

**CROSS-NATIONAL COMPARISON OF INCOME AND WEALTH  
STATUS IN RETIREMENT: FIRST RESULTS FROM THE  
LUXEMBOURG WEALTH STUDY (LWS)**

Eva Sierminska, Andrea Brandolini, and Timothy M. Smeeding\*

CRR WP 2007-3  
Released: February 2007  
Draft Submitted: November 2006

Center for Retirement Research at Boston College  
Hovey House  
140 Commonwealth Avenue  
Chestnut Hill, MA 02467  
Tel: 617-552-1762 Fax: 617-552-0191  
<http://www.bc.edu/crr>

\* Eva Sierminska is a research associate and the Wealth Project (LWS) Director at the Luxembourg Income Study. Andrea Brandolini is an economist at the Bank of Italy. Timothy M. Smeeding is the Director of the Center for Policy Research at Syracuse University. The research reported herein was supported in part by the by the LIS and LWS member countries. An earlier version was presented to the 8th Annual Joint Conference of the Retirement Research Consortium “Pathways to a Secure Retirement” on August 10-11, 2006 in Washington, DC. The research reported herein was performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Retirement Research Consortium. The findings and conclusions are solely those of the authors and do not represent the views of SSA, any agency of the Federal Government, The Luxembourg Income Study, the Bank of Italy, Syracuse University, or Boston College. The opinions and conclusions are solely those of the authors and should not be construed as representing the opinions of our employers or sponsors. We thank James P. Smith, Janet Gornick and Axel Borsch-Supan for comments, and Kati Foley, Karen Cimilluca, and Mary Santy for data and manuscript preparation. Please send comments to Smeeding at [tmsmeed@maxwell.syr.edu](mailto:tmsmeed@maxwell.syr.edu).

© 2007, by Eva Sierminska, Andrea Brandolini, and Timothy M. Smeeding. All rights reserved. Short sections of text, not to exceed two paragraphs, may be quoted without explicit permission provided that full credit, including © notice, is given to the source.

### ***About the Center for Retirement Research***

The *Center for Retirement Research at Boston College*, part of a consortium that includes parallel centers at the University of Michigan and the National Bureau of Economic Research, was established in 1998 through a grant from the Social Security Administration. The Center's mission is to produce first-class research and forge a strong link between the academic community and decision makers in the public and private sectors around an issue of critical importance to the nation's future. To achieve this mission, the Center sponsors a wide variety of research projects, transmits new findings to a broad audience, trains new scholars, and broadens access to valuable data sources.

### **Center for Retirement Research at Boston College**

Hovey House  
140 Commonwealth Avenue  
Chestnut Hill, MA 02467  
phone: 617-552-1762 fax: 617-552-0191  
e-mail: [crr@bc.edu](mailto:crr@bc.edu)  
[www.bc.edu/crr](http://www.bc.edu/crr)

#### *Affiliated Institutions:*

American Enterprise Institute  
The Brookings Institution  
Center for Strategic and International Studies  
Massachusetts Institute of Technology  
Syracuse University  
Urban Institute

## **Abstract**

This paper provides a first glance at the role of income and wealth in comparing economic security of older persons in the United States in cross-national perspective. We compare our elders to those in six other rich OECD countries (Canada, Finland, Germany, Italy, Sweden, and the United Kingdom). These countries have diverse social policy systems, with respect to both social insurance and public assistance; and they have very different patterns of private wealth holding. The paper is based on a new source of wealth micro data, known as the Luxembourg Wealth Study (LWS).

In this paper, we first develop a comparable definition of wealth and net worth across nations and then focus our efforts on the inter-country variation in the composition of income and asset packages for those 65 and over, with respect to the main sources in each package. We examine the structure of income and wealth holdings and their joint distribution; income and asset poverty of the elderly; the importance of home ownership in providing security for the elderly; differences in wealth by education; and we provide an initial glimpse at wealth and income inequality in a comparative perspective. We conclude by comparing the risks associated with private assets to those associated with under-funded public pension systems.

## **I. Older Persons in Comparative Perspective**

Considerable progress has been made in reducing poverty and economic insecurity among individuals ages 65 and older in most rich countries over the past fifty years. Older persons are increasingly able to live long and relatively healthy lives free of poverty in relatively secure social and economic situations, and are increasingly less likely to share accommodations with their adult children or to rely on them for direct economic support in old age. Indeed most resource transfers between generations now go from elders to children and not vice versa as was more or less the case in the United States before 1960 (Engelhardt and Gruber 2004; Engelhardt, Gruber, and Perry 2005; Clark, et al. 2004; Smeeding 1999). Still older persons' income poverty has not been eradicated, especially in the English-speaking nations; and women's poverty status in old age is still a major concern in most rich societies (See Gornick, et al, 2006). Indeed even when wealth and income are taken into account in the US, lowly educated, nonworking, single older persons seem to be deprived (Haveman, et al., 2006). However, how does the U.S. experience compare to that of other nations?

So far, most of what we know about elder poverty and well-being in cross-national context has been derived from the Luxembourg Income Study (LIS) data (e.g., see: Smeeding-Sandstrom 2005; Keese 2006; Brown and Prus 2006) from micro simulation of incomes (Dang, et al. 2006) or from harmonized household longitudinal panel data (Burkhauser, et al. 2005). In order to most effectively design a system to further reduce poverty and increase economic security, we need to know more about how older persons live and what other sources of economic support they might have, over and above their annual incomes.

In this paper, we sharpen and focus on sources of economic well-being for the elderly by considering both income and wealth, using the newly available Luxembourg Wealth Study (LWS) database. We extend prior cross-national analyses of older persons' economic well-being by assessing both income and wealth in a harmonized fashion across a number of rich OECD nations. Earlier studies have been limited to only two or three nations (e.g., Banks, Blundell and Smith 2003; Kapteyn and Panis 2003). We investigate the multiple income streams on which elderly persons rely and compare that

to the level and structure of their wealth holdings. We conceptualize the income support system as having four legs: earnings, capital income, private transfers, and public transfers. We capture wealth mostly as a stock (in what we call “wealth packages”), although wealth clearly constitutes a potential income and consumption stream as well.<sup>1</sup>

In order to effectively make this first comparison using both types of resources in the space made available, we have to sketch out our methodology and focus on just a few comparisons. And so, we address several core research questions: How do older persons’ income packages — and their wealth portfolios — vary across countries on average and in particular for lower income older persons, where resources are measured in both absolute and relative terms? How does well-being vary across countries focusing on the joint distribution between income and wealth? To what extent is low income and low education (one proxy for permanent incomes) paired with limited wealth, and does that vary across countries? We will also compare income and asset poverty and both combined to see how likely elders are to experience low-income and meager financial assets. And finally, we will examine how these patterns of within-country disparity in income and wealth vary cross-nationally.

We also want to begin to address some policy questions. To what extent do the pension systems in other countries, where we find larger social retirement schemes, embody policy features that are advantageous for asset accumulation? Is there evidence that these features contribute to variation in the economic well-being of the elderly? And in closing, what can we say about the economic security of elders in the future once the contributions of income and wealth are both taken into account?

Indeed this is exploratory work. Future research will focus in on any number of additional issues. LWS allows one to investigate how health status affects wealth holding and poverty in old age. While consumption is closely linked to both income and assets in old age (e.g., Hurd and Rohwedder 2006), we have not yet derived comparable measures of consumption to go along with our measures of income and assets. We do not assess how needs — e.g., for health care finance — are changing along with assets and incomes

---

<sup>1</sup> We also capture some wealth directly as flows, via the “capital income” component of the income package, but as elders increasingly consume from their accumulated assets, interest rent dividends and capital gains do not capture the full value of assets for economic well being. We also do not measure the rental equivalent value (imputed income) from owner occupied homes in this paper, though it is discussed in the poverty section of the paper.

in the various countries in this paper. Further questions related to gender, age breaks above age 65, race, minority status, ethnicity, and geographic location should also be addressed in future work.<sup>2</sup>

## **II. Brief Literature Review**

Although several literatures cross-cut issues related to older persons economic well-being in comparative perspective, we focus our scan of the literature in two areas: the newer cross-national literature on wealth holding including housing wealth especially, and the research on older person's poverty. In both cases, we concentrate almost solely on cross-national research.

### **Wealth in Cross-National Perspective**

New studies of comparative wealth holdings — many in the form of singular components, such as owner occupied housing and pensions, are just beginning to emerge over the past 5-7 years (Chiuri and Japelli, 2006; Apgar and Di, 2005; Banks, Blundell and Smith, 2003; Kapteyn and Panis 2003). Many of these have been limited because of unavailability of comparable data, or have been limited to two or three countries where each author harmonizes his own data for purposes of making a particular comparison. It should be noted that many of the new and emerging “cohort studies” of older persons (HRS, ELSA, SHARE) will also help fill this comparative data void, but for one or two specific cohorts only. Moreover, the SHARE data is not yet ready for comparisons to the results presented here because household weights and data cleaning have not yet been released. The comparison we do have between the SCF and the HRS data show a close correspondence (Juster, et. al., 1999). Comparisons with ELSA and SCG have not yet been made.

Housing wealth is by far the most studied of these components (Chiuri and Japelli 2006; Apgar and Di 2005; Doling, et al. 2004; Claus and Scobie 2001; Banks et al. 2005). While housing is the most widely held real asset in many countries, its effects on other consumption or on additional wealth accumulations are less generalizable (Apgar and Di

---

<sup>2</sup> In so far as we know, only one other paper (also in draft form) has begun to look into this general topic using the LWS data, focusing on women age 60 and over (Gornick, et al. 2006).

2005). In the United States, reverse annuity mortgages and home equity loans are just now beginning to be used by “home rich but cash poor” elders to access their savings. Even then, this access is not terribly widespread, occurring to less than 10 percent of United States elders in the early 2000’s (Fisher, et al. 2006; Copeland, 2006; see also Mitchell and Pigot, 2004 on Japan; and Hurst and Stafford 2004, on the United States). At the same time, Apgar and Di (2005) report that low-income (bottom 20 percent of elders ranked by income) United States units which own their own homes outright, may still end up spending 25 percent or more on housing due to property taxes, utilities, and upkeep. Thus, ownership is not without direct costs even when the mortgage has been paid off. Indeed one could examine housing vs. income poverty and their joint distribution in cross-national context. The effects of housing on other consumption vary (Carroll 2004; Case, et al. 2001) with MPC’s of 2-8 percent. Similar amounts are found by Catte, et al .2004 for a wider range of OECD nations. The effects of housing wealth on consumption are smaller than those of financial wealth in some studies (Barrel and Davis 2004), but the results vary with the methods used (see Sierminska and Takhtamanova 2006, for an overview). Others have made forays on the extent of financial wealth holdings and their effect on consumption, claiming that the propensity to hold stocks in the United States is more widespread than in other rich nations (Dvornak and Kohler 2003) and therefore has a larger effect on spending.

Evidence of home owning and maintenance of housing wealth has been studied by many analysts in specific countries (e.g., Venti and Wise 2001; and Fisher, et al. 2006, for the United States; Crossley and Ostrovsky 2003, for Canada; Ermisch and Jenkins 1999, in the United Kingdom; Tatsiramos 2004 for six European nations; and finally Chiuri and Japelli 2006, more generally using the LIS data). They find that housing is held long into retirement with the exception of two nations (Finland and Canada) where the transition from owning to renting takes place later in life. In most other nations, rules of housing finance, borrowing, and other national idiosyncrasies have large effects on renting vs. owning across the life cycle (e.g., see Chen 2006; Chiuri and Japelli 2003; Ortalo–Magne and Rady 2005; Martins and Villanueva 2006).

## **Poverty and Income in Cross-National Perspective**

Despite major progress in recent decades, significant pockets of poverty remain among the elderly. The relatively precarious economic position of the elderly in the United States as measured by their incomes (Shaw and Lee 2005; Dang, et al. 2006) is even more evident when we look at cross-national comparative data. Poverty outcomes are markedly better in Canada and in Scandinavian-Nordic countries, than in the United States (Smeeding and Sandstrom 2005; Brown and Prus 2006).

A number of researchers have used the Luxembourg Income Study (LIS) data to analyze broader range income disparities among elders, (Smeeding 2003; Doring, Hauser, Rolf and Tibitanzl 1994; Hutton and Whiteford 1992; Smeeding, Torrey, and Rainwater 1993; Stapf-Fine 1994; Siegenthaler 1996; Smeeding and Saunders 1999). Many of these papers examine the income portfolio of elders (men, women, and couples), and find a balanced package of private or occupational pensions, retirement savings, earnings, and public transfers only at higher income levels. At median and below median income ranges, social retirement pensions or income tested public transfers dominate the income sources of elderly units in every nation.

Another body of literature assesses income trajectories and transitions during older years — although not necessarily with a focus on poverty alone. For example, drawing on the Cross-National Equivalent File, Burkhauser, et al (2005) studied the economic well-being of elders in the United States, compared to those in the United Kingdom, Canada, and Germany. They concluded that, despite diverse social welfare systems, the change in economic well-being in old age is actually remarkably similar across these countries.

In most cross-national research on older person's well-being, income is the main indicator. But in all of these studies wealth is rarely mentioned, though Smeeding (2003) capitalizes interest rent and dividend flows to estimate financial wealth, and he differentiates between homeowners and renters in some comparisons. And the literature on elder consumption across countries is more limited and less well established (see Sierminska and Garner 2002). While recent papers suggest that consumption among older women is both higher than income and more equally distributed in the United States, we have no such estimates for other countries on a comparable basis (Johnson et al. 2005).



In summary, there is a large gap to be filled by papers using the LWS data. This paper is just the tip of a large iceberg of research which will contribute to better understanding the joint effects of income and wealth on well being at older ages.

### **III. Data, Variables, Methods, and Measurement Issues.** <sup>3</sup>

#### **Data**

The empirical work for these analyses is based on data associated with the Luxembourg Income Study (LIS). LIS is a cross-national archive of harmonized cross-sectional micro-datasets from across the industrialized countries. For over twenty years, LIS has collected and harmonized datasets containing income data at the household- and person-level; these datasets also include extensive demographic and labor market data. Currently, the LIS database includes over 140 datasets, from thirty countries, covering the period 1967 to 2002.<sup>4</sup>

All of the data used in this paper are from the Luxembourg Wealth Study (LWS) — a new project that is under development within the larger LIS project. The LWS database contains harmonized wealth micro-datasets from ten rich countries. These wealth datasets also include comparable income data, and we use both components in this paper. The LWS project is still in its pilot phase. The first release of the database will be finalized during 2007 and then made available for public access. Access will be via LIS's remote-access system, as with the LIS income datasets.<sup>5</sup>

In this paper, we include seven countries, each with a LWS dataset from the period 1999-2002. These countries include the United States, Canada, and the United Kingdom; two continental European countries, Italy and Germany; and two Nordic countries, Finland and Sweden. We chose these seven in order to include countries with

---

<sup>3</sup> Additional details are contained in the notes to the tables themselves and in a methodological appendix.

<sup>4</sup> See [www.lisproject.org](http://www.lisproject.org) for a detailed description of the Luxembourg Income Study (LIS), including both the original LIS datasets and the new LWS datasets. See also the first methodological paper from LWS, Sierminska, et. al. (2006a)

<sup>5</sup> Preliminary analyses reveal that poverty rates and income packages based on the income data from these new LWS data itself are very similar to those produced in the LIS data; the cross-national rankings are the same and measures of poverty and inequality are very large. See Niskanen, 2006 for a comparison.

diverse economic outcomes and widely varying social and economic systems. The original datasets that the LWS project harmonized include; for the United States, the Survey of Consumer Finances (SCF) 2001; for Canada, the Survey of Financial Security (1999); for the United Kingdom., the British Household Panel Study (BHPS) 2000; for Italy, the Survey of Household Income and Wealth (SHIW) 2002; for Germany, the Socio-Economic Panel Study (German SOEP) 2002; for Finland, the Household Wealth Survey (1998); and for Sweden, the Wealth Survey 2002 (Sierminska, et. al. 2006a). We do not use the Austria, Cyprus or Norway LWS data in this paper. We also refer to the second United States LWS dataset, the PSID, in some places, but we rely on the SCF for most of the analyses in this paper.

### **Income and Wealth “Packages” — The Aggregate Indicators and Their Components**

Our main income variable used in the income and wealth poverty analyses — is household disposable personal income (DPI). DPI is defined as the sum of total revenues from earnings, capital income, private transfers, public transfers (social insurance and public social assistance) — net of taxes and social security contributions.<sup>6</sup>

In the LWS data, these income sources—the four legs of the income stool, as it were — are defined as follows. First, *earnings* include wages and salaries, as well as income from self-employment activities. Second, *capital income* includes interests and dividends, rental income, income from savings plans (including annuities from life insurance and private individual retirement accounts), royalties and other property income.<sup>7</sup> Third, *private transfers* include occupational and other pensions (e.g., pensions of unknown type or foreign pensions), alimony, regular transfers from other households/charity/private institutions, and other incomes not elsewhere classifiable.<sup>8</sup>

---

<sup>6</sup> Imputed rents and irregular incomes such as one-time lump sums and capital gains and losses are not included in DPI.

<sup>7</sup> Capital income does not include capital gains/losses, which are both excluded from the concept of DPI. See Niskanen (2006) on the exact definitions of disposable income in LIS and LWS.

<sup>8</sup> Private transfers do not include irregular incomes such as lottery winnings or any other lump-sums, which are excluded from the concept of DPI.

Fourth, *public transfers* include *social insurance* (including some universal benefits such as social retirement pensions, unemployment insurance, disability benefits, and family allowances), as well as *public social assistance*, which includes income-tested and means-tested cash and near-cash public income transfers.<sup>9</sup>

The counterpart of DPI, with respect to wealth, is the concept of net worth that consists of financial assets and non-financial assets — net of total debt. Financial assets include deposit accounts, stocks, bonds, and mutual funds. Non-financial assets are broken into two parts: (owned) principal residence and other investment real estate. Finally, total debt refers to all outstanding loans, both home-secured and non-home secured. We do not include pension wealth which has not been realized in the form of a pension flow or converted to accessible financial assets. Finally, business assets are not included as they are comparable for only a much smaller number of nations (see methodological note at the end of the paper and at <http://www.lisproject.org/lws.htm>).

### **Analyzing the Economic Well-Being of the Elderly: Units of Analysis**

In analyzing economic well-being, we limit ourselves to all units with a head or a spouse aged 65 or over. We ignore differentials in holdings among individuals within households (e.g., between spouses) because many sources of income and wealth cannot be disaggregated within households. We analyze only two types of households: all that include elderly persons (i.e., persons age 65 and older) as either the head or the spouse; and single individuals living alone who are age 65 or over as a subset of the larger group. These households may or may not contain additional persons (Appendix Table A-1 and methodological note).

In all of these countries the majority of the members of these households are a couple, either married or cohabiting, although some are elderly female heads living without a spouse/partner but with other persons, and some live entirely alone.<sup>10</sup> The unit of analysis is the household, or all the individuals within such households, which includes

---

<sup>9</sup> Our income measure does not include health care benefits in-kind, even we know that they are large (Garfinkel, Rainwater and Smeeding 2006), nor does it contain in-kind housing benefits in the form of imputed rent. It does include the cash value of having allowances, food stamps, and heating allowances.

<sup>10</sup> This scheme does not explicitly capture one group of elderly: those who are part of extended households and who are neither the head nor the spouse of the head.

some non elderly persons in multigenerational units. Since assets are recorded on a household level, we implicitly assume full sharing of all resources among members of the household. We exclude other households with an elderly person, where neither head nor spouse are age 65 plus. These are most likely low income or frail elders living with adult children, where we assume that the majority of assets in the household belong to the younger generations and not the elders.

The fraction of households which are included in our analyses, ranges from 14 percent in the United States and Canada to 24 percent in Italy (where in the latter there are a number of elders living in multigenerational households). The rest of the countries include 14-21 percent of all households. The decision to exclude households where elders are living with younger generations mainly affects Canada and Italy where 5 percent of all households are excluded from our analyses. Between 4 and 8 percent of households are single elders living alone.

### **Equivalizing Income and Wealth, and Other Data Adjustments**

As is standard in research on income, we “equivalize” the income data—meaning, we adjusted each household's income to account for household size. Incomes are equivalized as follows: adjusted income equals unadjusted income divided by the square root of household size. Although there is a large literature on income equivalency scales, there is much less consensus about how to equivalize wealth (Sierminska and Smeeding 2005). In most of our analyses, we use the same method for wealth as we did for income—in a few places we compare outcomes where wealth is not equivalized.

Incomes were bottom-coded at 1 percent of the mean equivalized DPI and top-coded at 10 times the median unequivalized amount. The wealth variables are not bottom-coded or top-coded and as a result wealth variables (net worth in particular) can contain negative and zero values. Because the top and bottom ends of these wealth distributions may differ across countries, depending on the quality of the wealth survey and the sampling practices among the richest portions of the population, we rely mainly on medians, not means. All observations with missing or zero disposable income or missing net worth were dropped from the sample. Furthermore, when we report actual currency amounts, all amounts are expressed as United States dollars, adjusted by

purchasing power parities (PPPs), using the 2002 OECD individual consumption by households PPPs. Amounts referring to years prior to 2002 were deflated using each country's CPI.

### **Poverty Measurement—Income and Wealth**

For purposes of international comparisons, poverty is usually captured in relative terms.<sup>11</sup> When analyzing income, most cross-national studies define the poverty threshold as one-half of national median (equivalized) income. In this study, we use 50 percent of median household income (of the whole population) to establish our national relative poverty lines. The 50 percent line is closest to the Canadian Low Income Cut Off (LICO) standards. It is above the ratio of the official United States poverty line to median American household cash income which was about 30-35 percent in 2000 and 2002 (Smeeding 2006) and below that used in the European Union where the poverty line is set at 60 percent of median income.<sup>12</sup>

While there is considerable agreement on the appropriate measurement of income poverty in cross-national context, there is no such consensus on asset or wealth poverty measures. For this paper, we have chosen a poverty definition of households with financial assets below one quarter of adjusted median household incomes (or one-half of the poverty line) for the whole population. Thus, households without enough financial assets to support themselves for six months at a poverty line income level are deemed asset poor. We do not explore other measures here, e.g. those based on wealth alone (such as financial assets less than half of median liquid assets, or net worth less than half of median net worth). In future work we intend to explore various measures that might capture absolute as well as relative wealth poverty.<sup>13</sup>

---

<sup>11</sup> For a discussion of the merits of using relative versus absolute poverty in cross-national research, see Kenworthy 2004; Smeeding, Rainwater and Burtless 2001.

<sup>12</sup> While we use only the 50 percent definition in this paper, others -- including the United Kingdom and the European Union -- have calculated poverty rates for elders based on 60 percent of the median income (Atkinson et al. 2002; Bradshaw 2003). In other papers we use both the 40 and 50 percent cutoffs, e.g., Gornick et. al. 2006.

<sup>13</sup> Haveman and Wolff (2004) and Caner and Wolff (2003) have analyzed absolute wealth poverty —but for the United States only. Haveman and Wolff (2004) defined “a household with insufficient assets to enable it to meet basic needs (United States official poverty line) for a period of time (three months) to be

## IV. Results

We begin by presenting a set of basic results followed by discussion in section V. Descriptive statistics are followed by deeper analyses of income and wealth for poor and non-poor units, housing values, the relationship between education and net wealth, and the joint distribution of income and wealth. Readers should keep in mind that wealth values, e.g., for homes vs. financial wealth, may be sensitive to the year and date at which data are recorded.

### **Openers: Asset Participation and Wealth Holding**

Patterns of asset holding and portfolio composition among older household units are more similar in terms of prevalence than in level or composition (Table 1).<sup>14</sup> Excluding Germany (due to its bottom code for financial assets), only Italian elder households are 75 percent likely to hold some form of financial assets. In other nations financial asset holdings range from 82 percent (United Kingdom) to 95 percent (United States). Almost all of those with such assets hold deposit (savings or checking) accounts. Stock ownership is far less prevalent, except for Finland, Sweden, and then the United States. The Swedish households are most likely to hold stocks, bonds and mutual funds, perhaps as a holdover from the “third tier” of their universal defined contribution retirement accounts (Sunden 2006). While financial asset holdings are widespread, they account for over 40 percent of household portfolios only in Sweden and the United States, where financial wealth is 44 percent of the total wealth portfolio (Table 1, Panel B). While the Swedish and the Finnish households are more likely to hold stocks than are United States elder households, they are of lesser value relative to other assets than in the United States.

Non financial assets figure heavily in the asset position of all elderly households, especially when looking at ones principal residence. German and Swedish households are least likely to own their own homes. United States elders are most likely to do so. In

---

asset poor.” They primarily have used a definition of liquid assets and we have chosen a similar time frame, three months, but a higher base poverty cutoff.

<sup>14</sup> Simply stated, ownership is one way to consider non financial assets, another is valuation.

Finland, a full third owns other residences—most likely summer or vacation homes, a pattern also prevalent in the United States and Italy. Only in the United Kingdom do less than 10 percent of elderly headed households own other real estate.

Non-financial assets make up the major part of all elder portfolios, adding up to 83 percent or more of the total value of assets in Finland, Italy, and Germany, but less than 60 percent in the United States. Despite its widely acknowledged role in elder wealth holding, the value of an own home for United States elderly is still only 35 percent of their total portfolio, but 55 percent or more in all other nations. Finland leads in the importance of the aggregate value of other real estate, but the United States is not far behind.

Debt holding among elderly households is most likely to be found in the United States (49 percent), Sweden (39 percent), and Canada (32 percent), we suspect for tax reasons, but also depends on the availability of these loans to the elderly. The majority of elder debt is held in the form of home loans and in the aggregate, debt values are 5 percent or less of the elder total wealth portfolio.

### **Magnitudes, Values, and Composition: Income and Wealth**

Median adjusted incomes for elder households (in 2002 PPP adjusted dollars) are remarkable similar in the countries we study (Table 2). In Finland and Sweden, they have the lowest relative incomes, but the variance across nations is relatively small. In income terms the elders are 10-15 percent less well off at the median compared to the whole population; and single elders typically have incomes  $2/3$  the value of the entire population. The PPP values of these incomes for the median unit are roughly the same, varying only from about \$13,800-20,043 for all households and from \$ 10,600-14,900 for singles. The United States is at the top of these rankings, as it should be since its GDP per person is 20-25 percent larger than that in the other nations compared here. Note that the overall median incomes (last two columns of Panel A), on which income and wealth poverty rates are based later in the paper, are also quite compressed. Excluding Italy, this suggest that the relative poverty measures we use are not very different from any absolute poverty measure which are also based on median incomes, e.g. using the overall average

adjusted income per equivalent adult of \$19,061 as a basis for calculating absolute poverty.

Whether mean or median incomes are used similar conclusions can be drawn (Table A-2). For example, the elders are about 10 percent less well-off at the mean compared to the whole population. Finland and Sweden once again, have the lowest relative incomes and the variance across nations is smaller than before. Single elderly households fare only a few percentage points better when the measure is based on mean rather than the median. The range of income values based is slightly broader using the mean, as it varies from \$16,561-\$28,028 for all elderly households, and \$11,536-\$21,521 for singles. When these values are compared as a percentage of the average there are virtually no differences in the country rankings based on the two measures.

In contrast to median incomes, median wealth holdings vary by a much greater degree. Of course, owing to the life cycle, net worth is much larger for elders than it is for the average household, with two exceptions: Germany, where homeownership and home values are relatively low for single elders<sup>15</sup> and Italy where there are more multigenerational households. For elderly households, the United States is the wealthiest nation in both relative and absolute terms. Some of this difference may be due to the high wealth sub-sample in the United States SCF survey.<sup>16</sup> (Repeating this exercise using means yields similar results (Table A-2 Panel B). Italy and the United Kingdom are next most rich, while the Swedish and Finnish households have the lowest asset values for elders. Single elder Germans are by far the least well-off in net worth terms, followed by the Swedes.

The data on net worth for the entire population presented in the final column of the table paint a very different picture. The median net wealth holdings of all households are very different than those of elders. Italian real estate and United Kingdom wealth holdings make them the richest, while the United States is now below the average nations median and not much different from Canada or Germany. These results suggest that we

---

<sup>15</sup> Much of the difference between Germany and the others might be explained by the vestiges of World War II and its effects on the German housing stock.

<sup>16</sup> For instance, these results do not change at all using median PSID values (which are not shown but which are very close to median SCF values) for these same wealth measures.



might find very different life cycle wealth portfolios across these nations (see Sierminska, Brandolini and Smeeding 2006a).

The components of income and wealth are shown in Table 3. The contrasts in income packages are large. Earnings are largest in the United States and Canada where retirement ages are latest and larger fractions work at older ages. Declared income from assets is also much larger in the United States (23 percent) than in other nations, with Finland second (15 percent). Private transfers — mainly occupational pensions — are largest in Finland, where there is some question as whether to count such pensions as private or public due to their mandatory employment related nature, and in Canada and the United Kingdom. Combined social insurance and social assistance is smaller in the United States (and Finland) than in other nations — 27 percent vs. 65-69 percent in Sweden and Germany. In terms of the 4 legged stool metaphor — the income legs are the most even in the United States the United Kingdom and Canada, while other nations rely to a greater extent on public transfers. The legs of the stool are very different — shorter or longer — in other nations.

Wealth packages are simply presented in the middle and bottom of Table 3 using the same categories as in Table 1. Here we contrast average equivalized values (Panel B — similar to unequivalized values in Table 1) with medians (Panel C). The differences between these snapshots are largely due to differences in wealth distributions across and within nations. Indeed, the “average” values in Panel B are very similar to the “averages” in Table 1. The “median” household estimates in Panel C are sometimes very different. For instance, while home values are 35 percent of average total assets of the U.S. elderly, households make up 70 percent of the portfolio for the “average” (median) American household. Owned homes are the major asset for the ‘average’ or ‘middle’ household everywhere but Sweden and at the median in Germany (Panel C) a result of low homeownership in these nations. Financial assets are therefore more prevalent in Sweden and Germany than in other nations. Debt, mainly housing debt, is much larger for the average older American or Canadian household than in other nations, especially Italy and Finland where we expect that most elders’ homes are owned outright.

## **Home Ownership and Value**

We take a closer look at home (principal residence) values in Table 4, for elders and for all households (Panel A), and among the income poor (Panel B). As we expected, owning homes is important and owning them debt free is highly prevalent for elders in all of these nations. Interestingly, amongst owners, United States elders are least likely to own their equity outright. While the United States elders are most likely to own a home, equity in these homes is not of the highest value, whether we adjust for the numbers living in each household (equivalized values) or not. While fewer German or British elderly households own their own homes, they are of higher equity values than in the United States. The values of homes in Sweden and Finland are much less (and the homes are also somewhat smaller, we expect). Homeownership patterns are similar among single elderly, and while home values are less, outright ownership is slightly more prevalent for this group. These patterns are similar to those found elsewhere in the literature (e.g., see Chiuri and Japelli 2006 for the same countries using the LIS data; and Fisher, et al. 2006 for the United States alone).

Home ownership amongst poor elders (those with incomes less than half the median in Panel B) is usually lower, but still substantial. Outright ownership is high, especially in nations which provide mortgage relief to low income elder owners (Finland, Italy). Home equity for poor owners is lower than for the entire elder population, but is still an asset of considerable value, especially in the United Kingdom and Germany, whether we use equivalized or unequivalized values.

## **Financial Assets**

Patterns of financial wealth holdings are also examined in Table 5, with median values given for both those with positive wealth holdings and for all elders. Values for all households (aged or not) are also given and all values are equivalized. Even among those with positive holdings only, median values are modest among elders. Elders in the US, Germany, and Sweden who hold financial assets hold just over \$20,000 in financial wealth at the median. In all other nations, holdings are less — under \$10,000 in Canada, Finland, and Italy. Moreover these holdings are not very different for single elders than

for all elders. Counting the zeros by averaging over all units reduces median values even further, especially in countries with fewer positive wealth holders.<sup>17</sup>

Among the elderly poor, liquid asset holding is both relatively and absolutely small in all nations, except Sweden and Germany.<sup>18</sup> In all the rest of these countries, low income or poor households — elderly, single elderly, and all households, have little in the way of financial assets. It is surprising to find high levels of liquid assets among the elder households, poor and non-poor, in the most generous social retirement spending nation, Sweden. It appears that while home ownership may be important to low income elders in most nations, liquid assets are not very important or plentiful across nations whose social security and income maintenance systems differ substantially. Some of these differences may be traced to their treatment of liquid assets for targeted benefit eligibility or other “means tested” programs, including long-term care for the frail aged.

### **Income and Asset Poverty**

Both incomes and assets provide consumption support to low-income elders. High-income poverty needs to be considered in light of other sources of consumption support from assets, especially from liquid assets. The 50 percent of median poverty line is high by United States standards, as the United States poverty line is now down to about 30 percent of median income (Smeeding 2006, Appendix Table 1); and so the 50 percent of median line provides higher income poverty rates than do United States standards. Of course, both the 30 and 50 percent lines are below the EU’s 60 percent of median poverty measure.

United States leads in the elder income poverty, with a rate of 23 percent (Figure 1, sum of Income Poor and Income and Asset Poor), compared to income poverty rates of 11 percent or below for all but United Kingdom elders. The LWS income poverty rates are consistent with earlier LIS papers using the LIS income data (Smeeding and Sandström 2005; Niskanen 2006). Asset poverty (equivalized liquid assets less than 25

---

<sup>17</sup> There is some concern about response notes for financial assets in these surveys, but all datasets are adjusted for item non reporting using imputation

<sup>18</sup> The German data is collected only for those who have liquid assets in excess of \$2,500 Euros. Thus the true median value for all wealth holders is probably not zero and the per cent holding financial assets is higher.

percent of equivalized median income) is lowest in Sweden, followed by the United States, and is 40 percent or more in all other nations.

Combining these concepts, we find the worst off, those both income and asset poor, are below 10 percent in all nations, except for the United States where the income and asset poverty rate is a little over 15 percent. Accounting for liquid assets reduces poverty by the most in the United States (from 23.2 to 15.4 percent), but also in the United Kingdom and Sweden. It has little effect in other nations. Clearly liquid asset holdings in the United States at the median (Table 5) are greater than in the EU where greater reliance on the public sector for income support and security (Table 3) makes owning financial assets less important for economic security in old age. This is not to deny the political risk of lower future social retirement benefits in nations such as Germany and Italy (Burtless 2004; Shoven and Slavov 2006). But still in the end, counting both income and assets, the United States has the highest fraction of at risk older persons counting both income and assets.

Among the income and asset poor, homeownership among the elderly is nearly as prevalent (Table 6) as among the income poor only. The single elderly do not fare as well, particularly in Canada and Germany, where less than 30 percent of the income and asset poor own a home. Median home values for the income and asset poor elderly are smaller than for all households, whereas the median income poor elderly had a higher home value than the median household. Except for the US and Canada almost all of the elderly own their homes outright.

In future analyses one may want to impute a rental value for owned homes to measure the benefit to low income elder of living “rent free” .However, do not forget that there are also real costs to owning which have to be reckoned with: property taxes, utilities, and upkeep. If United States low income elders, who own their own homes outright, end up spending 25 percent or more on these other housing costs, these need to also be kept in mind when making such estimates (Apgar and Di, 2005). For a very good beginning attempt at valuing imputed rent in a European context, see Frick, et. al. (2006).

## **Net Worth and Education**

We now take a quick look at asset holdings by educational status, as a proxy for permanent income and long-term health status. We employ a simple cross-national convention (see methodological note) to break elder households into three groups according to the highest level of education achieved by an elder head or spouse. In the United States this roughly equates to less than high school (low education); high school grad and some secondary education but no secondary degree (middle); and at least one tertiary education degree (high). We examine both the value of assets (Figures 2) and home ownership and value (Figure 3).

Except for Italy, net worth rises with level education. The slopes are steepest in the United States and the United Kingdom, and the variance in asset values increases with education. Virtually, all lowly educated elders in these countries have a median value of net worth of about \$50,000, but higher educated elders have median values that run from \$240,000 in the United States down to \$100,000 in Sweden. Italy, where home values are the major source of net worth, shows median net worth values of \$195,000 to 210,000 for higher and medium education, suggesting there is not much wealth return to higher education amongst these elder cohorts. The patterns of financial assets are similarly sloped, but at a much lower level and Italy is no longer an outlier. In all nations, the median lowly educated elder household has about \$10,000 or less in financial assets; the median medium educated elder household has \$22,000 or less. Only at higher education levels do we see a big spread and there the United States has a median value of almost \$70,000 while the next highest nation is at \$32,000. One question for future research is why the Swedish pattern looks so different from the others, both because of the higher level for lowly educated and the relatively modest accumulation for higher educated elder adults.

Homeownership is the most universal asset as we have seen, and the gradient in the education relationship is fairly flat at the top of Figure 3a. Indeed only Germany stands out as a nation that has an entirely different level of ownership at all education levels for this cohort of elders. The steepest slope is in the United Kingdom where only 61 percent of those in lowly educated households are living in an owned home, compared to 89 percent of those in highly educated households, and this slope is likely the

consequence of low cost public or ‘council housing’ for low-income households in the United Kingdom. Interestingly, the lines are reversed at the bottom of the Figure, with Germany having the highest value owned housing at each education level, followed by the United Kingdom and Italy.<sup>19</sup> The United States which has the steepest slope in home values is in the middle of the pack when it comes to values for owned homes amongst these elder cohorts.

### **Income and Net Worth Inequality**

The literature on economic well-being suggests that the relationship between income and wealth is complicated in the United States (Juster, Smith and Stafford 1999; Venti and Wise 2000). Income and wealth inequality to say the least do not go hand-in-hand and often high income and low wealth, or vice versa, is evident. We now look at this phenomenon from a cross-national perspective. Economic theory and aggregate savings evidence suggest that median wealth rises when calculated within each adjusted disposable income quartile, and indeed this is the case (Figure 4). The United Kingdom and United States have steep income wealth profiles; Canada and Sweden have much flatter profiles, and the other nations are found in the middle. Indeed, high income Brits have higher net worth on average than do high income Americans, but both nations well to do hold twice as much as in Canada, Finland, or Sweden.

These calculations still ignore the variance within each income or wealth quartile. While we could plot the variance in wealth by income quartile in many ways, we have decided to examine the income position of elderly households within three wealth groups: the top and bottom quartiles separately, and middle two wealth quartiles together (Figure 5). While 67-82 percent of high wealth households are found in the top income quartile, 11-28 percent of high-wealth holders are also found in the bottom income quartile (Figure 5a). And while few low-wealth elders (6 percent or less) are found in the top income quartile, only between 25 and 38 percent of low-wealth quartile households, excluding Sweden, are also found in the lowest income quartile (Figure 5b). Moreover, a higher fraction of middle two quartile wealth holders are found in the lowest income

---

<sup>19</sup> Again we speculate that the effect of World War II on the housing stock in Germany has much to do with the patterns we observe amongst this cohort of elders.

quartile than in the highest income quartile in every nation except Germany (Figure 5c). Thus while high-income, high-wealth households exhibit the highest level of “state dependence,” the correlation between income and wealth status is much less clear for other income and wealth quartiles.

## **V. Discussion**

This paper has provided the first, albeit brief and partial, ‘first glance’ at the joint asset and income position of older Americans in cross-national perspective. The data and definitions that we use need to be compared to other sources of similar data, such as those derived from the SHARE, HRS and other cohort data bases, as soon as they are ready for comparison. Still, in contrast to the well-known studies of income poverty and distribution, the LWS database allows us to also investigate asset holdings and asset poverty for elders (and other groups) in ten countries. Here we have selected seven countries for our initial foray. While much more pointed, directed, and well-hypothesized research papers will follow, we have attempted here to separate “signal” from “noise” as best we can and to find interesting patterns for future exploration in cross-national research

The four legs on the American income stool are shaped quite differently from those in other countries. United States elderly households on average rely much less on public social retirement pensions and much more on earnings and asset accumulations than do their counterparts elsewhere. While they are on average wealthier than their counterparts in other rich countries, and have less liquid asset poverty, U.S. elders also have the highest variance in these financial assets (-or ‘beware of the mean’- and median to quote Quinn 1987). Thus low-income American elder households are also wealth disadvantaged with respect to liquid assets, though a substantial fraction own their own homes, again with varying values.

Wealth is correlated with education, but home ownership is more or less universal among most elder households in all nations, save Germany. The value of these homes is an issue that deserves much more attention as homes both provide a growing store of value as an investment, and a flow of below-market-cost housing services (Fisher, et. al.,

2006). While issues related to the maintenance cost of owned housing( property taxes, utilities and other non-mortgage cost) and fungibility of housing wealth in comparative context need to be resolved, owned homes are probably the most important sources of wealth for most elder households in all the nations we study.

There is still much to be investigated here. A fuller picture of the nexus between assets and incomes is needed. Older women can be investigated separately (e.g., see Gornick et. al. 2006), and also the wealth gap between those who are members of ethnic/racial minorities and those who are not could be explored. We also want to take account of some of the elderly’s major needs, especially their financial needs related to healthcare, where the United States places a very large absolute, relative, and comparative burden on its elders in terms of out-of-pocket payments, self-insurance, and co-payments, for both acute and long-term health care (Smeeding 2003). Still, the picture that we have sketched here is highly relevant to policy issues.

Clearly, relative reliance on private versus public income sources varies across these countries. While private sources — earnings and assets — are more prevalent in the United States, especially among “middle income” elder households, and while this self-reliance may be commendable, it is also not universal. In so far as we can see, the private legs of the stool (earnings, private pensions, income from assets) are much more likely to vary both across and within countries than are the public sources.

While we recognize the risks associated with defined-contribution (unfunded) social retirement programs (Shoven and Slavov 2006), this “public leg” is so far more stable, more reliable, and more inflation-, injury-, and “bad labor market”- protected, than are the private legs of the stool. And in cases where social retirement pensions are being scaled back, the cuts are very progressive, mainly affecting the well to do elders and not this remaining on the lowest tier plans (Keese 2006). Indeed the country with the strongest public leg, Sweden, seems to perform better in fighting poverty *and* in shoring up liquid assets than does the United States.<sup>20</sup>

Many current old-age pension reform proposals, both in the United States and in other countries, could be better designed to meet the needs of the most vulnerable elders,

---

<sup>20</sup> One item that has clearly emerged is the difference between Sweden and other nations in terms of liquid assets and their relatively flat distribution and more universal spread in that country compared to the others.



especially older women living alone and those who are separated or divorced (Liebman, McGuineas and Samwick 2005; Favreault, Sammartino, and Steuerle 2002; Favreault and Steuerle 2006; Smeeding 1999). Indeed, the economic vulnerability of low-income elderly, especially older women might be increased if the U.S. moves toward partial privatization, because such a system would likely be less redistributive toward retirees with low lifetime earnings compared to the current system (Engelhardt and Gruber 2004). On the other hand a more universal “add on” defined contribution public pension system might leave a very high fraction of United States elders looking more like their Swedish counterparts in terms of widespread and substantial liquid asset holding at some future point.

Some policy implications shine through even after first efforts with new cross-sectional data. Governments in rich countries ought to provide a safety net for the elderly, with adequate and well-maintained minimum social security benefits (as is done in Canada) to ameliorate income and asset vulnerability. For instance, loosening asset limits and providing more adequate benefits in the SSI program would go a long ways toward bringing economic security and a steady reliable flow of cash income to elderly near the bottom of the income and wealth distributions in the United States (Clark et. al. 2004; Smeeding 2003).

Finally, promoting greater levels of home ownership can provide additional real economic support in old age. As home values increase among the old, we need to identify better and more reliable methods, such as reverse-annuity mortgages or borrowing against the value of their own homes, so that cash-poor but housing-rich older Americans can access these assets to meet their everyday needs. These arrangements are not going to be enough to help the income and asset poor in the United States today, simply because their home equity is too low (Table 6). But they may well help the next generation of older Americans cope with longer lives and low savings. While such financial devices are beginning to make headway in the United States (see Copeland, 2006), they are still not widespread. And they have made hardly any progress in the other rich nations studied here.

## References

- Apgar, William C., and Zhu Xiao Di. 2005. "Housing Wealth and Retirement Savings: Enhancing Financial Wealth for Older Americans." W05-8. Joint Center for Housing Studies, Harvard University.
- Atkinson, Anthony B., Bea Cantillon, Eric Marlier, and Brian Nolan. 2002. *Social Indicators: The EU and Social Inclusion*. Oxford: Oxford University Press.
- Banks, James, Richard Blundell, Zoe Oldfield, and James P. Smith. 2005. "House Price Volatility and Housing Ownership Over the Life Cycle." Discussion Paper 04-09. University College London February 2005.
- Banks, James, Richard Blundell, and James P. Smith. 2003. "Understanding Differences in Household Financial Wealth between the United States and Great Britain." *Journal of Human Resources* 38 (2): 241-279.
- Barrell, Ray, and E Philip Davis. 2004. "Consumption, Financial and Real Wealth in the G-5." Discussion Paper number 232. National Institute of Economic and Social Research. May, 2004.
- Bradshaw, Jonathan. 2003. "Using Indicators at the National Level: Child Poverty in the United Kingdom." Unpublished manuscript. Social Policy Research Unit. University of York, Heslington, York, United Kingdom. November.
- Brown, Robert L., and Steven G. Prus. 2006. "Income Inequality over the Later-life Course: A Comparative Analysis of Seven OECD Countries." Luxembourg Income Study Working Paper No. 435.
- Burkhauser, Richard V., Philip Giles, Dean R. Lillard, and Johannes Schwarze. 2005. "After Death Do Us Part: An Analysis of the Economic Well being of Widows in Four Countries." *Journal of Gerontology* 60B (5) (September): S246-S328.
- Burtless, Gary. 2004. "The Age Profile of Income and the Burden of Unfunded Transfers in Four Countries: Evidence from the Luxembourg Income Study." LIS Working Paper 394.
- Caner, Asena, and Edward N. Wolff. 2004. "Asset Poverty in the United States, 1984-99: Evidence from the Panel Study of Income Dynamics." *Review of Income and Wealth* 50 (4) (December): 493-518.

- Carroll, Christopher. 2004. "Housing Wealth and Consumption Expenditure." Presented at the Academic Consultants' Meeting of the Board of Governors of the Federal Reserve System.
- Case, Karl E, John M. Quigley, and Robert J Shiller. 2001. "Comparing Wealth Effects: The Stock Market versus the Housing Market." 8606. National Bureau of Economic Research.
- Catte, Pietro, Nathalie Girouard, Robert Price, and Christopher Andre. 2004. "Housing Markets, Wealth and the Business Cycle." 394. OECD Working Paper. December.
- Chen, Kaiji. 2006. "The Welfare Implications of Social Security for Homeowners." Univerisity of Oslo. March.
- Chiuri, Maria Concetta, and Tullio Jappelli. 2003. "Financial Market Imperfections and Howm Ownership: A Comparative Study." *European Economic Review* 47: 857-875.
- Churi, Maria Concetta, and Tullio Jappelli. 2006. "Do the Elderly Reduce Housing Equity? An International Comparison." Centre for Studies in Economics and Finance (CSEF) Working Paper No. 158. Salerno, Italy: Department of Economics and Statistics, University of Salarno. May.  
<http://www.dise.unisa.it/WP/wp158.pdf>.
- Clark, Robert L., Richard V. Burkhauser, Marilyn Moon, Joseph F. Quinn, and Timothy M. Smeeding. 2004. *The Economics of an Aging Society*. Oxford, UK: Blackwell Publishing.
- Claus, Iris, and Grant Schobie. 2001. "Household Net Wealth: An International Comparison." Working Paper 2001/19. The Treasury of New Zealand, Wellington.
- Copeland, Craig. 2006. "Debt of the Elderly and Near Elderly, 1992-2004." *Employee Benefit Research Institute* 27 (9) (September)
- Crossley, Thomas, and Yuri Ostrovsky. 2003. "A Synthetic Cohort Analysis of Canadian Housing Careers." Social and Economic Dimensions of an Aging Population Research Paper, 107. McMaster University.

- Dang, Thai-Thanh, Herwig Immervoll, Daniela Mantovani, and Holly Sutherland. 2006. "An Age Perspective on Economic Well-being and Social Protection in Nine OECD Countries." OECD Social, Employment and Migration Working Paper, 34. Paris. June.
- Doling, John, Marja Elsinga, Peter Boelhouwer, and Janet Ford. 2004. "Playing Snakes and Ladders: The Gains and Losses for Homeowners." Presented at ENHR Conference, Cambridge, England.
- Doring, Diether, Richard Hauser, G. Rolf, and Rank Tibitanzl. 1994. "Old Age Security of Women in the Twelve EC Countries." *Journal of European Social Policy* 4 (1): 1-18.
- Dvornal, Nikola, and Marion Kohler. 2003. "Housing, Wealth, Stock Market Wealth and Consumption: A Panel Analysis for Australia." Economic Research Department Discussion Paper 2003-07.
- Engelhardt, Gary V., Jonathan Gruber, and Cynthia D. Perry. 2005. "Social Security and Elderly Living Arrangements: Evidence from the Social Security Notch." *Journal of Human Resources* 40 (2) (Spring): 354-372.
- Engelhardt, Gary V., and Jonathan Gruber. 2004. "Social Security and the Evolution of Elderly Poverty." NBER Working Paper No. w10466. Cambridge, MA: National Bureau of Economic Research. May.
- Ermisch, John, and Stephen Jenkins. 1999. "Retirement and Housing Adjustments in Later Life: Evidence for the British Households Panel Study Survey." *Labour Economics* 6: 311-333.
- Favreault, Melissa, and C. Eugene Steuerle. 2006. "New Approach to Social Security Auxiliary Benefits." Presented at RRC Conferene, Washington, DC.
- Favreault, Melissa, Frank Sammartino, and C. Eugene Steuerle. 2002. "Social Security and the Family: Addressing Unmet Needs in an Underfunded System." Washington, DC: Urban Institute Press.
- Fisher, Jonathan, David Johnson, Joseph Marchand, Timothy M. Smeeding, and Barbara Boyle Torrey. 2006. "No Place Like Home: Older Adults, Housing, and Life-Cycle." *Journal of Gerontology: Social Sciences*.

- Frick, Joachim, Jan Goebel, and Markus M. Grabka. 2006. "Assessing the Distributional Impact of Imputed Rent and Non Cash Employee Income in Micro-data: Case Study Based on EU-SSILC(2004) and SOEP(2002)." Presented at Conference on Income and Living Conditions, Helsinki, Finland.
- Garfinkel, Irwin, Lee Rainwater, and Timothy M. Smeeding. 2006. "A Reexamination of Welfare State and Inequality in Rich Nations: How In-Kind Transfers and Indirect Taxes Change the Story." *Journal of Policy Analysis and Management* 25 (4)
- Gornick, Janet, Teresa Munzi, Eva Sierminska, and Timothy M. Smeeding. 2006. "Older Women's Income Packages and Wealth Portfolios: The Five Legged Stool in Cross-National Perspectives." Luxembourg Income Study. October.
- Haveman, Robert, Karen Holden, Barbara Wolfe, and Andrei Romanov. 2006. "The Sufficiency of Retirement Savings: A Comparison of Two Cohorts of Retired Workers at the Time of Retirement." July.
- Haveman, Robert, and Edward Wolff. 2004. "The Concept and Measurement of Asset Poverty: Levels, Trends, and Composition for the US: 1983-2001." *Journal of Economic Inequality* 2 (2) (August): 145-169.
- Hurd, Michael, and Susann Rohwedder. 2006. "Some Answers to the Consumption-Retirement Puzzle." 342. RAND. January.
- Hurst, Eric, and Frank Stafford. 2004. "Home is Where the Equity Is: Mortgage Refinancing and Household Consumption." *The Journal of Money, Credit and Banking* 36: 985-1014.
- Hutton, Sandra, and Peter Whiteford. 1992. "Women and Social Security in Retirement: A Comparative Analysis." Luxembourg Income Study Working Paper No. 82. Center for Policy Research, Syracuse University.
- Johnson, David, Timothy M. Smeeding, and Barbara Boyle Torrey. 2005. "United States Inequality through the Prisms of Income and Consumption." *Monthly Labor Review* 128 (4) (April): 11-24.
- Juster, F. Thomas, James P. Smith, and Frank Stafford. 1999. "The Measurement and Structure of Household Wealth." *Labour Economics* 6 (2) (June): 253-275.

- Kapteyn, Arie, and Constantijn Panis. 2003. "The Size and Composition of Wealth Holdings in the United States, Italy, and the Netherlands." NBER Working Paper Series, 10182. Cambridge, MA. December.
- Keese, Mark. 2006. "Live Longer, Work Longer." OECD, Paris: OECD.
- Kenworthy, Lane. 2004. "Egalitarian Capitalism." Russell Sage Foundation, New York.
- Martins, Nuno, and Ernesto Villanueva. 2006. "Does Limited Access to Mortgage Debt Explain Why Young Adults Live with Their Parents?" Banco de Espana Research Paper No. WP-0628.
- Mitchell, Olivia S., and John Piggott. 2004. "Unlocking Housing Equity in Japan." NBER, W10340. Cambridge, MA: NBER. March.
- Niskanen, Emilia. 2006. "The Luxembourg Wealth Study: Technical Report on LWS Income Variables." LIS.Luxembourg. April.
- Ortalo-Magne, Francois, and Sven Rady. 2005. "Housing Market Dynamics: On the Contribution of Income Shocks and Credit Constraints." University of Wisconsin.
- Quinn, Joseph. 1987. "The Economic Status of the Elderly: Beware the Mean." *Review of Income and Wealth* 33 (1) (March): 63-82.
- Shaw, Lois, and Sunhwa Lee. 2005. "Gender and Aging: Cross-National Contrasts: Growing Old in the US: Gender and Income Adequacy." *Feminist Economics* 11 (2): 174-186.
- Shoven, John, and Sita Slavov. 2006. "Political Risks Versus Market Risk in Social Security." NBER, 02135. Cambridge, MA. March.
- Siegenthaler, Jurg K. 1996. "Poverty among Single Elderly Women under Different Systems of Old-Age Security: A Comparative Review." *Social Security Bulletin* 59 (3): 31-44.
- Sierminska, Eva, A. Brandolini, and Timothy M. Smeeding. 2006. "Comparing Wealth Distribution Across Rich Countries: First Results for the Luxembourg Wealth Study (LWS)." Luxembourg Wealth Study, no. 1.
- Sierminska, Eva, A. Brandolini, and Timothy M. Smeeding. 2006. "The Luxembourg Wealth Study - A Cross-Country Database for Household Wealth Research." *Journal of Economic Inequality* 4 (3): 323-332.

- Sierminska, Eva, and Yelena Takhtamanova. 2006. "Wealth Effects out of Financial and Housing Wealth: Cross-Country and Cross-Demographic Group Comparisons." Presented at IARIW General Conference in Joensuu, Finland.
- Sierminska, Eva, and Timothy M. Smeeding. 2005. "Measurement Issues: Equivalence Scales, Accounting Framework and Reference Unit." Luxembourg Income Study. Luxembourg.
- Sierminska, Eva, and Thesia I. Garner. 2002. "A Comparison of Income, Expenditures, and Home Market Value Distributions Using Luxembourg Income Study Data from the 1990s." LIS Working Paper No. 338. Syracuse, NY: Center for Policy Research, Syracuse University. December.  
<http://www.lisproject.org/publications/liswps/338.pdf>.
- Smeeding, Timothy M. 2006. "Poor People in a Rich Nation: The United States in Comparative Perspective." *Journal of Economic Perspectives* 20 (1): 69-90.
- Smeeding, Timothy M., and Susanna Sandström. 2005. "Poverty and Income Maintenance in Old Age: A Cross-National View of Low-Income Older Women." *Feminist Economics* 11 (2) (July): 163-174.
- Smeeding, Timothy M. 2003. "Income Maintenance in Old Age: Current Status and Future Prospects for Rich Countries." *Genus* LIX (1) (April-June): 51-83.
- Smeeding, Timothy M., Lee Rainwater, and Gary Burtless. 2001. "United States Poverty in a Cross-National Context." In *Understanding Poverty*, edited by Sheldon H. Danziger and Robert H. Haveman. New York and Cambridge, MA: Russell Sage Foundation and Harvard University Press, 162-189.
- Smeeding, Timothy M. 1999. "Social Security Reform: Improving Benefit Adequacy and Economic Security for Women." Center for Policy Research, Policy Brief No. 16. Syracuse, NY: Syracuse University.  
<http://www-cpr.maxwell.syr.edu/pbriefs/pb16.pdf>.
- Smeeding, Timothy M., and Peter Saunders. 1999. "How Do the Elderly in Taiwan Fare Cross-Nationally? Evidence from the Luxembourg Income Study (LIS) Project." In *Emerging Social Economic Welfare Programs for Aging in Taiwan in a World Context*, edited by Chaonan Chen, Albert I. Hermalin, Sheng-Cheng Hu, and

- James P. Smith. Taipei, Taiwan: Institute of Economics, Academia Sinica, 205-237.
- Smeeding, Timothy M., Barbara B. Torrey, and Lee Rainwater. 1993. "Going to Extremes: An International Perspective on the Economic Status of the U.S. Aged." Luxembourg Income Study Working Paper No. 87. Syracuse, NY: Syracuse University. May.
- Stapf-Fine, Heinz. 1994. "Old Age Poverty in Selected Countries of the European Community - Are Women Disproportionably Affected?" Luxembourg Income Study Working Paper No. 105. Center for Policy Research, Syracuse University.
- Sunden, Annika. 2006. "The Swedish Experience with Pension Reform." *Oxford Review of Economic Policy* 22 (1): 133-148.
- Tatsiramos, Konstantinos. 2004. "Residential Mobility and the Housing Adjustment of The Elderly: Evidence from the ECHP for 6 European Countries." European University Institute. Florence.
- Venti, Steven F., and David A. Wise. 2001. "Aging and Housing Equity: Another Look." NBER Working Paper No. 8608. Cambridge, MA: National Bureau of Economic Research. November. <http://papers.nber.org/papers/W8608>.
- Venti, Steven F., and David A. Wise. 2000. "Choice Chance and Wealth Dispersion at Retirement." NBER Working Paper No. W7521. Cambridge, MA: National Bureau of Economic Research. February.



## Methodological notes

*Sample:* All observations with missing or zero DPI or missing NW1 were dropped from the sample.

*Household types (see Table A-1):*

1. “single” consist of one-person households comprised of a person 65 or over
2. “elderly couples” consist of two-person households comprised by a couple with (at least) one person aged 65 or over (the other person - could be younger than 65)
3. “other households with an elderly person as head/spouse” consist of households of two-persons headed by a person aged 65 or over without partner, or by households of more than two persons where the head or the spouse is aged 65 or more
4. “all other households” consist of households of any size where neither the head nor the spouse is aged 65 or more (note that there could be people aged 65 or more in the household, if they are not head or spouse)

“All households with elderly persons as head/spouse” including household types 1, 2 and 3 above, are examined in this paper. We also separately examine household type 1 above in some tables

*Definition of disposable income:* disposable income is the LIS-DPI variable of the LWS datasets (i.e. cash and noncash income next or direct taxes, without imputed rents, one-time lump sums and capital gains and losses). In all cases incomes are adjusted by  $E=0.5$  where  $ADI=unadjusted\ income\ (I)$  divided by household size (S) to the power E. Incomes were bottom coded at 1% of the mean equivalized DPI and top coded at ten times the median unequivalized DPI.

*Definition of net worth income:* net worth is the NW1 variable of the LWS datasets (see [www.lisproject.org/lws.html](http://www.lisproject.org/lws.html) ). It includes financial assets (deposit accounts, stocks, bonds and mutual funds) and non-financial assets (principal residence and investment real estate). Financial assets exclude life insurance and unrealized pension assets, and non-financial assets exclude business assets, business debt, vehicles, durables, and/or collectibles. In all cases except where noted, wealth variables are adjusted by the same  $E=0.5$  equivalence scale where  $ADI=unadjusted\ wealth\ (I)$  divided by household size (S) to the power E. Wealth variables are NOT bottom coded and top coded.

*Real dollar values:* for income and wealth are expressed in PPP terms using the 2002 OECD individual consumption PPPs (amounts referring to years prior to 2002 were inflated using OECD CPI indices within each country )

*Education Coding:*

- a. LOW includes no education, pre-primary, primary, lower secondary, compulsory and initial vocational education
- b. MEDIUM includes upper secondary general education, basic vocational education, post-secondary education
- c. HIGH includes specialized vocational education, university/college education and (post)-doctorate and equivalent degrees

The grouping follows the LIS Standardized Education Recoding method, which follows ISCED.

**Table A-1. Household Composition  
(percentage of households)**

<b>Household composition</b>	<b>United States (SCF)</b>	<b>Canada</b>	<b>Finland</b>	<b>Germany</b>	<b>Italy</b>	<b>Sweden</b>	<b>United Kingdom</b>
Households with no Elderly	84	81	82	79	71	81	78
All Households with Elderly	16	19	18	21	29	19	22
<i>of which:</i>							
<b>Single Age 65+ only (examined here)</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>8</b>	<b>7</b>
Couple head or spouse 65+ only	8	7	7	10	9	10	9
Single with others: head 65+	1	2	1	1	3	0	3
Couple 65+ Head or Spouse with others	1	1	1	2	7	1	2
Minus Other Units with Persons 65+ not Head or Spouse	(2)	(5)	(3)	(1)	(5)	(0)	(1)
<b>Household Units with Head or Spouse 65+ (examined here)</b>	<b>14</b>	<b>14</b>	<b>15</b>	<b>20</b>	<b>24</b>	<b>19</b>	<b>21</b>

Source: Authors' calculations from the Luxembourg Wealth Study.

**Table A-2. Mean Income and Net Worth in Households Containing Elderly Persons**

**A. Income Well-Being Across Countries**

		Mean Equivalized DPI as a Percentage of Mean DPI of All Households		Mean Equivalized DPI in 2002					
Country	(yr)	All Households with an Elderly Person as Head/Spouse		All Households with an Elderly Person as Head/Spouse		Single Elderly Persons		All Households	
			Single Elderly Persons						
United States (SCF)	(00)	96	74	28,028	(140)	21,521	(140)	29,193	(131)
Canada	(98)	95	72	22,527	(113)	17,035	(111)	23,676	(107)
Finland	(98)	87	61	16,561	(83)	11,536	(75)	18,959	(85)
Germany	(01)	91	77	19,502	(98)	16,388	(107)	21,385	(96)
Italy	(01)	92	68	16,963	(85)	12,452	(81)	18,413	(83)
Sweden	(02)	83	63	16,950	(85)	12,942	(84)	20,406	(92)
United Kingdom	(00)	82	67	19,210	(96)	15,640	(102)	23,507	(106)
Simple Average		90	69	19,963	(100)	15,359	(100)	22,220	(100)

**B. Net Worth Well-Being Across Countries**

		Mean Equivalized DPI as a Percentage of Mean DPI of All Households		Mean Equivalized DPI in 2002					
Country	(yr)	All Households with an Elderly Person as Head/Spouse		All Households with an Elderly Person as Head/Spouse		Single Elderly Persons		All Households	
			Single Elderly Persons						
United States (SCF)	(01)	234	153	313,934	(219)	205,916	(190)	134,227	(158)
Canada	(99)	173	182	101,300	(71)	106,394	(98)	58,548	(69)
Finland	(98)	157	126	84,642	(59)	67,918	(63)	53,816	(63)
Germany	(02)	160	107	140,536	(98)	94,537	(87)	88,097	(104)
Italy	(02)	116	93	138,886	(97)	111,477	(103)	119,719	(141)
Sweden	(02)	179	129	79,289	(55)	57,211	(53)	44,372	(52)
United Kingdom	(00)	149	119	144,634	(101)	114,812	(106)	96,811	(114)
Simple Average		167	130	143,317	(100)	108,324	(100)	85,084	(100)

Source: Authors' calculations from the Luxembourg Wealth Study.

Notes:

<sup>1</sup> DPI is the sum of total revenues from earnings, capital income, private transfers, public social insurance and public social assistance -- net of taxes and social security contributions. Incomes were bottom-coded at 1% of the mean equivalized DPI and top-coded at 10 times the median unequivalized.

<sup>2</sup> Net worth consists of financial assets and non-financial assets -- net of total debt. No bottom- or top-coding were applied.

<sup>3</sup> Both income and wealth are equivalized; adjusted = unadjusted / square root of household size.

<sup>4</sup> All observations with missing or zero disposable income or missing net worth were dropped from the sample.

<sup>5</sup> Assets can be valued at time of interview or end of year.

**Table 1. Asset participation and Portfolio Composition in Households with Elderly Persons' as Head or Spouse<sup>1</sup>**

**A. Asset Participation**

<b>Wealth components</b>	<b>United States</b>	<b>Canada</b>	<b>Finland</b>	<b>Germany</b>	<b>Italy</b>	<b>Sweden</b>	<b>United Kingdom</b>
<b>Financial assets</b>	95	93	91	62 <sup>2</sup>	75	86	82
Deposit accounts	95	93	89	n.a.	75	74	77
Stocks	23	10	33	n.a.	7	41	n.a.
Mutual funds	21	14	3	n.a.	9	59	n.a.
Bonds	17	17	4	n.a.	16	28	n.a.
<b>Non-financial assets</b>	84	76	81	55	78	64	70
Principal residence <sup>5</sup>	83	74	77	52	77	58	69
Investment real estate	24	20	33	15	22	18	6
<b>Total debt</b>	49	32	14	13	9	39	21
<i>of which:</i>							
Home secured debt	27	15	5	10	3	n.a. <sup>4</sup>	8

**B. Portfolio Composition<sup>6</sup>**

<b>Wealth components</b>	<b>United States</b>	<b>Canada</b>	<b>Finland</b>	<b>Germany</b>	<b>Italy</b>	<b>Sweden</b>	<b>United Kingdom</b>
<b>Financial assets</b>	44	33	17	14 <sup>2</sup>	17	41	26
Deposit accounts	12	17	11	n.a.	10	17	13
Stocks	18	8	5	n.a.	1	8	n.a.
Mutual funds	9	6	0	n.a.	3	13	n.a.
Bonds	4	3	1	n.a.	3	3	n.a.
<b>Non-financial assets</b>	56	67	83	86	83	59	74
Principal residence <sup>5</sup>	35	55	59	65	65	57	69
Investment real estate	21	12	23	20	18	12	5
<b>Total assets</b>	100	100	100	100	100	100	100
<b>Total debt</b>	6	5	1	6	1	11	2
<i>of which:</i>							
Home secured debt	5	4	1	4	0	n.a. <sup>4</sup>	1
<b>Total net worth</b>	94	95	99	94	99	89	98

Source: Authors' calculations from the Luxembourg Wealth Study, Beta-version (June 29th, 2006).

Notes: <sup>1</sup> Elderly are those where head or spouse are 65+ years of age.

<sup>2</sup> Germany records liquid assets and non-housing debt only when they exceed 2,500 per year. There is no further breakdown by type.

<sup>3</sup> Only savings or deposit accounts separately identified.

<sup>4</sup> In Sweden, home secured debt (is not separated from other loans).

<sup>5</sup> The self-assessed current value of the home is reported except for Sweden, where the tax value is reported inflated by a regional constant.

<sup>6</sup> Portfolio composition is based on unequivalized values of wealth.

**Table 2. Median Income and Net Worth in Households Containing Elderly Persons vs. All Households**

**A. Income Well-Being Across Countries**

Country	(yr)	Median Equivalized DPI as a Percentage of Median DPI of All Households		Median Equivalized DPI in US 2002 Dollars					
		All Households		All Households			All		
		with an Elderly Person as Head/Spouse	Single Elderly Persons	with an Elderly Person as Head/Spouse	Single Elderly Persons	All Households			
United States (SCF)	(00)	93	69	20,043	(123)	14,870	(116)	21,637	(114)
Canada	(98)	92	66	19,231	(118)	13,752	(107)	20,957	(110)
Finland	(98)	79	63	13,287	(81)	10,637	(83)	16,908	(89)
Germany	(01)	90	76	16,886	(103)	14,313	(112)	18,779	(99)
Italy	(01)	88	69	13,847	(85)	10,808	(84)	15,753	(83)
Sweden	(02)	78	62	14,834	(91)	11,743	(92)	18,935	(99)
United Kingdom	(00)	80	66	16,369	(100)	13,509	(106)	20,458	(107)
Simple Average		86	67	16,357	(100)	12,804	(100)	19,061	(100)

**B. Net Worth Well-Being Across Countries**

Country	(yr)	Median Equivalized Net Worth as a Percentage of Median Net Worth of All Households		Median Equivalized Net Worth: 2002 PPP Dollar Value and Relative to Average Value for Sample					
		All Households		All Households			All		
		with an Elderly Person as Head/Spouse	Single Elderly Persons	with an Elderly Person as Head/Spouse	Single Elderly Persons	All Households			
United States (SCF)	(01)	452	329	\$104,528	(142)	\$76,178	(158)	\$25,215	(70)
Canada	(99)	250	226	61,313	(83)	55,401	(115)	24,525	(68)
Finland	(98)	156	124	56,033	(76)	44,527	(92)	35,903	(100)
Germany	(02)	307	47	71,585	(97)	11,004	(23)	23,343	(65)
Italy	(02)	106	83	81,281	(110)	63,129	(131)	76,418	(213)
Sweden	(02)	285	143	47,591	(65)	23,917	(50)	16,715	(47)
United Kingdom	(00)	193	131	94,014	(127)	63,903	(132)	48,723	(136)
Simple Average		250	155	\$73,764	(100)	\$48,294	(100)	\$35,834	(100)

Source: Authors' calculations from the Luxembourg Wealth Study.

Notes:

<sup>1</sup> DPI is the sum of total revenues from earnings, capital income, private transfers, public social insurance and public social assistance -- net of taxes and social security contributions. Incomes were bottom-coded at 1% of the mean equivalized DPI and top-coded at 10 times the median unequivalized.

<sup>2</sup> Net worth consists of financial assets and non-financial assets -- net of total debt. No bottom- or top-coding were applied.

<sup>3</sup> Both income and wealth are equivalized; adjusted = unadjusted / square root of household size.

<sup>4</sup> All observations with missing or zero disposable income or missing net worth were dropped from the sample.

<sup>5</sup> Assets can be valued at time of interview or end of year.

**Table 3. Older Person's Income and Wealth Components:  
All Households with Elderly Persons as Head/Spouse**

**Panel A. Income Packages (ratio of means)<sup>1</sup>**

	All Households						
	United States (SCF)	Canada	Finland	Germany	Italy <sup>2</sup>	Sweden	United Kingdom
Earnings	34	34	9	16	26	11	18
Capital Income	23	9	15	10	6	10	12
Private Transfers	17	22	57	5	12	14	24
Public Social Assistance	27	35	19	69	56	65	46
TOTAL	100	100	100	100	100	100	100

**Panel B. Wealth Packages (ratio of overall means)<sup>3</sup>**

	All Households						
	United States (SCF)	Canada	Finland	Germany	Italy	Sweden	United Kingdom
Financial Assets <sup>4</sup>	44	30	17	14	17	41	26
Principal Residence	35	58	59	66	65	47	69
Investment Real Estate	21	12	23	20	18	12	5
Total Assets	100	100	100	100	100	100	100
(Debt)	6	10	1	6	1	11	2
(Net Worth)	94	90	99	94	99	89	98

**Panel C. Wealth Packages for median household (ratio of means in middle of distribution)<sup>5</sup>**

	All Households						
	United States (SCF)	Canada	Finland	Germany	Italy	Sweden	United Kingdom
Financial Assets <sup>4</sup>	24	18	12	53	10	51	26
Principal Residence	70	76	82	44	84	41	73
Investment Real Estate	6	6	7	4	6	8	1
Total Assets	100	100	100	100	100	100	100
(Debt)	12	20	2	5	2	11	6
(Net Worth)	88	80	98	95	98	89	94

Source: Authors' calculations from the Luxembourg Wealth Study.

Notes:

<sup>1</sup> Earnings include both wages and salaries and income from self-employment activities. Capital income includes interests and dividends, rental income, income from savings plans (including annuities from life insurance and private pensions), royalties and other property income. Private transfers include occupational and other pensions (e.g., pensions of unknown type or foreign pensions), alimony, regular transfers from other households/charity/private institutions, and other incomes not elsewhere classifiable. Public transfers include social insurance (including some universal benefits such as demo-grant pensions and family allowances) as well as public social assistance, which includes means-tested cash and near-cash public income transfers.

<sup>2</sup> Italy is net of taxes.

<sup>3</sup> Ratio of means is the ratio of the respective population means for each item.

<sup>4</sup> Financial assets include deposit accounts, stocks, bonds, and mutual funds. Non-financial assets include (owned) principal residence and investment real estate. Finally, total debt refers to all outstanding loans, both home-secured and non-home secured.

<sup>5</sup> Median household is defined as having equalized total assets between 40 to 60 percent of the distribution of all households. The ratio of means is the ratio of the respective means of the median household.

Table 4 . Homeownership and Home Values

**A. Owners in Households Containing Elderly Persons**

Country	All Households with an Elderly Person as Head/Spouse				Single Elderly Persons			All Households		
	Percent Homeowners	Percent Who Own Outright	For Owners:		Percent Homeowners	Percent Who Own Outright	Median Value Home Equity	For Owners:		
			Median Value Home Equity (equivalized)	Median Value Home Equity (unequivalized)				Median Value Home Equity (equivalized)	Median Value Home Equity (unequivalized)	
United States (SCF)	83.3	72.0	88,365	111,727	68.9	81.6	83,287	70.8	41,049	69,068
Canada	74.0	74.4	61,936	96,349	49.3	93.4	87,590	69.3	39,416	70,072
Finland	77.3	93.4	52,031	66,036	62.1	91.7	56,602	71.3	41,394	67,922
Germany	53.6	84.9	155,620	205,171	34.3	94.7	165,060	47.4	108,934	167,261
Italy	75.8	95.6	84,870	124,270	64.7	98.3	99,416	70.8	88,853	155,338
Sweden	58.4	n.a.	44,210	56,929	40.2	n.a.	45,048	62.3	25,998	41,941
United Kingdom	69.0	88.7	114,594	147,328	50.7	97.0	128,912	72.9	66,298	110,496

**B. Owners in Income Poor Households Containing Elderly Persons**

Country	All Households with an Elderly Person as Head/Spouse				Single Elderly Persons		
	Percent Homeowners	Percent Who Own Outright	For Owners:		Percent Homeowners	Percent Who Own Outright	Median Value Home Equity
			Median Value Home Equity (equivalized)	Median Value Home Equity (unequivalized)			
United States (SCF)	67.5	77.3	53,866	71,099	53.9	83.5	55,864
Canada	52.3	73.2	37,226	49,050	30.2	84.7	61,313
Finland	83.2	100.0	46,585	47,168	81.2	100.0	47,168
Germany	46.8	91.2	116,715	165,060	35.2	98.0	132,048
Italy	70.4	99.5	46,636	62,197	62.8	100.0	64,180
Sweden	44.3	n.a.	38,993	44,880	42.6	n.a.	39,356
United Kingdom	68.6	90.0	101,288	119,704	57.7	98.3	100,496

Source: Authors' calculations from the Luxembourg Wealth Study.

Notes:

<sup>1</sup> DPI is the sum of total revenues from earnings, capital income, private transfers, public social insurance and public social assistance -- net of taxes and social security contributions. Incomes were bottom-coded at 1% of the mean equivalized DPI and top-coded at 10 times the median unequivalized.

<sup>2</sup> Net worth consists of financial assets and non-financial assets -- net of total debt. No bottom- or top-coding were applied.

<sup>3</sup> Both income and wealth are equivalized; adjusted = unadjusted / square root of household size.

<sup>4</sup> All observations with missing or zero disposable income or missing net worth were dropped from the sample.

**Table 5. Financial Asset Holdings<sup>1</sup> for the Elderly and for All Households**

**A. Households Containing Elderly Person as Head or Spouse and Households of All Ages**

<b>Country</b>	<b>All Households with an Elderly Person as</b>			<b>Single Elderly Persons</b>			<b>Households of All Ages</b>	
	<b>Percent with Financial Assets</b>	<b>Median Value (\$ 2002)</b>	<b>Median Value for All (\$ 2002)</b>	<b>Percent with Financial Assets</b>	<b>Median Value (\$ 2002)</b>	<b>Median Value for All (\$ 2002)</b>	<b>Median Value (\$ 2002)</b>	<b>Median Value for All (\$ 2002)</b>
United States (SCF)	94.9	22,336	16,678	91.9	12,544	10,157	4398	3,321
Canada	90.3	6,255	5,110	93.4	10,730	8,759	2,168	1,548
Finland	91.1	4,686	3,694	88.9	3,396	2,830	2,723	2,316
Germany <sup>3</sup>	61.8	22,008	6,239	52.0	22,006	3,429	14,096	0
Italy	75.3	8,968	5,022	67.4	8,699	3,728	7,143	5,022
Sweden	85.7	21,061	15,702	76.9	15,958	8,764	6943	4,209
United Kingdom	82.4	14,975	9,506	75.6	9,208	4,788	5954	3,131

**B. Income Poor Households Containing Elderly Persons as Head or Spouse<sup>2</sup> and Households of All Ages**

<b>Country</b>	<b>All Households with an Elderly Person as</b>			<b>Single Elderly Persons</b>			<b>Households of All Ages</b>	
	<b>Percent with Financial Assets</b>	<b>Median Value (\$ 2002)</b>	<b>Median Value for All (\$ 2002)</b>	<b>Percent with Financial Assets</b>	<b>Median Value (\$ 2002)</b>	<b>Median Value for All (\$ 2002)</b>	<b>Median Value (\$ 2002)</b>	<b>Median Value for All (\$ 2002)</b>
United States (SCF)	83.6	2,285	1,239	79.9	2,133	813	396	124
Canada	76.0	1,517	540	86.8	1,664	920	310	114
Finland	89.9	3,019	2,830	88.7	2,830	1,887	585	453
Germany <sup>3</sup>	28.7	11,004	0	34.7	11,006	0	6,353	0
Italy	33.0	3,954	0	36.1	4,393	0	2,779	0
Sweden	77.5	18,081	11,714	79.8	17,088	11,873	4,453	528
United Kingdom	65.7	5,525	1,551	60.8	5,525	921	2,653	68

Source: Authors' calculations from the Luxembourg Wealth Study.

Notes: <sup>1</sup>All values for financial wealth are equalized using the square root (E=.5) equivalence scale.

<sup>2</sup>The income poverty rate is defined as the percentage of persons living in households whose adjusted DPI is lower than 50% of the median DPI.

<sup>3</sup>Germany records liquid assets and non-housing debt only when they exceed 2,500 per year.



**Table 6 . Homeownership and Home Values for Income and Asset Poor Owners in Households Containing Elderly Persons**

Country	All Households with an Elderly Person as Head/Spouse				Single Elderly Persons			% of Singles Income and Asset Poor
	Percent Homeowners	Percent Owners Who Own Outright	Median Value Home Equity (equivalized)	Median Value Home Equity (unequalized)	Percent Homeowners	Percent Owners Who Own Outright	Median Value Home Equity	
United States (SCF)	59.5	68.0	38,089	54,848	43.3	76.0	55,864	22.1
Canada	45.1	63.2	24,774	43,795	18.6	84.0	41,605	7.4
Finland	73.7 (1)	100(1)	46,585	46,585	73.7 (1)	100(1)	46,585	10.7
Germany	44.6	90.9	117,582	166,286	28.9	98.1	165,060	12.1
Italy	69.1	99.7	37,281	62,135	63.0	100.0	62,135	13.4
Sweden	41.6	n.a	38,993	44,880	42.9	n.a	39,356	5.0
United Kingdom	61.8	87.1	97,605	110,496	53	97.1	101,288	15.4

Source: Authors' calculations from the Luxembourg Wealth Study.

Notes:

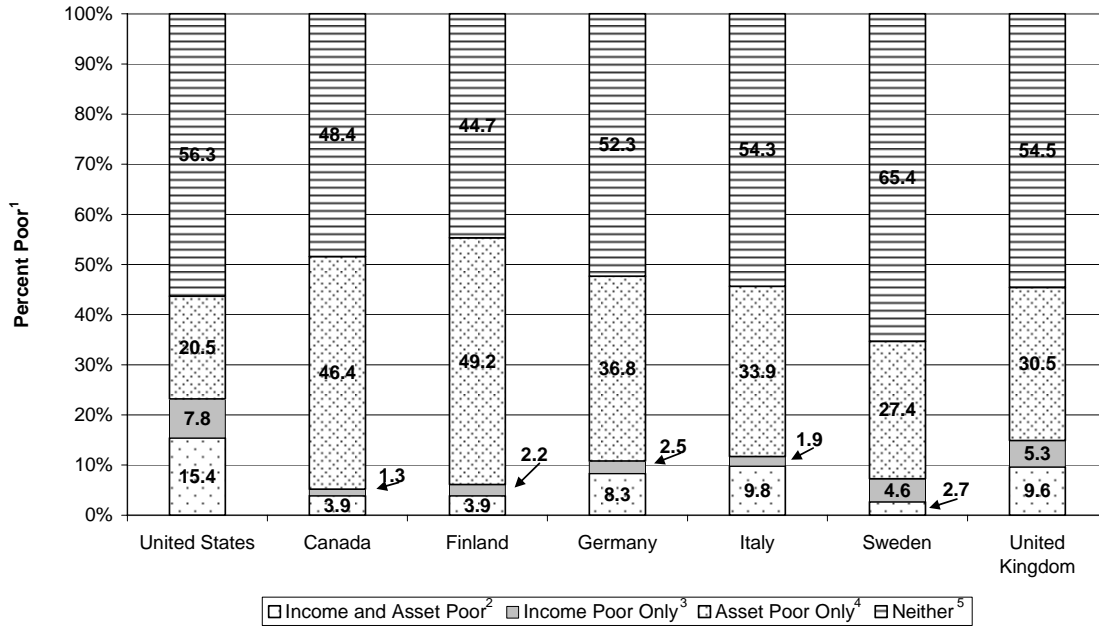
<sup>1</sup> DPI is the sum of total revenues from earnings, capital income, private transfers, public social insurance and public social assistance -- net of taxes and social security contributions. Incomes were bottom-coded at 1% of the mean equivalized DPI and top-coded at 10 times the median unequalized.

<sup>2</sup> Net worth consists of financial assets and non-financial assets -- net of total debt. No bottom- or top-coding were applied.

<sup>3</sup> Both income and wealth are equivalized; adjusted = unadjusted / square root of household size.

<sup>4</sup> All observations with missing or zero disposable income or missing net worth were dropped from the sample.

**Figure 1. Older Persons' Income and Asset Poverty**



Source: Authors' calculations from the Luxembourg Wealth Study.

Notes: <sup>1</sup>Percent of all persons living in units containing an elderly person who are poor. Totals may not add to 100 due to rounding.

<sup>2</sup>Income and asset poor are the fraction meeting both income and wealth poverty criteria.

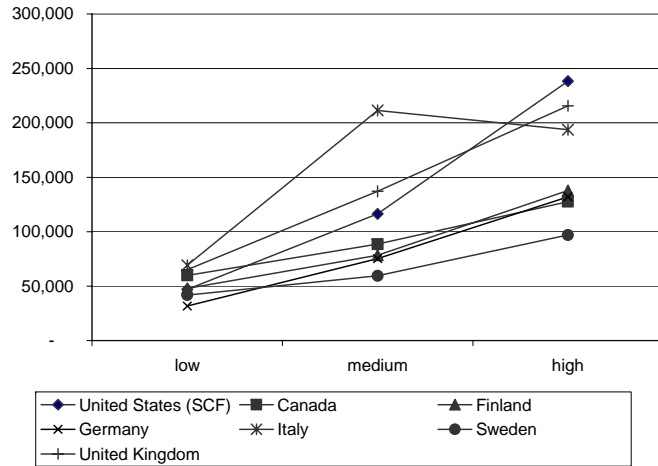
<sup>3</sup>Income poor are those with disposable incomes less than 50 percent of overall median disposable income.

<sup>4</sup>Asset poor are those with financial assets less than 25 percent of median financial assets.

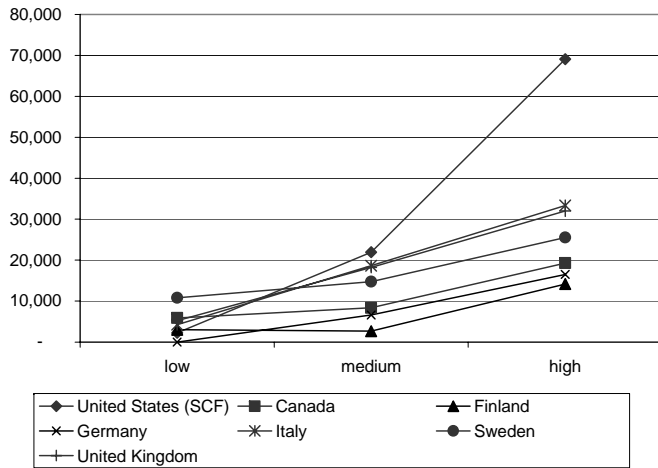
<sup>5</sup>Neither are the fraction who are neither income nor asset poor.

**Figure 2. Net Worth, Financial Assets and Education**

**A. Median Net Worth by Education Level of Head of Household for Older Households**



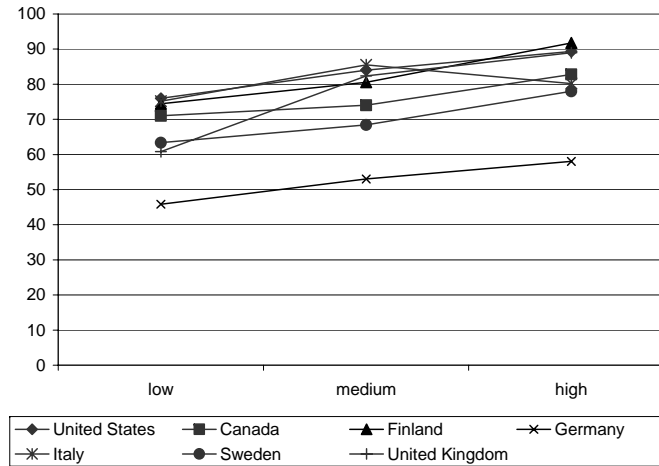
**B. Median Financial Assets by Education Level of Head of Household for Older Households**



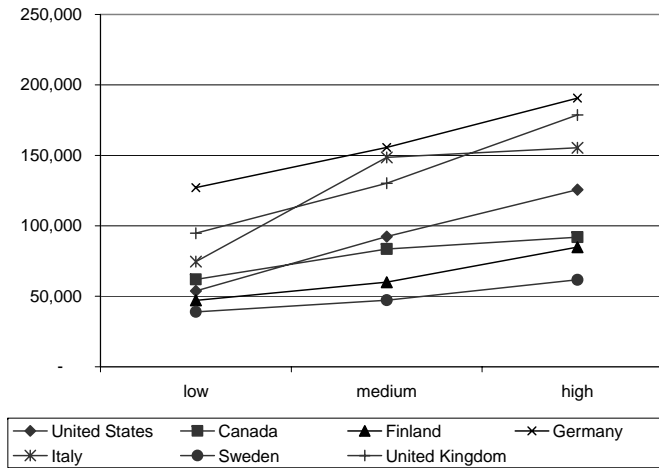
Source: Authors' calculations from the Luxembourg Wealth Study.

**Figure 3. Homeownership, Home Values, and Education**

**A. Homeownership by Education Level of Head of Household for Older Households**

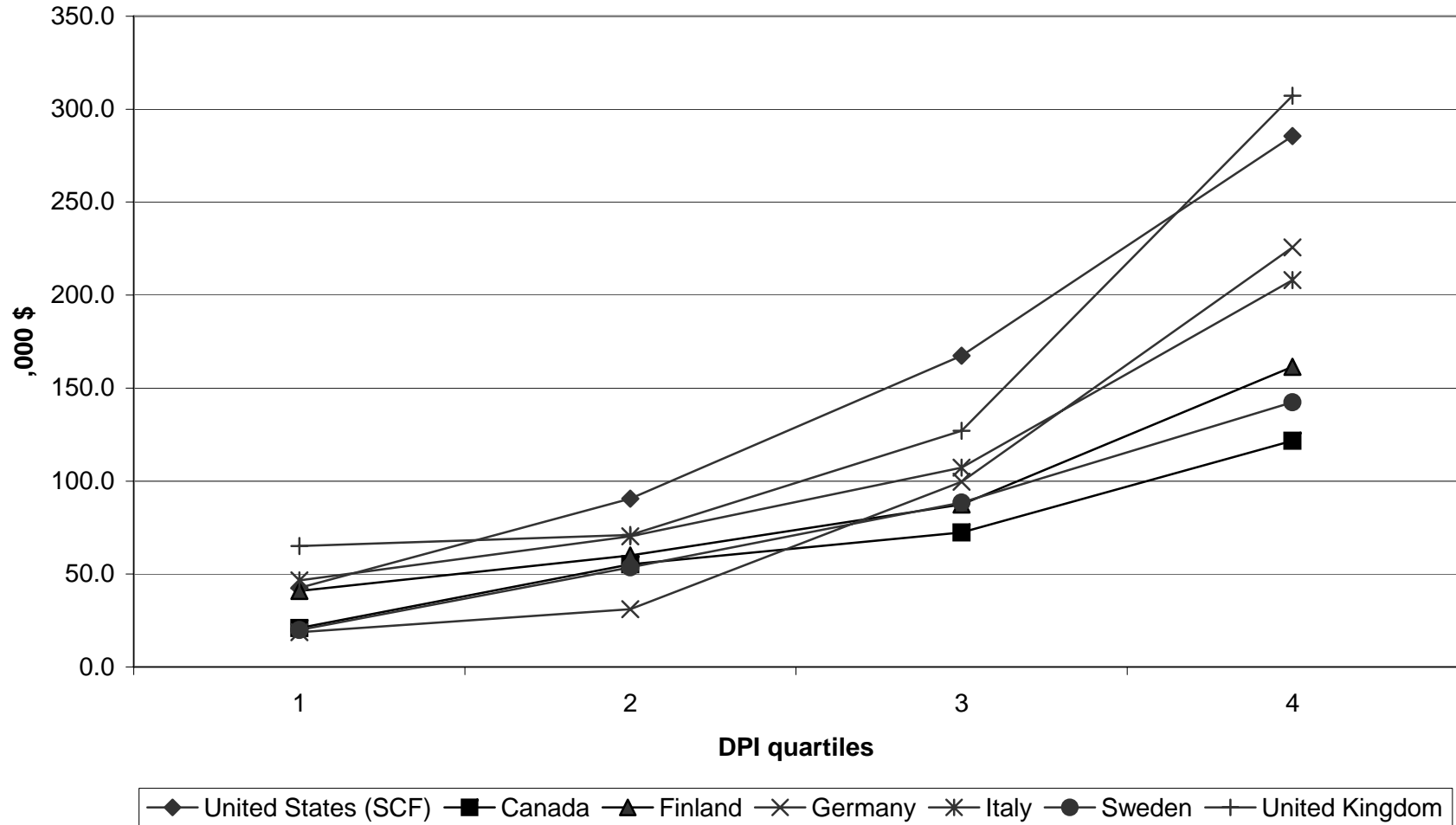


**B. Median Housing Equity for Homeowners by Education Level of Head of Household for Older**



Source: Authors' calculations from the Luxembourg Wealth Study.

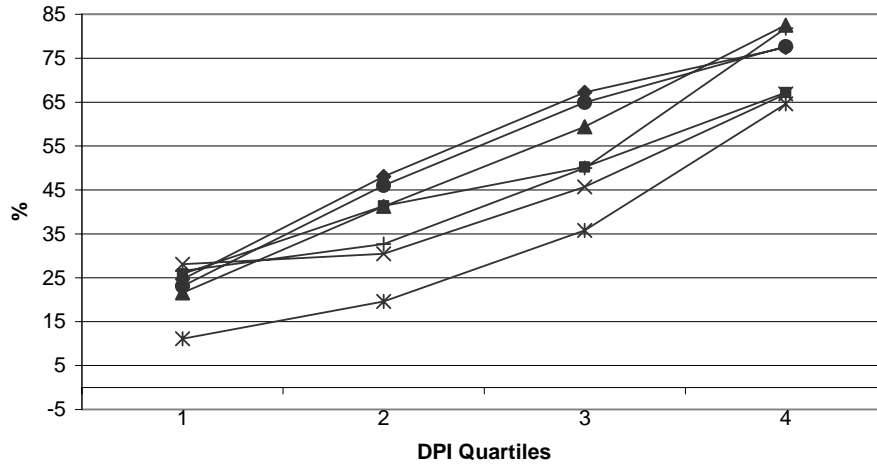
**Figure 4. New Worth Medians by Quartiles of DPI  
(in thousands, 2002 USD)**



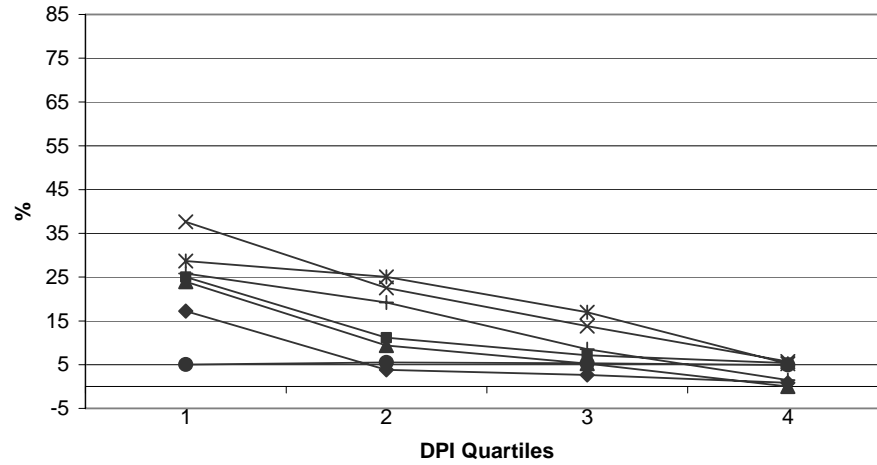
Source: Authors' calculations from the Luxembourg Wealth Study.

**Figure 5. The Income Quartile Position with Top, Bottom and Middle Wealth Quartiles**

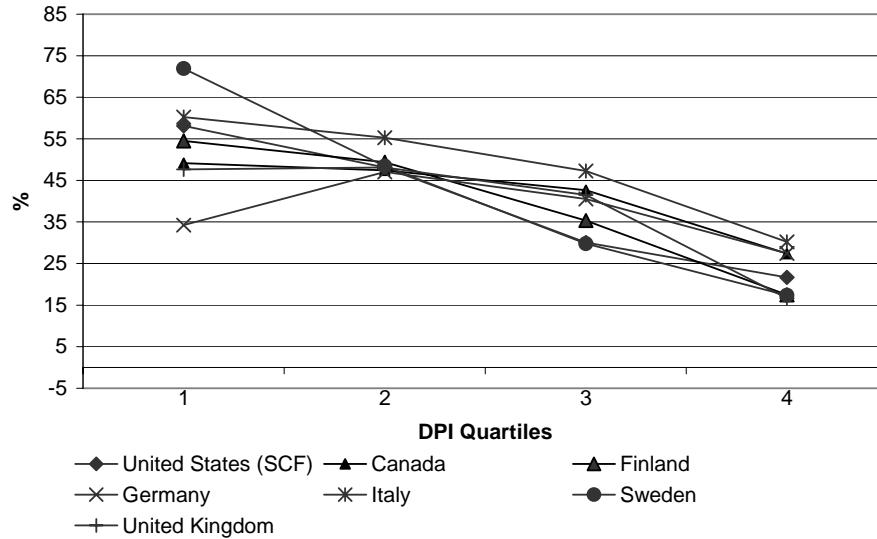
**A. Top Net Worth Quartile Distribution by DPI Quartiles**



**B. Bottom Net Worth Quartile Distribution by DPI Quartiles**



**C. Middle Two Net Worth Quartile Distribution by DPI Quartiles**



Source: Authors' calculations from the Luxembourg Wealth Study.  
 Note: All values of income and wealth are equalized.

RECENT WORKING PAPERS FROM THE  
CENTER FOR RETIREMENT RESEARCH AT BOSTON COLLEGE

**Saving and Demographic Change: The Global Dimension**

*Barry Bosworth and Gabriel Chodorow-Reich, February 2007*

**The Repeal of the Retirement Earnings Test and the Labor Supply of Older Men**

*Gary V. Engelhardt and Anil Kumar, February 2007*

**Persistence in Labor Supply and the Response to the Social Security Earnings Test**

*Leora Friedberg and Anthony Webb, December 2006*

**Annuitized Wealth and Consumption at Older Ages**

*Barbara A. Butrica and Gordon B.T. Mermin, December 2006*

**Risk and Reward of International Investing for U.S. Retirement Savers:  
Historical Evidence**

*Gary Burtless, December 2006*

**State Age Protection Laws and the Age Discrimination in Employment Act**

*Joanna Lahey, November 2006*

**Age, Women, and Hiring: An Experimental Study**

*Joanna Lahey, November 2006*

**Optimal Retirement Asset Decumulation Strategies: The Impact of Housing Wealth**

*Anthony Webb, Robert Triest, and Wei Sun, November 2006*

**The Impact of Aggregate Mortality Rise on Defined Benefit Pension Plans**

*Irena Dushi, Leora Friedberg, and Anthony Webb, November 2006*

**Health Care Costs, Taxes, and the Retirement Decision: Conceptual Issues and  
Illustrative Simulations**

*Rudolph G. Penner and Richard W. Johnson, November 2006*

**Why Do Boomers Plan to Work So Long?**

*Gordon B.T. Mermin, Richard W. Johnson, and Dan Murphy, November 2006*

*All working papers are available on the Center for Retirement Research website  
(<http://www.bc.edu/crr>) and can be requested by e-mail ([crr@bc.edu](mailto:crr@bc.edu)) or phone (617-552-1762).*