Children, adults and the elderly in the Great Recession:
An economic atlas by age

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Introduction

While there are some signs of improvement, the United States is still in the midst of the worst economic climate since the Great Depression. Those impacts have not been uniform across demographic groups, however, with important differences in experience by age. Age is an important aspect of the financial crisis for many reasons. Impacts on the young will have long-term consequences for human capital investment and earning potential even after the crisis is over. Impacts on the elderly will be an important matter for public policy as so much of elders' health care and other consumption are financed through public programs. Earning, saving and investing by age impacts the national capital supply and the country's ability to come out of the recession period and grow again.

Considering the age dimension of the Great Recession, some researchers have focused on the impacts on older persons (Hurd and Rowhedder, 2011; Coile and Levine, 2011), some on younger (Bell and Blanchflower, 2011). Also, most of the research on age effects looks at one particular aspect of economic life in isolation – labor markets, public sector policies, asset and housing markets, or saving.

To get a complete picture of the Great Recession requires more comprehensive tools. National accounts are an accepted tool for understanding all of the market flows in an economy, allowing us to understand aggregate consumption, production, transfers and saving over time. Building on the macro-level framework of national accounts, the National Transfer Accounts (NTA) framework adds age to this perspective.

In NTA estimates, national-level flows are disaggregated by age group, providing a tool to examine the entire age range and to take a comprehensive view of economic activity. NTA research has been instrumental in developing our understanding of the generational economy – how people produce, consume, share and save resources across age groups.

In this paper, I will explore age profiles of consumption, production, transfers and saving by age in the United States, starting from the pre-crisis years of 2003-2007, through the initial stages of the financial crisis in 2008 and through the resulting period of negative to slow growth, high unemployment, and volatile asset prices. The final year discussed in this abstract is 2009, but the data through 2011 will be available in time for inclusion in the final paper.

The main focus of the paper will be the annual cross-sectional estimates of the Great Recession period, but the long history of data available for the US makes it possible to include some cohort analysis as well. Age profiles of economic activity are available every year going back to 1982, with an additional prior set at 1960. With these repeated cross-sections, pseudo-cohort age profiles can be constructed. These will show not just current impacts and coping mechanisms, but also suggest how current cohorts may be affected by this difficult period well into the future.

Data and Methods

The methodology of the National Transfer Accounts project to disaggregate national accounts by age is well developed (www.ntaccounts.org) and has been implemented in over 30 different countries. It is discussed thoroughly in Lee and Mason (2010) with technical documentation in Mason, Lee, et al. (2009). A brief overview is given here, noting the data sources for the US case that will be presented in the paper.

An NTA age profile is a smoothed schedule of age-specific means for a particular economic activity, scaled proportionally by the same factor across age and sex so that the population total matches the national accounts aggregate value for that activity. The NTA framework includes all types of economic activity: consumption, production (labor income and asset income), transfers, and saving. The main amounts are divided into those flows through the public sector and those through the private sector.[1]

Consumption and income data come mostly from the Consumer Expenditure Survey (CEX), the Current Population Survey (CPS), and government sources. Consumption includes private consumption imputed to individuals within each household,[2] as well as publicly provided consumption of education, health care, and other public services. Labor income includes wages, salaries, fringe benefits, and a portion of self-employment income. The CPS has individual-level data to estimate the age averages for these flows. The rest of self-employment income, along with returns to capital and imputed rent, are included in private asset income, with the household amount attributed to the age of the household head. Public asset income is allocated based on taxes paid.[3]

The difference between income and consumption is made up by public and private transfers or saving/dis-saving: those with an income surplus transfer it to others or save it while those with an income deficit must receive transfers or dis-save by going into debt or selling assets. Public transfers are public benefits (cash and in-kind) and taxes, estimated using government data on benefit recipients or CPS or CEX data on benefits received and taxes paid. Private transfers consist of inter-household transfers, estimated from survey data, and intra-household transfers between co-resident household members, imputed within each household based on an assumed equal sharing model.[4] Saving is the final balancing item, equal to the household's total income and transfers less consumption. This amount is assigned to the household head, by assumption. The household structure, including information on headship, comes from the CEX.

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[1] These exact aggregates do not appear in national accounts for the most part, but they are combinations of national accounts flows. NTA uses national accounts as defined in the System of National Accounts framework (SNA). SNA is a set of definitions of national accounts concepts and a framework for organizing different types of flows, maintained by the United Nations and reviewed and updated periodically (http://unstats.un.org/unsd/nationalaccount/sna.asp).

[2] A variety of methods are used for imputations in the US case. Consumption other than health and education is allocated in proportion to equivalent adults consumption (EAC) weights, equal to .4 for ages 0–4, rising linearly thereafter until 1.0 at age 20, and 1.0 thereafter. Private education expenditures other than post-secondary are allocated with regression models, which regress numbers of persons by age group in households on household expenditure amounts. The regression coefficients are used as weights to allocate household amounts to individuals by age. Post-secondary private education age profiles come from National Center for Education Statistics (NCES). Health consumption is estimated using specialized surveys including the Medical Expenditure Panel Survey and the National Nursing Home Survey.

[3] This is a negative flow, including mostly interest payments on the national debt.

[4] A unitary model is assumed: all of those with surplus income within the household share the same proportion of surplus with those in the household who require transfers.

Illustrative Results

Figure 1 shows the age profiles of labor income for three pre-crisis years (2003, 2005, and 2007; the housing bubble peaked in 2006 and burst in 2007, stock market indices peaked in 2007 and declined sharply in 2008, unemployment started to rise in 2008) and one post-crisis year (2009). In the final paper, the results will cover later years up to and including 2011. (It is a matter of dispute whether the "Great Recession" is over or not even in 2012, but certainly the high unemployment that was a notable feature has continued.) The amounts are shown in 2003 dollars. Those in young and middle ages experienced a greater impact on their earnings than older workers, with the cross-over age at about 60. Older workers actually experienced an increase in average wages from 2007 to 2009. Although the data are not shown here, the increase is due both to increases in labor force participation and higher wages for those working. Older workers may have been motivated by their newly reduced retirement plan balances to return to work, or to stay in the workforce instead of retire. Also, this may be a continuation of the recent trend toward later retirement.

Given the changes in labor income, it is interesting to note that consumption has changed much less. Turning to Figure 2 shows the extent to which increases in public consumption compensated for reductions in private consumption over the period, especially for the elderly. Part of this was a product of the fiscal stimulus package enacted by the federal government which reduced taxes, increased or extended some government programs such as unemployment benefits, and saved others from cuts especially at state and local levels of government. The exact impacts of the stimulus will be explored much more in the final paper. Another aspect of these results that will be explored in the final paper is the effect of household composition on individual consumption. Many families have tried to cope with the effects of the recession by sharing households, benefitting from economies of scale and sharing the risks of unemployment across more potential workers. I will show how household composition has changed by age and how age profiles differ by household composition as well.

The final paper will also give age detail on public and private transfers, asset income and saving.

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Figure 1. Smoothed per capita age averages of US labor income for selected years from 2003 to 2009

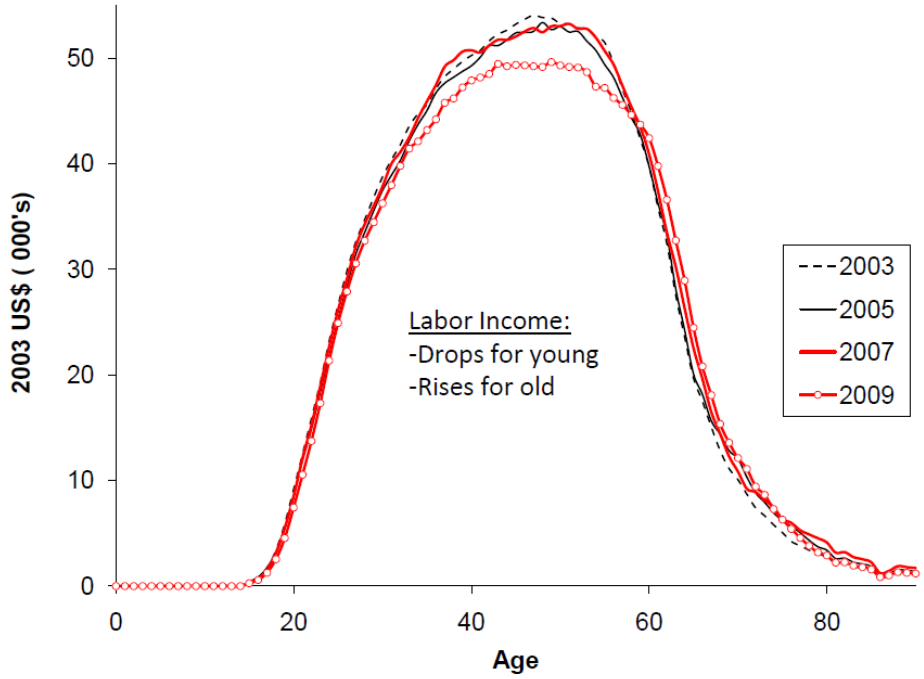

Figure 2. Smoothed per capita age averages of US consumption, 2003 and 2009. Blue lines show private amount, red lines show public amounts. Solid lines are for 2003, the circles for 2009.