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Financial Poverty in Developed Countries: The Evidence from LIS: Final Report to the UNDP

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Financial Poverty in Developed Countries: The Evidence from LIS

Final Report to the United Nations Development Programme (UNDP)

by

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I. Introduction

The object of this report is to review the available evidence on the extent and nature of financial poverty in modern rich nations within the OECD and selected other nations. While we discuss broader concepts of poverty such as those related to deficits in capabilities, social exclusion, violence and insecurity, our main concern is with financial poverty as measured by annual after-tax disposable income. Both absolute and relative poverty measures are presented and attempts are made to link the types of poverty standards used in rich nations to those used in developing nations. We further break down our analyses to compare major dependent groups in society: the aged and families with children (including lone parents).

The next section of the paper discusses the basic measures and concepts that we employ to assess poverty among these groups, and the Luxembourg Income Study (LIS) database which undergirds our analyses. Our descriptive results are presented and summarized in Section III, both level and trend in poverty and its sensitivity to measurement issues. We investigate the extent of poverty and assessing the impact of tax-transfer policy on each. Section IV turns to a brief explanation of sources of and remedies for poverty, including the redesign of the social welfare state. Economic (earnings, unemployment), demographic (aging, single parenthood) and policy effects are assessed over a 10- to 15-year period for a smaller subset of nations. Policy strategies related to labor markets and to addressing both elderly women's poverty and lone parent poverty are discussed. Section V concludes the report with a brief summary of what we have learned and its implications for poverty.

While this report covers a wide range of nations and causes of poverty, not everything could be included here. Very long-term trends in poverty are not available for most of the nations studied

here. We are not able to identify racial or ethnic minority populations in enough nations to separately analyze this issue. Similarly, national data exclusions do not permit an analysis of the economic status of immigrants, and only a sampling of the transition nations of Central and Eastern Europe could be studied. These are included for comparison purposes only.

II. Measuring Poverty in Rich Nations: Basic Concepts and Measurement Issues

Poverty measurement began as an Anglo-American notion. In fact, "official" measures of poverty (or their kin "low income") exist in very few nations. Only the United States (U.S. Bureau of the Census 1995) and the United Kingdom (Households Below Average Incomes or HBAI 1993) have "official" poverty series. Statistics Canada publishes the number of households with incomes below a "low income cutoff" on an irregular basis, as does Australia. First, European nations do not calculate low income or poverty rates because they know that their social programs and a reasonable set of measurement standards would ensure a low poverty rate (see Bjorklund and Freeman 1995, for example). Second, there is no consensus on guidelines for measuring poverty. Hence, there is much less agreement—and comparability—in the literature. While international bodies such as the OECD (Forster 1994), Eurostat (Hagenaars et al. 1994) and the Luxembourg Income Study (e.g., Smeeding, O'Higgins, Rainwater 1990) publish such figures, there is no general international agreement on the measurement of poverty. Moreover, extension to transition nations by these groups are rarely made (for an exception, see Torrey, Smeeding, and Bailey 1996). It is our hope that the United Nations might be able, in time, to link the nations and measures of poverty used in the "rich" nations of the world to those emerging from World Bank and others' research on the developing and/or less developed world (e.g., Lipton 1996; Ravallion 1996). But for now, cross-national poverty comparisons remain an infant industry.

Poverty measurement in rich countries using a large microdatabase such as LIS permits the analyst several choices of both concept and methods for measuring resources and needs. We begin by discussing the concepts of economic poverty and their relationship to social exclusion. We then turn to measurement issues related to needs: equivalence scales, absolute and relative poverty, and social distance (as measured by real incomes using purchasing power parities). Next we turn to measurement issues related to our chosen standard of well-being, often direct tax cash disposable income and its sensitivity to noncash income and indirect taxes. In order to measure the effects of policy on poverty we define a second income concept—market income. We end by identifying groups of interest and the database which supports this study.

Concepts of Well-Being, Poverty, Social Exclusion, and Resource Measures

The measurement of economic poverty in rich nations involves the calculation of economic well-being or resources relative to needs. Economic well-being refers to the material resources available to households.[1] The concern with these resources is not with material consumption itself but rather with the capabilities they give household members to participate in their societies (Sen 1992). These capabilities are inputs to social activities and participation in these activities produces a particular level of well-being (Rainwater 1990; Coleman and Rainwater 1978). Measurement of these capabilities differs according to the context in which one chooses to measure them, particularly within rich nations as compared to within poor nations.

All advanced or rich societies are highly stratified socially. Some individuals have more resources than others. The opportunities for social participation are vitally affected by the resources that the family disposes, particularly in nations like the United States, where there is heavy reliance on the market to purchase such social goods as health care, education, and child care services (Rainwater 1974). Money income is the central resource in these societies. But there are still other

important kinds of resources such as social capital (Coleman 1988), noncash benefits, education, and access to basic health care, all of which add to human capabilities. There are also many forces in rich societies which reduce well-being by limiting capabilities to participate fully in society: for instance, violent, geographically, and socially isolated neighborhoods, poor quality public education, and earnings and job instability increases economic insecurity in many rich countries.

In poor nations, where poverty is more basic—often the difference between life and death—real consumption of food and shelter is the preferred measure of well-being. Economic poverty emerges and is measured by having too few resources for survival, or living on life's edge. Here life expectancy, mortality rates at young ages, lack of access to public health, illiteracy, and other basic measures of "poverty" and social exclusion are much more common and more easily measured than is "income."

But in rich societies, we argue that income—or the ability to consume—is the key measure of economic resources and the ability to avoid poverty. While income—consumption plus change in net worth—brings with it more complicated issues of period of measurement and life cycle considerations, it is a much more appropriate and, we would argue, more easily measured index of well-being for rich nations than is consumption (see Johnson and Smeeding 1997 on this topic).

In this paper, we are concerned mainly with annual disposable money income. Detailed comparable information exists on money income by source, taxes paid, and certain kinds of transfers which have a cashlike character, such as housing allowances, fuel assistance, and food stamps, for the almost 20 nations which we will investigate. Unfortunately we cannot take into account the major in-kind benefits which are available in most countries—for example, health care, education, day care and preschool, general subsidies to housing, and the like. To the extent that the level and distribution of these resources is different in different countries, our analysis of money income must be treated

with some caution. However, their inclusion would be unlikely to change the conclusions reached in this paper. (See below, and Smeeding et al. 1993 for an analysis that includes these benefits.)

Social isolation and the ability to permanently escape poverty are notions which could better rely on longitudinal household panel datasets. Longer term measures of income can help us differentiate those units which are only temporarily poor from those which are longer term or "permanently" poor. While comparative studies of social exclusion might therefore be better captured by such datasets, they are even more sparse, as are studies of long-term poverty spells and/or reliance on social assistance. We know of only one or two such comparative studies for eight nations (i.e., Duncan et al. 1993, 1994). While they indicate that social exclusion due to long-term poverty, joblessness, or extended dependence on social assistance may be a widespread feature of life only in the United States and possibly the United Kingdom, there is growing concern about social exclusion in Europe (e.g., see Bergmans 1996).

Equivalence Scales. Families differ not only in terms of resources but also in terms of their needs. We take differing needs, because of household size and the head's stage in the life course, into account by adjusting income for family size using an equivalence scale. The adjustment for household size is designed to account for the different requirements families of different sizes have for participating in society at a given level. Different equivalence scales will yield different distributions of well-being. Several studies in Europe, the United States, and Australia point to an equivalence scale which implies fairly large economies of scale in the conversion of money incomes to social participation among families with children (Buhmann et al. 1988; Bradbury 1989; Rainwater 1990), and also for the aged (Burkhauser, Smeeding, and Merz 1996). Because choice of equivalence scale may favor small versus large families, depending on which level is selected, we aim

to find a middle ground value which is appropriate for measuring vulnerability for both large families (e.g., those with two or more children) and smaller units (e.g., single elderly women living alone).

Buhmann et al. (1988) have proposed that disposable income be adjusted for family size in the following way:

$$\text{Adjusted income} = \text{Disposable Income}/\text{Size}^{E} \quad (1)$$

The equivalence elasticity, E, varies between 0 and 1; the larger is E, the smaller are the economies of scale assumed by the equivalence scale. The various studies reviewed in the survey from Buhmann et al. (1988) and later Atkinson, Rainwater, and Smeeding (1995) make use of equivalence scales for analyses of per capita income ranging from E = 0 (or no adjustment for size), to E=1 (which ignore all economies of scale). Between these extremes, the range of possible values is rather evenly covered. The reader should keep in mind that all money income estimates in the paper are based on adjusted or equivalent income calculated according to the above formula.

The obvious question is which measure of E to use for this study. Following Atkinson, Rainwater, and Smeeding (1995, especially chapters 2, 3, and 7), we have selected an E value of .5, similar to that used by OECD (Forster 1994), and Eurostat (Hagenaars et al. 1994). For the most part, national rankings by *overall* poverty rates are not sensitive to the measure of E selected (Burkhauser, Merz, and Smeeding 1996). However, because the relative poverty rates of subgroups of the population are very sensitive to these choices, we also test the sensitivity of our results using E = .33 and E = .67 in the appendices of this report (Appendix Table A-1).

Having defined equivalent income in this way, we determine the equivalent income of all individuals in each country. We then examine the distribution of equivalent incomes of persons in households in relation to the selected poverty line. In this analysis we mainly tabulate the percentage of persons who have given characteristics, not the percentage of families with given characteristics.

In technical terms, our calculations are weighted by the number of persons of each type (all, children, adults, elderly), in each household type.

Poverty Measurement. Needs can be measured two ways, an absolute definition and a relative definition. Relative poverty involves deciding on the income concept for relativity (median or mean) and on the fraction of adjusted income which signifies poverty. Absolute poverty measurement means locating the "absolute" poverty line and then converting that poverty line into national currency.

We mainly rely on a relative concept of poverty, the percent of persons living with incomes below half of median income. This income is in line with a well-established theoretical perspective on poverty (Sen 1992; Townsend 1979). Such a measure is now commonly calculated by the European Commission (Hagenaars et al. 1994), by the OECD (Förster 1993) and by other international groups. Only the British and one other international study (Cantillion, Marx, and van den Bosch 1996) use mean income as a standard, though Cantillion et al. use both mean and median income-based poverty rates in their study.

In fact, most studies use the "average" or median household as the point of reference, as do we. Using the average or mean *income* means measuring social distance from something other than the average household. Moreover, the decision to use one measure versus the other can lead to quite different results in poverty trends when inequality is changing. In the United States from 1973 to 1994, the mean income grew 15 percent more than the median income, thus assuring that poverty measured relative to the mean grew much more than poverty relative to the median (Burtless 1996). Appendix Table A-3 illustrates the differences found between using mean or median income as the reference point.

We use two additional measures of relative poverty to test the sensitivity of our headcount measures to alternative poverty lines. Forty percent of the median is chosen because it is almost exactly the ratio of the United States poverty line to the United States median, and 60 percent is used because this is the minimum income level where Scandinavian welfare states typically set their safety net benefits packages. Because poverty rates are sensitive to choice of a relative threshold, we demonstrate poverty rates at these cutoffs in the main body of the paper.

Our absolute poverty approaches are two. First, in order to link our results to those produced by others studying developing nations, we use the World Bank poverty lines of $1 per person per day and also $2 and $4 per person per day in 1985 United States dollars (Ravallion 1996). For comparison, we also use the per capita (E=1) equivalence scale which is common in most studies of poverty in developing nations with these same poverty lines in Appendix Table A-2. While we expect to find few persons in rich nations at these levels of real income, we expect that they will be quite interesting for comparisons with both transition nations and poverty rates in developing countries. A more realistic poverty line in rich nations is the United States single person poverty line—about $14.40 per person per day in 1985 dollars. We also use 50 percent ($7.20 per day), 75 percent ($10.80 per day) and 125 percent ($18.00 per day) of this measure for illustrative purposes, converting all incomes to constant dollars using purchasing power parities.

Purchasing Power Parities (PPP) and Real Standards of Living. In order to investigate the issue of absolute parity and the real living standards of the poor, we have converted the United States poverty line, the World Bank poverty lines, and the relative real incomes of all persons in each country to units of equal purchasing power in 1985 dollars using information found in the Penn World tables (Summers and Heston 1991).[2] In addition to head count poverty measures, after converting all incomes to real incomes, we examine national differences in real standards of

living. We do so by comparing national incomes as a percent of the United States median income in the year of the survey. This gives us the real living standards for middle-income persons—the 20 percent of persons whose income are around the median (10 percent of them below and 10 percent above). We also present results for each country's median low-income or poor person (the median of the 20 percent with the lowest income), and for contrast, the median high-income person (the median of the 20 percent with the highest income).

Measuring Resources: Disposable Income, Noncash Benefits and Taxes

Cross-national comparisons of poverty have focused primarily on the distribution of disposable money income after direct taxes (income and employee payroll) and after transfer payments.[3] While this definition of post-tax and transfer disposable income is broad, it falls considerably short of the Haig-Simons comprehensive income definition, typically by excluding much of capital gains, imputed rents, home production, and in-kind income (including employment related benefits).[4]

Noncash Benefits. In general, no account is taken here of the benefits from public spending other than cash transfers. Benefits for health care, education, or most housing subsidies and tax subsidies are omitted. Because different countries have different mixes of cash and noncash benefits, poverty rates may be sensitive to the income definition. Disposable or gross money income measures used here include only public cash and near cash benefits (food stamps, housing allowances, and other similar benefits denominated in cash). Hence, one might expect differences across countries depending on a nation's preferences for cash versus noncash transfer. In fact, the mix of cash plus noncash benefits across OECD nations is more uniform than is the distribution of cash benefits alone (see Smeeding et al. 1993; Whiteford and Kennedy 1994). Basic public education and health benefits are much more equally distributed across the population at large than are cash benefits, that are more

likely to benefit poor, disabled, sick, and unemployed individuals than the population at large. However, in-kind benefits also tend to be a small share of total social transfers relative to cash benefits in nations with small shares of GDP spent on cash benefits, and vice versa. Thus, high cash benefit nations tend to be high in-kind benefit nations as well.

Including noncash benefits in estimates of the incomes of households also requires the choice of what benefits to include and the valuation of these benefits. While several national studies of noncash benefits have assessed their impact on the income distribution as measured by the cost of benefits to the supplier, the literature has made little progress in arriving at a true Hicksian equivalent variation measure of their cash equivalent value to households (U.S. Census Bureau 1982; Wolfe and Moffitt 1991). A final issue involves the effects of noncash benefits on the definition of the poverty line. Absolute thresholds should not change when in-kind benefits are added in, but relative poverty lines will change. Hence, a further poverty line choice must be made.

Two recent studies (Smeeding et al. 1993; Whiteford and Kennedy 1994) have made such comparisons based on eight nations in the early and mid-1980s. When noncash benefits for health education and housing (owner-occupied and publicly subsidized units) were valued at their government cost and absolute poverty rates were used, poverty rates fell, but national rankings did not change. These results are similar to those found in the United States when the U.S. Census Bureau made similar calculations (U.S. Bureau of the Census 1995). When relative poverty rates were calculated, neither the overall poverty rates nor the rankings changed a great deal.[5]

Another study comparing the United Kingdom and France reached a different conclusion (Gardiner et al. 1994). Here, depending on the poverty measure, type of noncash income included, and valuation method chosen, the poverty ranking of the United Kingdom and France could be reversed. Hence, one must caution that measurement and valuation of noncash benefits may affect

poverty status. This caution is even more pronounced in developing nations where provision for public health and basic education is liable to have a large impact on poverty status, life expectancy, and a range of other aspects of well-being.

Taxes. Most cross-national studies of poverty employ either a measure of income gross of all taxes, or a measure that subtracts "direct taxes"—income and employee payroll taxes—alone. In general, studies do not count personal property or wealth taxes as direct taxes. Employer payroll taxes are implicitly assumed to fall on employees, and indirect taxes are ignored.

However, because of differential reliance on employer and employee social security contributions across nations, and because of the differential mix of personal, business, earnings, income, property, and goods (expenditure, V.A.T., sales) taxes across rich nations, the manner in which taxes are collected may have some effect on the results of cross-national comparative analyses of poverty.

In order to calculate the burden of indirect taxes, a great deal of additional information is needed. Incidence assumptions (consumers, labor, capital) need to be made and relative types and amounts of consumption need to be identified. Largely because of these additional requirements, we know of no studies of poverty which include the effect of indirect as well as direct taxes.

Measuring the Effects of Policy on Poverty

Because we want to measure the efforts of public policy on poverty alleviation, we also examine the impact of public taxes and transfers on well-being by estimating the percent of persons with incomes below half of adjusted median disposable income based on their adjusted market incomes (MI). MI, or pre-government income, includes all forms of earnings (wages, salaries, and self-employment income) plus capital income, occupational pension benefits, and private transfers such as child support. In short, MI includes everything but government transfers and taxes. We

compare these estimates to those made using disposable personal income or DPI, which includes taxes and transfers. Such a comparison illustrates how universal benefits, social insurance, and "welfare" programs—the social safety net—help reduce poverty. It also tells us how the tax system, including negative taxes such as refundable personal tax credits (e.g., the United States' Earned Income Tax Credit and the United Kingdom's Family Tax Credit), help raise the incomes of some families relative to others.

Because poverty is of greater concern when it is concentrated among vulnerable groups (children, aged) as compared to others (e.g., able childless adults), we present poverty rates for all three groups: aged persons (aged 65 or older), nonaged adults (aged 18 to 64), and children (aged 18 or less). We also break the aged and children into various types of living arrangements. For the aged we are interested in the poverty status of single women as opposed to couples, single men and those in other similar arrangements. For children we want to compare single parent status with children living with two parents and in other living arrangements.[6]

Database

The database used to carry out this analysis is the *Luxembourg Income Study (LIS)* database which now contains information on child poverty for 25 nations in 70 databases covering the period 1967 to 1994 (LIS User Guide 1995). Because of the recent addition of the 1990s data to LIS, and the addition of several new nations, we are now able to analyze both the level and trend in poverty and low incomes for a considerable period. One nation which is not a member of LIS—Japan—has prepared data for the report according to LIS specifications so that it could be included here. As LIS continues to add datasets an even more complete picture of comparative national poverty incidence will emerge.

III. Results

Here we present the basic descriptive results of our analyses, looking first at levels of poverty and then at trends. Our objectives in this exercise are as follows:

> determine differences in the extent of relative poverty across nations and the sensitivity of these results to use of different poverty levels and measures.
>
> compare relative poverty for vulnerable groups—aged and children—across nations and further break down these categories by living arrangements.
>
> compare real levels of living of the poor and the "social distance" or between rich and poor across nations.
>
> examine differences in absolute poverty rates, including those of Central and Eastern European nations.
>
> summarize the trends in poverty that emerge from LIS.

Appendix tables show the differences which result from measurement choices and other factors.

Level of Poverty

The extent of poverty varies from 19.1 percent (United States) to 5.4 percent (Luxembourg) with an average rate of 9.3 percent across the 17 OECD nations examined here (Table 1). At the poverty standard of half the median personal disposable income, national poverty rates fall into several groupings: United States at about 19 percent poor; the Anglophone nations—United Kingdom, Australia, Canada, and Ireland—plus Japan—between 11.1 and 14.6 percent poor; one less rich nation, Spain, at 10.4 percent overall poverty; and the remaining ten nations—most of Central Europe and all of Scandinavia—clustered in the 5.4 to 7.6 percent range. These differences are related to several factors: level of overall inequality (United States, United Kingdom);

Table 1

Extent of Poverty[1] in 19 Rich and Emerging Nations Circa 1990 (in percent)

		Level of Poverty				Ranks			
Country	**Year**	**Overall**	**Aged**	**Adults**	**Children**	**Overall**	**Aged**	**Adults**	**Children**
United States	1994	19.1	19.6	16.4	24.9	1	3	1	1
United Kingdom	1991	14.6	23.9	10.7	18.5	2	1	3	2
Australia	1989	12.9	21.6	10.3	15.4	3	2	4	3
Japan	1992	11.8	18.4	10.2	12.2	4	4	5	7
Canada	1991	11.7	5.7	11.2	15.3	5	14	2	4
Ireland	1987	11.1	7.6	9.6	13.8	6	11	6	5
Spain	1990	10.4	11.4	9.2	12.8	7	9	7	6
Germany	1989	7.6	7.5	7.3	8.6	8	12	10	9
Denmark	1992	7.5	11.3	7.3	5.1	9	10	10	13
France	1984	7.5	4.8	8.1	7.4	9	15	8	11
Netherlands	1991	6.7	4.1	6.6	8.3	11	17	12	10
Sweden	1992	6.7	6.4	8.1	3.0	11	13	8	16
Norway	1991	6.6	13.5	5.4	4.9	13	6	15	14
Italy	1991	6.5	4.4	6.1	10.5	14	16	13	8
Finland	1991	6.2	14.4	5.8	2.7	15	5	14	17
Belgium	1992	5.5	11.9	4.6	4.4	16	8	16	15
Luxembourg	1985	5.4	12.9	4.1	5.2	17	7	17	12
Overall Average		9.3	11.7	8.3	10.2				

Notes:

[1]Poverty is measured at 50% median adjusted disposable personal income (DPI) for individuals. Incomes are adjusted by E=0.5 where adjusted DPI = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^E.

[2]Adults aged 65 and over.

[3]Adults aged 18 - 64.

[4]Children under 18.

[5]In Ireland "Aged" includes adults (over 18) living in households headed by someone aged 65 and over; "Adults" includes all adults (over 18) living in households headed by someone aged under 65.

geographical size and diversity (United States, Canada, Australia); immature national welfare states (Spain, Japan); and mature welfare states (European Community, Scandinavia).

Patterns and ranks of poverty for adults alone mirror the overall patterns, particularly in the high poverty nations, though adult poverty rates average 1.0 percentage points below overall poverty rates. Children's poverty rates average roughly 2 percentage points higher than the adult rates and 3 to 5 points higher than overall rates for the three highest poverty nations (United States, United Kingdom, and Australia). In contrast, in the low poverty countries of the EC and Scandinavia, child poverty rates are at or below overall poverty rates. Child poverty in the United States is near 25 percent, with the United Kingdom's rate in 1991 at 18.5 percent. In contrast, child poverty rates in the Scandinavian countries range only from 2.7 to 5.1 percent.

The aged are the group that stands in greatest contrast to the others. The high (11.8 percent) rate of poverty among the aged in Japan is largely explained by the fact that less than 10 percent of the households in Japan are headed by an aged person—most of the elderly there (except for the very rich and the very poor) live with their children. But elder poverty is even higher in the United Kingdom (23.4 percent), Australia (24.5 percent), and the United States (19.6 percent). Lest we think aged poverty is synonymous with Anglophone nations, Canada and Ireland have among the lowest elder poverty rates at 5.7 and 7.6 percent, respectively. Other nations with unusually high elder poverty rates include Belgium, Finland, Denmark, and Luxembourg. On average, the elderly have poverty rates more than 3 percentage points higher than the nonaged and almost 2 points above those of children.

It needs to be emphasized that these results are sensitive to nation-to-nation comparisons among groups. Comparing poverty among children and the elderly (Table 1), we find large imbalances within several nations. Elderly poverty exceeds child poverty by large amounts in

Belgium, Denmark, Finland, Luxembourg, Norway, and Japan. The reverse is apparent in Canada, Ireland, Italy, and the Netherlands (though both rates are below 10 percent there). Poverty among both groups is high, above 11 percent, in Spain and near or above 20 percent in the United States and the United Kingdom. It is low, 9 percent or less, among both children and aged in Sweden, France, The Netherlands, and Germany.

The percent of persons living below any relative (or absolute) poverty line may also be sensitive to where the line is drawn. If we bound the 50 percent of median figures with rates at 40 and 60 percent of adjusted median, we can examine this issue directly. In fact, more or less the same picture of overall poverty emerges regardless of where the relative poverty line is drawn (Table 2). Overall rankings are affected only slightly if we compare the 40 and 50 percent rates. Beyond rankings, however, other differences can be found. One noticeable difference is the fact that among rich nations, "deep" or extreme poverty in the United States stands out much more clearly at the 40 percent standard. Here 13.2 percent of the United States population is poor as compared to 7 percent or less in all of the remaining nations, a 6 percentage point spread. In contrast, the average poverty rate for all nations is only 4.9 percent. Moving to the 60 percent standard lessens the gap between the United States and the rest, with the United Kingdom, Australia, and Ireland all within 6 percentage points of the United States. Here the all-nation average poverty rate is 15.4 percent. Depending on the steepness of the income distribution at or near the poverty line, the percent poor can rapidly increase, e.g., from less than 7 percent in the United Kingdom at the 40 percent standard to 22.8 percent at the 60 percent standard.

Poverty rates for children and the aged are also both sensitive to where the line is drawn (Table 3). Countries are ranked here according to the 50 percent of median standard among the aged. Among both children and the aged, the United States stands out with a high rate of deep (40

Table 2
Overall Level of Poverty[1] (in percent)

		Poverty Level			Ranks		
Country	**Year**	**40%**	**50%**	**60%**	**40%**	**50%**	**60%**
United States	1994	13.2	19.1	25.4	1	1	1
United Kingdom	1991	6.7	14.6	22.8	5	2	2
Australia	1989	7.0	12.9	20.0	2	3	3
Japan	1992	6.9	11.8	na	4	4	na
Canada	1991	7.0	11.7	17.2	2	5	6
Ireland	1987	4.4	11.1	20.0	8	6	3
Spain	1990	5.5	10.4	17.6	6	7	5
Germany	1989	5.2	7.6	12.6	7	8	8
Denmark	1992	4.1	7.5	14.9	12	9	7
France	1984	4.3	7.5	12.3	9	9	12
Netherlands	1991	4.3	6.7	12.5	9	11	10
Sweden	1992	4.2	6.7	12.1	11	11	13
Norway	1991	2.4	6.6	12.5	16	13	10
Italy	1991	2.7	6.5	12.6	14	14	8
Finland	1991	2.8	6.2	11.5	13	15	14
Belgium	1992	2.6	5.5	11.0	15	16	16
Luxembourg	1985	1.8	5.4	11.2	17	17	15
Overall Average		5.0	9.3	15.4			

Notes:

[1]Poverty is measured as a percent of median adjusted disposable personal income (DPI) for individuals. Incomes are adjusted by E=0.5 where adjusted DPI=actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^E.

[2]Adults aged 65 and over.

[3]Adults aged 18 - 64.

[4]Children under 18.

[5]In Ireland "Aged" includes adults (over 18) living in households headed by someone aged 65 and over; "Adults" includes all adults (over 18) living in households headed by someone aged under 65.

Table 3

Level of Poverty[1] (in percent): Aged vs. Children

		Aged						Children					
		Poverty Level			Rank			Poverty Level			Rank		
Country	Year	40%	50%	60%	40%	50%	60%	40%	50%	60%	40%	50%	60%
United Kingdom	1991	8.2	23.9	43.5	3	1	2	8.6	18.5	26.9	4	2	2
Australia	1989	5.6	21.6	44.7	4	2	1	9.8	15.4	21.2	2	3	4
United States	1994	11.3	19.6	28.1	2	3	6	17.8	24.9	32.5	1	1	1
Japan	1992	11.4	18.4	na	1	4	na	6.8	12.2	na	6	7	na
Finland	1991	3.8	14.4	29.8	11	5	4	1.2	2.7	6.1	17	17	16
Norway	1991	0.2	13.5	29.4	17	6	5	1.9	4.9	10.0	14	14	13
Luxembourg	1985	4.0	12.9	22.8	10	7	9	1.5	5.2	12.9	16	12	11
Belgium	1992	5.5	11.9	23.8	5	8	8	2.0	4.4	9.6	13	15	14
Spain	1990	4.3	11.4	25.1	8	9	7	7.4	12.8	20.6	5	6	6
Denmark	1992	4.1	11.3	35.8	9	10	3	2.5	5.1	10.5	12	13	12
Ireland	1987	4.7	7.6	17.5	6	11	13	4.7	13.8	25.1	10	5	3
Germany	1989	4.4	7.5	16.7	7	12	14	6.3	8.6	14.4	7	9	8
Sweden	1992	1.5	6.4	19.8	13	13	10	1.6	3.0	6.2	15	16	15
Canada	1991	1.4	5.7	18.5	14	14	12	9.0	15.3	20.9	3	4	5
France	1984	1.4	4.8	11.4	14	15	16	4.1	7.4	14.4	11	11	8
Italy	1991	1.4	4.4	12.6	14	16	15	5.0	10.5	18.9	9	8	7
Netherlands	1991	3.0	4.1	19.6	12	17	11	5.1	8.3	14.0	8	10	10
Overall Average		4.5	11.7	24.9				5.6	10.2	16.5			

Notes:

[1]Poverty is measured as a percent of median adjusted disposable income (DPI) for individuals. Incomes are adjusted by E=0.5 where adjusted DPI = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^E.

[2]Adults aged 65 and over.

[3]Adults aged 18 - 64.

[4]Children under 18.

[5]In Ireland "Aged" includes adults (over 18) living in households headed by someone aged 65 and over; "Adults" includes all adults (over 18) living in households headed by someone aged under 65.

percent standard) poverty. While Japan also has elder poverty rates at the 40 percent standard which are at or above those found in the United States, child poverty rates in America at this poverty standard are almost double those found in the nearest comparable nations (Australia, Canada, the United Kingdom) and are triple the overall average poverty rates (5.6 percent) found in these 17 nations.

Moving from the 50 percent to the 40 percent standard creates large declines in aged poverty rates on average (from 11.7 to 4.5 percent) and in specific nations (e.g., in the United Kingdom it drops from 23.9 to 8.2 percent). The differences in many other countries are also very large when going from the 50 percent to the 40 percent standard among the aged. Most nations with double digit aged poverty rates at the 50 percent line find drastically reduced poverty rates at the 40 percent line. Moving to a 60 percent standard among the aged has quite the opposite effect, more than doubling the overall average poverty rate from 11.7 to 24.9 percent, producing up to 44 percent of the aged who could be classified as poor under this standard in Australia and the United Kingdom, and more than a third poor in Denmark. Clearly, large groups of elderly persons are clustered around the 50 percent of median income standard, not far enough from poverty to live comfortably.

We conclude that overall levels of poverty are sensitive to where the poverty line is drawn and to which subpopulations one is referring. High poverty rates at the lowest relative poverty line (40 percent) are found in the United States for all persons and for all subgroups. Comparisons between children and the aged vary according to nation and level of poverty, with both groups having rates below 10 percent at a low (40 percent) poverty standard in most countries. With few exceptions, poverty is higher in the United States and Anglophone nations than it is in Scandinavia or Central Europe regardless of the group selected. Given the effect of deep child poverty on the developmental

outcomes of children (Duncan et al. 1996), the high United States child poverty rate at the 40 percent line should be a matter of great concern.

The Feminization of Poverty: Old and Young

For most of the nations examined here, we can further break down the population into vulnerable groups.[7] Previous research has highlighted the fact that among the aged, older single women living alone are a most vulnerable group (Smeeding, Torrey, Rainwater 1993). At age 65, life expectancy for women is three to five years more than for men, and younger women tend to marry older men. This produces a situation where older widows live 8 to 12 years longer than their partners.

Older single women have the highest poverty rates in almost every nation studied (Table 4, first bold column), higher than those found among single elderly men, aged persons living in other living situations (e.g., with a son, daughter, other relative, or friend), and especially older couples. The incidence of poverty among older women living alone is above 50 percent in Australia, above 40 percent in the United Kingdom, and 33 percent and above in Finland, Norway, and the United States. Single digit poverty rates for this group are found only in The Netherlands and in France. Poverty rates for older single women average 22.5 percent in these nations, more than three times the average rate for couples and significantly higher than the rate among single men.

Among families with children, a growing concern in all nations is the high poverty rate of single parents (Table 4, second bold column). Single-parent families range from 10 to 25 percent of all families with children in most major European nations and in the United States, and single fathers are less 5 percent or less of all single parents in every country studied. Similar to the situation of single older women, among families with children, single parents tend to have the highest poverty rates in every nation: 57 percent or more in Canada, the United States, and Australia;

Table 4

Level of Poverty[1] (in percent) by Living Arrangements

		Families with an Aged Head					Children in Families			
Country	Year	Overall	Couples[2]	Single Women[3]	Single Men[4]	Other[5]	Overall	One Parent[6]	Two Parents[7]	Other[8]
Australia	1989	19.8	8.7	**52.7**	42.3	5.5	15.4	**60.9**	9.5	7.7
Belgium	1992	11.3	11.3	**17.7**	13.8	2.9	4.4	**13.5**	3.8	2.4
Canada	1991	5.8	3.8	**12.0**	11.7	2.5	15.3	**57.5**	9.5	9.3
Denmark	1992	10.8	3.0	**19.8**	21.6	na	5.1	**13.8**	9.8	1.8
Finland	1991	14.7	2.7	**33.2**	13.6	3.6	2.7	**7.7**	2.2	2.0
France	1984	4.3	2.2	**8.9**	5.0	2.6	7.4	**19.5**	6.1	8.2
Germany	1989	7.4	4.9	**12.5**	5.9	4.3	8.6	**24.8**	6.4	11.7
Italy	1991	4.4	4.3	**10.4**	3.5	2.1	10.5	**6.1**	10.2	11.4
Luxembourg	1985	13.4	12.9	**17.7**	14.0	7.9	5.2	**23.1**	3.5	6.4
Netherlands	1991	3.9	4.4	**2.8**	5.3	3.3	8.3	**33.9**	6.1	4.5
Norway	1991	11.9	1.1	**34.2**	20.7	0.3	4.9	**19.0**	2.4	0.2
Spain	1990	12.3	15.5	**20.1**	11.4	7.7	12.8	**37.1**	13.2	10.7
Sweden	1992	6.1	0.6	**14.7**	8.1	na	3.0	**5.0**	2.6	na
United Kingdom	1991	22.0	16.4	**42.3**	26.9	5.3	18.5	**49.1**	13.7	11.6
United States	1994	18.9	12.1	**38.2**	24.3	13.2	24.9	**59.2**	13.2	30.6
Overall Average		11.1	6.9	**22.5**	15.2	4.7	9.8	**28.7**	7.5	8.5

Notes:

[1]Poverty is measured at 50% median adjusted disposable personal income (DPI) for individuals. Incomes are adjusted by E=0.5 where adjusted DPI = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^{E}.

[2]Families with only two adults (aged 65 and older) present. Adults are coded as head and spouse.

[3]Single Women living alone aged 65 and older.

[4]Single Men living alone aged 65 and older.

[5]All other families with a household head aged 65 and older.

[6]Children in families with only one adult (aged 18-64) present.

[7]Chldren in families with only two adults (aged 18-64) present. Adults are coded as head and spouse.

[8]Children in all other families.

30 to 50 percent in the Netherlands, Spain, and the United Kingdom. Single-parent poverty rates below 10 percent are found only in Italy, Sweden, and Finland. The average child poverty rate in single-parent families is 28.7 percent, triple the overall child poverty rate and four times the rate in two-parent families.

The important message here is that even among nations with low overall poverty rates, women may do economically much worse than men in situations where adult or older men are not found in the household. Gender is the common currency of poverty for both aged women living alone and single parents in most rich nations.

Real Levels of Living

Beyond poverty rates, real levels of living at the bottom of the income distribution are also important indicators of comparative well-being. Interest in real income goes beyond the situation of the poor—in comparative studies of low income one also wants to know about the real standard of living of average and the well-off as well. Comparisons of real gross domestic product and aggregate consumption often show that some nations (e.g., United States) have the "highest standard of living" among major modern nations. Does this state of affairs extend to measures of after-tax adjusted disposable income? While the Penn World Table purchasing power parities (PPPs) used here to make such adjustments are based on differences in consumption patterns among nations, they are designed to be used with macroeconomic concepts: aggregate output (GDP) and aggregate consumption as defined by national and international income accountants. Cross-national differences in types of "consumption"—tax- financed versus household expenditure-financed—are not taken into account. Because countries differ in the way that they finance such goods as health care and education, and because they differ in the extent to which specific types of consumption are tax subsidized, e.g., owned versus rented housing, the PPPs used here are less than ideal for adjusting disposable income

for control over resources across countries. Yet they are the best tool we have to make such comparisons. The "real incomes" of the poor measured below should therefore be seen as measures of net spendable income rather than measures of total consumption since goods and services such as health care, day care, and education are provided at different prices in different nations. Here we compare the real spendable (disposable) incomes of well-off, average and low-income persons using the United States median person as a benchmark for 14 nations.[8]

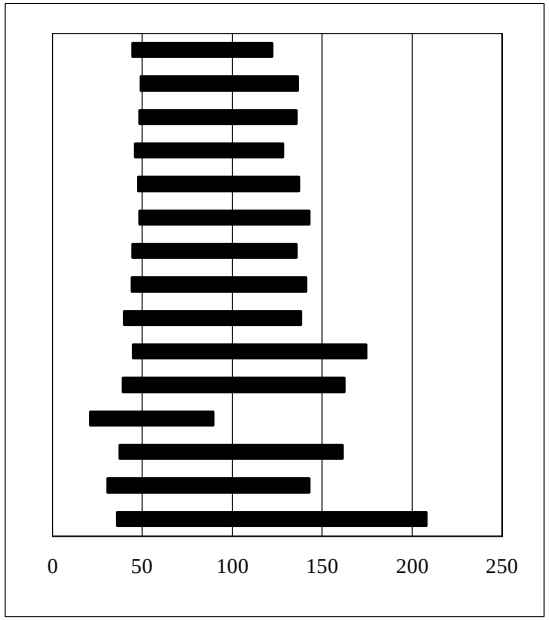
Focusing first on persons in the middle 20 percent of the distribution (Figure 1, third last column) we find that the rankings of the median person are similar to those found for GDP per capita. The United States is the richest nation, and other nations have on average less disposable income per equivalent adult. Nations' median real levels of living vary from 95 percent of the United States level in Canada to 43 percent in Ireland, averaging 79 percent. All 14 nations, except Ireland, Israel, and the United Kingdom, have real median adjusted incomes that are 72 percent or more of the United States median.

However, these rankings and ratios change greatly when comparing the incomes of the poor (or low-income persons at the 10th percentile) to the United States real median. As one might expect, real incomes of the poor in Ireland and the United Kingdom are the lowest found here, since they both have living standards less than 70 percent of the United States median. This result is predictable. The big surprise is that the real living standard of the United States poor. Both national (U.S. Bureau of the Census 1995) and international evidence suggest that the poverty rate in the United States, measured as 50 percent of the median income, is about 20 percent (19.1 percent in Table 1). If we compare the real spendable income of the typical American poor person—the one at the median of the bottom 20 percent—with that of comparable low-income or poor persons in other countries in Figure 1, we find that, with the exception of Ireland and the United Kingdom, low-

Figure 1. Real Income and Social Distance Comparisons

(numbers given are percent of United States median income in 1991 United States dollars)[1]

	Poor/Low Disposable Income[2] (P10)	Length of bars represents the gap between high and low income individuals	Rich/High Disposable Income[3] (P90)	Ratio of Real National Median To Real U.S. Median	Social Distance: Ratio of Low Income to National Median	Social Distance: Ratio of High to Low Incomes
Finland 1991	44		122	77	57	2.74
Sweden 1992	49		136	86	57	2.78
Belgium 1992	49		136	83	58	2.79
Norway 1991	46		128	81	56	2.80
Denmark 1992	48		137	89	54	2.86
Luxembourg 1985	48		143	83	58	2.95
Netherlands 1991	45		136	78	57	3.05
Germany 1989	44		141	82	54	3.21
France 1984	40		138	72	55	3.48
Canada 1991	45		174	95	47	3.90
Japan 1992	39		163	85	46	4.14
Ireland 1987	21		89	43	49	4.23
Australia 1989	38		161	83	45	4.30
United Kingdom 1991	31		143	69	44	4.67
United States 1991	36		208	100	36	5.78
Average[4]	42		139	79	53	3.42



Source: Authors' calculations using the Luxembourg Income Study database.

[1]Unit of aggregation is the household and units are weighted by the number of persons in the household. Incomes are adjusted by E=0.5 where adjusted disposable income (DPI)=actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^{E}.

[2]Relative income for individuals who are below 90 percent of the individuals in the country and more affluent than 10 percent of the individuals in the country. Numbers give real income (1991 United States dollars) as a percent of the United States median.

[3]Relative income for individuals who are more affluent than 90 percent of the individuals in the country and below 10 percent of the individuals in the country. Numbers give real income (1991 United States dollars) as a percent of the United States median.

[4]Simple average, excluding United States.

income persons in these nations have real standards of living above those in the United States. The average poor person's living standards are 5 percentage points above those in the United States, with a high of 49 percent in Sweden and Belgium. Thus, real standards of living among the poor can be quite different than overall living standards within rich nations. Even in countries with 72-75-77 percent as high an "average" (median person) standard of living as the United States such as France, Italy, and Germany, respectively, the median low-income person in these nations enjoys a living standard that is 11-16-22 percent higher than that found in the United States.

Social Distance

Social distance is an important indicator of the cohesiveness and shared goals of any society. One measure of this concept is the relationship between incomes of the rich (persons at the 90th percentile of the distribution) and those of the poor (those at the 10th percentile). Unless a society is highly mobile, the economic distance between these groups presents an important indicator of differences in values, aspirations, consumption patterns, and lifestyles across groups, and of social exclusion for the bottom group. We would argue that poverty status (at least in developed countries) is most crucially a function of the individual's relative position in the distribution of income within their own nation. Agreement on common social goals and policies (solidarity) can be more easily reached when the distance between rich and poor is smaller. On the other hand, when the distances between the poor and the rich, or between the poor and the "middle class," are larger, one is more likely to find a situation of social isolation and less likely to find a shared vision of society.

Social distance between the rich and the poor and between the poor and the median is also shown in the final two columns of Figure 1. The decile ratio compares the incomes of the rich (high-income) to the poor (low-income)in each nation. These ratios vary from 2.74 to 5.78, with the United States and the United Kingdom having the largest social distances. When the incomes of the

rich are five times or more the incomes of the poor, the median or the average is an increasingly unreliable indicator of the well-being of the typical person in a society. The "average" American or British citizen is not nearly as interesting or descriptive of each society as is the contrast between rich and poor Americans or rich and poor British subjects.

Perhaps most important are the incomes of the poor relative to the middle class (or median income) within each nation (second last column of Figure 1). Here the range runs from 36 percent in the United States to 58 percent in Belgium and Luxembourg. Large countries (e.g., Canada, Australia) also tend to have low ratios of poor to median income, reflecting their geographic and economic diversity. Other Anglo-Saxon nations (including the United Kingdom and Ireland) also have relatively large distances from the poor to the middle class.

We conclude that social solidarity is difficult to achieve when the average poor person has a real income which is 17 percent that of a rich person's income and only 36 percent that of the median person, such as is found in the United States. In contrast, Scandinavian and Northern European nations have both low distances from rich to poor and relatively high incomes at the bottom of their distributions relative to the median.

Absolute Poverty Rates

The final method by which we examine poverty is to look at low incomes using the type of poverty indicators favored by development economists (e.g., Ravallion 1994, 1996). Here we look at headcounts below several levels of real income from the $1 per day World Bank standard to $14.40 per day, the United States poverty line for a single person (in 1985 dollars) and 1.25 percent of this rate ($18 per day) (Table 5). We continue to use the E=.5 equivalence scale here, though similar patterns can be found for the E=1.0 or per capita equivalence scale in Appendix Table A-2.

Table 5
Poverty Rates in Sixteen Countries Using Absolute and Relative Poverty Measures

		Absolute Poverty[1] Measure							Relative[2] Poverty Measures		
Country	**Year**	**$1/day**	**$2/day**	**$4/day**	**$7.20/day**	**$10.80/day**	**$14.40/day**	**$18/day**	**33%**	**50%**	**75%**
Australia	1989	0.6	0.9	1.3	2.2	4.1	7.8	14.9	4.6	12.9	31.6
Belgium	1992	0.9	0.9	1.1	1.6	4.1	12.0	26.9	1.8	5.5	25.7
Canada	1991	0.3	0.4	0.7	1.3	2.8	5.9	10.2	4.0	11.7	29.3
Denmark	1992	0.8	1.0	1.4	2.1	3.7	7.6	17.0	3.1	7.5	27.5
Finland	1991	0.1	0.1	0.2	0.5	1.4	3.8	8.3	1.5	6.2	23.1
France	1984	0.7	0.9	1.3	2.6	5.2	12.0	25.5	3.2	7.5	27.6
Germany	1989	0.6	0.8	1.8	3.4	5.9	11.5	21.6	4.4	7.6	23.7
Ireland	1987	0.9	1.3	2.2	4.6	20.7	36.5	51.0	3.3	11.1	32.0
Luxembourg	1985	0.1	0.2	0.2	0.4	0.9	4.3	10.8	0.9	5.4	25.1
Netherlands	1991	1.4	1.9	2.4	3.2	5.7	14.4	29.3	3.4	6.7	26.2
Norway	1991	0.3	0.5	0.6	1.1	1.7	2.6	7.0	1.9	9.9	30.7
Spain[3]	1990	0.3	0.5	1.0	3.3	9.5	21.1	34.3	3.5	10.4	29.9
Sweden	1992	0.3	0.4	0.8	1.7	3.0	4.6	7.5	3.2	6.7	23.4
United Kingdom	1991	0.5	0.6	0.9	1.9	4.6	13.1	23.1	3.4	14.6	33.6
United States	1994	1.1	1.5	2.3	4.3	8.4	14.1	20.3	9.4	19.1	35.0
Japan	1992	0.2	0.3	0.5	0.8	2.4	3.7	na	na	11.8	29.7
Overall Average		0.6	0.8	1.2	2.2	5.3	10.9	20.5	3.4	9.7	28.4

Notes

[1]Incomes are adjusted by E=0.5 where adjusted disposable personal income (DPI) = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^{E}. Penn World Tables, Mark V, were used to transform real incomes into 1985 US dollars.

[2]Relative poverty is measured as a percent of median adjusted disposable personal income (DPI) for individuals.

[3]PPP taken from unpublished WorldBank data.

Starting at the United States poverty line ($14.40 per day), we find that the two poorest nations, Ireland (36.5) and Spain (21.1) have the highest absolute poverty rates. Several nations are found in the 12 to 14 percent range, including Belgium, France, Germany, The Netherlands, the United Kingdom, and the United States. The other nations of Europe, Scandinavia, Japan, Australia, and Canada all have single digit real poverty rates. At a slightly lower standard ($10.80 per day, or $3,950 per year per equivalent adult), only Ireland has a double digit poverty rate. Clearly there are differences when comparing real and relative poverty rates (see right side of Table 5). High relative poverty (using the 50 percent of median standard) need not imply high absolute poverty (using $14.40 per day), e.g., Japan; and low relative poverty is not always synonymous with low absolute poverty, e.g., Belgium.

The World Bank Standard of $1 per day per equivalent adult, or even four times that standard ($4 per day), produces poverty rates of 2.4 percent or less in every rich nation. At these standards, one finds a large number of anomalous cases in surveys of developed nations: businessmen with real economic losses, differences in bottom codes among nations, and related measurement issues which are not related to poverty but to shortcomings of survey data. Were we to include nations such as Poland, Hungary, or Russia in such a table, we would find poverty rates of 8 to 20 percent (or more) at $4 per day.[9] Moving to a $14.40 per day standard, more than 70 percent of Czechs, Poles, Hungarians, and Russians have incomes below this living standard. The highest poverty rate among OECD nations at this level is Ireland, where GDP per capita is much higher in real terms, and 36.5 percent of the population is poor. The next nearest nations are The Netherlands and the United States (about 14 percent poor) followed by the United Kingdom, Belgium, France, and Germany (11 to 13 percent poor). Clearly, the vast differences in living standards between transition nations and

most OECD nations do not allow us to make direct comparisons of absolute poverty across these groups.

Poverty Trends

The evidence on the trend in relative poverty across nations is mixed and somewhat difficult to assess. Our raw data (Appendix Table A-4) contain a mixture of different years of data for different nations over different periods. Here we score changes in poverty rates from a base year (1979 or 1981 in most cases) to the most recent year (1991 to 1994) according to the following index:

0	less than 1.0 point change
+ (-)	increase (decrease) of 1.0 to 1.9 points
++ (--)	increase (decrease) of 2.0 to 3.9 points
+++ (---)	increase (decrease) of 4.0 points or more

We rank nations according to their most recent poverty rate (same ranking as Table 1) to permit us to assess the impact of poverty change in high, medium, and low poverty nations in Table 6.

Overall poverty rose the most in the 1980s in the United States and in the United Kingdom, with no other nation (except Italy) exhibiting an overall poverty change of 2.0 points or more. In Italy, relative poverty fell by 4.0 points from 1986 to 1991. Thus, only two nations exhibited a rise in the poverty rate over the 1980s: the United Kingdom (5.4 percentage point increase), and the United States (2.5 percentage point increase).[10] Changes in adult poverty mirror the changes in overall poverty rates, something one expects when 55 to 70 percent of the population in each nation consists of persons aged 18 to 64.

Different patterns are found among the aged and children. Among the old, large changes in poverty rates in both directions are evident within most nations studied here. Elder poverty

Table 6
Overall Trends in Poverty

Country	Years	Overall	Aged	Adults	Children
United States	1979-1994	++	- - -	++	+++
United Kingdom	1979-1991	+++	++	+++	+++
Australia	1981-1989	0	+	0	0
Canada	1981-1991	0	- - -	+	0
Spain	1980-1990	-	- - -	-	0
Denmark	1987-1992	0	0	0	0
Sweden	1975-1992	+	++	+	-
Norway	1979-1991	+	+++	0	0
Finland	1987-1991	0	+	0	0
France	1979-1984	0	- - -	0	0
France	1984-1989	-	- - -	0	0
Germany	1984-1989	+	- -	+	++
Belgium	1985-1992	0	+	0	0
Italy	1986-1991	- - -	- - -	- - -	-
Netherlands	1986-1991	+	++	+	++

Source: Author's calculations.

Legend:
0 = within +/- 1.0 points
+ = increase of 1.0 to 1.9 points
++ = increase of 1.9 to 3.9 points
+++ = increase of 4.0 points or more
- = decrease of 1.0 to 1.9 points
- - = decrease of 1.9 to 3.9 points
- - - = decrease of 4.0 points or more

decreased dramatically in the United States (5.8 percentage point drop) despite the overall increase in poverty noted above, while in the United Kingdom, elder poverty rose consistent with the overall change in poverty. Elder poverty decreased by 4.0 points or more in many nations and increased by large amounts in a few, with the largest increases a 7.3 point gain in Norway and a 5.4 point rise in Taiwan. Lesser gains were noted in Sweden (3.7 percentage point rise) and The Netherlands (3.8 percentage point rise), though elder poverty rates in both of these nations remained at 6 percent or less, even after the increases. Elder poverty rates fell dramatically in Canada (15.2 points), Spain (7.5 points), France (by 4.3 points or more), and Italy (8.7 points), with Germany and Israel also showing large decreases. However, these rates are sensitive to the level at which we measure poverty in each nation.[11]

Among children there was less change in most countries. However, the large changes that were observed are all in the wrong direction. The increases in the United States (4.0 point gain) and the United Kingdom (9.5 point gain) are disturbing. Dutch and German child poverty also rose by 3.1 and 2.2 percentage points respectively, though they began at much lower poverty rates. Other changes were much more modest.

It is important to note that changes in relative poverty rates are not always the same as changes in income inequality. While income inequality rose precipitously in the United Kingdom and the United States, and poverty with it, overall income inequality in Sweden, Denmark, and Australia also rose over this over this period with no appreciable effect on overall poverty rates in these nations (Gottschalk and Smeeding 1997, 1997a; Smeeding 1996).

We conclude that trends in poverty in the 1980s were generally flat except in the United States and the United Kingdom, where poverty began at fairly high levels and then rose further. Only Italy exhibited a fairly large decline in relative poverty status. The trends in elder poverty are

sensitive to the level at which the poverty line is drawn and, due to bunching at or near the 50 percent of overall median income level, large swings are evident. Among children, while there was little change in most nations, and small declines in Sweden and Italy, child poverty rose by a large amount in the United Kingdom and the United States, with more modest but notable increases child poverty in the Netherlands and Germany

IV. Sources of, and Remedies for, Poverty

Sorting out the causal factors which produce the wide range of poverty rates found here is a difficult enterprise. Economic change, demographic, and policy changes all can affect the level and trend in poverty among the nations studied here. In this section of the paper we begin with a look at the effects of social policy on poverty rates. Then, for five nations, we begin to sort out the effects of economic and demographic change on absolute poverty change using a decomposition technique. Finally, we examine the relationship between labor markets, unemployment, low wages, and poverty. We conclude with a discussion of antipoverty strategies in rich nations for the 1990s.

Direct or Indirect Impacts of Redistributive Policies

Public policy aimed at stabilizing the incomes of families and persons can affect poverty in many ways: directly, through redistributive taxes and transfers, and indirectly, through their impact on labor supply and other behaviors (e.g., savings).[12] Here we chart the direct impact of government redistribution on poverty rates, but we also discuss indirect effects.

The indirect impacts of public policy are more difficult to measure and are mixed in both direction and magnitude of effect. Much discussion centers on the negative impact of most safety net programs on labor supply: unemployment benefits policy, take-back rates for means-tested benefits, etc. The best evidence indicates that there are modest effects of redistributive means- or income-

tested transfers on work effort and that these effects are to reduce labor supply (see Moffitt 1992; Barr 1991).

In contrast, other types of safety net features (e.g., parental leave, child care, and related employment enabling policies) increase labor supply among married women with children, thus reducing market based poverty (Gornick, Meyers, and Ross 1996). Other types of policies such as the Earned Income Tax Credit (EITC) may have both types of effects: increasing work effort among those with no prior earnings, and decreasing them among those who have substantial earnings and are in the phaseout range (Eissa and Leibman 1995; Hill, Hotz, Mullin, and Scholtz 1996). Finally, active employment policies which provide training, job placement, and related subsidies to both employers and employees have increased both wages and employment among otherwise jobless adults in many nations (OECD 1995, 1996). We conclude that the net indirect effects of redistributive and employment policy are not clear and may vary by country, time period, and type of worker.

Impact of Direct Taxes and Transfers on Poverty Rates

In order to estimate the net effects of tax and transfer policies on poverty rates in rich nations, we calculate the percent of persons poor before and after redistributive policy—direct income and payroll taxes, and all forms of cash and near cash government transfers (Table 7). We show net effects only, though in every nation some persons pay direct taxes in excess of transfers received and therefore fall into poverty due to the effects of policy.[13] Because governments use both tax and transfer policies to affect poverty status, and because transfers are subject to direct taxes in most countries, the tax and transfer system's impact is not separable.

Pregovernment (or as outlined in Section II, market income) poverty rates vary substantially across nations. In order to focus on the effects of employment and wages, and to avoid issues of

Table 7
Market v. Disposable Income Poverty [1]:
The Effect of Government Redistribution on Poverty

		Overall Poverty Levels			Aged[2] Poverty Levels			Adult[3] Poverty Levels			Child[4] Poverty Levels		
Country	Year	Market Income	Disposable Income	Percent Reduction	Market Income	Disposable Income	Percent Reduction	Market Income	Disposable Income	Percent Reduction	Market Income	Disposable Income	Percent Reduction
Australia	1989	23.2	12.9	44.4	70.2	21.6	69.2	16.5	10.3	37.6	20.5	15.4	24.9
Belgium	1992	28.4	5.5	80.6	88.9	11.9	86.6	20.4	4.6	77.5	17.2	4.4	74.4
Canada	1991	23.4	11.7	50.0	58.2	5.7	90.2	17.9	11.2	37.4	22.7	15.3	32.6
Denmark	1992	26.9	7.5	72.1	69.9	11.3	83.8	19.5	7.3	62.6	17.1	5.1	70.2
Finland	1991	15.6	6.2	60.3	43.8	14.4	67.1	11.6	5.8	50.0	11.6	2.7	76.7
France	1984	21.6	7.5	65.3	79.9	4.8	94.0	23.5	8.1	65.5	27.4	7.4	73.0
Germany	1989	22.0	7.6	65.5	65.8	7.5	88.6	12.5	7.3	41.6	11.7	8.6	26.5
Ireland[5]	1987	30.3	11.1	63.4	54.9	7.6	86.2	30.4	9.6	68.4	30.3	13.8	54.5
Italy	1991	18.4	6.5	64.7	55.7	4.4	92.1	13.6	6.1	55.1	11.0	10.5	4.5
Luxembourg	1985	22.3	5.4	75.8	79.4	12.9	83.8	15.6	4.1	73.7	12.3	5.2	57.7
Netherlands	1991	22.8	6.7	70.6	65.5	4.1	93.7	17.3	6.6	61.8	15.2	8.3	45.4
Norway	1991	21.8	6.6	69.7	68.0	13.5	80.1	12.9	5.4	58.1	12.7	4.9	61.4
Spain	1990	28.2	10.4	63.1	68.2	11.4	83.3	22.3	9.2	58.7	20.7	12.8	38.2
Sweden	1992	34.1	6.7	80.4	91.6	6.4	93.0	23.0	8.1	64.8	18.4	3.0	83.7
United Kingdom	1991	29.2	14.6	50.0	68.5	23.9	65.1	19.5	10.7	45.1	28.7	18.5	35.5
United States	1994	26.7	19.1	28.5	58.7	19.6	66.6	19.5	16.4	15.9	28.7	24.9	13.2
Overall Average		24.7	9.1	62.8	68.0	11.3	82.7	18.5	8.2	54.6	19.1	10.1	48.3

Notes:

[1]Poverty is measured at 50% median adjusted disposable personal income (DPI) for individuals. Incomes are adjusted by E=0.5 where adjusted DPI = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^{E}.

[2]Adults aged 65 and over.

[3]Adults aged 18 - 64.

[4]Children under 18.

[5]In Ireland "Aged" includes adults (over 18) living in households headed by someone aged 65 and over; "Adults" includes all adults (over 18) living in households headed by someone aged under 65.

aging, we first compare adult market income-based poverty rates across nations (Table 7, Third panel). Pregovernment or market income-based poverty rates average 17.9 percent, varying from 8.7 percent (Finland) to 30.4 percent (Ireland), with a wide range of estimates in between. Note that "high and low employment societies" bear no strong correlation with premarket income poverty status. Finland, with 12 percent unemployment in 1991, has a low market income-based poverty rate despite this fact. And the United States, with 6.5 percent unemployment, has a 19.5 percent adult market income-based poverty rate. Countries with market income-based poverty rates, above 20 percent include Belgium, Spain, Sweden, France, and Ireland, a group which is as difficult to link together as are the low market income poverty nations (14 percent and below) of Finland, Germany, Italy, and Norway.

What is easier to find is the relationship between postgovernment disposable income rates among adults (and children) and the percentage reduction in poverty—a measure of the efforts of government intervention on poverty status. In general, low poverty reduction nations have lower social expenditures on the nonelderly, while high expenditure nations achieve higher rates of poverty reduction, as we might expect (Appendix Figure 1-A). Government efforts at targeted redistribution produce large differences in disposable income poverty. This fact is most clear when viewing child poverty rates. Here the correlation between antipoverty effort and resulting rates of poverty is generally very high. Those nations with high disposable income-based child poverty rate, have low rates of poverty reduction from social programs for families with children.

Elderly poverty rates are more mixed. Nations with large and effective social security systems for the old such as Germany and Sweden produce high market income-based and low disposable income-based poverty rates among the aged. Other nations with low aged poverty rates, such as France and Canada combine social insurance with income-tested benefits to reduce high market

income-based poverty rates. The nations with the highest aged poverty rates tend to have the least effective tax transfer systems for reducing these rates. This includes United Kingdom, the United States, Israel, and Australia.

The overall rates of poverty reduction in the first panel of Table 7 are averages of the combined systems of transfer for the aged, adults, and families with children. Some nations do much more for one group than for others. For example, contrast the effects of policy on poverty rates for the aged and children in Canada. Some governments do a lot for both groups (Sweden, The Netherlands), and some do little for either group (the United States).

The effects of government tax and transfer policy on poverty are difficult to evaluate. Clearly high spending societies (Scandinavia, Northern Europe) produce lower poverty rates in large part due to their safety nets. Among the aged, where work is not a realistic alternative, tax and transfer systems produce large reductions in poverty; only better targeting and higher spending are likely to produce poverty reductions here. However, among younger adults and children, poverty may be reduced by greater involvement in the labor market (and higher pay), mixed with social program assistance. This is a topic to which we will return.

Decomposing Poverty Change

Changes in poverty rates are produced by a combination of factors, economic, demographic and distributional. Even when poverty rates change little over time, large offsetting forces may be at work in producing small net change in poverty rates. Here we consider five nations where we can disentangle the effects of economic growth, demographic change, and distributional change over ten or more years to gauge their individual impacts on absolute poverty.

Following Danziger and Gottschalk (1995), when we compare two periods (t_1, t_2), we find that the change in poverty (P) is dependent on real income growth (μ), demographic change (d), and distributional change ( ).

$$P \quad f(\ \mu,\ d,\ \ ). \qquad \textbf{(1)}$$

We simulate the effects of each of these by decomposing the change in absolute poverty (as measured by the United States poverty line, the $14.40 per day per person line in Table 5) as follows:

1. *Change in mean with unchanged distribution:* difference between $P_1 \quad f(\mu_1, d_1, \ _1)$ and $\hat{P}_1 \quad f(\mu_2, d_1, \ _1)$. We simulate this change by growing the incomes of all persons by the same rate as overall mean incomes grew over the given period. Thus, absolute poverty would change by the difference between P_1 and $\hat{P}_1$ due to overall growth of incomes with demography and distribution constant.

2. *Change in demographic structure*: difference between $\hat{P}_1 \quad f(\mu_2, d_1, \ _1)$ and $\hat{P}_2 \quad f(\mu_2, d_2, \ _1)$. We simulate this change by reweighting each type of household in the later year, given the new mean income and the initial income distribution. We examine both overall demographic change d and changes for subgroups of the aged, and nonaged. The difference between $\hat{P}_1$ and $\hat{P}_2$ measures the impact of demographic change holding mean income change and the original distribution of income constant.

3. *Change in distribution:* difference between $\hat{P}_2 \quad f(\mu_2, d_2, \ _1)$ and $P_2 \quad f(\mu_2, d_2, \ _2)$. Here we measure the effect of the change in income distribution over the period. This is simply the difference between the actual poverty rate in the second period (P_2) and the simulated poverty rate ($\hat{P}_2$) with higher mean and demographic changes, but with the original distribution of incomes.

These three changes are compared to the levels of both absolute and relative poverty rates in the bottom of Table 8. While the time periods over which we measure change differ across nations (due to differences in available demographic details in various waves of each survey and other factors), the following results are apparent:

Table 8
Decomposing Absolute Poverty Change: Economic, Demographic and Distributional Effects

	Australia (1981-1989)	Canada (1981-1991)	Sweden (1975-1992)	United Kingdom (1979-1991)	United States (1974-1994)
Actual Change in Poverty	-0.79	-2.14	-7.22	0.05	0.67
Change due to:					
1) Change in Mean with Unchanged Distribution	-2.00	-1.64	-7.57	-9.06	-2.79
2) Change in Demographic Structure:	0.56	0.20	0.67	0.73	1.54
Aged (Household Head 65+)	*0.07*	*-0.02*	*0.11*	*0.19*	*0.14*
Single Parents (<65)	*0.46*	*0.03*	*-0.06*	*0.43*	*0.03*
Couples with Children (Head <65)	*0.09*	*0.07*	*0.31*	*0.24*	*0.42*
Singles (<65)	*0.01*	*0.16*	*0.31*	*0.17*	*0.45*
Other Families (Head <65)	*-0.08*	*-0.04*	*0.00*	*-0.27*	*0.03*
3) Change in Distribution	0.65	-0.69	-0.31	8.38	1.92
Absolute Poverty Rates[1]:					
Year 1	13.66 (1981)	8.74 (1981)	14.30 (1975)	20.00 (1979)	14.38 (1974)
Year 2	12.87 (1989)	6.60 (1991)	7.08 (1992)	20.05 (1991)	15.05 (1994)
Relative Poverty Rates[2]:					
Year 1	12.5 (1981)	12.6 (1981)	6.7 (1975)	9.2 (1979)	16.4 (1974)
Year 2	12.9 (1989)	11.7 (1991)	6.7 (1992)	14.6 (1991)	19.1 (1994)

Notes:

[1]Absolute Poverty Rates are based on the 1994 U.S. Poverty line adjusted for purchasing power parity and inflation. Incomes are adjusted by E=0.5 where adjusted DPI = actual DPI divided by household size (S) to the power E: Adjusted DPI = DPI / S^{E}.

[2]Relative Poverty is measured at 50% median adjusted disposable personal income (DPI) for individuals. Incomes are adjusted by E=0.5 where adjusted DPI = actual DPI divided by household size (S) to the power E. Rates are from Table A-4.

1. In every country, equally distributed economic growth, as represented by the change in mean incomes (demography and distribution constant in line 1 of Table 8) unambiguously lowers poverty rates. The higher the growth of overall disposable incomes, e.g., Sweden and the United Kingdom, the greater the reduction in absolute poverty.

2. Demographic change has, on net, increased poverty in every nation, but by less than the poverty reduction due to income growth. The change in the number of couples with children and in single persons under age 65 produced an increase in poverty in every nation. Single parent household growth increased poverty in the United Kingdom and Australia, but had only a small effect in the other three nations over this period. Changes in the age structure also had little effect. Of the three major factors considered here, demographic change seems to have had the least effect.

3. Changes in income distribution have largely offset changes in mean income in the United Kingdom and in the United States. The (slight) declines in inequality in Sweden and Canada reinforced the effects of real economic growth. In Australia, the positive effects of growth were much larger than the offsetting effects of distributional change.

Thus differences in absolute poverty rates can be the result of many types of changes: economic growth and demography playing offsetting roles, and income inequality changes having different effects. Changes in income inequality are much more correlated with relative poverty change, as we might expect. Income distribution may have large effects and, where distribution grows much more unequal (thus creating the increase in relative poverty noted in the bottom row of the table), it may largely offset the absolute antipoverty gains of growing mean income (e.g., United Kingdom and United States). Where the fruits of economic growth are more equally shared among the population, as noted by a rise in mean income, and are not offset by a large increase in inequality, absolute poverty will decrease (Sweden, Canada, Australia). Relative poverty, on the other hand, will decrease only when distributional effects are larger than are demographic effects, and where the distributional change is toward greater equality.

V. Poverty and Employment

While some types of poverty, e.g., among the old, can be reduced via massive tax and transfer efforts, most nations prefer to fight poverty among the nonelderly and their children by promoting

economic independence and labor market involvement. Studies have shown that nations that best reduce child poverty accomplish this via integration of work with the social safety net (e.g., Bergmann 1996; Garfinkel and McLanahan 1994). And in fact, nations which are at the outer limits of their tax and transfer capacity must fight poverty through jobs and work.

If we examine the labor markets of the nations covered here we find that they differ substantially in two ways:

1. A group with both high unemployment and relative high wages for low-skilled workers: mainly EC and Scandinavian nations;

2. A group with lower unemployment and relatively lower wages for low-skilled workers: mainly the Anglophone countries (the United States, Canada, Australia, Ireland, the United Kingdom).

Does this mean that if one wants to reduce poverty through employment, the level of wages must fall (thus increasing the working poor) or does it mean that societies which mix expansive social programs with high wages, even though they experience relatively higher unemployment, do better at fighting poverty?

Stated differently, is the relationship between adult poverty and unemployment stronger than the relationship between adult poverty and lower wages, holding social spending constant? Which of these models produces higher poverty? We postulate that there is a positive relationship between adult poverty rates (APR) and unemployment (U) and also between adult poverty rates (APR) and low pay (LP). These relationships can be measured as follows:

$$APR \quad a_0 \quad a_1 U \qquad \textbf{(2)}$$

$$APR \quad a_0 \quad a_1 LP \qquad \textbf{(3)}$$

We assume nonzero intercepts due to functional unemployment, disability among adults, less than full-time workers, single parents who cannot work, and related factors.

Figures 2 and 3 present these relationships. The difference in the results is striking. There is very little relationship between the APR and U (poor fit, low correlation)[14] but a high intercept in Figure 2. On the other hand, there is a strong relationship between APR and LP (as measured by the share of full-time workers earning less than two-thirds of the median wage for those workers), a good fit and a sizeable coefficient, with a relatively small intercept in Figure 3.

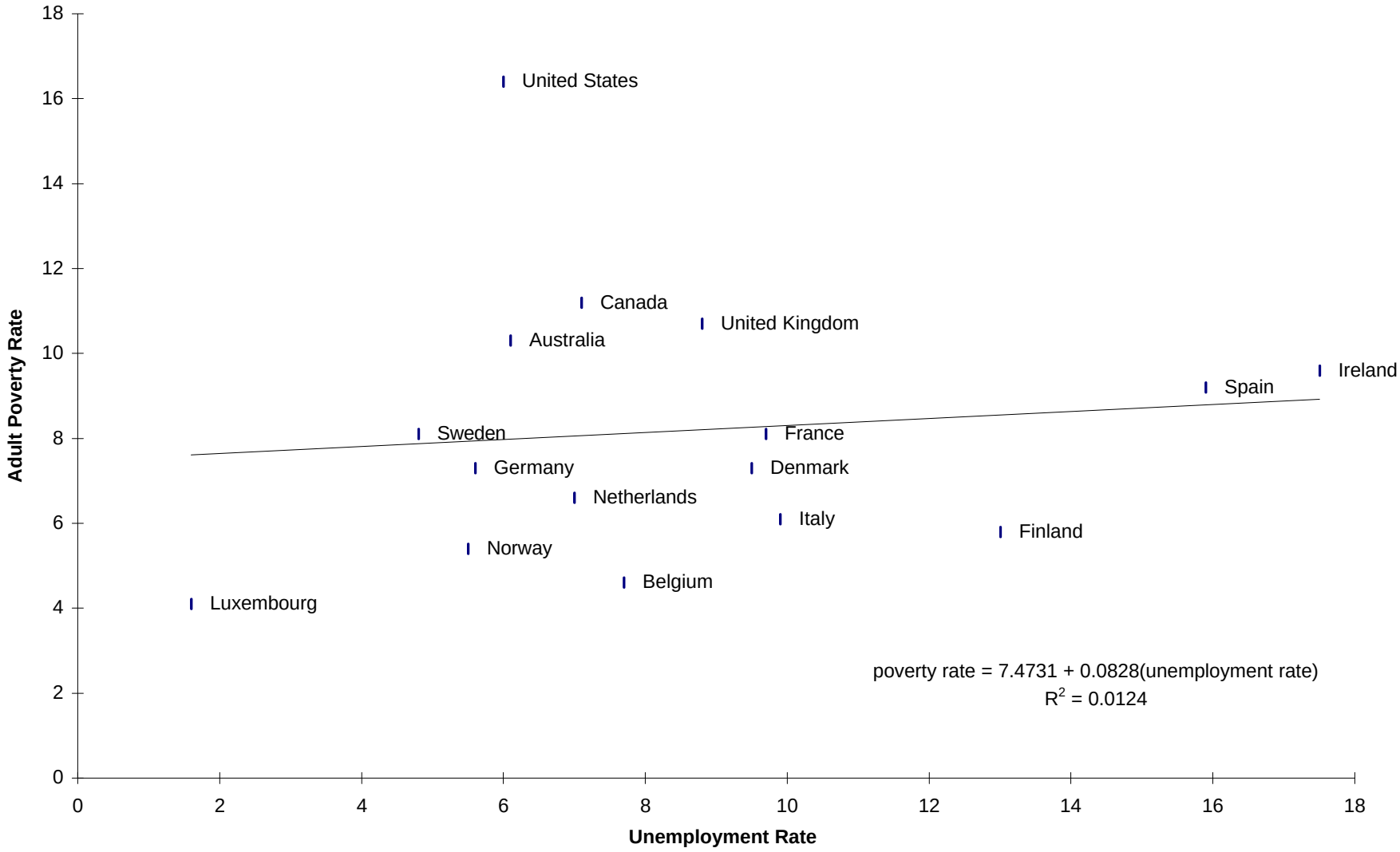
These relationships support the policy conclusions that lowering unemployment will produce only a small decline in adult poverty since nonlabor force participation (the vertical axis intercept in Figure 2) is sizeable. Thus, being in the labor force may be more important than actual employment or unemployment status. But low pay is more important than unemployment in explaining adult poverty. Thus, raising low wages, through skill enhancement or through "in-work" benefits such as the EITC, is liable to have a larger payoff in poverty reduction than is reducing unemployment per se.

VI. Summary and Policy Implications

In this report we have surveyed the relative and absolute poverty status of persons living in rich OECD nations. We find that poverty varies substantially across nations and over time. Particularly vulnerable groups such as women—both older women and lone parents—have very high poverty rates. Poverty is higher in Anglo-Saxon nations than in European or Scandinavian countries. Absolute poverty is highest among the poorest of the rich nations (Ireland, Spain) but also varies widely across countries.

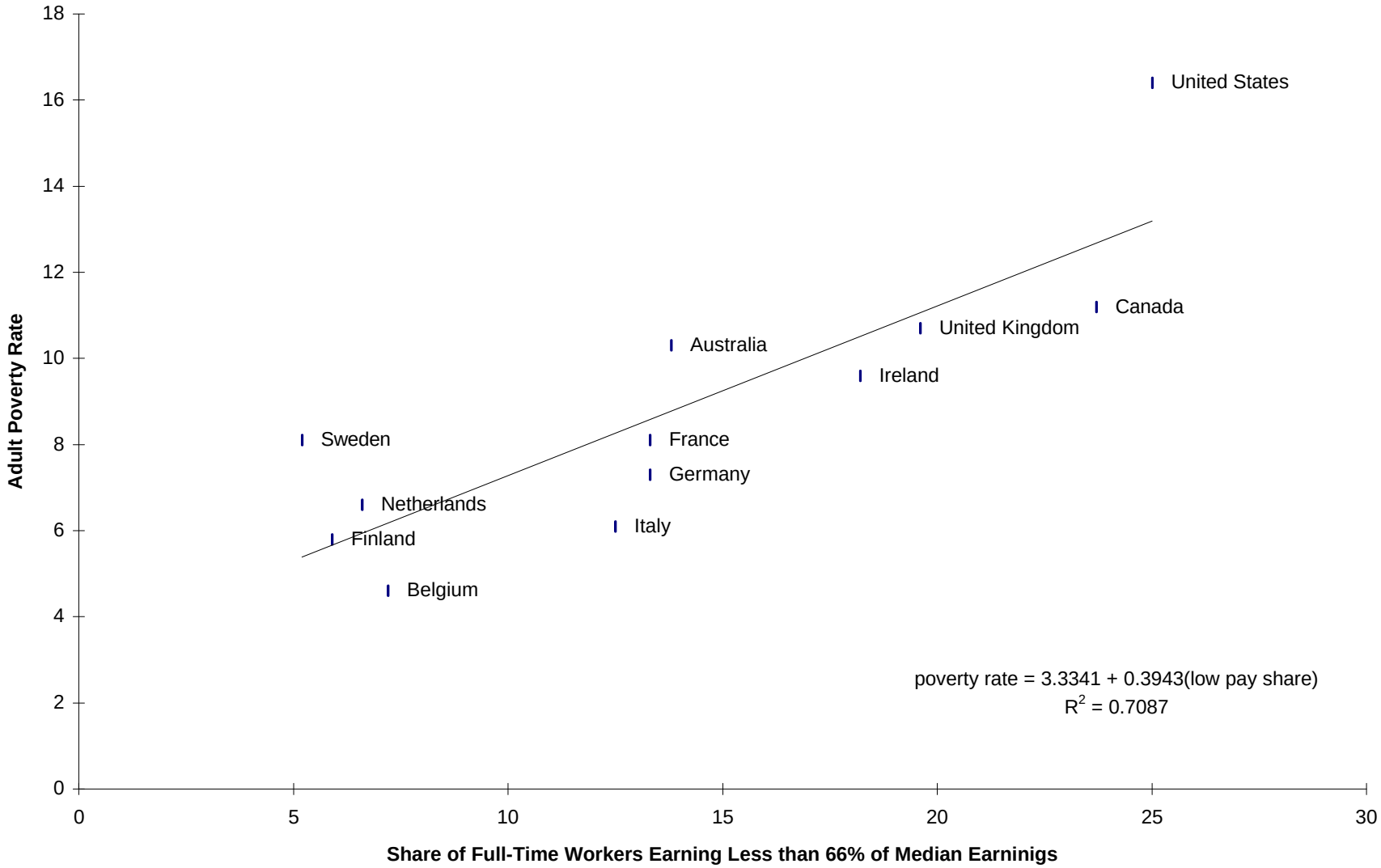
Economic growth, employment status, and pay levels all influence poverty. Economic factors play a larger role than do demographic factors in explaining either the level or trend in poverty. The relationship between economic growth and absolute poverty is a strong one, but it may be offset by distributional changes toward greater inequality. In nations where the fruits of growth are more equally shared among the population, inequality has changed very little at the lower end

Figure 2
Unemployment and Adult Poverty



Source: Adult Poverty rates, Table 1
Unemployment rates, OECD (1995 and 1994)

Figure 3
Low Pay and Adult Poverty



Source: Adult Poverty rates, Table 1
Low pay, all but Ireland, OECD (1996, Table 3.2); Ireland low pay (OECD 1994, Table 1.11)

of the distribution, and absolute poverty rates can thus fall greatly with economic growth. However, when inequality increases with economic growth, the absolute poverty reductions from higher growth are muted, and relative poverty increases.

Social (tax and transfer) policy also has a strong effect on poverty in every nation studied. The poverty rate is significantly affected by antipoverty policy. For example, high poverty rates for single older women living alone can be alleviated by antipoverty spending. A prime example is Canada, where efforts targeted at low-income older women significantly reduced their overall poverty rate in the 1980s (Smeeding, Torrey, and Rainwater 1993). But, while income transfer policies are needed to reduce older women's poverty, tax-transfer schemes are a very expensive way to fight poverty for the nonelderly. A much better vehicle to attack poverty is the labor market. Here we find a strong relationship between wage levels and adult poverty. Schemes to increase wages via skill enhancement, in-work benefits to raise the social wage (e.g., EITC), and related programs may be very helpful here.

Labor force participation itself is a useful antipoverty device. In particular, a mother's ability to work is dependent on both family leave and adequate low-cost child care provision. In normal couple units, the net income from an additional worker, even at a relatively low wage, can move a family out of poverty. Among single parents, ability to work must be aided by child care schemes and child support assistance from the absent parent (or by a guaranteed child support insurance scheme). Policies such as these, which mix work and in-work benefits with supportive social services, are key ingredients in reducing relative and absolute poverty for adults and especially for children.

Appendix Table A-1

Level of Poverty[1]: Sensitivity to Equivalence Scales

		Overall			Aged			Adults			Children		
Country	**Year**	**0.33**	**0.50**	**0.67**	**0.33**	**0.50**	**0.67**	**0.33**	**0.50**	**0.67**	**0.33**	**0.50**	**0.67**
Australia	1989	14.9	12.9	10.9	35.9	21.6	7.5	11.6	10.3	8.4	14.2	15.4	16.6
Belgium	1992	7.0	5.5	5.4	21.4	11.9	8.4	5.3	4.6	4.3	3.6	4.4	6.5
Canada	1991	12.9	11.7	11.2	15.3	5.7	2.2	12.3	11.2	10.5	13.4	15.3	16.7
Denmark	1992	10.7	7.5	6.0	25.8	11.3	4.9	9.0	7.3	6.2	4.4	5.1	6.3
Finland	1991	8.9	6.2	4.5	26.4	14.4	6.4	7.9	5.8	4.6	2.4	2.7	3.4
France	1984	8.1	7.5	7.8	10.4	4.8	2.3	8.5	8.1	8.2	6.2	7.4	9.7
Germany	1989	8.8	7.6	7.5	13.0	7.5	5.4	7.9	7.3	7.1	7.8	8.6	11.1
Ireland	1987	13.0	11.1	11.8	20.1	7.6	5.5	11.6	9.6	9.7	12.4	13.8	17.0
Italy	1991	6.8	6.5	7.4	10.4	4.4	2.7	5.7	6.1	7.1	9.1	10.5	12.6
Luxembourg	1985	6.6	5.4	4.7	21.6	12.9	7.6	4.8	4.1	3.7	4.2	5.2	5.9
Netherlands	1991	8.6	6.7	6.4	15.2	4.1	3.5	7.8	6.6	5.8	7.4	8.3	9.2
Norway	1991	9.2	6.6	4.3	23.9	13.5	1.9	6.9	5.4	4.5	4.9	4.9	5.4
Spain	1990	11.8	10.4	10.0	22.1	11.4	6.9	9.6	9.2	9.0	11.6	12.8	14.1
Sweden	1992	9.5	6.7	5.6	16.1	6.4	2.9	10.2	8.1	7.1	2.4	3.0	3.9
United Kingdom	1991	16.6	14.6	13.5	36.8	23.9	13.6	11.7	10.7	10.4	15.9	18.5	21.4
United States	1994	17.4	19.1	19.1	24.6	19.6	14.8	17.0	16.4	16.1	22.7	24.9	27.6
Overall Average		10.7	9.1	8.5	21.2	11.3	6.0	9.2	8.2	7.7	8.9	10.1	11.7

Notes:

[1]Poverty is measured as a percent of median adjusted disposable income (DPI) for individuals. Incomes are adjusted by the indicated equivalence scale (E=0.33, 0.50, 0.67) where adjusted DPI = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^E.

[2]Adults aged 65 and over.

[3]Adults aged 18 - 64.

[4]Children under 18.

[5]In Ireland "Aged" includes adults (over 18) living in households headed by someone aged 65 and over; "Adults" includes all adults (over 18) living in households headed by someone aged under 65.

Appendix Table A-2
Poverty Rates Using Absolute and Relative Poverty Measures

		Absolute Poverty[1] Measure							Relative[2] Poverty Measures		
Country	**Year**	**$1/day**	**$2/day**	**$4/day**	**$7.20/day**	**$10.80/day**	**$14.40/day**	**$18/day**	**33%**	**50%**	**75%**
Australia	1989	0.8	1.2	2.3	6.4	15.9	30.9	46.8	4.9	11.6	30.1
Belgium	1992	0.9	1.1	1.7	8.7	30.3	55.4	75.5	1.8	7.0	25.5
Canada	1991	0.3	0.5	1.1	4.4	11.8	22.9	36.5	4.1	11.7	28.7
Denmark	1992	0.9	1.1	1.8	3.7	11.0	28.7	50.5	2.5	6.5	22.7
Finland	1991	0.1	0.2	0.3	1.4	6.8	21.8	42.1	1.1	4.7	23.2
France	1984	0.8	1.2	2.8	11.7	31.3	50.6	66.0	3.7	11.3	30.4
Germany	1989	0.7	1.5	2.7	7.7	23.6	43.5	59.8	3.6	8.7	27.2
Ireland	1987	1.4	2.6	11.0	38.0	63.7	79.2	87.8	4.0	14.3	33.0
Luxembourg	1985	0.1	0.2	0.5	3.0	16.6	35.8	53.7	1.1	5.6	26.7
Netherlands	1991	1.9	2.3	2.9	9.4	32.6	56.0	70.6	3.2	7.4	26.6
Norway	1991	0.4	0.5	0.7	1.7	5.3	16.7	35.3	1.5	4.8	23.7
Spain[3]	1990	0.5	1.1	4.5	19.9	45.7	66.0	79.6	4.0	4.5	30.7
Sweden	1992	0.3	0.4	1.1	2.4	5.7	14.4	30.0	2.5	6.4	23.9
United Kingdom	1991	0.5	0.8	1.8	8.4	22.1	37.6	52.0	4.4	13.5	32.1
United States	1994	1.4	2.0	4.6	12.1	22.4	33.4	44.2	10.7	20.1	35.6
Japan	1992	0.2	0.4	0.7	1.8	na	9.6	16.1	na	11.3	30.1
Overall Average		0.7	1.1	2.5	8.8	23.0	37.7	52.9	3.5	9.3	28.1

Notes:

[1]Incomes are adjusted by E=1.0 where adjusted disposable personal income (DPI) = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^{E}. Penn World Tables, Mark V, were used to transform real incomes into 1985 US dollars.

[2]Relative poverty is measured as a percent of median adjusted disposable personal income (DPI) for individuals.

[3]PPP taken from unpublished WorldBank data.

Appendix Table A-3
Relative Poverty[1] Measures

		Country Mean				Country Median		
Country	**Year**	**33%**	**50%**	**75%**	**100%**	**33%**	**50%**	**75%**
Australia	1989	6.0	17.7	39.2	58.3	4.6	12.9	31.6
Belgium	1992	1.9	7.8	30.4	56.3	1.8	5.5	25.7
Canada	1991	5.4	14.6	35.8	57.9	4.0	11.7	29.3
Denmark	1992	3.3	8.6	30.0	53.8	3.1	7.5	27.5
Finland	1991	1.8	7.7	27.5	56.7	1.5	6.2	23.1
France	1984	3.9	11.7	38.4	61.7	3.2	7.5	27.6
Germany	1989	4.7	9.9	30.9	55.3	4.4	7.6	23.7
Ireland	1987	4.4	19.4	42.0	60.9	3.3	11.1	32.0
Italy	1991	2.4	9.7	33.7	58.3	1.8	6.5	25.9
Japan	1992	na	16.4	39.6	na	na	11.8	29.7
Luxembourg	1985	1.0	7.6	32.3	58.7	0.9	5.4	25.1
Netherlands	1991	3.8	9.0	34.2	58.9	3.4	6.7	26.2
Norway	1991	2.1	8.1	28.5	57.6	1.9	9.9	30.7
Spain	1990	4.9	16.1	39.5	60.7	3.5	10.4	29.9
Sweden	1992	3.4	7.6	27.1	55.6	3.2	6.7	23.4
United Kingdom	1991	6.0	22.2	42.8	61.1	3.4	14.6	33.6
United States	1994	12.6	24.8	43.4	59.5	9.4	19.1	35.0
Overall Average		4.2	12.9	35.0	58.2	3.3	9.5	28.2

Notes:

[1]Incomes are adjusted by E=0.5 where adjusted disposable personal income (DPI) = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^E. Relative poverty is measured as a percent of either mean or median (as indicated on table) adjusted disposable personal income (DPI) for individuals.

Appendix Table A-4
Level of Poverty[1] Trends

Country	Year	Overall	Aged	Adults	Children
United States	1974	16.4	28.1	12.6	19.4
	1979[5]	16.6	25.4	12.6	20.9
	1986	18.4	23.3	14.5	25.2
	1991	18.3	20.6	15.1	24.5
	1994	19.1	19.6	16.4	24.9
United Kingdom	1979	9.2	21.6	6.3	9.0
	1991	14.6	23.9	10.7	18.5
Australia	1981[5]	12.5	19.8	10.0	14.9
	1985	12.3	22.1	9.6	14.1
	1989	12.9	21.6	10.3	15.4
Canada	1971	16.8	36.6	14.1	16.5
	1975[5]	14.3	31.6	11.2	14.5
	1981[5]	12.6	20.5	10.2	14.9
	1987	12.2	10.4	11.2	15.2
	1991	11.7	5.7	11.2	15.3
Spain	1980	12.2	18.9	10.5	12.7
	1990	10.4	11.4	9.2	12.8
Denmark	1987	10.4	31.6	7.4	4.7
	1992	7.5	11.3	7.3	5.1
Belgium	1985	4.6	10.7	3.8	4.1
	1988	4.9	10.7	4.2	3.8
	1992	5.5	11.9	4.6	4.4
Sweden	1975	6.7	13.9	6.5	2.4
	1981	5.4	2.7	6.6	4.5
	1987	7.6	7.2	9.1	3.5
	1992	6.7	6.4	8.1	3.0
Norway	1979[5]	5.0	6.2	4.8	4.8
	1986	7.3	21.7	4.8	4.4
	1991	6.6	13.5	5.4	4.9
Finland	1987	5.7	12.5	5.4	3.2
	1991	6.2	14.4	5.8	2.7
France	1979	8.2	10.4	8.1	7.2
	1984	7.5	4.8	8.1	7.4
	1984	15.3	22.1	14.7	13.9
	1989	14.1	17.8	14.1	14.1
Germany	1984	6.5	10.3	5.5	6.4
	1989	7.6	7.5	7.3	8.6
Netherlands	1986	4.9	0.3	5.6	5.2
	1991	6.7	4.1	6.6	8.3
Italy	1986	10.6	13.1	9.5	11.5
	1991	6.5	4.4	6.1	10.5

Notes:

[1]Poverty is measured at 50% median adjusted disposable personal income (DPI) for individuals. Incomes are adjusted by E=0.5 where adjusted DPI = actual DPI divided by household size (s) to the power E: Adjusted DPI = DPI/s^E.

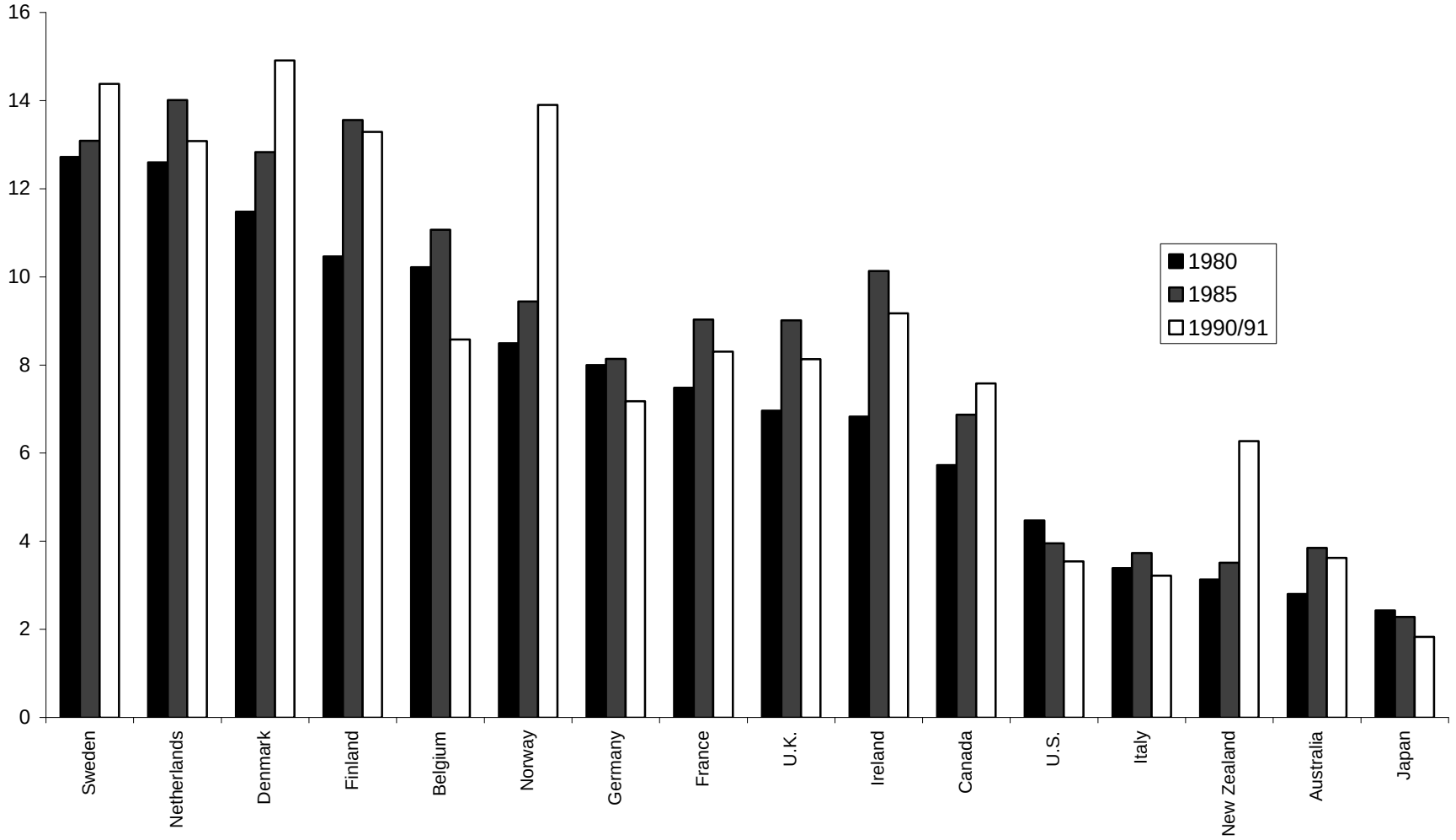
[2]Adults aged 65 and over.

[3]Adults aged 18 - 64.

[4]Children under 18.

[5]In Ireland "Aged" includes adults (over 18) living in households headed by someone aged 65 and over; "Adults" includes all adults (over 18) living in households headed by someone aged under 65.

Appendix Figure 1-A.
Expenditures on Social Programs Among the Nonaged as Percent of GDP in 1980, 1985, and 1990/91



Source: OECD(1994b), Tables 1b, 1c

Note: These include cash benefits for disability and disability services, employment promotion benefits, unemployment compensation, family allowances, welfare benefits, and other miscellaneous items. Excludes all cash benefits to the aged and survivors, health benefits, and education benefits.

Endnotes

1. We use the terms household and family interchangeably. Our formal unit of aggregation is the household—all persons living together and sharing the same housing facilities—in almost all nations. Only in Sweden and Canada does the "household" refers to a more narrow definition of the "family" unit.

2. The Penn World Tables Mark V purchasing power parities (PPP) were judged to be accurate and consistent for the early 1990s for all nations except Italy. We present only limited comparisons of real poverty rates over time due to the temporal inconsistency of OECD PPP's dating back to the mid-1980s and earlier. For additional comments on PPP's see Gottschalk and Smeeding (1997a).

3. Direct taxes are most often estimated from tax imputation models rather than official tax records. For example, the after-tax data for Australia, Germany, New Zealand, and the United States are obtained using a tax imputation model at the level of the individual household to estimate direct taxes. Italy, Belgium, and Luxembourg surveys report only after-tax income; Sweden, Finland, and Norway use official records of taxes paid.

4. Still, this definition is broader than some. For instance, the Census Bureau's annually reported household income and poverty statistics use data from the U.S. Current Population Survey that include cash transfers but exclude taxes, thus making it difficult to ascertain the long-term effects of even income taxes on income inequality in the United States.

5. However, poverty rates for families with children and the aged fell, while poverty rates of childless younger adults rose in both cases (Smeeding et al. 1993). Previous research also indicates that the method of valuing noncash transfers may have a large impact on these results (U.S. Bureau of the Census 1982).

6. Other research has shown these to be the most vulnerable groups. For example, Förster (1994), Smeeding, Torrey, and Rainwater (1993), and Rainwater and Smeeding (1995).

7. We are unable to break down the data in this way for Japan or Ireland.

8. We exclude Italy due to the lack of an appropriate PPP. We have included the United Kingdom and Ireland, each of whose real median income is less than 70 percent of the United States median.

9. We use unpublished World Bank PPP's to adjust the LIS data for Russia, Hungary, and Poland in making these calculations.

10. Extending back to 1974 gives the same result for the United States and for Sweden. In Canada, overall poverty fell from 1971 to 1981, then changed little. Our United Kingdom data go back only to 1979.

11. At the 40 percent of median income poverty rate even stronger reductions in elderly poverty are noted in most nations.

12. Of course, macroeconomic policy can also affect employment, prices, and then also poverty rates. However, our discussion here is limited to the effects of redistributive policies.

13. This fraction ranges from 0.1 percent in Belgium to 0.9 percent in the United States and Italy.

14. The simple multiple correlation is also low (R^2 = .3733) for AP and U.

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