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4 Results

4.1 Income and trust

First, 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. To do this I used the available income data from the 2020 wave with the trust measures from the same year.

Table 1: Log Income (2020) on Trust rv557

	(1) log Lab No controls	(2) log Tot	(3) log Lab With controls	(4) log Tot
Trust	0.282*** (0.053)	0.318*** (0.057)	0.153*** (0.053)	0.133** (0.053)
Trust ²	-0.022*** (0.004)	-0.025*** (0.005)	-0.013*** (0.004)	-0.011*** (0.004)
Age			0.048 (0.045)	0.123** (0.052)
Age ²			-0.000 (0.000)	-0.001** (0.000)
Years of education			0.073*** (0.011)	0.098*** (0.012)
In labor force			0.667*** (0.082)	0.849*** (0.089)
Married			0.098 (0.061)	0.243*** (0.066)
Born in U.S.			0.168* (0.099)	0.139 (0.115)
_cons	9.348*** (0.154)	9.447*** (0.164)	6.453*** (1.555)	3.422* (1.815)
Observations	972.000	1023.000	963.000	1013.000
Adj. R-squared	0.038	0.034	0.193	0.221

Standard errors in parentheses

Robust SEs in parentheses; Age entered quadratically when available.

Controls (when included): raedyrs, in labor force, married, born in U.S.

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

As you can see, the effect does persist in this dataset. These estimates suggest that the level of trust which maximizes predicted income is 6.4, 6.36, 5.88, 6.05.

Since the HRS includes multiple measures of trust, I do a principal component analysis (PCA) on them and use that as the explanatory variable. The results are in the table below.

These results are less encouraging.

Table 2: Log Income (2020) on Trust PC1

	(1) log Lab No controls	(2) log Tot	(3) log Lab With controls	(4) log Tot
Trust PC1	0.040 (0.037)	0.030 (0.041)	0.050 (0.034)	0.021 (0.036)
Trust PC1 ²	-0.097*** (0.030)	-0.102*** (0.032)	-0.049* (0.026)	-0.045* (0.027)
Age			0.028 (0.039)	0.120** (0.049)
Age ²			-0.000 (0.000)	-0.001** (0.000)
Years of education			0.082*** (0.011)	0.099*** (0.012)
In labor force			0.611*** (0.073)	0.819*** (0.089)
Married			0.113* (0.062)	0.269*** (0.069)
Born in U.S.			0.227** (0.108)	0.193 (0.124)
_cons	10.240*** (0.042)	10.439*** (0.049)	7.531*** (1.345)	3.933** (1.735)
Observations	892.000	938.000	883.000	928.000
Adj. R-squared	0.019	0.013	0.205	0.220

Standard errors in parentheses

Robust SEs in parentheses; Age entered quadratically when available.

Controls (when included): raedyrs, in labor force, married, born in U.S.

PC1 variance prop = .

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

4.2 Returns and trust

With the hump-shape relationship between log earnings and trust present in the HRS, I wanted to see if a similar relationship held for returns. I used the formula from Daminato and Pistaferri 2024:

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

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.

Since the survey is every two years, I annualized the returns using the expression $r_{annual} = (1 + R_{period})^{(1/2)} - 1$. I also trimmed the returns at the top and botton by 5% to deal with outliers.

The returns from residential housing were especially large, so I computed returns with this asset class excluded as well.

Here are the results of the regression with the general trust measure as the explanatory variable. As you can see, the results are significant for the untrimmed returns but lose significance when I trim them in most cases. The level of trust which maximizes predicted returns is 5.07, 3, 5.6, 11, 5.07, 1.5, 4.9, 8.5. Again, the PCA results are worse.

Table 3: Returns (2022) on Trust rv557

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Annual	Annual (trim)	Excl. res.	Excl. res. (trim)	Annual	Annual (trim)	Excl. res.	Excl. res. (trim)
	No controls				With controls			
Trust	0.071** (0.028)	0.012 (0.019)	0.056*** (0.017)	0.022*** (0.008)	0.071** (0.028)	0.003 (0.019)	0.049*** (0.017)	0.017* (0.009)
Trust ²	-0.007*** (0.003)	-0.002 (0.002)	-0.005*** (0.002)	-0.001* (0.001)	-0.007*** (0.003)	-0.001 (0.002)	-0.005*** (0.002)	-0.001 (0.001)
Age					-0.072** (0.028)	0.007 (0.014)	-0.024 (0.025)	-0.008 (0.009)
Age ²					0.000** (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Years of education					0.003 (0.006)	0.005 (0.003)	0.003 (0.004)	0.002 (0.002)
In labor force					0.056 (0.042)	0.047** (0.023)	0.060* (0.033)	0.031** (0.014)
Married					-0.012 (0.042)	0.034 (0.022)	0.011 (0.032)	0.033** (0.013)
Born in U.S.					-0.016 (0.051)	-0.001 (0.027)	0.018 (0.038)	0.002 (0.018)
_cons	0.081 (0.076)	0.145** (0.057)	0.001 (0.040)	-0.013 (0.023)	2.617*** (0.984)	-0.121 (0.500)	0.843 (0.868)	0.244 (0.301)
Observations	814.000	737.000	824.000	750.000	808.000	733.000	817.000	743.000
Adj. R-squared	0.007	0.001	0.007	0.007	0.031	0.012	0.017	0.021

Standard errors in parentheses

Robust SEs in parentheses; Age entered quadratically when available.

Controls (when included): raedyrs, in labor force, married, born in U.S.

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

Table 4: Returns (2022) on Trust PC1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Annual	Annual (trim)	Excl. res.	Excl. res. (trim)	Annual	Annual (trim)	Excl. res.	Excl. res. (trim)
	No controls				With controls			
Trust PC1	-0.038*	-0.018	-0.019	0.015**	-0.019	-0.015	-0.009	0.018**
	(0.022)	(0.012)	(0.015)	(0.007)	(0.021)	(0.012)	(0.014)	(0.007)
Trust PC1 ²	-0.007	-0.005	-0.008	-0.002	-0.003	-0.002	-0.004	0.000
	(0.013)	(0.009)	(0.008)	(0.005)	(0.013)	(0.009)	(0.008)	(0.005)
Age					-0.059**	0.010	-0.009	-0.010
					(0.029)	(0.015)	(0.023)	(0.009)
Age ²					0.000*	-0.000	0.000	0.000
					(0.000)	(0.000)	(0.000)	(0.000)
Years of education					0.005	0.003	0.006	0.002
					(0.006)	(0.003)	(0.004)	(0.002)
In labor force					0.055	0.048**	0.053	0.038***
					(0.043)	(0.024)	(0.034)	(0.014)
Married					-0.010	0.024	0.015	0.036***
					(0.043)	(0.023)	(0.032)	(0.014)
Born in U.S.					-0.018	0.004	-0.006	0.002
					(0.051)	(0.029)	(0.040)	(0.019)
_cons	0.205***	0.152***	0.113***	0.062***	2.357**	-0.211	0.482	0.360
	(0.022)	(0.013)	(0.017)	(0.008)	(1.030)	(0.540)	(0.821)	(0.328)
Observations	747.000	677.000	757.000	690.000	741.000	673.000	750.000	683.000
Adj. R-squared	0.002	0.001	-0.000	0.004	0.032	0.013	0.021	0.028

Standard errors in parentheses

Robust SEs in parentheses; Age entered quadratically when available.

Controls (when included): raedyrs, in labor force, married, born in U.S.

PC1 variance prop = .

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

4.3 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 also use three similar specifications. First, a pooled OLS regression with a baseline set of controls. Second, a similar pooled regression with aimed at controlling for risk exposure. Third, a panel regression with individual fixed effects and year dummies.

Table 5: Baseline Pooled OLS Regressions

	(1) Annual"	(2) Annual (trim)	(3) Excl. res	(4) Excl. res (trim)
Age	0.004** (0.002)	-0.000 (0.002)	-0.004* (0.002)	-0.002 (0.002)
Age ²	-0.000*** (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Years of education	0.015*** (0.001)	0.007*** (0.001)	0.010*** (0.001)	0.006*** (0.000)
In labor force	0.046*** (0.004)	0.014*** (0.003)	0.023*** (0.004)	0.016*** (0.003)
Married	0.040*** (0.004)	0.015*** (0.003)	0.006 (0.004)	0.014*** (0.003)
Born in U.S.	0.001 (0.006)	-0.012*** (0.004)	0.002 (0.006)	-0.003 (0.003)
Observations	71264.000	18724.000	28471.000	16547.000
R-squared	0.041	0.076	0.038	0.035
Adjusted R-squared	0.041	0.074	0.037	0.033

Standard errors in parentheses

Clustered standard errors at individual level in parentheses

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

Wealth deciles and other controls included but not shown; see text

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

There are two important takeaways from the panel regression which incorporates individual fixed effects. The first is that the standard deviation for the fixed effects is relatively high in each case. This suggests there is substantial heterogeneity in this persistent component of returns. Not only this, but a large part of the variation in returns can be explained by variation in the individual fixed effects.

Lastly, below are plots of the distribution of the estimated fixed effects. They have a shape somewhat similar to the distribution measured by Fagereng et al. 2020.

4.4 Trust and average returns

Since the trust module was only conducted in a single survey wave, we have to think of ways to use trust with the panel data. The first is to take the average returns over the 11 waves and use that

Table 6: Asset Shares \times Year Interactions

	(1) Annual ¹	(2) Annual (trim)	(3) Excl. res	(4) Excl. res (trim)
Age	0.004* (0.002)	0.001 (0.002)	-0.004 (0.002)	-0.002 (0.002)
Age ²	-0.000*** (0.000)	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Years of education	0.014*** (0.001)	0.008*** (0.001)	0.010*** (0.001)	0.006*** (0.000)
In labor force	0.042*** (0.004)	0.012*** (0.003)	0.023*** (0.004)	0.015*** (0.002)
Married	0.041*** (0.004)	0.016*** (0.003)	0.005 (0.004)	0.015*** (0.003)
Stock share	-0.137*** (0.044)	-0.093*** (0.030)	-0.188*** (0.033)	-0.100*** (0.028)
Bond share	0.337*** (0.108)	0.300** (0.117)	0.282*** (0.096)	0.368*** (0.133)
Real estate share	0.029 (0.065)	-0.008 (0.046)	0.051 (0.085)	-0.068* (0.041)
IRA share	-0.126*** (0.034)	-0.107*** (0.024)	-0.177*** (0.030)	-0.119*** (0.020)
Business share	-0.053 (0.061)	-0.148*** (0.047)	-0.135** (0.053)	-0.064 (0.040)
Liability share	0.084** (0.042)	-0.025 (0.057)	0.124* (0.070)	0.040 (0.063)
Observations	71264.000	18724.000	28471.000	16547.000
R-squared	0.060	0.089	0.049	0.051
Adjusted R-squared	0.059	0.084	0.046	0.046

Standard errors in parentheses

Clustered standard errors at individual level in parentheses

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

Wealth deciles, year dummies, and interaction terms included but not shown

Joint F-tests by asset class reported below and in log

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

as the dependent variables. Below are graphs similar to the exercise we did for returns in 2022. The results are not encouraging in this case.

Table 7: Individual Fixed Effects Regressions

	(1) Annual"	(2) Annual (trim)	(3) Excl. res	(4) Excl. res (trim)
Married	0.014 (0.010)	0.025*** (0.007)	0.014 (0.009)	0.018*** (0.006)
In labor force	-0.003 (0.007)	-0.002 (0.004)	0.000 (0.005)	0.004 (0.004)
Risky share	0.067 (0.062)	-0.044*** (0.015)	-0.088*** (0.018)	-0.062*** (0.013)
Observations	27632.000	18480.000	27951.000	16280.000
Number of groups	2512.000	1680.000	2541.000	1480.000
R-sq within	0.136	0.175	0.171	0.174
R-sq between	0.002	0.001	0.034	0.077
R-sq overall	0.034	0.037	0.022	0.008
Sigma u	0.239	0.167	0.239	0.154
Sigma e	0.339	0.191	0.268	0.133
Rho	0.332	0.434	0.443	0.572

Standard errors in parentheses

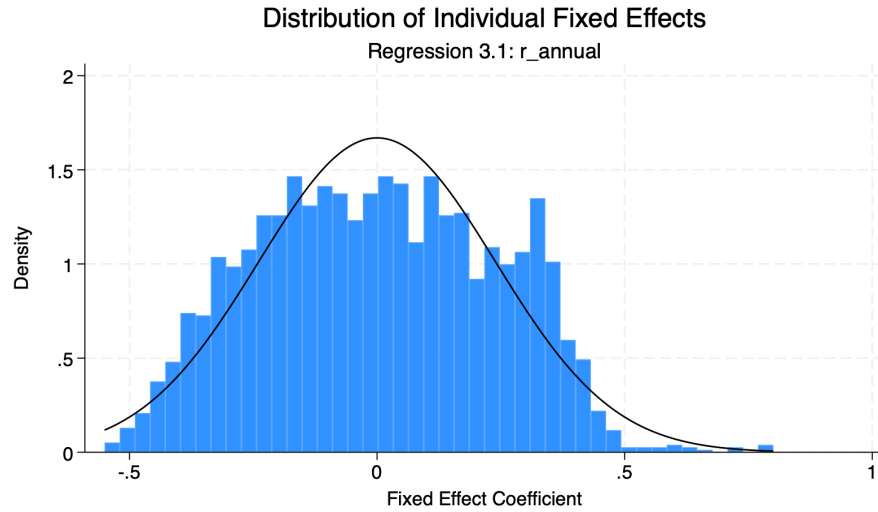
Clustered standard errors at individual level in parentheses

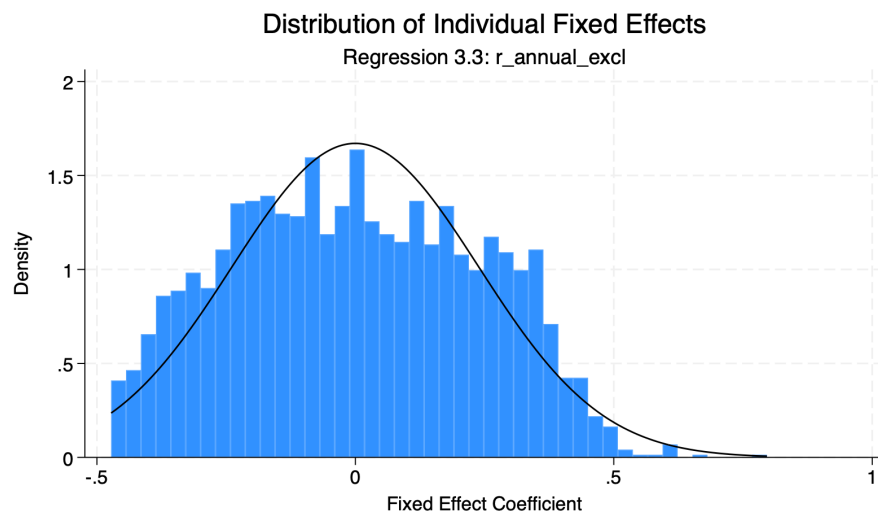
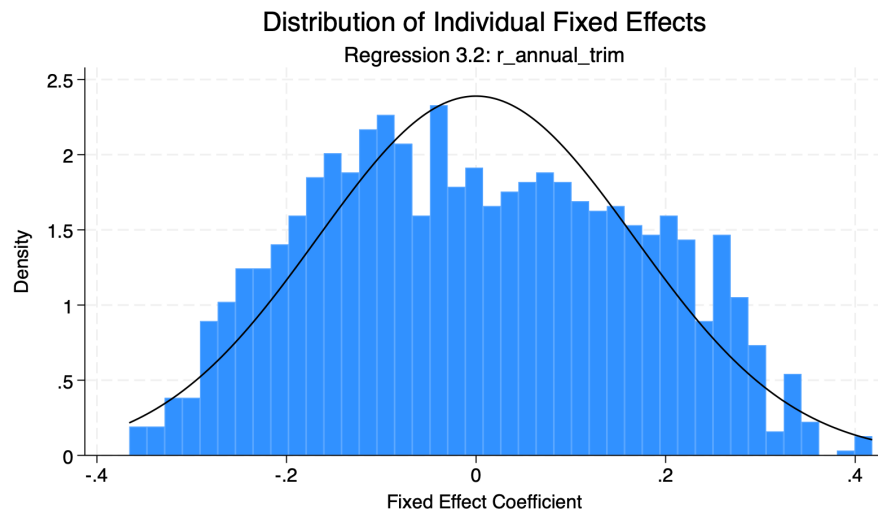
*** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$

Individual fixed effects included but not shown

Wealth deciles and year dummies included but not shown

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





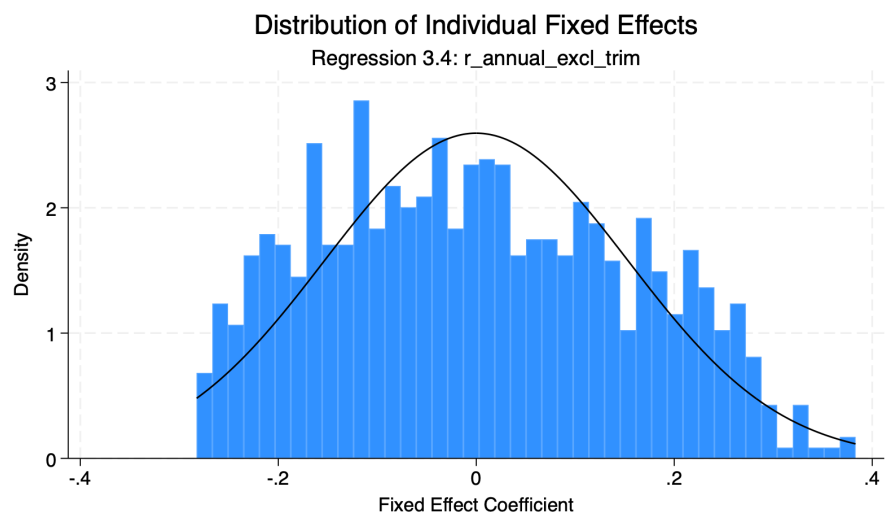


Table 8: Average Returns (2002–2022) on Trust rv557

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Avg Annual	Avg Annual (trim)	Avg Excl. res.	Avg Excl. res. (trim)	Avg Annual	Avg Annual (trim)	Avg Excl. res.	Avg Excl. res. (trim)
	No controls				With controls			
Trust	0.021*** (0.008)	0.008 (0.005)	0.015*** (0.005)	0.012*** (0.003)	0.012 (0.008)	0.004 (0.005)	0.006 (0.005)	0.006 (0.004)
Trust ²	-0.002** (0.001)	-0.001* (0.000)	-0.001** (0.000)	-0.001*** (0.000)	-0.001 (0.001)	-0.001 (0.000)	-0.001 (0.000)	-0.001 (0.000)
Age					0.010 (0.017)	0.017* (0.010)	0.014 (0.018)	0.020*** (0.008)
Age ²					-0.000 (0.000)	-0.000* (0.000)	-0.000 (0.000)	-0.000*** (0.000)
Years of education					0.003 (0.002)	0.002 (0.001)	0.004* (0.002)	0.002** (0.001)
In labor force					0.025 (0.018)	-0.001 (0.014)	0.016 (0.015)	-0.008 (0.010)
Married					-0.010 (0.012)	-0.005 (0.009)	-0.012 (0.011)	0.004 (0.006)
Born in U.S.					-0.004 (0.010)	-0.020** (0.009)	-0.001 (0.016)	-0.014 (0.009)
_cons	0.025 (0.021)	0.051*** (0.013)	0.006 (0.010)	-0.007 (0.007)	-0.264 (0.646)	-0.539 (0.373)	-0.472 (0.695)	-0.740** (0.286)
Observations	208.000	135.000	213.000	127.000	208.000	135.000	212.000	126.000
Adj. R-squared	0.013	0.011	0.008	0.032	0.047	0.036	0.055	0.073

Standard errors in parentheses

Robust SEs in parentheses; Age entered quadratically when available.

Controls (when included): raedyrs, in labor force, married, born in U.S.

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

Table 9: Average Returns (2002–2022) on Trust PC1

	(1) Avg Annual	(2) Avg Annual (trim)	(3) Avg Excl. res. No controls	(4) Avg Excl. res. (trim)	(5) Avg Annual	(6) Avg Annual (trim)	(7) Avg Excl. res. With controls	(8) Avg Excl. res. (trim)
Trust PC1	0.006 (0.006)	-0.002 (0.005)	0.007 (0.004)	0.006 (0.004)	0.005 (0.006)	0.000 (0.005)	0.007 (0.004)	0.007 (0.005)
Trust PC1 ²	-0.004 (0.004)	-0.002 (0.003)	-0.005* (0.003)	0.001 (0.004)	-0.001 (0.004)	-0.001 (0.003)	-0.002 (0.003)	0.001 (0.004)
Age					0.020 (0.018)	0.024** (0.011)	0.023 (0.020)	0.028*** (0.009)
Age ²					-0.000 (0.000)	-0.000** (0.000)	-0.000 (0.000)	-0.000*** (0.000)
Years of education					0.004 (0.002)	0.002 (0.002)	0.004* (0.002)	0.002 (0.001)
In labor force					0.032* (0.019)	-0.001 (0.016)	0.018 (0.016)	-0.007 (0.010)
Married					-0.005 (0.013)	-0.005 (0.010)	-0.010 (0.011)	0.007 (0.007)
Born in U.S.					-0.009 (0.012)	-0.023* (0.012)	-0.012 (0.018)	-0.020* (0.010)
_cons	0.083*** (0.007)	0.065*** (0.005)	0.047*** (0.006)	0.019*** (0.004)	-0.616 (0.692)	-0.777* (0.405)	-0.780 (0.750)	-1.004*** (0.321)
Observations	185.000	116.000	190.000	109.000	185.000	116.000	189.000	108.000
Adj. R-squared	-0.004	-0.013	0.005	0.008	0.069	0.030	0.087	0.107

Standard errors in parentheses

Robust SEs in parentheses; Age entered quadratically when available.

Controls (when included): raedyrs, in labor force, married, born in U.S.

PC1 variance prop = .

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

References

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