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AN INTERNATIONAL PERSPECTIVE ON THE INCOME AND POVERTY STATUS OF THE U.S. AGED: LESSONS FROM THE LUXEMBOURG INCOME STUDY AND THE INTERNATIONAL DATABASE ON AGING

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AN INTERNATIONAL PERSPECTIVE ON THE INCOME AND POVERTY STATUS OF THE U.S. AGED: LESSONS FROM THE LUXEMBOURG INCOME STUDY AND THE INTERNATIONAL DATABASE ON AGING

I. Introduction

The income of the aged in the United States has increased in real terms since 1970. The increase is due in part to the substantial increases in social security benefits. It is also due to the better wage histories of those who are now retired compared to the retired of 15 years ago.

The trend towards an improved economic status for the aged in the United States is not an isolated phenomenon. This trend has occurred in the five other industrial countries examined in this paper. In fact, the increase in incomes for the aged in the United States in the 1970's may actually be less than occurred elsewhere. Nevertheless, the income of the U.S. aged is higher relative to the national average income than in any of the other countries examined. At the same time the U.S. elderly have more income inequality than the elderly of the other five countries examined and because of this income inequality the U.S. elderly also have more poverty than in every country but one.

Most of the data in this paper comes from the Luxembourg Income Study (LIS), which has created comparable national income microdata files for nine countries. These files are for either 1979 or 1981. Therefore, the LIS comparisons of the aged in these countries is cross-sectional. In order to provide a broader context to the cross-sectional discussion, this paper briefly summarizes recent

income trends for family incomes in general and the aged in particular in several countries drawing from the U.N. National Institute on Aging and the U.S. Bureau of the Census' Center for International Research (NIA/CIR) International Data Base on Aging.

Appendices 1 and 2 briefly describe these two new resources for comparative international social policy and economic research. This paper is intended to demonstrate this usefulness by examining the comparative economic well-being of the U.S. aged.

We begin by discussing the trends in social security benefit increases in the six LIS countries and the changes in labor force participation of the aged in those countries. These trends and changes have been the antecedents to the detailed picture the LIS data provides of the income of the aged in the 1979-81 period--aged income relative to the national income, its distribution among the elderly, and the resulting poverty rates.

II. Trends in Family Income for the Aged and Non-Aged

Incomes for elderly households have increased substantially in the three countries for which time series data is available. However, the available data in each country are not for the same years, and definitions of aged differ from households with a reference person age 65 and over in the United States and Canada to those single elderly who are retired in the United Kingdom. These intertemporal comparisons, therefore, create broad-brushed impressions rather than well-focused photographs of the income changes for the general and aged population over a 10-year period. Given the limitations of these data and the

imprecision of the comparisons, small differences in either levels of income or changes in those levels should not be emphasized. But they do provide a useful perspective for better understanding the income trends in the United States.

In the three countries studied, the income of the aged increased slightly more than the general family income in Canada, but substantially more in both the United Kingdom and the United States (Table 1). In the United Kingdom, income of the retired could be calculated only for retired one-adult families, but the increase for this type of family income was more than three times as great as for family income in general. In the United States as in other economies, the increases in income are particularly sensitive to the time span used. Yet, regardless of the selection of different end parts, the increase of income for the aged household is much higher than for all households in the United States. In fact, comparing our closest neighbor (Canada) to the United States from 1973 to 1984, we find that while overall U.S. income fell by 8.7 percent, the incomes of the aged rose by more than one-fifth. Moreover, were we to compare increases in the income for the aged to those for other "dependent" family types, such as single-parent families, the improvement in aged incomes would be even more dramatic in all three countries, but especially in the United States.

Increases in Social Security Benefits

A large part of the improvement of the incomes of the aged in real terms and relative to the incomes of the rest of the population (Table 1) is because the social security benefit has increased in real terms in every country examined except Germany. Not only have social security benefits increased relative to inflation, but benefits as a percent of average wages in manufacturing have

TABLE 1

PERCENT CHANGE IN INCOME BY TYPE OF FAMILY FOR SELECTED COUNTRIES

Country	Average Real Household Income Changes		
	Time frame	All	Aged[1]
Canada[2]	1970-80	+ 28.5	+ 30.2
United Kingdom[3]	1973-84	+ 6.9	+ 23.2
United States[4]	1970-80	+ 0.4	+ 20.1
	1973-84	- 8.7	+ 21.3

[1]Households with a reference person age 65 or over for Canada and the United States, retired one-adult households for the United Kingdom.
[2]Changes in Income, Statistics Canada, 1985.
[3]Family Expenditure Surveys, 1973, p. 86; 1984, p. 64. Department of Employment, Government Statistical Service.
[5]United States Current Population Surveys, various years.

also risen. As seen in Table 2, increases in this ratio have occurred for both the single worker and the aged couple in every country except Germany. And the gain for single workers has been greater than that for couples, except in the United States. Among aged couples, the ratio of social security benefits to the average earnings in manufacturing in 1980 varied from 47 percent in the United Kingdom to 83 percent in Sweden. Canada and Germany replaced approximately half of these average earnings through their social security pension programs, while the United States replaced two-thirds. The increase in replacement rates of the social security systems in most countries represents an important and dependable improvement in economic security for retired populations.

Declines in Labor Force Participation Rates and Increases in Unemployment

The increased generosity of retirement programs has had a predictable effect on labor force participation rates. Overall participation rates after age 60 have declined since 1960 in every country examined in Table 3. The decline has been more pronounced for men than for women because male participation rates were much higher initially. Among the age group 55 to 59 years, male rates show a fairly modest decline since 1960 in every country except Japan. In the age group 60 to 64 years, the declines increase substantially. Among men age 65 and over, however, the decline has continued to be substantial even in Japan which has the highest participation rates of all countries examined here.

The relatively recent general increase in the number of women in national labor forces has meant that female participation rates for ages 55 to 59 have actually increased since 1960 in every country examined. And in some countries their

TABLE 2

SOCIAL SECURITY OLD-AGE PENSIONS AS A PERCENT OF

AVERAGE WAGES IN MANUFACTURING, 1969, 1975, AND 1980

Country	Single worker				Aged couple			
	1969	1975	1980	Percent increase 1969-1980	1969	1975	1980	Percent increase 1969-1980
Canada	24	33	34	41.7	41	47	49	19.5
West Germany	55	51	49	-10.9	55	51	49	-10.9
Norway	--	--	--	--	--	--	--	--
Sweden	42	57	68	61.9	56	73	83	48.2
United Kingdom	27	31	31	14.8	43	47	47	9.3
United States	30	38	40	33.3	44	58	66	50.0

-- Not available.

Sources: Leif Haanes-Olsen, "Earnings Replacement Rate of Old-Age Benefits, 1965-75, Selected Countries," Social Security Bulletin, January 1978, pp. 3-14; and Jonathan Aldrich, "The Earnings Replacement Rate of Old-Age Benefits in 12 Countries, 1969-80," Social Security Bulletin, November 1982.

TABLE 3

LABOR FORCE PARTICIPATION RATES, BY SEX, FOR SELECTED AGE GROUPS AND YEARS

Country and year	Males			Females		
	55 to 59 years	60 to 64 years	65 years and over	55 to 59 years	60 to 64 years	65 years and over
Canada						
1961	86.7	75.8	28.5	27.9	20.3	6.7
1971	84.9	74.1	23.6	38.7	29.1	8.3
1981	84.4	68.8	17.3	41.9	28.3	6.0
1961-81 change	-2.3	-7.0	-11.2	+14.0	+8.0	-0.7
West Germany						
1961	88.7	72.5	22.8	32.2	21.0	8.4
1970	86.8	68.8	16.0	34.5	17.7	5.7
1980	82.3	44.2	7.4	38.7	13.0	3.0
1961-80 change	-6.4	-28.3	-15.4	+6.5	-8.0	-5.4
Japan						
1960	89.5	81.9	54.5	45.8	39.1	21.4
1970	94.2	85.8	54.5	53.8	43.3	19.7
1980	94.0	81.5	46.0	50.7	38.8	16.1
1960-80 change	+4.5	-0.9	-8.5	+4.9	-1.3	-5.3
Norway						
1960	95.0	88.1	37.7	27.0	23.1	7.6
1970	91.4[1]	73.6[2]	15.7[3]	46.8[1]	28.0[2]	3.7[3]
1980	87.7[1]	62.7[2]	12.6[3]	61.0[1]	32.2[2]	2.9[3]
1960-80 change	-7.3	-25.4	-25.1	+34.0	+9.1	-4.7
Sweden						
1960	92.3	82.5	27.1	31.8	21.5	4.6
1970	88.4	75.7	15.2	41.1	25.7	3.2
1980	84.4	65.9	8.1	66.4	41.4	2.6
1960-80 change	-7.9	-16.6	-19.0	+34.6	+19.9	-2.0
United Kingdom						
1961	--	--	24.7	--	--	5.4
1971	95.1	86.4	19.4	50.7	27.8	6.4
1981	91.5	74.6	10.7	52.0	22.5	3.7
1961-81 change	-3.6[4]	-11.8[4]	-14.0	+1.3[4]	-5.3[4]	-1.7
United States						
1960	87.7	77.6	30.5	39.7	29.5	10.3
1970	86.8	73.0	24.8	47.4	36.1	10.0
1982	81.1	57.9	17.7	50.2	34.2	7.9
1960-82 change	-6.6	-19.7	-12.8	+10.5	+4.7	-2.4

[1]Refers to ages 50 to 59 years.
[2]Refers to ages 60 to 69 years.
[3]Refers to ages 70 years and over.
[4]1971-81 change.

-- Not available.

Sources: U.S. Bureau of the Census International Data Base on Aging; International Labour Office, 1967, Year Book of Labour Statistics 1967, Geneva, table 1.

increases more than offset the decline in the male rates at this age. Even in the age group 60 to 64 years, women's participation rates increased in most countries, except Germany and the United Kingdom. For women age 65 and over, participation rates have declined in every country, though again by less than for males.

Although the pattern of activity decline is fairly consistent across countries, the range in levels of participation can be enormous. Even though income of the aged in Japan is not a major focus of this paper, data on labor force participation rates in Japan are included here for contrast. Even though Japan's "retirement age" is 55 years, nearly half of elderly (age 65 and over) Japanese men were economically active in 1980, a rate more than six times higher than that of France and Sweden. Likewise, elderly Japanese women are much more likely than other nationalities to be in the labor force. Such high rates result from the fact that many Japanese retirees take part-time jobs and hence remain in the labor force on a reduced basis.

In 1982, aged males and females in the United States had higher labor force particiicipation rates than in any other country examined except Japan. This is despite the fact that the United States has an earnings test on its Social Security benefits and most other countries do not. In the United States, if people under age 72 earn more than a certain income they are not considered fully retired and, therefore, their social security benefits are reduced. The United Kingdom is the only other country with a retirement test for men up to age 70 and women up to age 65. The other countries in Table 3 which have no retirement test are Canada (for the earnings-related tier), Norway, Sweden, and West Germany (after age 65).

The retirement test theoretically creates a disincentive to work for the people above retirement age. Therefore, it is curious that despite the fact that the United States has an earnings test, it still has a higher labor force participation rate among people age 65 and over than do many other countries, especially Germany and Sweden where, with no earnings test, male labor force participation rates are less than half the rate in the United States.

III. The Present Economic Status of the Aged

The present income levels of the aged in various countries are in part the net result of the trends discussed above. The increase in social security benefits and the accompanying decrease in labor force participation rates, means that income from social security has increased over time and income from earnings almost certainly has fallen over time for the aged. Unfortunately, there is no good source of data on how the sources of income for the aged have changed over time. The only comparable international microdata on income and its composition come from the LIS.

The LIS is a cross-sectional comparison of income data from national household surveys taken in several different countries between 1979 and 1981. The data from these surveys were adjusted for definitional differences of both income and housing units. The LIS data base currently includes nine countries, the six shown in Tables 4 through 7 and also Israel, Australia, and Switzerland. Israel's economic situation is so anomalous compared with the other countries that it does not add sufficient insights to include in a paper limited to this topic, while Australia and Switzerland are just now coming on line and could not be included in this paper. Each country survey covers at least 92 percent

of the noninstitutionalized population, 96 percent excluding Germany. While some ethnic groups, such as Laps in Norway or Aleuts in the United States, have too small sample sizes to be representative, the age cohorts which are our major concern in this paper are well represented. A more detailed explanation of country datasets which form the foundation of the LIS is included in Appendix Table A-1.

The LIS data set contains 35 income and tax variables and 30 demographic variables, allowing the researcher to define income as called for in their study. The income concept used in Tables 4, 6, and 7 of this paper is disposable family income. It includes all forms of cash income (earnings, property income, all cash transfers) net of direct taxes (that is, employer and employee payroll taxes and income taxes). In Table 5 we examine the composition of gross (before direct tax) cash income among the elderly.

The household income variables can be further adjusted for differences in family size and composition. The equivalence scale, employed in Tables 4 and 6 of this paper, is between a per capita income, which counts each person in a three-person family as .33 equivalent adults, and household income unadjusted for the number of people in the household. It counts the first person as one equivalent adult and adds .50 equivalent adults for each additional person. In Appendix Table A-2 we compare the LIS equivalence scale to a per capita adjustment and to the food expenditure based equivalence scale implicit in the U.S. poverty line and used in Table 7 of this paper. While the equivalence scale is simplistic in nature, it is virtually identical to that used by the Organization for Economic Cooperation and Development (OECD) and by Hauser and Nouvertre (1980). Adjusted income is calculated by dividing disposable income

by the equivalence scale appropriate to each family size and age composition. The equivalence scale is normalized to a family of three persons. Thus, the factor for this unit is 1.00. For a more complete discussion of the development or application of this equivalence factor and its comparison to other household equivalence scales, see Smeeding, Schmaus, and Allegreza (1985), and Appendix Table A-2.

Income by Age in Relation to the National Mean Income

In every country except Germany, average household income is highest in the 55 to 64 age group. There is, then, a significant decline in income in the 65 to 74 age group when most people retire. Table 4 compares the after-tax and after-transfer income by age of household head for the 1979-81 period in six countries. Household income is adjusted for the size of the household using the LIS equivalence scale. Such an adjustment is extremely important since most aged households are smaller than non-aged households.

As can be seen, the aged 65 to 74 years appear to have slightly lower income than non-aged households, but on average have 92 percent of the national mean income. The countries that have relatively high average income in this age group are also the countries that tend to have high labor force participation rates in Table 3. The two countries with low average income, Germany and the United Kingdom, also have fairly low labor force participation rates. However, Norway and Sweden also have low participation rates, but a high relative income for people age 65 and over, suggesting that their pensions are very generous. The income of the people age 75 and over is, on average, 14 percent lower than the income of the 65 to 74 age group. On average, the households with heads

TABLE 4

RATIO OF ADJUSTED DISPOSABLE HOUSEHOLD INCOME TO NATIONAL MEAN[1], FOR SELECTED AGE GROUPS AND COUNTRIES

Country and year	Age of household head						
	Less than 25 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over
Canada (1981)	.87	.96	.96	1.11	1.15	.94	.81
West Germany (1981)	.86	.88	.94	1.30	1.07	.85	.79
Norway (1979)	.81	.96	.99	1.04	1.18	1.01	.79
Sweden (1981)	.86	1.00	.98	1.12	1.17	.96	.78
United Kingdom (1979)	.99	.97	.97	1.20	1.17	.76	.67
United States (1979)	.77	.93	.95	1.13	1.21	.99	.84
Mean	.88	.96	.96	1.13	1.17	.92	.78

[1]Disposable income is post-tax-and-transfer income. The adjustment of disposable income for family size is done using the LIS equivalence scale; see Appendix Table A-2.

Source: Luxembourg Income Study database.

age 75 and over have the lowest incomes of all households of any age group except for the incomes of very young families in the United States. The ratio of mean incomes for the elderly to the mean for the total population mean is the highest in the United States which has the second highest ratio for the 65 to 74 age group and the highest for the 75 and over age group.

Sources of Income of the Aged

The sources of income of the aged differ both by age of the household head and by country. Table 5 shows the relative importance of public pensions, private pensions, property income, and earnings in the recent income of the aged in our six countries. The role of social insurance transfers increases in every country examined with the age of the recipient. By the time people are 65 to 74 years old, social insurance transfers provide two-thirds to three-fourths of their income in Germany and Sweden, respectively. In the other countries the role of social insurance as a percent of total income varies from 35 to 46 percent. By age 75 and over, however, social insurance transfers provide 75 percent of the income in three of the six countries; in Canada and the United States they provide 45 percent of total income.

Earnings play a more important role in the average income of the aged 65 to 74 years than many people suspect. But as expected, earnings play a more important role in those countries that have relatively higher labor force participation rates. For the age group 75 years and over, earnings play a very small role and the decline in this role partly explains the decreased average income of that age group relative to those 65 to 74 years old.

TABLE 5

COMPOSITION OF GROSS INCOME OF ELDERLY HOUSEHOLDS IN SELECTED COUNTRIES

Country and age group of household head	Income before tax					Other Income	Total
	Earnings	Property income	Occupational pension	Social insurance transfers	Means-tested transfers		
Canada (1981)							
55 years and over	56	17	6	18	2	1	100
65 to 74 years	28	22	12	35	2	1	100
75 years and over	13	30	8	45	2	2	100
West Germany (1981)							
55 years and over	43	2	8	46	1	0	100
65 to 74 years	17	2	12	67	1	0	100
75 years and over	8	4	12	75	1	0	100
Norway (1979)							
55 years and over	61	5	3	30	0	0	100
65 to 74 years	41	6	7	45	0	1	100
75 years and over	6	8	10	75	1	1	100
Sweden (1981)							
55 years and over	39	7	-	51	3	0	100
65 to 74 years	12	9	-	76	3	1	100
75 years and over	2	13	-	78	7	1	100
United Kingdom (1979)							
55 years and over	54	7	8	28	3	0	100
65 to 74 years	26	9	15	46	3	1	100
75 years and over	17	10	12	54	7	0	100
United States (1979)							
55 years and over	58	13	8	19	1	0	100
65 to 74 years	32	18	13	35	2	0	100
75 years and over	17	24	12	45	2	0	100

Source: Achdut, Lea and Yosi Tamir, "Comparative Economic Status of the Retired and Nonretired Elderly," Luxembourg Income Study-CEPS Working Paper No. 5, Luxembourg, July 1985.

It is also interesting to note that the proportion of welfare benefits (means-tested transfers) in the average income of the aged is remarkably small. This does not mean that there are no aged who are poor. Rather, it suggests that the aged in the countries studied who are eligible for welfare benefits have relatively low participation rates in welfare programs. As a result, the total benefit amount given to the poor aged is small.

There is a wide variance in annual property (or capital) income (that is, interest, rent, dividends, and annuity income) among the elderly across these six countries. The Germans and Norwegians have little income from capital according to the LIS databases, while Canadian and U.S. elderly have much more property income. In all countries, the proportion of income from capital increases with age.

Finally, occupational pensions from private or public employers in all of the countries provide only 10 to 15 percent of the average income of the elderly. Several countries are making private pension benefits mandatory, which may affect their future role in the income security of the aged. But today private pensions are not a major source of income in any country.

Income Inequality

The U.S. elderly have by far the highest level of income inequality of their peers in these other countries as shown in Table 6. Income inequality increases when moving from the 65 to 74 age group to the 75 and over age group only in the United States and Germany; income inequality is less for the 75 and over age group than for the 65 to 74 age group in all other countries. The Gini ratio for the very elderly in the United States is .355, 25 percent larger than the

TABLE 6

INEQUALITY: GINI COEFFICIENTS[1] FOR DISTRIBUTION OF ADJUSTED DISPOSABLE INCOME, FOR SELECTED AGE GROUPS AND COUNTRIES: 1981

Country	Less than 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over	Total
Canada	.332	.295	.285	.286	.296	.309	.291	.299
West Germany	.304	.267	.317	.452	.342	.258	.282	.340
Norway	.296	.249	.214	.229	.229	.250	.229	.243
Sweden	.236	.209	.192	.216	.195	.143	.126	.205
United Kingdom	.279	.264	.253	.246	.253	.266	.240	.273
United States	.345	.313	.304	.303	.331	.342	.355	.326
Average[2]	.299	.266	.261	.289	.274	.261	.253	.281

[1]The higher the gini coefficient, the more income inequality exists.
[2]Average is the simple mean across all countries.

Source: Hedstrom, Peter and Stein Ringen, "Age and Income in Contemporary Society," LIS-CEPS Working Paper No. 4, Luxembourg, September 1985.

.282 ratio in Germany. At the other end of the spectrum, Swedish and Norwegian income inequality among the elderly are very low. Canadian and German elder inequality are closer to U.S. levels, though still far below.

Poverty Status

Poverty among the elderly is the result of both the level of average income and the degree of income inequality that exists within the aged cohorts. Even though the U.S. elderly have a high average income relative to the other countries, the percentage of U.S. elderly with low incomes (defined as adjusted income less than one-half the median income) is higher than is any other country except the United Kingdom (Table 7). This paradox of high mean income and larger numbers of low income elderly is because of the distribution of the elderly around the mean as measured by the high level of U.S. inequality as seen in Table 6. If, however, the official U.S. absolute poverty measure is used, then the poverty rate is considerably less than the rate of elderly who have low income. Both Norway and the United Kingdom have higher levels of poverty (U.S. definition) than the United States, while the German poverty rate is virtually the same.

In four of the six countries examined (Germany, Norway, Sweden, and the United Kingdom), the U.S. poverty line (converted into the appropriate national currency using OECD purchasing power parities) was higher than one-half the adjusted median income and therefore the poverty rates were higher than the low income rates. In the United States and Canada the poverty line was lower than one-half the median income line and therefore the poverty rates are lower.

TABLE 7

ABSOLUTE POVERTY AMONG THE AGED IN SELECTED COUNTRIES

Country and year	Adjusted absolute poverty line as percent of median adjusted income[1]	Low income relative rates[2]			U.S. absolute poverty rates[3]			Percent of absolute poor who are single women living alone	
		All 65 years and over	65 to 74 years	75 years and over	All 65 years and over	65 to 74 years	75 years and over	65 to 74 years	75 years and over
Canada (1981)	39.5	17.2	13.7	23.9	4.8	4.0	6.2	41.4	68.7
West Germany (1981)	56.0	11.1	8.1	14.2	15.4	12.5	20.4	45.6	70.4
Norway (1979)	55.8	5.6	3.1	9.0	18.7	10.8	29.3	63.9	70.5
Sweden (1981)	51.2	0.8	0.5	1.3	2.1	0.8	4.0	2.0	66.1
United Kingdom (1979)	52.9	29.0	24.1	39.1	37.0	31.5	48.5	46.8	60.1
United States (1979)	42.1	23.9	19.8	31.7	16.1	13.4	21.5	46.0	59.6

[1]Each country's disposable income is divided by the number of equivalent adults normalized to a 3-person family using the U.S. poverty line equivalence scales in Table A-2 to arrive at adjusted income. In this column we find the ratio of the 3-person U.S. poverty line for the given year to the median adjusted income in each country.
[2]Relative low income rates are the percentage of persons of a given age living in families with adjusted incomes less than 50 percent of each country's median adjusted income.
[3]U.S. absolute poverty rates are the percentage of persons of a given age living in families with adjusted incomes less than the official U.S. 3-person poverty line for the given year, where the U.S. poverty line was converted to other currencies using OECD purchasing power parity indices for the appropriate year.

Source: Luxembourg Income Study.

Comparing these (relative) low income and (absolute) poverty rates across countries for the aged as a whole, wide differences can sometimes be noted. For instance, in Norway, only 5.6 percent of the elderly were below the low income line. However, once the low income line was raised by 5.8 percent to the U.S. poverty line, 18.7 percent were poor. Coupled with the low degree of inequality among the Norwegian elderly in Table 6, it is clear that there are fairly large numbers of elderly persons clustered around the half of adjusted median income. The situation in the United Kingdom seems to be much the same.

Perhaps of more interest are the low income and poverty rates for the 75 and over age group as compared to the 65 to 74 year old elderly. In every country in Table 7, the older group's low income and poverty rates are higher than those of the younger aged by a substantial amount. Moreover, the percentage of all poor elderly who are single women living alone is very high and increases with age. In every country examined, between 60 and 70 percent of the poor age 75 and over are single women living along. If we were to add elderly females living in couples or in other arrangements, for example, with children in extended families, the percentages shown for the 75 and over age group would rise to between 70 and 80 percent for each country.

IV. Economically Disadvantaged Aged

As seen in Table 4, the average household income of people 65 years and over in the six countries examined is roughly 75 to 90 percent of the national household income of those countries. The United Kingdom has the lowest aged household income relative to the average, while the United States and Norway have the highest. But the averages obscure the more important issue of who within the aged population need more economic support than they are now getting.

The data on Table 4 suggests that the oldest old have less income than the recently retired. These are the people who often no longer have any option of working even part-time to supplement their retirement pension. And their pension, if based on past wage histories, is lower than the pensions of the recently retired, because wages in the more distant past were generally lower than wages in the near past. Coupling this information with the low income and poverty rates in Table 7 indicate that the most economically needy aged are in this oldest age group.

This comparative analysis suggests that the elderly are more heterogenous than causal generalizations suggest. People who are age 75 and over look very different economically than people who are age 65 to 74. They have less income in general; they have less earnings and more social security benefits. They also have more poverty. And if income inequality is a measure of diversity, then the U.S. aged are the most economically diverse of all the elderly studied.

To these facts we add two additional pieces of information: 1) as measured by low income or poverty status, the large majority of the disadvantaged aged are women, particularly women living alone; 2) according to OECD demographic forecasts, the proportion of aged who are age 75 and over in the six countries examined in this paper will increase from 35.3 to 39.0 percent in 1980 to well over 40 percent and even up to 48 percent in Norway and Sweden by the year 2000. In the United States alone, the percentage of all elderly persons who are age 75 and over will rise from 36.4 to 41.6 percent by the end of the century; at the same time, the proportion age 80 and over will rise from 20.0 percent to 28.5 percent.

Hence, the oldest old, who are increasingly females (widows) living alone and who are the poorest among the elderly, will be an increasing concern in Western society as this century progresses. Recent research (for example, Tracy and Ward; Torrey, Smeeding, and Kinsella) indicates that women's pensions, both public (social insurance) and private, and survivor's benefits under social insurance schemes are lower for women than for men. As single elderly women, who are usually widows, continue to depend very heavily on survivor's benefits under social insurance, it seems incumbent upon governments to carefully evaluate the adequacy of these benefits. While a more complete examination of this issue is beyond the scope of this paper, based on the evidence presented in this paper, a well-targetted increase in survivor's benefits and/or a higher widow's pension would help reduce the high levels of poverty among aged women.

V. Conclusion

In the last 20 years, the population of every country examined in this paper has become considerably older, and every national government has devoted a larger share of its gross domestic product to ensure the the economic security of this increasingly older population (Heller, Hemming, and Kohnert). Increased government expenditures were required in part because of the growing number of beneficiaries, both because of the general aging of the population and the liberalization of retirement ages in most countries, and because of growing medical expenditures. Larger expenditures also were required because of rising average benefit levels relative to wages in the economy.

The result of the increasing generosity of social security programs is that the aged in the countries studied have income levels that are between 75 and

90 percent of the national average income. A recent study for the United States indicates that if noncash income in the form of subsidized health care, implicit rent on owner occupied housing and food were also included, this ratio of net incomes would increase to near parity (Smeeding, 1985). And if leisure has any value at all, then the well-being of the aged is at least comparable to that of the non-aged. This is a remarkable achievement for national governments who have increasingly assumed the responsibility of providing economic security to this growing dependent population.

But improving the income of the aged in general still may not address the twin problems of the distribution of benefits and poverty levels among the aged, particularly single elderly women. The U.S. aged who enjoy the highest average income of all the countries studied also have the highest inequality of all the countries and one of the highest poverty rates. As Quinn has observed, when examining the economic status of the elderly, "Beware the Mean." The international comparisons of the income of the aged made in this paper reinforce his warning.

APPENDIX 1

LUXEMBOURG INCOME STUDY (LIS)

The Luxembourg Income Study has gathered in one central location (the Center for Population, Poverty and Policy Studies (CEPS), in Walferdange, Luxembourg) and made comparable several recent large microdata sets which contain comprehensive measures of income and economic well-being for a set of modern industrialized welfare states. The dataset is accessible to researchers at low cost. Because of the breadth and flexibility afforded by microdata, researchers are free to make several choices of perspective (definition of unit: family, household, etc.; measure of income; and population to be studied, for example, males, females, urban families, elderly households) within the same research paper. This truly comparable microdata creates a potentially rich resource for applied comparative and policy research in economics, sociology, and public policy. The LIS databank currently covers nine countries--Australia, Canada, Germany, Israel, Norway, Sweden, Switzerland, the United Kingdom, and the United States, with France and Finland soon to be added. Table A-1 contains an overview of LIS country datasets. A copy of the User's Guide and further information can be obtained by writing to one of the following:

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APPENDIX TABLE A-1

OVERVIEW OF LUXEMBOURG INCOME STUDY (LIS) DATASETS

Country	Dataset name	Income year	Dataset size[1]	LIS country coordinators	Population coverage[3]	Basis of household sampling frame[8]
Australia	Income and Housing Survey	1981	45,000	Peter Saunders	97.5[4]	Decennial census
Canada	Survey of Consumer Finances	1981	37,900	Gail Oja Roger Love	97.5[4]	Decennial census
Germany	Transfer Survey	1981[2]	2,800	Richard Hauser Irena Stolz Gunther Schmaus	91.5[7]	Electoral register on census
Israel	Family Expenditure Survey	1979	2,300	Lea Achdut Yossi Tamir	89.0 [5]	Electoral register
Norway	Norwegian Tax Files	1979	10,400	Stein Ringen Lief Korbol	98.5[4]	Tax records
Sweden	Swedish Income Distribution Survey	1981	9,600	Peter Hedstrom Robert Erikson	98.0[4]	Population register
Switzerland	Income and Wealth Survey	1981	7,036	Robert Len Brigitte Buhmann	95.5[9]	Electoral register and Central Register of Foreigners
United Kingdom	Family Expenditure Survey[2]	1979	6,800	Michael O'Higgins Geoffrey Stephenson	96.5[6]	Electoral register
United States	Current Population Survey	1979	65,000	Tim Smeeding Lee Rainwater Martin Rein	97.5[4]	Decennial census

APPENDIX TABLE A-1 (Continued)

[1]Number of actual household units surveyed.

[2]The United Kingdom and German surveys collect subannual income data which is normalized to annual income levels.

[3]As a percent of total national population.

[4]Excludes institutionalized and homeless populations. Also some for northern rural residents (eskimos, laps, etc.) may be under-sampled.

[5]Excludes rural population (those living in places of 2,000 or less), institutionalized, homeless, people in kibbutzum and guest workers.

[6]Excludes those not on the electoral register, the homeless, and the institutionalized.

[7]Excludes foreign-born heads of households, the institutionalized, and the homeless.

[8]Sample frame indicates the overall base from which the relevant household population sample was drawn. Actual sample may be drawn on a stratified probability basis, for example, by area, or age.

[9]Excludes nonresident foreigners and the institutionalized but includes foreign residents.

APPENDIX TABLE A-2

A RANGE OF EQUIVALENCE SCALES

Family size	Reference person's age[1]	No adjustment	U.S. poverty line[2]	LIS[3]	Per capita
1	65 years and over	1.00	.60	.50	.33
1	Less than 65 years	1.00	.66	.50	.33
2	65 years and over	1.00	.76	.75	.67
2	Less than 65 years	1.00	.84	.75	.67
3	All ages	1.00	1.00	1.00	1.00
4	All ages	1.00	1.28	1.25	1.33
5	All ages	1.00	1.52	1.50	1.67
6	All ages	1.00	1.71	1.75	2.00
7	All ages	1.00	1.86	2.00	2.33
Each additional person		0	+.15	+.25	+.33

[1]Reference person is sometimes referred to as the "householder," the "head," or the "principal person" in the family unit.
[2]Equivalence scales implicit in the U.S. poverty lines which are determined from expert judgments concerning the amount of food needed to make different size and structure families equally as well off as other size/structure families. See U.S. Bureau of the Census (1985) for additional detail.
[3]The LIS scale is a simplified version of that used by Hauser and Nouvertne (1980) and by the LIS project. Basically, the LIS equivalence scale counts the first person as a whole equivalent adult and each additional person as an additional one half equivalent adult. See Smeeding, Schmaus, and Allegreza (1985).

APPENDIX 2

NATIONAL INSTITUTE ON AGING/BUREAU OF THE CENSUS

I N T E R N A T I O N A L D A T A B A S E O N A G I N G

In response to the need for reliable and internationally comparable statistics on aging, the Natinal Institute on Aging (NIA) and the U.S. Bureau of the Census' Center for International Research (CIR) have developed a computerized data base that provides detailed demographic and socioeconomic information about the aged in the United States and 30 other countries. The intent of this effort is twofold: to promote a better understanding of the aging process in disparate societies; and concurrently, to afford researchers and policymakers in the United States a better opportunity to gain insights and formulate responses to demands generated by an aging American population.

While published data often aggregate the elderly into a broad, open-ended age group (65 years and over), the NIA/CIR data base assembles census, survey, and population-projection data in 5-year age cohorts for the highest obtainable grouping. Information about these cohorts is collected from 1950 to the present, and supplemented with selected projections through the year 2025. Such cohort data over time will allow researchers to go beyond mere cross-sectional comparisons to analyses of the same age cohorts in different countries.

The detailed statistics include not only numbers of people in each cohort, but also their marital and educational status, labor force participation and occupations, mortality rates and causes of death, and other related characteristics. For certain developed countries, income comparisons of the non-aged and aged, and among the aged, are being included in the data base as information from continuing studies becomes available. This represents an important first step toward an integration of the economics and demographics of international aging.

Data base contents are reviewed for internal consistency and international comparability. Source documentation accompanies all information, and additional notation of conceptual definitions and/or data irregularities is provided where necessary. Geographical coverage includes not only the most advanced countries in the world, but also three Eastern European countries which have declining life expectancy and eleven developing nations with very different age profiles than the United States. Among the latter is the People's Republic of China, which contains 22 percent of the earth's population and is likely to age faster than any other major country.

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