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Responses of Time-use to Shocks in Wealth during the Great Recession

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Retirees and those soon to retire, their families, the public at large, and the federal government, in particular the Social Security Administration—all have an interest in seeing that retiring is a period of physical, financial, and emotional well-being. Economic preparation for retirement is a key to ensuring the well-being of retirees. The aim of this paper is to contribute to the understanding of economic preparation for retirement by analyzing the extent to which individuals are able to adjust home production in order to smooth consumption and with that economic well-being.

The assessment of economic preparation for retirement has relied on measures of income and wealth, and in some cases on measures of consumption, or spending. But retired persons have considerable time, which can substitute for purchased goods and services to effectively increase their well-being beyond what a measure of spending would indicate. In this paper our intent is to expand on recent work in this area by using data on time-use and the wealth declines in the Great Recession to find whether and to what extent households were able to use time to buffer the welfare effects resulting from the cuts in household spending in response to wealth losses.

Data on wealth and time use are available from a long-running federally funded survey—the Health and Retirement Study and its supplement, the Consumption and Activities Mail Survey. Previous research has not taken full advantage of these sources, the combination of which data has the potential to be much more informative than data on time-use alone since it can show the degree to which spending can be substituted for home production. Furthermore, the data used are longitudinal, that is, they follow specific people over the years, with information on more than one respondent in a household. These data allow us to examine several topics more thoroughly than has previously been possible. First, we investigate the importance of home production and the variation in home production over various background characteristics of the survey respondents. Secondly, we use wealth shocks caused by the Great Recession to estimate how unexpected changes in wealth affect home production (such as

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cooking) and other activities. Finally, we analyze the scope, or potential, of households to substitute market-purchased goods for home production.

Overall, then, we wanted to learn how time-use is related to shocks to wealth, such as occurred during the Great Recession. The central hypothesis was that such shocks—sudden, dramatic reductions in wealth—would cause the people experiencing them to attempt to buffer the effect on well-being by decreasing the expenditure of money (of which they would now have less) on market-produced goods and substituting the expenditure of time to generate more home-produced goods.

This hypothesis was only partially supported by our analyses. Using regression analyses, we did find associations during the Great Recession between increased home production and shocks to homeowners aged 65 to 80, but not to younger respondents.

Time used for leisure is also associated with shocks. In particular, survey respondents subject to wealth losses increased the time they spent watching television. This is consistent with the findings of other researchers that watching TV and sleeping absorb about half the total productive time that is lost to an unemployment shock.

Some of these relationships were reinforced or elaborated upon through simpler correlations. For instance, cross-sectional correlations between time-use categories and categories of market-purchased goods suggest that people substitute time spent on housekeeping and food (cooking) for money spent on those activities (cleaning services, dining out) when shocks make money scarcer. In contrast, persons who spend more money on gardening and home and vehicle maintenance also devote more time to them.

Generally, home production accounts for significant quantities of people's time—over 20 hours per week, according to our data. And respondents with different characteristics (wealth, health, employment status) or at different times (before or during the Great Recession) varied little in the time they spent on home production. At the same time, many people spent money on market production of food (82% dined out), vehicle maintenance (79%), housekeeping (48%), home maintenance (46%), and gardening (35%). Note, however, that most people have no scope for reduction of housekeeping, home maintenance, and gardening expenditures—no spending to cut back so as to allow substitution of home production. Consider people who spend money on a particular activity (say, dining out) and people who never do. The difference between them in the time they spend on home production is very small. So even people who substitute spending on market-purchased goods for home production – people who dine out instead of cooking — are not likely to substitute to any great extent on average.

Overall, these results suggest that there is no population-wide substitution of home production for spending in response to wealth shocks and that the scope for changing spending in relation to home production is rather small. The only potential home production activity with sufficient scope is home cleaning as this takes up about a quarter of all home production

Recent work by other researchers has indicated that shocks in wealth significantly reduce household spending. Our results show that the scope for adjusting home production to wealth shocks is fairly limited. Together these results imply that negative wealth shocks primarily decrease spending without increasing home production. This implies that households experiencing a wealth shock find limited opportunity to buffer the welfare losses resulting from reductions in spending on market-purchased goods by increases in home production.

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