Smeeding, Timothy M.; Sandstrom, Susanna

Working Paper

Poverty and income maintenance in old age: A cross-national view of low income older women

LIS Working Paper Series, No. 398

Provided in Cooperation with:
Luxembourg Income Study (LIS)

Suggested Citation: Smeeding, Timothy M.; Sandstrom, Susanna (2005) : Poverty and income maintenance in old age: A cross-national view of low income older women, LIS Working Paper Series, No. 398, Luxembourg Income Study (LIS), Luxembourg

This Version is available at:
http://hdl.handle.net/10419/95568

Terms of use:
Documents in EconStor may be saved and copied for your personal and scholarly purposes.
You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.
Luxembourg Income Study
Working Paper Series

Working Paper No. 398

Poverty and Income Maintenance in Old Age:
A Cross-National View of Low Income Older Women

Timothy Smeeding, Susanna Sandström

January 2005
Poverty and Income Maintenance in Old Age:  
A Cross-National View of Low Income Older Women * 

Timothy M Smeeding 
Maxwell School and Luxembourg Income Study (LIS) 

and 

Susanna Sandstrom 
World Institute for Development Economic Research (WIDER) and LIS 

January 5, 2005 

Timothy M. Smeeding 
Maxwell Professor of Public Policy and Associate Dean for Sponsored Research 
Director, Center for Policy Research and Luxembourg Income Study (LIS) 
426 Eggers Hall, Syracuse University, Syracuse, NY 13244-1020 
(T) 315-443-9042; (F) 315-443-1081 
(E) tmsmeed@maxwell.syr.edu 

*The research reported herein was supported in part by the Center for Retirement Research at Boston pursuant to a grant from the U.S. Social Security Administrator as well as by the LIS member countries. The opinions and conclusions are solely those of the authors and should not be construed as representing the opinions or policy of the Social Security Administration or any agency of the Federal Government or the Center for Retirement Research at Boston College. We thank Nancy Folbre and Gary Burtless for comments on an earlier draft and Kim Desmond, Mary Santy, and Kati Foley for manuscript preparation. Please send comments to Smeeding (tmsmeed@maxwell.syr.edu).
Poverty and Income Maintenance in Old Age:
A Cross-National View of Low Income Older Women

Abstract

Great strides have been made in reducing poverty amongst the elderly in most rich countries over the past forty years. But pensioner poverty has not been eradicated, especially in the English-speaking nations. Poverty rates amongst older women are much higher than those for older men and much higher in the United States compared to other nations. In general, poverty rates rise with both age and changes in living arrangements though living alone has a larger effect for women. Poverty rates among older women are highest amongst the divorced, widowed and never-married, groups whose prevalence within the elder population will rise significantly over the next decades. The challenge for policy makers is to design systems of retirement benefits that guarantee minimum standards of living for all elderly women while also preserving incentives for self-financed retirement

Key words:
Poverty, income maintenance, cross-national, women
**Introduction**

Great strides have been made in reducing poverty amongst individuals ages 65 and older in most rich countries over the past forty years. But pensioner poverty has not been eradicated, especially in the English-speaking nations; and women’s poverty status in old age is a concern in all rich societies. In fact, due to demographic and other policy changes, pensioner poverty may rise again in the coming decades. This paper looks at elder poverty using the Luxembourg Income Study (LIS) database.

Poverty among younger pensioners is no longer a major policy problem in most rich nations, but older women remain vulnerable... Poverty rates amongst older women are more directly related to changes in living arrangements than to age. We find that poverty is especially a problem amongst women 75 or older who are living alone. The solutions to this problem lie in establishing a safety net which helps keep the poorest out of poverty regardless of alternative income sources or policy changes that affect the younger and more affluent elderly.

**Methodology, Measurement and Data Issues**

Differing national experiences in social transfer and antipoverty programs provide a rich source of information for evaluating the effectiveness of alternative social policies amongst the elderly. Policymakers in the industrialized countries share common concerns about social problems such as poverty and social exclusion. Poverty measurement is an exercise that is particularly popular in the English-speaking countries. Few Northern European and Scandinavian countries calculate low income or poverty rates, because their social programs already ensure a low poverty rate under any reasonable set of measurement standards (Anders Björklund and Richard Freeman 1997). Instead they concentrate their efforts on measures of social exclusion, mobility, and inequality (e.g., Anthony Atkinson, et. al 2002; Robert Erikson and John H. Goldthorpe 2002).
While there is no international consensus on guidelines for measuring poverty, groups such as the United Nations Children’s Fund (UNICEF), the United Nations Human Development Report (UNHDR), the Organization for Economic Cooperation and Development (OECD), the European Statistical Office (Eurostat), the International Labor Office (ILO) and the Luxembourg Income Study (LIS) have published several cross-national studies of the incidence of poverty in recent years. As a result, there is considerable agreement on the appropriate measurement of poverty in a cross-national context and on the calculation of the anti-poverty effect of transfers. Most of the available studies share the following similarities that help guide our research strategy:

- For purposes of international comparisons, poverty is almost always a relative concept. A majority of cross-national studies define the poverty threshold as one-half of national median income. In this study, we use the 50 percent of median income to establish our national poverty lines. We also use the 40 percent of national median income as our relative poverty threshold because it is closest to the ratio of the official United States poverty line to median United States household (pre-tax) cash income (42 percent in 1998 and 2002). Alternatively, the United Kingdom and the European Union have selected a poverty rate of 60 percent of the median income (Anthony Atkinson, et. al 2002; Jonathan Bradshaw 2003). We use only the 40 and 50 percent standards here.

- Poverty and income measurement is based on the broadest income definition that still preserves comparability across nations. The best current definition is disposable cash and near-cash income (DPI) which includes all types of money income, minus direct income and payroll taxes and including all cash and near cash transfers, such as food stamps and cash housing allowances, and refundable tax credits such as the earned income tax credit (EITC). We do not include health care benefits in kind, even though they are large (Irwin Garfinkel, Lee Rainwater and Timothy Smeeding 2004).
• In determining the antipoverty effects of social transfers and tax policy, we also use a measure of “before tax and transfer” market income (MI), which includes earnings, income from investments, and private transfers. To this measure we can add private and occupational pensions. In tracing the effects of income transfer policy from MI to DPI poverty, we determine the effects of two additional bundles of government programs: Social Insurance and Taxes (including all forms of universal and social insurance benefits, minus income and payroll taxes) and Social Assistance (which includes all forms of income-tested and asset tested benefits targeted at poor people). Again, in making these comparisons for all persons and for groups, we use one set poverty line, half of median DPI, throughout. However, in this case we base our analysis on households (with a head 65 and over) not persons.

The data we use for this analysis are from the Luxembourg Income Study (LIS) database, which now contains more than 140 household income data files for thirty nations covering the period 1967 to 2001 (www.lisproject.org). We can therefore analyze patterns of poverty and low incomes across a wide range of nations. In this paper we focus on seven nations, each with a recent 1998-2000 LIS database. These include the United States; two other English-speaking nations (Canada and the United Kingdom); two central European nations (Italy, Germany, including the eastern states of the former German Democratic Republic); and two Nordic nations (Finland and Sweden). These were chosen to typify the broad range of variation available within LIS and to simplify our analysis.

Poverty and Demography

Despite major progress over the past forty years, significant pockets of poverty remain among the elderly, especially among elderly women living alone. The relatively precarious
economic position of the elderly in the United States (see Lois Shaw and Sunhwa Lee 2004) is even more evident when we look at comparative data. Table 1 shows “relative poverty” rates, that is poverty measured relative to median income in the country, for eight rich countries using two alternative thresholds: 40 and 50 percent of median income. In this table the United States and the United Kingdom have relatively higher poverty rates for all groupings; Italy and Germany are in the middle range poverty rate range (especially using the half median international poverty line); and Canada, Finland and Sweden have generally lower overall elder poverty levels. The United States, the United Kingdom and Italy also stand out with the highest overall elder poverty rate especially at the higher standard, suggesting that they all have a large near-poor population, with incomes between the 40 and 50 percent lines. The United States and United Kingdom stand out especially at the 40 percent of median line as no other nation has an elder poverty rate higher than 5.6 percent (Table 1, Panel A).

These patterns are even more striking if we focus on poverty among older women. Older women in general (Table 1, Panel B), women living alone (Panel C), and the oldest (aged 75 and over) women living alone (Panel D), do progressively worse on average and in almost every country. While there is surprisingly little difference between 65 and 75 year old women living alone, in some places the differences are very large. The general pattern is that poverty rates rise within countries as one moves down the table and to the right, suggesting that gender, living arrangements, and to a lesser extent, age, all tend to increase poverty status. Not only does the average fraction of women who are poor increase as we move down the table, the difference between the percent poor at the 40 and 50 percent poverty standards also widens.

In some nations—e.g., Sweden, Finland and Canada—older women generally do better than in others. And in all nations (even including these three), poverty rates for the older women living alone at the one-half median poverty standard, are 18 percent or more. The United States, with 45-48 percent of older women living alone in poverty at the higher standard, is only close to the United Kingdom at 41 percent poor. At the 40 percent of median income standard, the
poverty of older women is also highest in the United States (followed closely by the United Kingdom) where rates are between 25-30 percent for 65 and 75 year olds. In other nations older women’s poverty is 11 percent or less. In four nations, it is 7 percent or less.

Because of differences in life expectancy, older women make up the majority of the elderly population in every rich country. The fraction of the elderly poor who are women in general and women living alone in particular, is very high. While 55 percent of all persons aged 65 and over are elderly women, 70 percent of the elderly poor are women (unpublished tabulations). Older women living alone average about 29 percent of all persons 65 and over, but are nearly one-half (49 percent) of all poor persons in these nations. At still older ages (aged 75 and over), where needs are greatest, 75 percent of the poor are women and 58 percent are women living alone (Smeeding 2001, Table 3). Thus, the poverty problem in old age in all of these rich nations is concentrated among the oldest women, particularly single older women who live alone. But some nations cope with this problem better than others.

Most current Social Security reform proposals, both in the United States and other nations are not well attuned to met the needs of the most vulnerable elders, those 75 or over, especially older women living alone (Eugene Steuerle 2001; Timothy Smeeding 1999). Indeed, the economic vulnerability of the elderly is likely to be increased if the United States moves toward partial privatization, because such a system would likely be less redistributive toward retirees with low lifetime earnings than the current system (Gary Engelhardt and Jonathan Gruber 2004). Seniors would probably also be exposed to increased administrative costs and greater risks regarding the value and variation in their retirement savings accounts and annuity prices when they retire under such a system (Peter Diamond, 2004). Finally, most of the Social Security reform proposals that do address these issues only partially address them, for instance, by only considering benefit changes for elderly widows and survivors (e.g., David A. Weaver 2001) and by not including other groups of at-risk elders such as divorcees or the never married (Timothy Smeeding 2001; 1999).
Income Maintenance and Anti-Poverty Effects

Every nation fights poverty among the old by assembling some combination of three programmatic income maintenance strategies:

- Citizenship retirement (universal pensions)
- Social retirement (social insurance)
- Social safety net (social assistance)

The first strategy usually consists of a universal (or nearly universal), pay-as-you-go, flat-rate benefit, sometimes phased out for those with higher incomes. The second strategy, social insurance, generally ties benefits more closely to earnings histories, although many social insurance pension systems also provide a modicum of benefit adequacy to all of their participants by tilting benefits toward those with lower lifetime earnings histories.

Countries like the United Kingdom and Canada combine universal and earnings-related social insurance pensions: a lower tier provides a higher replacement rate for lower lifetime earners, coupled with an upper tier that is more closely related to contributions up to an earnings ceiling. Social retirement schemes are usually based on individual earnings, supplemented by a spousal benefit package (including survivor’s benefits) for those who spent less career time in the paid labor force. In most European and Scandinavian countries the citizen pension is relatively high while the social insurance tier is smaller (David Weaver 2001).

In most societies, these citizenship and/or social retirement schemes are the major source of income of the aged (Shaw and Lee 2004; Gary Engelhardt and Jonathan Gruber 2004). Many nations, however, also couple these programs with some form of social assistance or safety net benefit targeted at the low-income population.\(^1\)

---

1 Even if the benefits in principal are divided into the three categories mentioned, it is sometimes very difficult to in practice divide the original variables correctly into the LIS-variables. In many cases, different pensions are combined, or they are hard to split correctly due to insufficient information. Additional information was needed for instance, to separate the effects of the Canadian Safety net from the Canadian social retirement program.
The effects of both types of benefits on household poverty rates (measured at the 50 percent level) are clearly laid out in Table 2, where we progress from market income (MI) poverty rates (in Column (A)) to disposable income (DI) poverty rates (in Column (D)), factoring in all three types of social spending outlined above. We also include the effects of occupational pensions that are contributory old age income schemes, related to either private or public employment and almost always directly related to previous earnings. We include two separate panels: one for all households, the other for female-headed households, and both measured at the 50 percent needs standard. The poverty rates in Table 2 are for households, not persons, so they do not directly correspond to the poverty rates in Table 1.

Moving from left to right, we can identify the sequential impact of each type of old age income support. As expected, poverty rates are highest based on market income alone. Most elderly households do not have sufficient earnings and property income (interest, rent, dividends) to by themselves eliminate poverty. This is particularly true for older female-headed units (Panel B). Countries that have higher labor force participation rates or larger accumulated financial wealth stocks at older ages have lower Market Income (MI)-based poverty rates (e.g., United States, Italy) excluding occupational pensions than do other nations.

The second Column (B) adds in occupational pensions (and other private transfers). In nations that rely more heavily on such schemes, poverty rates are lower. For instance, elder poverty, including occupational pension benefits, is 38 percent in Finland where employment related pensions have replaced a great deal of public pension spending.\(^2\) And in the 59- to 65 percent range in the United States, Canada, and Italy, poverty for older women, including occupational pensions, is 57 percent in Finland, and in the 70 to 73 percent range for older women in these same three nations (United States, Canada, Italy). It is much higher in societies

---

\(^2\) The Finnish case is a very hard one to classify, because the most important pensions are occupational, but they are also insured by the Social Insurance System. These schemes are compulsory occupational schemes, providing an earnings-related amount to all workers and self-employed persons, organized by sector and covering almost all Finnish workers and insured by the Finnish Social Security System. These insurances are stronger than the ones made by the Pension Benefit Guarantee Corporation (PBGC) in the United States. But, as they are contributory pensions, they are best classified as occupational pension.
that have much lower (or fewer) occupational pensions, e.g., Sweden and Germany. Since women’s labor force participation rates have increased over recent decades, women (panel B) will look increasingly more like those in all other households (Panel A) as the baby boom generation ages into retirement.

Counting these several sources of income sets the stage for measuring the impact of the income maintenance system. Column (C) shows the impact of universal and social insurance programs. Column (D) shows the impact of the social assistance “safety net” programs. The largest effect on old age poverty in every nation comes from the citizenship/social retirement systems in both panels. In general, the larger and more inclusive the social insurance system, and the higher the first tier benefit for lower wage earners, the larger the antipoverty effect (Column (E)). Thus, Sweden and Germany have the largest effects on poverty with 63 to 68 percentage point reductions for the elderly in general, and a 60 percentage point decline for older women in Germany.

In lower spending nations like the United Kingdom and the United States, the effect on poverty is also less, with social retirement reducing elder poverty by only 36 to 39 percentage points overall. For older women, the effects of social retirement on poverty run from 28 to 32 percent reductions in the United States and the United Kingdom. Canada does much better for a low spending nation, with a 45 percent reduction for all households and also for reduction for older women.

Because elder women are liable to have less in terms of occupational pensions, earnings, and wealth, they are more likely to be dependent on social insurance and social assistance (safety net) programs to keep them from poverty. This is true in all of these nations, the United States included (Timothy Smeeding, Carol L. Estes, and Lou Glasse 1999). Universal and social insurance pensions can also be very expensive and blunt instruments, spending quite a large amount of public funds to achieve a low poverty result (Timothy Smeeding and James Smith 1998; Jonathan Gruber and David Wise 2001; Timothy Smeeding, 2004).
These benefits set the scene for the final stage impacts of the social assistance or “safety net” programs (in Column (F)). Here skillfully targeted supplements with high participation rates may produce large marginal antipoverty effects. Take-up rates and other features of the systems also affect the results. In the United Kingdom, Sweden and Canada the safety net impacts are largest. In the other countries (e.g., Germany and Finland) the effects are small with most of the “heavy lifting” of the elderly from poverty being already accomplished by their social retirement system. In other nations, especially in the United States, the effects are weak, owing to the less than full integration of Supplemental Security Income (SSI) with social retirement, as evidenced by low take up rates in SSI, the relatively low SSI benefit guarantee, relatively low Food Stamp take-up rates among the elderly, and the stringent liquid asset tests in both programs (Green Book 2000; Janet Currie 2004; Mary Daly and Richard Burkhauser 2003; Paul Davies and Melissa Favreault 2004).

The effects for older women show much the same cross-national pattern but with larger safety net impacts, again largest in Canada, Sweden and the United Kingdom. In the United States, the safety net effects have a below 1 percent overall reduction in poverty, and an almost zero impact for older women. Thus, while the SSI program and Food Stamps provide some help to low income older Americans, the benefits do not seem to be sufficient to lift them out of poverty.

The net effects of these systems (Column (G)) are to produce widely varying poverty outcomes depending on the mix and strength of each component of the system. Those systems that spend more, especially on social insurance (e.g., Sweden; Germany) end up with lower poverty rates. Those whose spending is modest, but with well-targeted, high participation rate social assistance benefits also seem to do well (e.g., Canada), while those who do not spend as much, or whose systems are not well targeted, do worse, e.g., Italy, the United Kingdom, and especially the United States. Finland has a relatively effective overall set of programs, with all types of support contributing to their low overall poverty rates.
In sum, countries that do best in the fight against elder poverty are those with high minimum “first tier” traditional (defined benefit type) social retirement plans for all elderly, as in Germany and Italy. But population aging in coming decades will increase pressure on these governments to reduce these benefits and to turn their systems more toward defined contribution-type pension plans. Targeted income-tested benefit strategies such as those implemented by Canada (especially), Sweden and the United Kingdom are also relatively successful in reducing elderly female poverty, at a much lower overall budgetary cost.

**Benefit Levels: Au Canada?**

However it is structured, the minimum old age benefit for a single person from the combined social retirement/social safety net package is also an important determinant of vulnerability to poverty. If a nation has a low minimum benefit package, poverty rates will be higher than if it has a higher level of minimum benefit generosity. The level of the safety net benefit varies considerably across countries. The United States, has the least generous minimum benefit level of all the nations studied here, far below the next nearest country, the United Kingdom (Green Book 2004; Timothy Smeeding 2003).

The integration of safety net and social insurance systems as well as rules restricting eligibility to those with liquid assets below a certain level make a big difference for the overall antipoverty effectiveness of social spending on the aged. Canada for example, offers a basic quasi-universal pension topped up by an income-tested pension received by over 30 percent of all pensioners.

Minimum pension guarantees vary substantially across countries in their transparency, as well as their generosity. The most notable difference is whether the minimum guarantee is embedded in a universal or earnings-related program or takes the form of a separate program that disproportionately rewards the first dollars of earnings in calculating benefit replacement rates, providing additional benefits to those working at low wages. The United States does not have a
specific income guarantee within Social Security, but instead a higher replacement rate for long
time low-wage earners. Moreover, it only has a special minimum benefit, far below the 40
percent poverty line, for those who work for many years at low wages.

In contrast, the United States’ SSI program does offer a minimum guarantee (about 80
percent of the poverty line once combined with food stamps), but it serves only about one
twenty-fifth as many aged persons as Social Security, and it suffers from both low take-up rates
and strict liquid asset tests. The take-up rates in SSI among the elderly are only the 55-65
percent range (Janet Currie 2004), while many are not eligible because of the stringent liquid
assets tests of $2,000 for a single person ($3,000 for a couple). Benefit levels (but not asset
levels) are annually adjusted for changes in the Consumer Price Index (CPI). Low take-up issues
also plague the United Kingdom System (Stephen Pudney, Ruth Hancock, and Holly Sutherland
2004).

The Canadian case is particularly instructive in each of these comparisons. Canada has
managed to achieve much greater poverty reduction among seniors while spending much less on
social retirement programs than most other rich countries (but slightly more than the United
States). The reason is that Canada spends its public pension money differently, prioritizing its
near-universal Old Age Security and linking it seamlessly to income-tested Guaranteed Income
Supplement (GIS) program. This program has no asset test and a relatively simple annual
application process which permits an income test integrated with income tax filing so as to avoid
stigma and encourage take-up. In effect, the GIS ‘tops up’ the Canadian Pension Plan—the social
insurance component of the Canadian system, at source. Over 90 percent of the eligible Canadian
elderly participate in GIS (Ken Battle 1997; 2001), compared to about 60 percent of eligible
erlder participation in SSI in the United States (U.S. Congress 2000; Kathleen McGarry 2000;
David Weaver 2001; Paul Davies et al. 2000). Canada allocates close to 9 percent of its total tax
and transfer retirement income spending on GIS, while the United States allocates less than 2
percent of government retirement income spending on the SSI program. SSI benefits accrue to
about 10 percent of the United States aged; GIS benefits reach 31 percent of Canadian elders (Smeeding 2001a; Battle 1997, 2001). By 1999, the Canadians spent $C5.1 billion Canadian dollars (or .83 percent of Gross Domestic Product (GDP) --about $3.5 billion in United States dollars-- on GIS benefits for the elderly (Battle 2001). In contrast, and with almost 10 times the number of elderly, the United States spent only $3.9 billion United States (.031 percent of GDP) on SSI for the elderly in 1999 (United States Congress 2000; Timothy Smeeding 2001a).

**Future Differences**

Older women in the next two decades will look very different from older women today as a result of changing earnings histories (Alicia Munnell 2004) and different demographic characteristics (Madonna Harrington Meyer, Christine L. Himes, and Douglas Wolf 2004). Many will have good occupational pensions and partners who have similar benefits. But not all women of the baby boom cohort will benefit equally from their labor market experience. Poverty rates among older women are highest among divorced, widowed and never-married women, groups (whose prevalence within the elder population will rise significantly over the next decades (Timothy Smeeding 1999). For instance, in the United States, divorced and never-married women who were 10 percent of all older women in the 1990s will comprise over 25 percent of all aged in the 2020s. And these groups have poverty rates more than double overall elder poverty rates, despite the high average labor force participation rates and pension benefits of their cohorts.

The current and future challenge will be to encourage self-funded occupational and savings-related contributory pension systems (such as Investment Retirement Accounts or IRAs and 410K plans) which encourage individual responsibility, but at the same time provide retirement benefits that guarantee minimum standards of living for very elderly women, especially those who have never been married or are widows or divorcees. Cutting Social Security benefits will raise older women’s poverty (Gary Engelhardt and Jonathan Gruber 2004).
Once taken up, these benefits are unlikely to increase in real terms in future years. Integrating an income-tested benefit for those at older ages who have nothing else to rely on is crucial to protecting older women against poverty.

A famous book on Canadian social policy is entitled *Small Differences that Matter* (David Card and Richard Freeman 1993). Policy makers in the United States should recognize that our neighbors to the north offer a blueprint for a cost-effective system that protects low-income elders, mainly older women, in a way that does not stigmatize benefit receipt.
References


Table 1. Poverty<sup>1</sup> Rates among the Aged<sup>2</sup>: Being Old and Being Female
Percent of Population with Income Less than Given Percent of Adjusted National Median Disposable Income

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>40 percent</th>
<th>50 percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Elderly</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>2000</td>
<td>15.0</td>
<td>24.7</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1999</td>
<td>10.2</td>
<td>20.9</td>
</tr>
<tr>
<td>Germany</td>
<td>2000</td>
<td>3.9</td>
<td>10.1</td>
</tr>
<tr>
<td>Canada</td>
<td>1998</td>
<td>1.7</td>
<td>7.8</td>
</tr>
<tr>
<td>Sweden</td>
<td>2000</td>
<td>2.1</td>
<td>7.7</td>
</tr>
<tr>
<td>Italy</td>
<td>2000</td>
<td>5.6</td>
<td>13.7</td>
</tr>
<tr>
<td>Finland</td>
<td>2000</td>
<td>1.1</td>
<td>8.5</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td><strong>5.7</strong></td>
<td><strong>13.3</strong></td>
</tr>
<tr>
<td><strong>B. Elderly Women (65+)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>2000</td>
<td>17.7</td>
<td>28.6</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1999</td>
<td>14.4</td>
<td>26.2</td>
</tr>
<tr>
<td>Germany</td>
<td>2000</td>
<td>4.8</td>
<td>13.0</td>
</tr>
<tr>
<td>Canada</td>
<td>1998</td>
<td>1.5</td>
<td>9.6</td>
</tr>
<tr>
<td>Sweden</td>
<td>2000</td>
<td>2.5</td>
<td>10.3</td>
</tr>
<tr>
<td>Italy</td>
<td>2000</td>
<td>6.8</td>
<td>16.2</td>
</tr>
<tr>
<td>Finland</td>
<td>2000</td>
<td>1.8</td>
<td>11.8</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td><strong>7.1</strong></td>
<td><strong>16.5</strong></td>
</tr>
<tr>
<td><strong>C. Elderly Women (65+) Living Alone</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>2000</td>
<td>29.6</td>
<td>45.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1999</td>
<td>25.3</td>
<td>40.7</td>
</tr>
<tr>
<td>Germany</td>
<td>2000</td>
<td>7.1</td>
<td>19.6</td>
</tr>
<tr>
<td>Canada</td>
<td>1998</td>
<td>1.2</td>
<td>17.7</td>
</tr>
<tr>
<td>Sweden</td>
<td>2000</td>
<td>3.6</td>
<td>16.5</td>
</tr>
<tr>
<td>Italy</td>
<td>2000</td>
<td>11.0</td>
<td>28.7</td>
</tr>
<tr>
<td>Finland</td>
<td>2000</td>
<td>2.8</td>
<td>21.2</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td><strong>11.5</strong></td>
<td><strong>27.1</strong></td>
</tr>
<tr>
<td><strong>D. Elderly Women (75+) Living Alone</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>2000</td>
<td>30.4</td>
<td>48.3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1999</td>
<td>26.7</td>
<td>41.3</td>
</tr>
<tr>
<td>Germany</td>
<td>2000</td>
<td>6.8</td>
<td>17.7</td>
</tr>
<tr>
<td>Canada</td>
<td>1998</td>
<td>0.8</td>
<td>19.8</td>
</tr>
<tr>
<td>Sweden</td>
<td>2000</td>
<td>4.3</td>
<td>19.6</td>
</tr>
<tr>
<td>Italy</td>
<td>2000</td>
<td>10.5</td>
<td>28.3</td>
</tr>
<tr>
<td>Finland</td>
<td>2000</td>
<td>4.2</td>
<td>26.4</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td><strong>12.0</strong></td>
<td><strong>28.8</strong></td>
</tr>
</tbody>
</table>

Source: Authors calculations from Luxembourg Income Study.

Notes: 1Poverty is defined as percentage of elderly living in households with adjusted disposable income less than given percent of median adjusted disposable income for all persons. Incomes are adjusted by $E=.5$ where adjusted DPI=actual DPI divided by household size (S) to the power $E$: Adjusted $\text{DPI} = \text{DPI} \times S^{-E}$.

2Aged are all persons at least aged 65 and older. Person level and household level files were matched and income data weighted by the person sample weight from the person level file.
Table 2. Elderly Poverty Rates by Income Maintenance Source and Income Definition and 50 percent Needs Standard

A. Poverty Rate for All Elders Household by Income Definition

<table>
<thead>
<tr>
<th></th>
<th>(A) Market Income</th>
<th>(B) A + Occupational Pensions</th>
<th>(C) B+ Universal and Social Income Transfers - Taxes</th>
<th>(D) C + Social Safety Net Transfers (DPI)</th>
<th>(E) Social Insurance B to C</th>
<th>(F) Safety Net C to D</th>
<th>(G) Total System Effect E + F</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>71.9</td>
<td>60.5</td>
<td>24.9</td>
<td>24.7</td>
<td>35.6</td>
<td>0.2</td>
<td>35.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>85.9</td>
<td>70.4</td>
<td>31.0</td>
<td>20.9</td>
<td>39.4</td>
<td>10.1</td>
<td>49.5</td>
</tr>
<tr>
<td>Germany</td>
<td>88.4</td>
<td>78.5</td>
<td>10.3</td>
<td>10.1</td>
<td>68.3</td>
<td>0.2</td>
<td>68.5</td>
</tr>
<tr>
<td>Canada</td>
<td>78.8</td>
<td>59.1</td>
<td>14.3</td>
<td>7.8</td>
<td>44.8</td>
<td>6.5</td>
<td>51.3</td>
</tr>
<tr>
<td>Sweden</td>
<td>88.7</td>
<td>82.0</td>
<td>19.5</td>
<td>7.7</td>
<td>62.5</td>
<td>11.8</td>
<td>74.3</td>
</tr>
<tr>
<td>Italy</td>
<td>73.8</td>
<td>65.1</td>
<td>17.4</td>
<td>13.7</td>
<td>47.7</td>
<td>3.7</td>
<td>51.4</td>
</tr>
<tr>
<td>Finland</td>
<td>87.8</td>
<td>37.9</td>
<td>11.1</td>
<td>8.5</td>
<td>26.8</td>
<td>2.6</td>
<td>29.4</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>82.2</strong></td>
<td><strong>64.8</strong></td>
<td><strong>18.4</strong></td>
<td><strong>13.3</strong></td>
<td><strong>46.4</strong></td>
<td><strong>5.0</strong></td>
<td><strong>51.5</strong></td>
</tr>
</tbody>
</table>

B. Poverty Rate for Female Headed Households by Income Definition

<table>
<thead>
<tr>
<th></th>
<th>(A) Market Income</th>
<th>(B) A + Occupational Pensions</th>
<th>(C) B+ Universal and Social Income Transfers - Taxes</th>
<th>(D) C + Social Safety Net Transfers (DPI)</th>
<th>(E) Social Insurance B to C</th>
<th>(F) Safety Net C to D</th>
<th>(G) Total System Effect E + F</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>80.0</td>
<td>71.9</td>
<td>39.7</td>
<td>39.6</td>
<td>32.2</td>
<td>0.1</td>
<td>32.3</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>91.0</td>
<td>84.7</td>
<td>56.3</td>
<td>36.7</td>
<td>28.4</td>
<td>19.6</td>
<td>48.0</td>
</tr>
<tr>
<td>Germany</td>
<td>94.0</td>
<td>85.3</td>
<td>19.1</td>
<td>18.9</td>
<td>66.2</td>
<td>0.2</td>
<td>66.4</td>
</tr>
<tr>
<td>Canada</td>
<td>84.9</td>
<td>70.5</td>
<td>25.7</td>
<td>15.4</td>
<td>44.7</td>
<td>10.3</td>
<td>55.1</td>
</tr>
<tr>
<td>Sweden</td>
<td>96.7</td>
<td>93.3</td>
<td>45.5</td>
<td>16.6</td>
<td>47.8</td>
<td>29.0</td>
<td>76.7</td>
</tr>
<tr>
<td>Italy</td>
<td>81.9</td>
<td>72.5</td>
<td>25.2</td>
<td>23.4</td>
<td>47.3</td>
<td>1.7</td>
<td>49.1</td>
</tr>
<tr>
<td>Finland</td>
<td>94.8</td>
<td>56.9</td>
<td>25.5</td>
<td>19.8</td>
<td>31.4</td>
<td>5.7</td>
<td>37.1</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>89.0</strong></td>
<td><strong>76.4</strong></td>
<td><strong>33.9</strong></td>
<td><strong>24.3</strong></td>
<td><strong>42.6</strong></td>
<td><strong>9.5</strong></td>
<td><strong>52.1</strong></td>
</tr>
</tbody>
</table>

Source: Authors calculations from Luxembourg Income Study.