PSID A national study of socioeconomics and health over lifetimes and across generations

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Determinants of Wealth Fluctuations

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BACKGROUND

Fluctuation in families' economic conditions over time are an empirically interesting phenomenon; in fact, they are the *raison d'être* of household panel studies like the Panel Study of Income Dynamics (PSID). The dynamics of wealth are of particular interest, for instance, to understand families' ability to smooth consumption during times of economic distress (Deaton 1991). In addition, spend-down of wealth in response to long-term care needs of the elderly or human capital investment needs of the young has been a policy-relevant topic (Scholz and Seshadri 2009). Finally, measures of wealth fluctuation can serve as indicators of macro-economic turbulence, such as in the form of widespread and large wealth losses that occurred during the most recent economic recession (Pfeffer et al. 2013).

Although the study of wealth and its fluctuation over time is thus highly relevant, wealth information can be challenging to collect (Bucks and Pence 2015). Respondents might be unwilling or even unable to answer detailed questions about their own asset holdings. To minimize the incidence of missing data special data collection procedures have been applied to wealth data. For example, PSID respondents who report that they do not know an exact asset value receive a series of follow-up questions that ask them to report whether the value falls within certain pre-specified ranges ("brackets") (Juster and Smith 1997). This "unfolding bracket" approach is also used in the Health and Retirement Study (HRS) and other national surveys. In the PSID, this technique helps to keep the average prevalence of item nonresponse across a variety of different asset components at less than 5%.

Panel surveys that collect longitudinal wealth information face additional challenges. Researchers have noted that wealth data tend to be noisier than many other economic data (Bucks and Pence 2015). Furthermore, some have suggested that extreme fluctuation in wealth are the result of measurement error rather than real changes in life circumstances (Hill 2006; Bosworth and Smart 2009; Venti 2011). Like any survey measure, random and non-random error might result from a number of sources, including both respondent behaviors (e.g., guessing or erroneous reporting) and

interviewer behaviors (e.g., incorrectly asking a question or entering an answer). PSID attempts to correct such errors by investigating outlying responses and reconciling them with other information collected in the same or prior waves. In contrast, the Health and Retirement Study (HRS) preloads wealth values from the prior interview and asks respondents to reconcile conflicting responses between the current and prior wave. In 2012, the HRS procedures identified a small number of cases (≤ 2.5 percent, depending on the source) who corrected errors in either the prior or current wave (generally at a rate of 2:1).

Another potentially important, yet, to our knowledge, unexplored, source of extreme fluctuation might be the procedures a study uses to fill in missing wealth values. Such imputation procedures vary, but generally involve first imputing whether or not an asset (debt) was held (owed) and then imputing the asset value for those who held the asset (debt). For example, HRS recently released a set of asset variables based on cross-wave imputations incorporating information from the current and adjacent waves (Moldoff et al. 2013). Current-wave predictors included age, race, marital status, education, occupation, health status, income, receipt of pension or government benefit, cognition, and bequest expectations. Asset information from adjacent survey waves was also included. In contrast, PSID has used a random hot-deck imputation procedure that does not rely on such covariates (PSID 2011).

Determining whether wealth fluctuation is too large to be realistic (i.e., whether they are induced by measurement error or reflective of meaningful changes) is difficult and ultimately based on arbitrary decisions about what constitutes "too" extreme of a change. In this paper, we define extreme wealth fluctuation as cases within the top and bottom 2.5% of the overall distribution of wealth changes. Using data from the 2005 and 2007 PSID, we seek to (1) reveal some of the socioeconomic and demographic conditions of households that give rise to these extreme wealth changes and (2) isolate the contribution of potential measurement error (i.e., wealth imputations, a change in respondent) net of these observed changes.

DATA AND SAMPLE

Since the onset of the Great Recession, the wealth holdings of American families have been subject to substantial fluctuation, the majority of which have been steep losses (Pfeffer et al. 2013). To circumvent these strong period effects in this methodological project, we choose to assess wealth fluctuation between 2005 and 2007, the two survey waves preceding the Great Recession. Our main analytic sample comprises 7,051 households with the same household head at both time points. All of our analyses are weighted using the 2005 family weight (Gouskova et al. 2008) and were conducted using Stata 13 (StataCorp 2013).

MEASURES

Wealth fluctuation. To measure wealth holdings, we draw on the PSID's imputed net worth variable that includes all measured asset components. These asset components are:

- Home values;
- Home mortgages (up to two);
- Financial assets held in checking accounts, savings accounts, money market accounts, certificates of deposit, government savings bonds, Treasury bills, and others;
- Financial assets held in stocks, mutual funds, and investment trusts
- Other financial assets, such as bond funds, life insurance cash, valuable collections, trust or estate rights;
- Farm and business ownership;
- Real estate;
- Vehicles, motor homes, trucks, boats, trailers, and others;
- Retirement wealth held in private annuities or IRAs; and
- Other debt, including credit card debt, student loans, medical bills, legal bills, and loans from relatives.

We measure between-wave wealth fluctuation in three different ways:

(a) absolute changes in net worth between 2005 and 2007,
i.e. W_{2007}-W_{2005} ("absolute change");
(b) changes in net worth between 2005 and 2007 relative to 2005 net worth among those with positive net worth in both years,
i.e. $(W_{2007}-W_{2005})/W_{2005}$ ("relative (to net worth) change"); and
(c) changes in net worth between 2005 and 2007 relative to 2005 household income among those with positive net worth in both years,
i.e. $(W_{2007}-W_{2005})/I_{2005}$ ("relative (to income) change").

Each of these measures has its own advantages and disadvantages. For example, households with greater wealth are more likely than households with lower wealth to be classified as having experienced an extreme absolute change because it is much more likely for them to lose or gain larger amounts of money. In contrast, households with lower wealth are more likely to be classified as having experienced an extreme relative (to net worth) change: For example, a doubling of household wealth from $100 to $200 can occur more easily than a doubling of household wealth from $100,000 to $200,000. To account for the effect of baseline wealth on whether a household is classified as having experienced an extreme change, our models control for baseline wealth (in 2005). Additionally, the measure of change relative to baseline household income is also intended to address these distributional concerns. For instance, it treats a wealth gain of $10,000 for a household with an income of $50,000 the same way as a wealth gain of $50,000 for a household with an income of $250,000.

Demographic characteristics and changes in socioeconomic circumstances. We consider a variety of socioeconomic and demographic characteristics expected to predict wealth fluctuation. In addition to demographic variables (age, sex, and race of household head), we include a number of indicators for changes (between 2005 and 2007) in household composition, asset portfolios, labor market participation, and health conditions (see Table 2 for a detailed list and description). Lastly, to account for some of the differences in the three wealth fluctuation measures discussed above, we control for baseline net worth (quintiles).

Number of imputed asset components. To investigate the potential impact of imputations, we compute an indicator for the total number of imputed asset components that make up net worth across both waves. Imputed components are those for which the presence or absence of the asset, the asset value bracket, or the continuous value was assigned rather than reported.

Change in respondent. The PSID does not necessarily interview the same respondent in both years, even in households with no composition change since the prior wave. For instance, a husband might be the respondent in one year whereas his wife might be the respondent in another year. We assess whether a change in respondent, conditional on household composition changes, might also induce extreme wealth fluctuation.

APPROACH

For each wealth fluctuation measure, we define extreme fluctuation as the top and bottom 2.5% of the respective distribution of wealth changes; thus, the primary focus of this study is on the 5% of households that exhibit the largest absolute or relative wealth changes between 2005 and 2007. For some analyses, we also distinguish between extreme gains (top 2.5%) and extreme losses (bottom 2.5%). Other definitions, such as the largest 10% of changes, yield similar overall conclusions (results not shown).

We begin our empirical analysis with a descriptive assessment of the relationship between extreme wealth fluctuation and changes in socioeconomic circumstances (i.e., changes expected to be reflective of meaningful wealth fluctuation) and between extreme wealth fluctuation and the presence of wealth imputations and a change in respondent (i.e., indicators of potential measurement error). Following these bivariate assessments, we estimate a series of logistic regression models predicting extreme wealth fluctuation. We report odds ratios and the pseudo- R^2 for logistic regressions (McKelvey and Zavaino 1975), an assessment of model fit that has been shown to best approximate the "percent explained variance" interpretation commonly used in OLS regressions (Hagle and

Mitchell 1992; Windmeijer 1995).[1] For the analysis of explained variance, we display separate results for extreme wealth gains (top 2.5%) and losses (bottom 2.5%).

FINDINGS

The Distribution of Wealth Fluctuation

Table 1 displays all three measures of between-wave wealth fluctuation: absolute change, relative change (relative to baseline wealth and relative to baseline income) among those with positive net worth in both years, and relative (to income) change among those with positive net worth in both years. The median wealth change is $4,200 (absolute), 21% (relative to net worth), and 23% (relative to income). Inflation accounts for at least some of the increase in the first two measures; however, we did not adjust for inflation because we were more interested in the accuracy of respondents' reports than relating wealth to changing macro-economic conditions. The typical degree of wealth fluctuation reported here indicates that wealth tended to increase leading up to the crash, a finding that has been documented by prior research using the same data (Pfeffer et al. 2013).

Our main interest here is in the tails of the distribution of wealth fluctuation. As shown in Table 1, extreme changes in absolute wealth include losses of $370,000 or more and gains of $731,900 or more. Extreme changes in relative (to net worth) wealth include losses of 93% or more and gains by a factor of 21.2. Extreme changes in relative (to income) wealth include cases who experienced a loss of wealth that is at least 8.4 times as high as their baseline income or a gain of wealth that is at least 15.5 as high as their baseline income.

Correlates of Extreme Wealth Fluctuation

[1] This interpretation requires us to assume a latent trait underlying our outcome variables (Long and Freese 2014). Such an assumption is justified in this application because we are more interested in evaluating the latent trait of "wealth fluctuation" than in evaluating the observed trait of specifically falling into the outlying +/- 2.5% of the wealth change distribution. The fit statistics reported here are based on unweighted regressions.

As discussed above, the three different measures of extreme wealth fluctuation differ in their sensitivity to baseline wealth levels. For example, large absolute changes are much more likely at the top of the wealth distribution whereas large relative changes are much more likely at the bottom of the distribution. This pattern can be observed in Table 2. Families with lower baseline wealth are overrepresented among cases with extreme relative (to net worth) fluctuation (36% of these families originate from the second wealth quintile whereas only 16% originate from that quintile based on the overall weighted distribution). Conversely, households with greater baseline wealth are overrepresented among households with extreme absolute fluctuation and extreme relative (to income) fluctuation (88% and 70%, respectively, come from the highest wealth quintile).

Table 2 reveals additional correlates of extreme wealth fluctuation. The strongest correlates are changes in asset portfolios (measured in the PSID "active savings" module). Households with extreme absolute wealth fluctuation are disproportionally likely to have purchased real estate (14%), made home additions or improvements (26%), sold (27%) or purchased stocks (33%), put money into an IRA (29%), or invested in a business or farm (14%). The same holds true for extreme relative (to income) changes (though, in most cases, the associations are smaller). In contrast, the main correlate of extreme relative (to net worth) wealth fluctuation is whether a household experienced a change in home ownership status (either from owner to renter or vice versa). Nearly half (47%) of those households classified as experiencing extreme relative (to net worth) wealth fluctuation changed their home ownership status (versus 12% overall).

Notably, the pattern of association between extreme wealth fluctuation and other socioeconomic changes is much less pronounced than the pattern of association with changes in asset portfolios. For example, households where either the head or spouse entered into retirement are overrepresented in the group of families with extreme absolute wealth changes (9% vs. 5% overall for household heads and 4% versus 2% overall for spouses). Furthermore, families headed by a person who experienced a change in health

conditions that limited his or her work (whether negative or positive) are overrepresented among those experiencing extreme relative (to income) fluctuation (15% vs. 9%).

Finally, Table 2 shows the relationship between extreme wealth fluctuation and two different sources of potential measurement error: the number of imputed asset components and whether there was a change in respondent. The number of imputed asset components is positively associated with the probability of a household experiencing an extreme wealth fluctuation. Households with extreme absolute fluctuation and extreme fluctuation relative to their baseline income are particularly likely to have multiple imputed asset components. For instance, 28% of cases with extreme absolute fluctuation and 34% of cases with extreme relative (to income) fluctuation are based on net worth measures for which three or more components have been imputed (in any of the two years). Households with extreme relative (to net worth) fluctuation are particularly likely to have one imputed wealth component (28% vs. 19% overall). Because we know that these households are also disproportionally drawn from the bottom of the wealth distribution, a likely interpretation is that many of these households hold a very limited range of assets; thus, imputation of even one component becomes more consequential (and imputation of several components is less likely because few such households own several different types of assets). Lastly, a change in respondent increases the probability of a household experiencing extreme relative (to net worth) and relative (to income) wealth fluctuation (12% and 9%, respectively, vs. 5% overall). Interestingly, a change in respondent does not appear to increase the probability of experiencing extreme absolute fluctuation (5%).

Predictors of Extreme Wealth Fluctuation

Next, we use a multivariate approach to predict extreme wealth fluctuation based on the same set of controls discussed so far (see Table 3). Several household characteristics and changes in socioeconomic circumstances are independently predictive of extreme wealth changes; however, the specific characteristics and circumstances that matter vary across the different measures of wealth fluctuation. We find more statistically significant independent predictors (at $p<.05$) of extreme absolute fluctuation than either measure of

relative fluctuation. Greater baseline wealth is still a very strong predictor of experiencing extreme absolute fluctuation. Furthermore, several changes in asset portfolios are strong predictors. Specifically, holding all else constant, changes in home ownership status and investment in a business or farm more than double the odds of experiencing extreme wealth fluctuation (odds ratios of 2.4 and 2.2, respectively), purchasing real estate triples the odds (OR=3.3), making home additions or improvements increases the odds by 62%, and selling a principal residence decreases the odds by about two thirds (OR=0.34). The only other change in socioeconomic conditions that is independently and statistically significantly predictive of extreme absolute wealth change is a change in the perceived health status of the spouse (increasing the odds by 35%).

For extreme relative (to net worth) wealth fluctuation, we observe a different set of independent predictors. Again, lower baseline wealth is highly predictive of experiencing extreme changes. Holding all else constant, households with a black household head are nearly twice as likely as whites to experience extreme relative wealth fluctuation. Moving nearly doubles the chances of experiencing extreme relative fluctuation (OR=1.9). Also, a change in home ownership status is a strong predictor of extreme relative wealth fluctuation: those experiencing such transition are more than six times more likely to show extreme fluctuation compared to those who do not experience that transition. Finally, an investment in a business or farm more than doubles the odds of extreme relative fluctuation (OR=2.3).

Lastly, extreme wealth fluctuation relative to baseline income are positively predicted by the age of the household head, higher baseline wealth (households from the top wealth quintile are 12 times more likely to experience this type of fluctuation compared to households from the bottom quintile), and a change in home ownership status (OR=2.3).

So far, we have discussed the predictors that we consider to reflect meaningful sources of wealth fluctuation. However, Table 3 also reports independent sources of extreme wealth fluctuation reflective of two sources of potential measurement error. The presence of

imputed wealth components remains a significant predictor of extreme fluctuation in the multivariate models. Specifically, households with just one asset component imputed are 2.5 times more likely than households with no such imputations to have experienced extreme wealth fluctuation (relative to baseline wealth). Having two imputed asset components increases the odds of extreme wealth fluctuation by a factor of between 2.4 and 3.8 depending on the measure of wealth fluctuation. Having three or more imputed components nearly quadruples the odds of experiencing extreme absolute fluctuation (OR=3.9) and quintuples the odds of extreme relative fluctuation relative to baseline income. Finally, a change in respondent triples the odds of extreme wealth fluctuation relative to baseline wealth and doubles the odds of extreme fluctuation relative to baseline income

Overall Success of Accounting for Extreme Wealth Fluctuation

Finally, we evaluate whether the observed household characteristics studied here account for an appreciable share of the cases experiencing extreme wealth fluctuation (see Table 4). The indicators of demographic characteristics and changes in socioeconomic conditions, such as changes in household composition, asset portfolios, labor market participation, and changes in health status – all of which we consider meaningful predictors of wealth fluctuation – explain more than half of the variance in the prediction of extreme absolute fluctuation and about one third of the variance in the prediction of either measure of relative fluctuation. The presence of imputed wealth components (which we consider to be one source of potential measurement error) explains less variance than meaningful household characteristics and changes do; a change in respondent explains still less. These measurement issues do not contribute to a large amount of explained variance once socioeconomic conditions and changes have been taken into account. For example, the overall explained variance in a full model of extreme absolute wealth change is .537 – very close to the R^2 of .526 in a model with socioeconomic indicators only and without the measurement indicators. Although the independent contribution of these measurement indicators is higher for the two relative fluctuation measures, meaningful household changes still account for a much greater share of the variation than do these measurement issues.

So far, we have analyzed wealth fluctuation irrespective of the direction of change. When analyzing the top 2.5% largest wealth gains and the top 2.5% largest wealth losses separately, the predictive power of our models increase appreciably (coefficients from these models are available upon request). In particular, meaningful changes in socioeconomic conditions alone account for more than two thirds of extreme relative (to net worth) gain (R^2=0.648) and extreme absolute losses (R^2=0.694) and still more than half of the most extreme losses relative (to income).

DISCUSSION

We have studied the determinants of extreme fluctuation in wealth in the Panel Study of Income Dynamics between 2005 and 2007, the two survey waves preceding the Great Recession which induced further fluctuation to families' wealth. Deciding what degree of wealth change is extreme enough to qualify as suspicious is arbitrary; here, we focused on the five percent of households that experienced the most extreme absolute and relative changes. Using this definition, we were able to account for one third to half of extreme wealth changes overall and up to two thirds for some of the directional changes (extreme losses and gains. In other words, the mere fact that a household's wealth in one wave is radically different from its wealth in the prior wave should not automatically raise suspicion about the role of measurement error as an explanation of seemingly unreasonably extreme wealth fluctuation. Instead, the best explanations for such extreme fluctuation (besides the household's baseline level of wealth) are changes in asset portfolios. For example, a change in home ownership is highly predictive of experiencing extreme wealth fluctuation as are other asset portfolio changes, such as the purchase of real estate or investments in businesses.

In addition, we have also confirmed that, whereas the imputation strategy currently implemented by PSID does contribute to extreme wealth fluctuation, it only explains a small portion of the variance in such fluctuation. Nonetheless, the random hot-deck imputations that were a state-of-the-art approach when then PSID began collecting and imputing data in the 1980s could be updated to accommodate covariates, including

information from prior and subsequent waves. In particular, including the changes in life circumstances identified here (e.g., changes in home ownership and active savings behaviors) appears to be a promising next step in improving the wealth data provided by PSID.

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TABLES

Table 1: Distribution of Wealth Fluctuation

	Absolute Change	Relative Change (to baseline wealth)	Relative Change (to baseline income)
Percentile 1	-788,700	-0.98	-20.42
Percentile 2.5	**-370,000**	**-0.93**	**-8.37**
Percentile 5	-173,975	-0.83	-4.07
Median	4,200	0.21	0.23
Percentile 95	414,000	9.02	8.12
Percentile 97.5	**731,900**	**21.19**	**15.56**
Percentile 99	1,466,700	64.93	34.10
N	7,051	5,329	5,323

Table 2: Control variables and their association with wealth fluctuation

Control Variable	Mean / %	Among Households with Extreme Fluctuations		
		Absolute Change	Relative (to net worth) Change	Relative (to income) Change
Demographics				
Age of HH head (mean-centered)	6.38	13.61	4.11	18.07
Sex of HH head (1=male)	0.72	0.83	0.59	0.63
Race of HH head				
White (reference)	0.77	0.92	0.64	0.84
Black	0.14	0.05	0.24	0.09
Hispanic	0.08	0.03	0.11	0.06
Other	0.01	0.00	0.01	0.01
Baseline wealth quintile (2005)				
1st (reference)	0.15	0.00	0.18	0.01
2nd	0.16	0.01	0.36	0.08
3rd	0.18	0.02	0.15	0.04
4th	0.23	0.08	0.17	0.17
5th	0.28	0.88	0.14	0.70
Change in household composition				
Any change in household structure	0.22	0.21	0.36	0.15
Whether household member joined with assets or debts	0.01	0.02	0.06	0.03
Whether household member left with assets or debts	0.01	0.02	0.02	0.02
Whether household member entered college	0.04	0.05	0.03	0.03
Whether moved	0.28	0.16	0.57	0.20
Changes in asset portfolio				
Change in home ownership status	0.12	0.08	0.47	0.11
Whether sold home used as main dwelling	0.06	0.05	0.07	0.04
Whether purchased real estate other than main home	0.04	0.14	0.04	0.06
Whether sold real estate other than main home	0.02	0.05	0.02	0.04
Whether made home additions or improvements	0.11	0.26	0.04	0.16
Whether purchased non-IRA stock	0.13	0.33	0.07	0.22
Whether sold non-IRA stock	0.09	0.27	0.05	0.17
Whether put money into private annuities or IRAs	0.15	0.29	0.06	0.19
Whether cashed in any part of pension, private annuity, or IRA	0.07	0.12	0.04	0.10
Whether invested in business or farm	0.05	0.14	0.07	0.08
Whether sold business or farm	0.01	0.03	0.00	0.02
Whether received gift or inheritance >=$10k in last two years	0.05	0.07	0.04	0.06
Whether received large settlement or inheritance in last year	0.05	0.08	0.03	0.06
Changes in labor market participation				
Whether change in spouse's employment status				
No change (reference)	0.89	0.91	0.91	0.91
Change from employment to unemployment	0.07	0.07	0.05	0.06
Change from unemployment to employment	0.04	0.03	0.03	0.03
Whether change in spouse's employment status				
No change (reference)	0.92	0.91	0.94	0.94
Change from employment to unemployment	0.04	0.05	0.04	0.02
Change from unemployment to employment	0.03	0.04	0.02	0.04
Whether change in head's current main occupation	0.46	0.41	0.48	0.35
Whether change in spouse's current main occupation	0.26	0.27	0.23	0.18
Whether change in head's retirement status				
No change (reference)	0.93	0.89	0.94	0.87
Exit from retirement	0.02	0.02	0.02	0.04
Entry into retirement	0.05	0.09	0.04	0.09
Whether change in spouse's in retirement status				
No change (reference)	0.96	0.95	0.99	0.96
Exit from retirement	0.01	0.01	0.00	0.02
Entry into retirement	0.02	0.04	0.01	0.03

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Control Variable	Mean / %	Among cases with large fluctuations		
		abs. fluct.	rel. fluct.	rel. to inc.
Changes in health status				
Change in head's health status				
No change	0.54	0.58	0.52	0.57
Positive change	0.23	0.22	0.23	0.24
Negative change	0.22	0.20	0.25	0.19
Change in spouse's health status				
No change	0.77	0.76	0.84	0.82
Positive change	0.12	0.12	0.09	0.09
Negative change	0.11	0.12	0.08	0.09
Perceived health change for head				
Much worse	0.04	0.02	0.08	0.04
Worse	0.15	0.14	0.14	0.17
Same	0.67	0.72	0.65	0.70
Better	0.08	0.06	0.09	0.04
Much better	0.07	0.05	0.05	0.05
Perceived health change for spouse				
Much worse	0.02	0.01	0.01	0.01
Worse	0.06	0.06	0.04	0.06
Same	0.85	0.84	0.92	0.88
Better	0.03	0.04	0.01	0.03
Much better	0.03	0.05	0.03	0.03
Change in health condition limiting work for head				
No change	0.86	0.86	0.83	0.77
Positive change	0.09	0.09	0.10	0.15
Negative change	0.05	0.05	0.06	0.08
Change in health condition limiting work for spouse				
No change	0.94	0.94	0.94	0.94
Positive change	0.04	0.03	0.03	0.04
Negative change	0.03	0.03	0.03	0.03
Wealth imputation				
Number of imputed asset components				
Zero	0.62	0.41	0.41	0.30
One	0.19	0.18	0.28	0.18
Two	0.08	0.13	0.16	0.17
Three or more	0.10	0.28	0.15	0.34
Change in respondent				
Whether respondent changed	0.05	0.05	0.12	0.09

Table 3: Logistic Regressions. Predictors of Extreme Wealth Fluctuation

	Absolute Change	Relative (to net worth) Change	Relative (to income) Change
	OR (SE)	OR (SE)	OR (SE)
Demographics			
Age of HH head (mean-centered)	1.012	0.996	1.021 **
	(0.007)	(0.009)	(0.008)
Sex of HH head (reference = female)	1.565	0.632	0.64
	(0.396)	(0.163)	(0.153)
Race of HH head (reference = white)			
Black	1.676	1.946 *	1.765
	(0.519)	(0.531)	(0.553)
Hispanic	0.661	1.859	1.364
	(0.275)	(0.636)	(0.452)
Other	*dropped*	1.275	0.935
		(1.116)	(0.855)
Baseline wealth quintile (reference = 1st)			
2nd	2.976	0.099 ***	2.179
	(2.569)	(0.034)	(2.024)
3rd	2.53	0.047 ***	0.903
	(2.068)	(0.019)	(0.879)
4th	9.637 **	0.042 ***	2.717
	(7.330)	(0.019)	(2.561)
5th	92.934 ***	0.049 ***	12.642 **
	(69.231)	(0.026)	(11.869)
Change in household composition			
Any change in household structure	1.238	1.437	0.818
	(0.249)	(0.325)	(0.198)
Whether mover-in brought >=$5k in assets or debts	1.448	2.189	2.801
	(0.917)	(1.247)	(1.814)
Whether mover-out took >=$5k in assets or debts	1.52	1.845	1.299
	(0.748)	(1.002)	(0.862)
Whether household member entered college	0.895	0.609	0.517
	(0.295)	(0.328)	(0.229)
Whether family moved	1.177	1.858 *	1.544
	(0.323)	(0.550)	(0.480)

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	Absolute Change	Relative (to net worth) Change	Relative (to income) Change
	OR (SE)	OR (SE)	OR (SE)
Changes in asset portfolio			
Whether change in home ownership status	2.386 *	6.224 ***	2.29 *
	(0.830)	(1.708)	(0.783)
Whether sold home used as main dwelling	0.344 **	0.738	0.271 **
	(0.127)	(0.344)	(0.127)
Whether purchased real estate other than main home	3.331 ***	1.457	1.356
	(0.814)	(0.817)	(0.443)
Whether sold real estate other than main home	1.283	2.444	1.478
	(0.449)	(2.021)	(0.641)
Whether made home additions or improvements	1.621 **	0.554	1.253
	(0.296)	(0.241)	(0.306)
Whether purchased non-IRA stock	1.161	1.097	0.956
	(0.245)	(0.478)	(0.253)
Whether sold non-IRA stock	1.494	0.613	1.057
	(0.319)	(0.340)	(0.290)
Whether put money into private annuities or IRAs	1.1	0.566	1.008
	(0.192)	(0.209)	(0.224)
Whether cashed in any part of pension, private annuity, or IRA	0.884	0.957	0.774
	(0.238)	(0.450)	(0.224)
Whether invested in business or farm	2.22 ***	2.265 *	1.385
	(0.515)	(0.823)	(0.436)
Whether sold business or farm	0.766		0.777
	(0.427)		(0.505)
Whether received gift or inheritance >=$10k in last two years	0.901	1.52	1.231
	(0.293)	(0.681)	(0.433)
Whether received large settlement or inheritance in last year	0.929	0.457	1.114
	(0.295)	(0.287)	(0.398)

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	Absolute	Relative (to net	Relative (to
	OR	OR	OR
	(SE)	(SE)	(SE)
Changes in labor market participation			
Change in head employment status (reference = no change)			
Employed to unemployed	0.927	0.725	0.959
	(0.297)	(0.351)	(0.364)
Unemployed to employed	1.051	0.619	1.24
	(0.430)	(0.377)	(0.605)
Change in spouse employment status (reference = no change)			
Employed to unemployed	1.162	1.244	0.535
	(0.359)	(0.526)	(0.294)
Unemployed to employed	0.859	0.583	1.64
	(0.317)	(0.358)	(0.613)
Whether change in head occupation	0.987	0.958	0.996
	(0.165)	(0.193)	(0.193)
Whether change in spouse occupation	0.826	0.928	0.749
	(0.146)	(0.235)	(0.165)
Change in head retirement status (reference = no change)			
Retired to not retired	0.911		1.105
	(0.555)		(0.665)
Not retired to retired	1.035	0.835	1.076
	(0.358)	(0.463)	(0.373)
Change in spouse retirement status (reference = no change)			
Retired to not retired	0.241		0.508
	(0.219)		(0.350)
Not retired to retired	0.756	1.605	0.805
	(0.281)	(1.682)	(0.428)

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	Absolute OR (SE)	Relative (to net OR (SE)	Relative (to OR (SE)
Changes in Health Status			
Change in head health status (reference = no change)			
Worse	0.998	0.828	0.968
	(0.195)	(0.213)	(0.208)
Better	0.898	1.032	0.878
	(0.187)	(0.297)	(0.196)
Change in spouse health status (reference = No change)			
Worse	0.736	0.959	0.841
	(0.164)	(0.283)	(0.227)
Better	0.858	0.827	0.792
	(0.208)	(0.286)	(0.236)
Change in head perceived health status	1.035	0.918	0.973
	(0.110)	(0.110)	(0.115)
Change in spouse perceived health status	1.352 *	0.944	1.142
	(0.165)	(0.152)	(0.160)
Change in health condition limiting work for head (reference = no change)			
Worse	1.108	1.194	1.56
	(0.320)	(0.478)	(0.449)
Better	0.742	1.865	1.31
	(0.263)	(0.795)	(0.416)
Change in health condition limiting work for spouse (reference = no change)			
Worse	0.828	1.163	1.032
	(0.343)	(0.495)	(0.498)
Better	0.661	1.773	0.944
	(0.276)	(1.052)	(0.444)

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	Absolute		Relative (to net		Relative (to	
	OR		OR		OR	
	(SE)		(SE)		(SE)	
Wealth Imputation						
Number of asset components imputed (reference = none)						
One	1.465		2.502	***	1.59	
	(0.301)		(0.584)		(0.393)	
Two	2.395	***	3.791	***	3.811	***
	(0.604)		(1.159)		(0.960)	
Three or more	3.889	***	1.969		5.256	***
	(0.817)		(0.818)		(1.149)	
Change in Respondent						
Whether respondent changed between 2005 and 2007	0.911		3.031	**	1.962	*
	(0.383)		(1.086)		(0.654)	
Constant	0.001	***	0.193	***	0.006	***
	(0.001)		(0.078)		(0.006)	
N	6,499		4,823		4,977	

Table 4: Goodness of Fit

McKelvey & Zavoina Pseudo-R^2

	5% Most Extreme Fluctuations			2.5% Largest Gains			2.5% Largest Losses		
	Absolute	Relative (to wealth)	Relative (to income)	Absolute	Relative (to wealth)	Relative (to income)	Absolute	Relative (to wealth)	Relative (to income)
Predictors included									
(1) Socio-economic conditions & changes	0.526	0.300	0.346	0.443	0.648	0.311	0.694	0.432	0.530
(2) Imputation indicator	0.075	0.043	0.120	0.053	0.053	0.114	0.086	0.032	0.109
(3) Change in respondent	0.000	0.017	0.008	0.001	0.020	0.024	0.000	0.012	0.109
(1-3) All	0.537	0.362	0.390	0.457	0.697	0.354	0.705	0.444	0.109