

Today's Research on Aging

PROGRAM AND POLICY IMPLICATIONS

Issue 3, May 2007

Savings and the Elderly

Savings strongly influence the well-being of the elderly and the rate of a country's economic growth. But decisions about saving are complex, involving consideration of current circumstances and predictions of future conditions. These decisions reflect the personal situation of the individual making choices between saving and spending, and the regulatory, insurance, and pension environment. This environment is extremely complex and constantly changes in most countries, including the United States. For example, in recent decades, employers have shifted away from defined benefit plans in which they controlled the investment risk and portfolio management. Today, more employers in the United States have instituted retirement savings plans that put complex long-term investment decisions in the hands of individuals.

In one study that included the major tax and transfer programs affecting incentives to work and save in the United States, Kotlikoff and Rapson (forthcoming) conclude that not only are the incentives to save low, but it is nearly impossible for people to understand the incentives to work, save, or contribute to retirement accounts.

The National Institute on Aging (NIA) has sponsored research to investigate how people's savings behavior responds to changes in taxes and public programs. This research includes models that look at a variety of motives for

savings and also data collection that will improve the ability to test assumptions about why and when people save. This newsletter reviews findings from NIA-supported researchers and others.

Saving for Retirement

For most of the last half-century, economists have depicted individual and household saving decisions as a simple life-cycle model. According to this theory, young adults save in order to maintain their lifestyle in old age, at which time their earnings are expected to decline. However, this model fails to predict two prevailing facts about the elderly: Many households reach retirement age with financial assets too small to maintain their standard of living, and most elderly in developed countries keep large amounts of assets until very late in life (De Nardi, French, and Jones 2006).

Several factors may explain why some adults do not save as much prior to retirement and why retirees do not spend down their assets. For example, two-earner couples will reach retirement with multiple sources of income, and the simple life-cycle model does not usually take into account the spouse's expected income. Also, people may well consider personal savings to be less necessary in the presence of Social Security, employer-provided pensions, public assistance, and disability payments. Finally, wealth held in the form of a house can be transformed into income through rent, sale, or borrowing instead of tapping other savings. Perhaps this is why most elderly households maintain home ownership as long as they can, usually until the death of a spouse or entry into a nursing home (Venti and Wise 2004).

Researchers have used a more complex life-cycle model to predict what individual households ought to save, household by household (Scholz, Seshadri, and Khitatrakum 2006). This model takes into account the many factors, including pensions and medical expenses, that influence how much households spend and save. When comparisons are made between each household's optimal amount of savings and what is actually saved, most households are saving more than they need for

In This Issue

- Saving for Retirement
- Precautionary Savings and Bequests
- Savings in the National Economy
- Research, Data, and Policy

This review summarizes research related to the objectives of the National Institute on Aging, with emphasis on work conducted at the NIA demography centers. Our objective is to provide decisionmakers in government, business, and nongovernmental organizations with up-to-date scientific evidence relevant to policy debates and program design. These newsletters can be accessed at www.prb.org/TodaysResearch.aspx.

retirement. Saving more than necessary may mean that households forfeit current consumption such as prescription drugs, or other long-term investments such as education. Fewer than 20 percent of households save less than they should, and most of those generally miss the mark by a small amount.

One implication of these research findings is that when a government increases the generosity of public transfer programs or when housing prices experience a long-term climb, people may reasonably save less. In Germany, for example, the very old have had the highest savings rates of any group, and they still accumulate wealth as they age. Börsch-Supan (1992) concluded that the generous German pension system and the almost complete coverage of health expenses through mandatory health insurance, along with naturally declining consumption in old age, means that consumption just cannot exhaust income flow, so wealth accumulates.

Precautionary Savings and Bequests

The elderly also may continue to accumulate savings and assets until very late in life because they are more certain about the risks they face. A precautionary model of savings implies that individuals who have a history of health problems will save to pay their eventual health expenses. Others, facing a longer life, may save to ensure against expected but unpredictable health costs. This approach suggests that with increasing life expectancy and the likely onset of health problems during later years, savings rates will increase, or at least not decline as rapidly as expected. The risk of living long and facing high medical expenses helps explain savings decisions among the elderly. Taking account of differences—sex, poverty, and medical history—that influence the life expectancy of individuals, De Nardi, French, and Jones (2006) predicted that those ages 70 and older spend down their assets at a slow rate, which is consistent with the U.S. experience.

The bequest model of savings recognizes that many people value the welfare of their heirs enough to accumulate assets for transfer at the time of death. This approach proposes that households that have received or expect to receive bequests treat these gifts as substitutes for their own savings, and therefore, save less out of their own earnings. Some research indicates this is true, and thus reconciles the conflict between research on samples of individuals and crosscountry studies (Weil 1994):

- In examining differences among individuals, studies indicate that the elderly do not spend down their assets significantly faster than young adults.

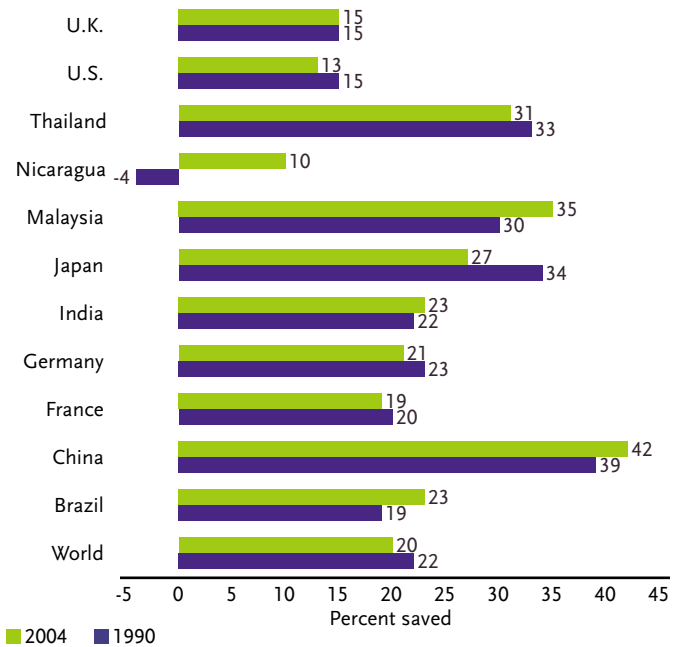
- Studies using country-level data indicate that countries with a large elderly population tend to have a lower aggregate savings rate.

Savings in the National Economy

For a national economy, savings plays a similar role as it does for individuals: providing funds to support investments that cost money now but have returns down the road. Savings rates differ a great deal from country to country and can also change substantially from decade to decade within the same country, as the figure shows. Indeed, the aggregate savings rate in the United States, now about 13 percent of national income, is remarkably low, both historically for the country and compared with many other countries.

When extending the simple life-cycle savings model to an entire nation, the dissavings (spending down of assets) of the elderly should offset the savings of young people. Hypothetically, in a country where the size and age distribution of the population are not changing, this model predicts that the total wage income of the young is the same as the total retirement income of the elderly, so that net national savings are zero. However, if the population age

Gross savings rates vary dramatically across countries and over time.



Note: Gross savings rates are calculated as gross national income less total consumption plus net transfers.

Source: World Bank, *2006 World Development Indicators* (Washington, DC: World Bank, 2006): table 4.8.

structure is changing, as it does when a country becomes more or less populous, then the model predicts that aggregate savings or dissavings occur at the national level. An imbalance between the total income in young households and the total income in elderly households may also take place when economic growth or decline occurs quickly. Much research has indeed confirmed that national savings rates are higher when the working-age population is relatively large and when economic growth is rapid (Higgins 1998; Masson, Bayoumi, and Samiei 1998).

Recent studies have simulated the effect of demographic and policy changes on savings and capital accumulation at the national level (Lee, Mason, and Miller et al. 2000, 2003). One study (Lee, Mason, and Miller et al. 2003) investigated what happens when a country moves from an old-age support system based on transfer of wealth from the young to the old and adopts a system of self-support based on individual savings and asset accumulation. In traditional societies, such as in many developing countries, families provide old-age support by transferring wealth from the young to the old. In a funded pay-as-you go system such as in the United States, there is also a transfer from young adults to the older retired population. Under the simple life-cycle model, a change from either the family or pay-as-you-go pension system to an individual savings scheme has similar effects. Workers who no longer foresee family or public support in old age will save more. In the transition, both increased savings and continued wealth transfers occur. As a result, the elderly may not spend down their assets and the aggregate savings rate will increase. However, as the new system replaces the old, the aggregate savings rate will stabilize at a rate higher than under a system of transfers but lower than the rate observed during the transition period.

Life expectancy in most of the world's countries is now increasing (see table). The economic impact of this long-term change will depend on how saving varies with age. Researchers have investigated the savings effects of long-term shifts in life expectancy by comparing age structures, retirement ages, and savings rates in 57 countries (Bloom et al. 2006). These studies found that retirement ages in most developed countries have stayed nearly constant, either by law or in response to strong social security rules that penalize individuals for retiring before the age at which they become eligible for full pension benefits. In such countries, national savings rates tend to rise along with life expectancy.

Attanasio and Rohwedder (2003) studied the effects of three pension reforms on private savings in the United

Life expectancy in most of the world's countries is increasing.

	1990	2005
World	64	67
Brazil	66	72
China	68	73
France	77	79
Germany	76	79
India	59	64
Japan	79	82
Malaysia	70	74
Nicaragua	64	72
Thailand	67	70
U.K.	76	79
U.S.	75	78

Source: United Nations, 2006 World Population Prospects (New York: UN, 2006).

Kingdom, and found that people increased their private savings in response to reduced public provision of old-age support. This was less true for the youngest and poorest parts of the population. Consequently, if public pensions are reduced, many households will tend to increase their savings to make up for a large part of the loss.

What This Means: Research, Data, and Policy

Saving during the working years is essential, even for low-income workers. Yet the tax and transfer environment in which Americans make their savings decisions is so complex and changeable that virtually no one can figure out the best possible amount to save over the life cycle. In addition, as the U.S. population ages, concern about the solvency of Social Security and the reliability of private pensions will likely focus government more and more on enacting policies that ensure Americans' adequate retirement income.

Research summarized here indicates that people's savings behavior does respond to changes in taxes and transfer programs. Laws, regulations, and public programs have inadvertently created extraordinarily low incentives for personal saving in the United States. To the extent that higher national savings rates are desired, these disincentives may have to be adjusted. However, in order to predict the effects of policy change, researchers must analyze available data to capture the complex environment in which savings decisions are made.

Until recently, relevant household surveys have not included both personal characteristics of savers and features of their

environment, and have only rarely included all components of consumption, leading researchers to measure savings with considerable error. Only in the last 15 years, under NIA sponsorship, have vastly improved data appeared. The American Health and Retirement Study (HRS) now documents all relevant public and private programs, follows individuals and households over time, and includes households' complete consumption expenditures for part of the sample (Hurd and Rohwedder 2006). Countries around the world are now conducting or planning internationally comparable versions of the HRS.

References

Orazio P. Attanasio and Susann Rohwedder, "Pension Wealth and Household Saving: Evidence From Pension Reforms in the United Kingdom," *The American Economic Review* 93, no. 5 (2003): 1499-1521.

David E. Bloom et al., "Demographic Change, Social Security Systems, and Savings," *NBER Working Paper* No. 12621 (October 2006): 1-39.

Axel Börsch-Supan, "Saving and Consumption Patterns of the Elderly," *Journal of Population Economics* 5, no. 4 (1992): 289-303.

Mariacristina De Nardi, Eric French, and John Bailey Jones, "Differential Mortality, Uncertain Medical Expenses, and the Saving of Elderly Singles," *NBER Working Paper* No. 12554 (October 2006): 1-2.

Matthew Higgins, "Demography, National Savings, and International Capital Flows," *International Economic Review* 39, no. 2 (1998): 343-69.

Michael Hurd and Susann Rohwedder, "Life-Cycle Consumption and Wealth Paths at Older Ages," unpublished manuscript (May 2006): 2-16.

Laurence J. Kotlikoff and David Rapson, "Does It Pay, at the Margin, to Work and Save?—Measuring Effective Marginal Taxes on Americans' Labor Supply and Saving," *Tax Policy and the Economy* (forthcoming).

Ronald Lee, Andrew Mason, and Timothy Miller, "Saving, Wealth, and the Transition From Transfers to Individual Responsibility: The Cases of Taiwan and the United States," *Scandinavian Journal of Economics* 105, no. 3 (2003): 339-57.

Ronald Lee, Andrew Mason, and Timothy Miller, "Life Cycle Saving and the Demographic Transition: The Case of Taiwan," in *Population Change in East Asia, Transition*, ed. Cyrus Chu and Ronald Lee (New York: Population Council, 2000): 194-222.

The NIA Demography Centers

The National Institute on Aging supports 13 research centers on the demography and economics of aging, based at the University of California at Berkeley, the University of Chicago, Harvard University, the University of Michigan, the National Bureau of Economic Research, the University of North Carolina, the University of Pennsylvania, Pennsylvania State University, Princeton University, RAND Corporation, Stanford University, the University of Southern California/University of California at Los Angeles, and the University of Wisconsin.

This newsletter was produced by the Population Reference Bureau with funding from the University of Michigan Demography Center. This center coordinates dissemination of findings from the 13 NIA demography centers listed above. This newsletter was written by William P. Butz, president and CEO of the Population Reference Bureau.

For More Information

RAND Labor and Population Program, Aging and Retirement
www.rand.org/labor/aging.html

NBER Economics of Aging Program
www.nber.org/programs/ag/

John Scholz, Center for Demography, Health, and Aging, University of Wisconsin-Madison
www.ssc.wisc.edu/~scholz/Research/recent_papers.htm

Ronald Lee
www.ceda.berkeley.edu/peoplenew/rlee.html

Andrew Mason
www2.hawaii.edu/~amason/

PRB

POPULATION REFERENCE BUREAU

1875 Connecticut Ave., NW, Suite 520, Washington, DC 20009 USA
Tel.: 202-483-1100 | Fax: 202-328-3937
E-mail: popref@prb.org | Website: www.prb.org

Paul Masson, Tamim Bayoumi, and Hossein Samiei, "International Evidence on the Determinants of Private Saving," *World Bank Economic Review* 12, no. 3 (1998): 483-501.

John Scholz, Ananti Seshadri, and Surachi Khitatrakum, "Are Americans Saving 'Optimally' for Retirement," *Journal of Political Economy* 114, no. 4 (2006): 607-43.

Steven Venti and David Wise, "Aging, Housing, and Equity: Another Look," in *Perspectives in the Economics of Aging*, ed. David Wise (Chicago: University of Chicago Press, 2004).

David Weil, "Savings of the Elderly in Micro and Macro Data," *Quarterly Journal of Economics* 109, no. 1 (1994): 55-81.