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## ECONOMIC CONSEQUENCES OF THE GREAT RECESSION: EVIDENCE FROM THE PANEL STUDY OF INCOME DYNAMICS

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The macroeconomic effects of the 2007-09 recessions have been widely evaluated and discussed, but until recently there has been much less available information about its effects on different segments of the population. This paper uses micro-survey data from successive waves of the Panel Study on Income Dynamics (PSID) to investigate the distribution of wealth and job losses during the 2007-09 recession for major socio-economic groups of the population, and the recession's effect on the retirement decision of older workers. Estimates of wealth losses are constructed for major socioeconomic groups and compared with those of the Survey of Consumer Finances (SCF). The panel dimension of the data is used to measure changes in the labor-force status of workers and to estimate the determinants of the decision by older workers to transition from participation in the labor force to retirement.

In a major extension of prior efforts, the SCF was expanded in 2009 in incorporate a re-interview of 2007 participants. While the basic micro-level data has yet to be released, descriptive articles report a very wide pattern of large wealth losses that seem surprisingly uniform across a wide range of socioeco-nomic categories. Most households lost about one-fifth of their wealth between 2007 and 2009. The SCF is widely viewed as the most comprehensive survey of wealth because of its special coverage of households at the very top of the wealth distribution and the extensive efforts made by staff to check and edit the quality of the responses.

This study compares PSID wealth data with that of the SCF to demonstrate the close correspondence of wealth estimates in the two surveys for household below the 95th percentile of the SCF distribution. However, the very wealthiest households are severely underrepresented in the PSID. The analysis also indicates that the PSID does well in capturing the magnitude and timing of the rise and fall of home prices over the past decade.

The magnitude of wealth change between 2007 and 2009 is computed for a variety of household characteristics using three different metrics of the change in the mean, changes in the median, and median changes. The measures of wealth losses are generally smaller than in the SCF (changes in the range of 12-15 percent compared to 18-23 percent in the SCF), but they display the same general pattern across a wide range of household characteristics. All three metrics show similar patterns of wealth change, but

the median percentage change seems a bit more robust and less sensitive to variations in sample selection. The estimates of wealth changes also display greater variability at the level of individual households than reported for the SCF, reflecting perhaps a larger influence of measurement error.

The second section of the study uses the panel dimension of the PSID to explore the effects of the recession on patterns of job change. For example, changes in individuals' economic circumstances are known to influence their retirement decisions. A weakening job market, which occurred between 2007 and 2009, encourages workers to retire at an earlier age than they had previously planned. On the other hand, losses of wealth from the associated fall in asset prices might encourage workers to delay retirement. The existence of data on large wealth changes between 2007 and 2009 at the individual household level offers a unique opportunity to evaluate these two offsetting responses.

Labor market flows between the five waves of the PSID stretching from 1999 to 2009 are used to compute changes in labor market status for those household heads and spouses who participated in two successive waves. In each wave the household respondent is asked about the current employment status of the head and spouse, distinguishing among: employed, unemployed, retired, disabled, or out of the labor force for other reasons. For individuals who were in the workforce (employed or looking for work) in the first wave, transition probabilities are computed for the five alternative statuses in the third year (the second wave). In addition, the analysis distinguishes between men and women and those who are above and below age 55, when the probabilities of retirement begin to change substantially.

For women below the age of 55, the proportion that was employed fell sharply between 2007 and 2009, but most remained in the workforce (84.0 employed, 6.5 percent unemployed). About 9 percent exited the labor force in year 3, and that proportion was above the average of the three prior subperiods, which were generally years of strong employment growth. It was not as high as the proportion that exited in 1999-2001, another period of recession. Most choose to exit for reasons other than retirement or disability. Men below the age of 55 had a significantly lower probability of labor-force exit in the third year–4 percent versus 9 percent. Again, the proportion exiting in 2007-09 is higher than in the earlier periods, but the difference is only about one percentage point. Overall, there is some increase in the probability of labor-force exit in the recessions of 2001 and 2009, but the observed magnitudes seem very small for both men and women.

The patterns of change were quite different for individuals age 55 and over. The proportion of men and women exiting the labor force in year 3 is substantially larger, and it appears to show greater sensitivity to the business cycle. For women over the age of 55, the rate of exit in year 3 averages 20 percent over the past decade, and more than two-thirds was due to retirement. The exit rate and the rate of retirement both jump substantially in the recessions of 2001 and 2009. There is also an increase in the proportion that left the labor force for reasons other than retirement or disability, but it remains well below that of younger women. There is an even larger rise in the exit rate for men over age 55, and it is more than accounted for by increased retirement. In comparing the change for men who were in the workforce in 2007 with the comparable group in 2005, there was a 10 percentage point reduction in the employment rate in year 3, more than a doubling of the number transitioning into unemployment (4.5 versus 1.4) and a seven percentage point rise in the proportion who left the workforce. The patterns of change for both older men and women suggest a strong discouraged-worker effect.

Finally, the data on labor force transitions for workers between the ages of 55 and 70 are combined with the survey data of household wealth to more formally explore the effects of wealth losses and changes in employment opportunities. A probit model is estimated in which the binary outcome variable is defined as 1 if the respondent is retired in year 3, and 0 for all other transition states. The estimates include indicator variables reflecting each respondent's age in 5-year categories, educational attainment,

marital status, whether they have a working spouse, and a measure of their permanent income (defined as the average of household income in the three survey waves corresponding to t = 0, t+2 and t-2). In addition, the specification includes the unemployment rate in the respondent's state in year 3 as the measure of labor market conditions. The ratios of household wealth to permanent income in the initial and terminal waves are included, and an alternative specification distinguishes between home equity and other forms of wealth.

The estimates show a consistent positive influence of wealth and unemployment on the probability of retirement, but the marginal influence of wealth changes is less important than variations in labor market conditions. Wealth changes are not a significant influence on the retirement of older males but do affect the retirement of women. Changes in unemployment are statistically significant for both men and women, and the combined regressions suggest that the 2007-09 fall in home values will have a significant delaying effect on retirement.

In sum, the household-level data of the PSID indicate a larger influence of changes in both labor market conditions and household wealth on retirement decisions of older workers than has been typically found in other studies. Those studies are reliant on the cross-section level data of the Current Population Survey and similar data sources. The advantage of the PSID lies in the ability to link household wealth and other specific characteristics with the changes in labor market status. Like the SCF, it also indicates very large wealth losses across a wide range of households of differing economic and social characteristics. Still, these effects are probably understated because the PSID under-represents the richest households with the largest stock market wealth.

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