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# **Luxembourg Income Study Working Paper Series**

**Working Paper No. 417**

**Causes and Conditions of Social Vulnerability in Comparative  
Perspective: Asian Evidence from the LIS Dataset**

**Timothy Smeeding**

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**Causes and Conditions of Social Vulnerability  
in Comparative Perspective:  
Asian Evidence from the LIS Dataset**

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# **Causes and Conditions of Social Vulnerability in Comparative Perspective: Asian Evidence from the LIS Dataset**

## **Abstract**

Social vulnerability due to insufficient income and earnings may come from many sources, both demographic and economic, in a globalizing world. This paper examines the problems of population aging, low wages, growing inequality, and insufficient social spending. Vulnerable groups such as children and the aged are considered. The paper will look at the United States, Canada, and Europe, and Chinese Taipei-Taiwan using the LIS (Luxembourg Income Study) database, and will assess the net effects of existing policies and particularly the United Kingdom's program to reduce child poverty. While best practices may be identified, each nation must create its own set of mutually supportive policies which provide protection against global economic forces while at the same time encouraging self effort and efficient behavior. Still, policy can make a difference in outcomes as shown by the recent British success in fighting child poverty.

## **I. Introduction**

Many nations have a long tradition of measuring income inequality and poverty and weighing the effectiveness, successes, and failures of government policies aimed at poverty reduction and at offsetting the instability effects of globalization of labor markets.

One can find many types of ‘social policy reforms’ in rich nations, e.g., 1996 United States Welfare Reform Act which shrunk the AFDC/TANF (Aid to Families with Dependent Children/Temporary Assistance for Needy Families) rolls from over 5.0 million units and 11 million persons in 1994 to under 2.0 million cases (and less than 5.0 million persons) by June 2004. Or one could look at the series of child poverty reducing reforms introduced by the Blair government in 1999 (see Hills and Waldfogel 2004). These two cases, compared later in the paper, help us understand the question of whether and to what extent dramatic changes in program caseloads lead to better antipoverty outcomes. And even in areas where the case for policy success seems overwhelming, e.g., the dramatic decline in poverty among the aged over the last half century, in many nations there is still room for serious policy debate over the remaining poor elders and their prospects for better conditions under impending Social Security reform. Moreover, in the Asian context, it appears that elder poverty may be a more important problem than is child poverty.

For the most part, examinations of domestic antipoverty policy in any country are inherently parochial, for they are based on the experiences of only one nation in isolation from the others. The estimation of cross-nationally equivalent measures of poverty and inequality, the comparison of programs that help reduce them, provide a unique opportunity to compare the design and effectiveness of one nation’s social policy and antipoverty policy with the experiences of other nations. The Luxembourg Income Study database, which undergrids this

paper, contains the information needed to construct comparable poverty and inequality measures for more than 30 nations. It allows comparisons of the level and trend of poverty and inequality across several nations, along with considerable detail on the sources of incomes and public policies that in large part shape these outcomes.

In this paper we use cross-national comparisons to examine differential experiences in fighting poverty in the face of substantial and rising economic inequality, in a cross-national context. In so doing, we compare the effectiveness of antipoverty policies to similar nations elsewhere in the industrialized world. As an Asian case study, we include Chinese Taipei-Taiwan in our analyses. However because Korea has not yet joined the LIS, we are unable to directly compare the Korean case with the situation in other nations using the LIS microdata.

We believe that there are lessons about antipoverty policy that can be learned from cross-national comparisons. While every nation has its own idiosyncratic institutions and policies, reflecting its values, culture, institutions, and history, wide differences in success and failure are evident from the comparisons which follow. And there is evidence that such policies are becoming internationalized in their spread and evaluation (Banks et. al. 2005), especially as issues of globalization, job instability, and population aging become more important throughout the rich and developing world, threatening safety nets and basic income supports.

We begin by reviewing international concepts and measures of poverty and inequality. In so doing, we identify a number of markers that we can use to examine the success and failure of antipoverty policy in a cross-national context. We examine the effects of work, education, family structure, and social policy in achieving these outcomes. We conclude with a discussion of the relationship between policy differences and outcome differences among the several countries,

and consider the implications of our analysis for research and for antipoverty policy in Korea and other Asian nations.

While all nations value low poverty, high levels of economic self-reliance, and equality of opportunity for younger persons, they differ dramatically in the extent to which they reach these goals. Most nations have remarkable similarities in the sources of national social concern: births outside of wedlock and lone parent families (especially in Anglo - Saxon nations); poverty in old age, especially among older women; unstable employment; low fertility rates; low wages; and the sustainability of social expenditures in the face of rapid population aging and rising medical care costs. They also exhibit differences in the extent to which working age adults mix economic self-reliance (earned incomes), family support, and government support to avoid poverty.

The correct course or set of policies for Korea depend on the poverty policy issues which it deems to be most important. Recent studies (Song 2003; Song and Hong 2004; Park and Byun 2004) suggest that population aging and low wages are two important issues to address in the Korean context. Clearly, the 'right' solution depends on the institutions, culture, politics, and feasibility constraints under which it finds itself.

## **II. Cross-National Comparisons of Poverty and Inequality: Methodology and Measurement**

There is considerable agreement on the appropriate measurement of poverty in a cross-national context. Most of the available studies and papers share many similarities that help guide our methodological strategy. Differing national experiences in social transfer and antipoverty programs provide a rich source of information for evaluating the effectiveness of alternative social policies in fighting poverty. While most rich nations share a concern over low incomes,

poverty measurement began as an Anglo-American social indicator. In fact, “official” measures of poverty (or measures of “low income” status) exist in very few nations. Only the United States (U.S. Bureau of the Census 2003b) and the United Kingdom (Department of Social Security 1996; Department of Work and Pensions 2005) have regular “official” poverty series. In Northern Europe and Scandinavia the debate centers instead on the level of income at which minimum benefits for social programs should be set and on “social exclusion” (Atkinson et al. 2002). Most recognize that their social programs already ensure a low poverty rate under any reasonable set of measurement standards (Björklund and Freeman 1997). Instead they concentrate their efforts on social mobility and inequality (Erikson and Goldthorpe 2002).

While there is no international consensus on guidelines for measuring poverty, international bodies such as the United Nations Children’s Fund (UNICEF), the United Nations Human Development Report (UNHDR), the Organization for Economic Cooperation and Development (OECD), the European Statistical Office (Eurostat), the International Labor Office (ILO) and the Luxembourg Income Study (LIS) have published several cross-national studies of the incidence of poverty in recent years. A large subset of these studies is based on LIS data.<sup>1</sup>

For purposes of international comparisons, poverty is almost always a relative concept. A majority of cross-national studies define the poverty threshold as one-half of national median income. In this study, we use the 50 percent of median income standard to establish our national poverty lines. We could have selected 40 percent of national median income as our relative poverty threshold because it is closest to the ratio of the official United States poverty line to median United States household (pre-tax) cash income (42 percent in 1997 and below 40 percent of median since 2000)<sup>2</sup>, but we have decided to stay with the conventional level in most of our analyses. Alternatively, the United Kingdom and the European Union have selected a poverty



rate of 60 percent of the median income (Eurostat 2000; Atkinson et al. 2002; Bradshaw 2003). The results we show at the 50 percent poverty standard can be generalized to the lower poverty standard of 40 percent (see Smeeding, Rainwater, and Burtless 2001). The differences between the United States and other nations are much larger at the 60 percent of median line, which is more than 50 percent above the United States poverty line.

While some nations like to think of themselves as using an “absolute” poverty measure, there is no one absolute poverty measure. All poverty measures are, in some sense, relative and are chosen to be appropriate for the context in which they are used. The World Bank and the United Nations Millennium Development movement define poverty in Africa and Latin America using an income threshold of \$1 or \$2 per person per day, and in Central and Eastern Europe a threshold of \$2 or \$3 per day (Ravallion 1994; 1996). In contrast, the absolute United States poverty line is six to 12 times higher than these standards and the European poverty line is another 50 percent higher than the United States line. Real income change does, however matter. And so we present comparisons of poverty rates in a set of countries, to a fixed or “anchored” poverty line using the LIS data.

## **Measurement Issues**

Comparisons of poverty and inequality across nations with LIS are based on many choices. A poverty line, a measure of resources such as (market and disposable) incomes, an equivalence scale to adjust for family size, and in some cases exchange rates for conversion to real terms are all important precursors to accurate cross-national measurement of poverty status. We assess both the poverty rate (percent of persons who are poor) and overall levels of inequality using several measures in this paper. We measure trends in poverty using two

measures: relative poverty and a poverty line anchored at half of median income in the mid 1980s.

Other choices include:

- Poverty and inequality measurement is based on the broadest income definition that still preserves comparability across nations. The best current definition is disposable cash and near cash income (DPI) which includes all types of money income, minus direct income and payroll taxes and including all cash and near cash transfers, such as food stamps and cash housing allowances, and refundable tax credits such as the earned income tax credit (EITC).<sup>3,4</sup> In determining the antipoverty effects of social transfers and tax policy, we also use a measure of “before-tax-and-transfer” market income (MI), which includes earnings, income from investments, private transfers, and occupational pensions.<sup>5</sup>
- In tracing the effects of income transfer policy from MI to DPI poverty and from MI to DPI inequality, we determine the effects of two bundles of government programs: Social Insurance and Taxes (including all forms of universal and social insurance benefits, minus income and payroll taxes) and Social Assistance (which includes all forms of income- tested benefits targeted at poor people, including the EITC). Again, in making these poverty comparisons for all persons and for groups, we use poverty lines of half of median DPI anchored or fully relative, for all persons throughout.<sup>6</sup> We use the gini coefficient, decile ratio and ratio of the 10<sup>th</sup> and 90<sup>th</sup> percentile to the median income to measure inequality.
- For international comparisons of poverty and inequality, the “household” is the only comparable income-sharing unit available for almost all nations. While the household is the unit used for aggregating income, the person is the unit of analysis. Household income is assumed to be equally shared among individuals within a household. Poverty rates are calculated as the percentage of all persons of each type who are members of households of each type with incomes below the poverty line. In some cases we also calculate the poverty rate for elders (65 and over) and children (17 and under) regardless of their living arrangements. Further, we use the available LIS data to separate annual hours worked (according to weekly hours last year and full time-part time status), marital status and standardized education level of the household head (reference person).
- A variety of equivalence scales have been used in cross-national comparisons in order to make comparisons of well-being between households with differing compositions. Equivalence scales are used to adjust household income for differences in needs related to household size and other factors, such as the ages of household members. In the United States poverty literature, a set of equivalence scales is implicit in the official poverty lines, but these are neither consistent nor robust (Citro and Michael 1995). For the cross-national analysis of *relative* poverty rates, however, we use a consistent scale, which is much more commonly used in international analyses. After

adjusting household incomes to reflect differences in household size, we mostly compare the resulting adjusted incomes to the 50 percent of median poverty line. The equivalence scale used for this purpose, as in many cross-national studies, which include both children and elders, is a single parameter scale with a square-root-of-household-size scale factor.<sup>7</sup>

In measuring “anchored” poverty changes in prices within nations are measured by their own country change in the CPI (Consumer Price Index) as published by OECD (2005) or IMF (in the case of Chinese Taipei Taiwan).

We do not address mobility in or out of poverty across or within generations. Researchers have shown that both income and family structure affect children’s life chances and thus, the real income level of children and their parents is of serious social concern (Sigle-Rushton and McLanahan 2004; Duncan et al. 1993). The question of mobility in and out of poverty requires the use of longitudinal microdata. All of the comparisons in this paper are based on cross-sectional data, not longitudinal data. In fact, several recent cross-national poverty studies suggest that mobility in and out of poverty is lower in the United States than in almost every other rich country (Bradbury, Jenkins, and Micklewright 2001; Goodin et al. 1999; Duncan, et al. 1993).

### **III. Data, Countries, and Macroeconomic Comparisons**

The data we use for this analysis are taken from the Luxembourg Income Study database, which now contains almost 140 household income data files for 30 nations covering the period 1967 to 2000 ([www.lisproject.org](http://www.lisproject.org)). We can analyze both the level and trend in poverty and low incomes for a considerable period across a wide range of nations. A broad league table showing all LIS nations is first presented. But, because we are computing the level and trend in relative poverty, and inequality for several major policy relevant groups, we have decided to focus on just twelve nations for the remainder of this paper, each with a recent 1999-2000 LIS database.

These include the United States, three Anglo-Saxon nations (Canada, Ireland, and the United Kingdom), four central European nations (Austria, Belgium, Germany, and the Netherlands), one southern European country (Italy), and two Nordic nations (Finland and Sweden) and one Asian nation (Chinese Taipei Taiwan). We can add Korea only in the macroeconomic comparison table because while the country has excellent microeconomic data sources, it has not been made available to LIS. These nations were chosen to typify the broad range of rich countries available within LIS and to simplify our analysis.<sup>8</sup> We include all of Germany, including the eastern states of the former German Democratic Republic (GDR), in most of our analyses.<sup>9</sup>

### **Macroeconomic Comparisons**

We begin and gain perspective by comparing three features of the economic and social institutions of each nation: standard of living (as measured by Gross Domestic Product (GDP) per capita in 2000 PPP adjusted dollars); unemployment (as measured by OECD/Standardized unemployment rates), and cash and near cash social expenditures for the non-elderly in 13 nations (Table 1).

#### **TABLE 1 HERE**

The United States is far and away the richest nation that we observe among our set, with 2000 GDP per capita of \$35,650.<sup>10</sup> Excluding Chinese Taipei-Taiwan and Korea, the other OECD nations lie within a tight 12 percentage point GDP per capita range, from 69 to 81 percent of the United States level. and Korea are more accurately classified as “middle income” countries, with DGP per capita that are 50 (to 60) and 46 percent of the United States level, respectively. While we cannot directly study Korea here, Chinese Taipei-Taiwan appears to be a fairly good substitute based on Table 1. With the exception of Austria and the Netherlands, the United States also enjoyed the lowest unemployment rate of all nations in 2000 Canada, Finland,

and Belgium all had unemployment rates more than twice the United States rate, with the variance in unemployment far exceeding the differences in incomes across these select nations.<sup>11</sup>

While the United States is unique in both its high standard of living and its low unemployment rate, it is also unique in the small amount of its resources devoted to cash and near cash social transfer program. In 2000 (latest year available), the United States spent less than 3 percent of GDP on cash and near cash assistance for the nonelderly (families with children and the disabled). This is less than half the amount (measured as a percent of GDP) spent by Canada, Ireland, or the United Kingdom; less than a third of spending in Austria Germany, the Netherlands, or Belgium; and less than a quarter of the amount spent in Finland or Sweden, and closer to Chinese Taipei-Taiwan and Korea than to any other nation. While there is a rough correlation between social spending and unemployment, the differences we see here are not cyclical, but are rather structural in nature (see also Garfinkel, Rainwater, and Smeeding 2004, for more on these differences and health and education benefits in kind).

#### **IV. Results: Level and Trend in Inequality and Poverty**

Much of the concern over social and economic vulnerability is driven by the high and growing levels of economic inequality found in all the countries studies here. Thus, we begin with a broad view of cross-national inequality and later the effect of government on reducing inequality by means of tax-transfer policy. Then we move to comparisons of poverty. In addition to overall poverty rates, we examine many subgroups. We separately estimated poverty among two vulnerable populations, children and the aged.<sup>12</sup> We examine the antipoverty effect of government policy for each of these groups. We examine poverty status according to the amount of amount of work, family status, and education level of parents for low-income children in each

nation. We conclude with a brief summary of what we have learned about how government support affects poverty and inequality for the vulnerable in comparative perspective.

### **Inequality in Comparative Perspective**

A wide range of inequality is apparent in the rich and middle income countries contained in LIS. Figure 1 presents a “bird’s eye” view of these inequalities using four different measures

FIGURE 1 HERE

of inequality. Countries are ranked by the adjusted income ratio of the 10<sup>th</sup> person to the 50<sup>th</sup> person in each nation ( $P_{10}$ ). A slightly different ranking can be observed by using the ratio of the 90<sup>th</sup> to the 50<sup>th</sup> person ( $P_{90}$ ). In fact, concerns over inequality, vulnerability and social protection need consider both the low income ( $P_{10}$ ) and also the high income ( $P_{90}$ ) population. The difference between the two is summarized by the decile ratios ( $P_{90} / P_{10}$ ) in the next column and the gini coefficient in the final column. While all four measures provide slightly different rankings, broad patterns are apparent. The least inequality is found in northern and central European nations and Nordic/Scandinavian nations. Central and Southern Europe has more inequality, but not as much as the Anglo Saxon nations, especially the United States. Eastern European nations show large differences (compare Czech Republic and Estonia) as do the “middle income countries” where Chinese Taipei-Taiwan is significantly more equal than is Mexico or Russia. The 12 countries we have selected, marked by (\*), fairly well span the wide range in the table. The two Asian nations we have, Chinese Taipei-Taiwan and Japan, lie close to the middle of the pack of nations according to all four inequality measures.

### **Relative Poverty Levels**

Relative poverty rates in the 11 nations are given in Figures 2a, 2b, and 2c. The overall poverty rate for all persons using the 50 percent poverty threshold varies from 5.4 percent in

FIGURES 2a, 2b, 2c HERE

Finland to 17.0 percent in the United States, with an average rate of 10.2 percent across the 12 countries (Figure 2a). And using a lower relative poverty rate (such as the 40 percent of median rate) makes little difference in terms of overall poverty rate rankings.

Higher overall poverty rates are found in Anglo-Saxon nations with a relatively high level of overall inequality (United States, Canada, Ireland, and the United Kingdom), in Italy (with a wide north-south regional differential in income) and in geographically large and diverse countries (United States, Canada). Still, Canadian and British poverty are both about 12 percent and are, therefore, far below the United States levels. The lowest poverty rates are more common in smaller, well-developed, and high-spending welfare states (Sweden, Finland) where they are about 5 or 6 percent. Middle level rates are found in major European countries where unemployment compensation is more generous, where social policies provide more generous support to single mothers and working women (through paid family leave, for example), and where social assistance minimums are high. For instance, the Netherlands, Austria, Belgium, and Germany have poverty rates that are in the 8 to 9 percent range.

On average, child poverty (Figure 2c) is a lesser problem than is elder poverty (Figure 2b) in these nations based on incomes alone. However, consumption poverty and wealth poverty might produce an entirely different picture among the elderly who do better than children (and their families) on both grounds (Johnson, Smeeding, and Torrey 2005). Single parents and their children and single elders generally have the highest poverty rates, while those in two-parent units, mixed units, and the childless experience the least poverty (not shown). In some nations elders live with their children, and in these cases, living arrangements reflect the economies of scale gained by sharing living arrangements in multigenerational and cohabiting partner

households. Privacy is sacrificed for lower cost housing.<sup>13</sup> High elder poverty in Taiwan probably reflects many low income elders who live alone, as in the United States and the United Kingdom. Irish elders are relatively poor (as perhaps with Taiwanese elders) because in rapidly growing economies where pensions are fixed in real terms, the rest of society enjoys an increasingly higher standard of living due to economic growth, while the elderly truly do live on “fixed incomes.” Thus, Korea is similar to Taiwan, paying some attention to elder poverty makes great sense (see also Song 2003; Park and Byun 2004).

Child poverty rates are highest in countries with many single parents and low wages and low levels of transfer support. Taiwan has a below average poverty rate for children, and similarly, because Korea has relatively fewer single parent households, child poverty may be less of a problem in Korea.

The United States has the highest or second highest poverty rate in each category. Poverty rates in the United States for persons living with children are almost 90 percent above the average rate. In most cases, Ireland has the highest or second highest second highest poverty rate (e.g., for elders and children) but is also rapidly growing. This observation brings up the issue of real income change and trends in poverty to which we now turn.

### **Trends in Poverty**

The trend in poverty is shown in Tables 2 and 3, reflecting between 9 and 17 years of

TABLES 2, 3 HERE

history in each nation. We present two types of trends. First, trend findings based on relative poverty, which are similar to those in other recent LIS papers with different percentage of median poverty rates and wider ranges of countries (e.g., see Smeeding, Rainwater, and Burtless 2001), are presented. Next, trend measures based on a poverty line which is ‘anchored’ or fixed



in real terms at the mid 1980s (or 1991 for Chinese Taipei Taiwan) poverty measure, but then using poverty lines adjusted to the most recent year using each nation's CPI. We also list beginning and ending rates to give the reader some idea of starting points in each nation. In all nations we show simple (percentage point) changes in poverty rates.

In general, relative poverty is higher in most nations at the end of the period compared to the beginning, even at the end of the relatively prosperous 1990s. (This trend does not conflict with the observation that many nations' relative and absolute poverty rates, including those in the United States, rose in the early 1990s and fell in the later 1990s.) The drops in relative poverty in the United States and Sweden are exceptions, but starting from vastly different level of relative poverty (though by 2002 the United States relative poverty rate has risen back to 17.7 percent). Four nations: Ireland, Belgium, the Netherlands, and the United Kingdom experienced a rapid increase in relative poverty over this period (see last column, Table 2).

The story of changes in anchored (absolute) poverty is very different, and perhaps more relevant for countries like Korea and Ireland. In each nation, shown in Table 2, poverty falls in absolute terms, and in some rapidly growing nations such as Ireland, it fell by 9.9 points (or by over 80 percent). The United States, which experienced a large fall in anchored poverty, still had the highest anchored poverty rate (13.5 percent) by a wide margin by 2000—with only Canada and Italy having anchored rates above 5.6 percent by periods end.

In general, child and elder poverty also increased in relative terms over this period (Table 3) while both fell in absolute terms, especially elder poverty (except in the United Kingdom). The only nation to experience a drop in relative child poverty from 1986-2000 was the United States—but it also had the highest rate of child poverty at both the beginning and end of this period. The rise in relative child poverty has also recently been reported by UNICEF (2005) and

Chen and Corak (2005). Relative elder poverty rose in all but four nations; absolute elder poverty increased by less than a percentage point in England and Netherlands—the former from an already high base. But elderly poverty fell in real terms in all other nations including Chinese Taipei Taiwan, though the gains were less than one might expect given the rapid growth in real incomes in Taiwan over the decade of the 1990s.

We hasten to mention that the trends noted in poverty are different from the changes found in inequality (e.g., using the Gini index and the LIS key figures, available at [www.lisproject.org](http://www.lisproject.org)) over this same period in these same nations. In many of the more equal nations, most of the rise in inequality noted over this period has taken the form of higher incomes at the top of the distribution rather than by falling lower incomes at the bottom. Hence, relative poverty changed by much less than did overall inequality (Förster and Vleminckx 2004; Brandolini and Smeeding 2005).

### **The Antipoverty Effect of Taxes and Transfers**

In every nation, benefits from governments, net of taxes, reduce inequality and relative income poverty (Figures 3 and 4, and Table 4). Countries are more similar in their levels of pre-government or Market Income (MI) inequality than in their “after tax and transfer” Disposable Personal Income (DPI) inequality. The United States has the highest level of DPI inequality but only an average rate of MI inequality. Chinese Taipei-Taiwan has the lowest level of MI inequality (owing to low unemployment and more equal wage rates) but taxes and transfers only reduced inequality by a further 10 percent (owing to a relatively small sized welfare state). In the more equal nations of North Central Europe and Scandinavia, taxes and transfers produce 40-47 percent drops in MI inequality. The four Anglo Saxon nations show an 18-27 percent drop in MI inequality at the right of Figure 3.

### FIGURE 3 HERE

As with inequality, poverty rates computed using household MI do not differ among countries as much as do those calculated after-taxes-and-transfers DPI (Figure 4). Here we find that the United States *before-tax-and-transfer* poverty rate is actually below average, but not as

### FIGURE 4 HERE

*low* as in high spending nations such as Finland and the Netherlands. This finding implies that different levels and mixes of government spending have sizable effects on national DPI poverty rates, but not so much on MI poverty rates (Smeeding, Rainwater, and Burtless 2001; Smeeding 2005). In Chinese Taipei Taiwan, MI based poverty rates are very low and the tax benefit system only reduces poverty from 11.7 to 9.1 percent. Thus, in a high employment society with relatively equal wages. The market itself produces low poverty rates in Taiwan. It seems much the same for Korea, even if we cannot show it directly in Figure 4 (see Song 2003; Song, and Hong 2004; and Park Byun 2004).

In fact, detailed analysis shows that higher levels of government spending (as in Scandinavia and Northern Europe) and more careful targeting of government transfers on the poor (as in Canada, Sweden, and Finland), produce lower poverty rates (see also Kenworthy 1998; Kim 2000). And unemployment is not well correlated with either market income poverty or disposable income poverty (Table 1). Rather, earnings and wage disparities are important in determining both market income and disposable income poverty rates, especially among families with children (Jäntti and Danziger 2000; Bradbury and Jäntti 1999). Countries with an egalitarian wage structure tend to have lower child poverty rates, in part because the relative poverty rate among working-age adults is lower when wage disparities are small.

Greater detail as to the effects of different types of spending on poverty rates is shown in Table 4. Here we split the antipoverty effect into two components: social insurance and taxes,

TABLE 4 HERE

and social assistance. The former is not income or means tested and includes universal benefits such as child allowances and child tax credits; the latter is targeted to the otherwise poor using income tests.

One can see that most nations make effective use of both types of instruments. As one might expect given that we started with the below average MI poverty rates and ended with the highest DPI based poverty rates, the United States shows the least antipoverty effort of any nation. The United States reduces poverty by 26 percent compared to the average reduction of 61 percent. The nations closest to the United States in terms of overall effect are Ireland and Canada. But even there, government programs reduce market income-based poverty by 44 and 46 percent, respectively. The United States social insurance and direct (payroll and income) tax system is weakly redistributive, as are the United Kingdom and Irish systems, while our safety net and social assistance system produces another 10 percentage points of poverty reduction (including the effect of the EITC in the social assistance category). Most nations get at least a 50 percent poverty reduction from social insurance, and in heavily insured countries like Austria, Belgium, and Germany, social insurance reduces poverty by 62 to 75 percent. In the case of social assistance, large effects of targeted programs are evident in Finland (34 percent) and the United Kingdom (33 percent reductions), and lower ones (under 10 percent) in the more socially insured nations where the heavy lifting has already been done (Austria, Germany, Belgium, the Netherlands, and Canada).

It should be apparent that different nations use different instruments and different “income packages” to achieve their antipoverty effects. There is no one program or one type of policy instrument that is universally generous and common across these eight nations. Clearly, the countries with the most and least effective antipoverty systems are evident in Table 4. The United States does not compare well. In contrast, the Asian nation of Chinese Taipei-Taiwan follows a different path. High employment and good wages for most workers generates a low level of MI inequality and a low level of MI poverty. The relatively small tax transfer system produces not much anti-poverty effect, but DPI poverty rates and inequality levels are still average by international standards. As these countries grow richer (and Korea too) the design of the tax transfer system should be to keep MI poverty and inequality low, while producing a relatively larger effect of the welfare state (taxes and transfers) in terms of both inequality and poverty reduction.

### **Antipoverty Effects for Aged and for Children**

As we have seen, relative poverty rates can vary across age groups within a nation as much as they do across nations. Comparing poverty among children and the elderly (return to Figures 2b and 2c); we find large imbalances in several nations. Poverty is relatively high among both the young and the old only in Ireland the United States and the United Kingdom.

Great strides have been made in reducing poverty among the elderly in most rich countries over the past 40 years, and so we do not recount this tale here (see trends in Table 3, for instance). But pensioner poverty has not been eradicated, especially in the three major Anglo-speaking nations of Ireland, the United States, and the United Kingdom, nor in Chinese Taipei Taiwan. Poverty among younger pensioners is no longer a major policy problem. Rather, poverty in old age is almost exclusively an older women’s problem. Poverty rates among older women

(not shown) rise with both age and changes in living arrangements. Three quarters of the poor elders, age 75 or older, in each rich nation are women; almost 60 percent of all poor age 75 and over in each nation are older women living alone (Smeeding and Sandstrom 2005).

As expected, the effects of social insurance on elder poverty are very large in all nations, including the United States. But social assistance is also a powerful antipoverty tool in Sweden, Finland, and the United Kingdom. In other nations, especially in the United States, social assistance—especially Supplemented Security Income (SSI) and food stamps—have almost no effect on elder poverty.<sup>14</sup> These findings are not further explored here. Instead, we concentrates upon the effects of tax transfer system on families with children, where we find the greatest difference between the United States and other nations.

### **Education and Work Effort among Parents**

None of us live in a world where all parents are well educated high earners - not in America, or in any of the other countries studied here. And since none of our nations will soon be in this situation, it is important to ask how policy deals with the world in which we do live: with single parents, undereducated parents, and parents who work but who do not make enough to escape being poor. In the United States, where less than 2.0 million families with children are still on welfare, we still have 12 to 15 million families who work, but are poor (Shapiro and Parrott 2003). How do benefits for families with children vary according to the educational situation and work status of the parent?

In order to isolate a parental education effect, we have combined one- and two-parent units and now present poverty rates for all children (Table 5). Due to education coding

TABLE 5 HERE

differences, our comparisons are reduced to nine nations.<sup>15</sup> We separate those children whose parents have the least education (lowest level) in the second grouping. In the United States, this comes down to households where at least one has not finished high school. These children are compared to all other children whose parents have had more education in the other grouping of Table 5.<sup>16</sup>

The results of this exercise are striking. In all nations, market and even disposable income poverty rates are at least twice as high for the poorly educated as for the highly educated. About 16 percent of all United States parents did not finish high school, and their children's poverty rate is over 50 percent, even after taking account of taxes and benefits (which again produce little effect on their incomes in the United States).<sup>17</sup> American children with more highly-educated parents in the last grouping have much lower market and disposable income poverty rates, but their disposable income poverty rates are still the highest among the nations shown. One reason for our high poverty rates is low transfers; the second reason must, therefore, be due to low earnings—owing to either low work hours or to low wages or both.

In the other nations, the after government, disposable income poverty rates for poorly-educated parents are also different from those found among highly-educated parents, but still the poverty situation of children is not so dependent on the education level of their parents. Indeed the percent reduction in poverty rates are similar regardless of education level in most nations, but because the lower educated start at such market income high levels, the poverty rates are higher among the lower educated.

We can begin to understand whether it is wages or hours that lie at the heart of the problem in Table 6. Clearly we want to separate the problem of low wages (but many work

TABLE 6 HERE

hours) from high wages and few work hours. To make the analysis manageable, we have shown annual work hours for only three groups of the poor: all non elderly heads and spouses, single-parents only, and the head of the unit in two-parent units, broken down by market or disposable income poverty status. We are limited to only eight nations where we have annual hours of work in the LIS data at this time.<sup>18</sup>

The patterns evident in the table will be no surprise to international labor market analysts, but some surprise to others. In almost every case, poor Americans work much longer hours than do most any other nations' workers (see also Osberg 2002). The differences between American and other workers are the largest among low-income parents, especially single parents. Poor American single parents average over 1,000 hours per year— almost twice as much as those in the other seven nations shown here. Poor heads in two-parent units work almost full-time (about 1600 hours per year), about the same as Austrian poor parents and less than Italian poor parents. It seems that the United States has the hardest working low-income parents extant, but that they are receiving the least assistance from the social safety net.

## **Summary**

Comparative cross-national poverty rankings suggest that United States poverty rates are at or near the top of the range when compared with poverty rates in other rich countries. The United States' child and elderly poverty rates seem particularly troublesome. United States elders have poverty rates that are high, particularly on relative grounds. In most rich countries, the relative child poverty rate is 10 percent or less; in the United States, it is 21.9 percent. Minorities are disproportionately poor in the United States, but also in Canada, the United Kingdom, Sweden, and Belgium. This comes as no surprise. What seems most distinctive about the American poor, especially poor American single parents, is that they work more hours than do



the resident parents of other nations where we can observe work hours. They also receive less in transfer benefits than in other countries, except for the Chinese Taipei Taiwan. But Chinese Taipei-Taiwan is not a rich country in comparison with the others and especially not compared to the United States.

## **V. Towards Explanations**

A substantial fraction of the variance in non elderly cross-national poverty rates appears to be accounted for not by the variation in work or in unemployment, but by the cross-national variation in the incidence of low pay (Figure 5). Because the United States has the highest

FIGURE 5 HERE

proportion of workers in relatively poorly paid jobs, it also has the highest poverty rate, even among parents who work half time or more (Smeeding, Rainwater, and Burtless 2001). On the other hand, other countries that have a significantly lower incidence of low-paid employment and also have significantly lower poverty rates than the United States. But the prevalence of low-pay workers is, in fact, not the only reliable predictor of poverty rates.

While low pay is a good predictor of United States poverty rates, and while poorly-educated workers do not do well at keeping their families from poverty based on earnings alone, other factors, such as the antipoverty efforts of the government, are also important predictors of the poverty rate (Figure 6). Social spending reduces poverty, as we have seen. And as a result of

FIGURE 6 HERE

its low level of spending on social transfers to the non-aged, the United States again has a very high poverty rate.

Even though social spending in general has an inverse correlation with poverty rates, different patterns of social spending can produce different effects on national poverty rates. Antipoverty and social insurance programs are in most respects unique to each country. There is no one kind of program or set of programs that are conspicuously successful in all countries that use them. Social insurance, universal benefits (such as child allowances), and social assistance transfer programs targeted on low-income populations are mixed in different ways in different countries. So, too, are minimum wages, worker preparation and training programs, work-related benefits (such as child care and family leave), and other social benefits. The United States differs from most nations that achieve lower poverty rates because of its emphasis on work and self-reliance for working-age adults, regardless of the wages workers must accept or the family situation of those workers. For over a decade, United States unemployment has been well below the OECD average, and until recently American job growth has been much faster than the OECD average. The strong economy coupled with a few specific antipoverty devices (like the expanded EITC) has produced most of the United States child poverty reduction in recent years.

What lessons can Korea take from this exercise? The first is to note that high employment produces lower levels of MI inequality and poverty (as even the United States data suggests). But also we must note that a large number of workers with relatively low wages is not a good sign, especially if they are lowly educated workers whose wages and jobs are at risk due to globalization and trade. As Korean education rates rise rapidly (Pilat 2005), the nation must be aware of those whose education and wages lag. Perhaps an EITC-like program for low wage Korean workers may help them avoid the “working, but poor” syndrome evident in the United States (Song 2004; Park and Byun 2004).

## **Discussion: A Tale of Two Countries**

While acknowledging that the United States has greater poverty than other industrialized nations, many defenders of American economic and political institutions have argued that inequality plays a crucial role in creating incentives for people to improve their situations through saving, hard work, and investment in education and training. Without the powerful signals provided by big disparities in pay and incomes, the economy would operate less efficiently and average incomes would grow less rapidly. In the long run, poor people might enjoy higher absolute incomes in a society where wide income disparities are tolerated than in one where law and social convention keep income differentials small (Welch 1999). According to this line of argument, wide income disparities may be in the best long-term interest of the poor themselves.<sup>19</sup> But, of course, there is no evidence that this is true (Burtless and Jencks 2003).

In recent years, the United Kingdom and especially the United States economies have, in fact, performed better than other western economies where income disparities are smaller. Employment growth (even since 2001) has been relatively faster, joblessness lower, and economic growth higher than in many other OECD countries where public policy and social convention have kept income disparities low. However, the evidence that our lower social spending “caused” higher rates of growth is not found in the literature (e.g., Arjona, Ladaique, and Pearson 2001; Lindert 2004). Our lower-income citizens’ real incomes are at or below the incomes that most poor people receive in other rich countries that have less inequality. The supposed efficiency advantages of high inequality have not accrued to low-income residents of the United States, at least so far. While the real incomes of families with children did rise in the latter 1990s (Blank and Schoeni 2003), most of the gains have been captured by Americans

much further up the income scale, producing a conspicuously wide gap between the incomes of the nation's rich and poor children, elders, and adults.

The attached Figure 7 compares child poverty in the and in the United States using the

#### FIGURE 7 HERE

same poverty standards—the United States poverty line (about 39 percent of United States median income in 1997) with the United Kingdom poverty line set at 60 percent of United Kingdom median income in 1996-1997. In the United States we show Census Bureau poverty estimates that reflect the LIS income definition and the changes in poverty measurement recommended by the United States National Academy of Sciences in 1995. Because United Kingdom incomes are about 69 percent of United States incomes in 1996 (and in 2000; see Table 1), this turns out to be just about the same poverty standard.<sup>20</sup>

We noted earlier that these nations were the top ranked nations in terms of child poverty (Figure 2a). We also note that child poverty in both nations began to fall without the help of policy from the mid to the late 1990s owing mainly to the strong wage growth and tight labor markets in both countries (Figure 7). In 1997, Blair announced his policies against child poverty; and in 1999 they began to be implemented. By 2000-2001, child poverty in the United Kingdom (15 percent) was just about the same as in the United States measured against this same 'real' resource level. But as we entered the 21<sup>st</sup> century, and when both economies—and especially United States unemployment—turned sour, the United Kingdom continued to have policy driven reductions in child poverty while the United States poverty decline stopped and even reversed. The poverty rate for United Kingdom children had fallen to 11 percent by 2003-2004, while the official United States child poverty rate was 17.8 at percent in 2004 according to the most recent United States Census Bureau estimates (U.S. Bureau of the Census 2005).

Five years earlier, these low-income United Kingdom kids were worse off than were United States kids in real terms (Smeeding and Rainwater 2004). The reason for their improvement is that they have a leader who has set a national goal of improving living standards and eradicating child poverty in Britain over the next decade, and who has matched his political rhetoric with some measure of real and continuing fiscal effort that has already had an important impact (Bradshaw 2003; Walker and Wiseman 2001; Micklewright 2001). And in Britain, Prime Minister Blair has spent an extra .9 percent of GDP for low-income families with children since 1999 (Hills 2003). Nine tenths of a percent of United States GDP is about \$100 billion. This is more than we now spend on the EITC, food stamps, and TANF combined. The result of this spending in Britain is that child poverty rates in 2003 were 23 percent below their 1996 level and, as evident, real living standards for these children also rose (United Kingdom Department of Work and Pensions 2005; Bradshaw 2003).

## **VI. Summary and Conclusions**

As long as the United States relies almost exclusively on the job market to generate incomes for working-age families, changes in the wage distribution that affect the earnings of less skilled workers will inevitably have a big effect on poverty among children and prime-age adults. If Korea pursues this strategy, it should be aware of low wage incomes, especially among the unskilled. Welfare reform has pushed many low-income women into the labor market and they have stayed there as TANF roles continue to fall. Even with the \$25.4 billion spent on TANF today, only \$11.2 billion is in the form of cash assistance; the rest is now in the form of child care transportation assistance, training and other services (Pear 2003). While the switch from cash to services has undoubtedly helped account for higher earnings among low-income

parents, it has not helped move many of them from poverty. In fact, serious gaps still exist, especially in the child care arena (Smolensky and Appleton Gootman 2003) and in family leave policy (Gornick and Meyers 2003). Still, labor markets alone cannot reduce poverty because not all of the poor can be expected to “earn” their way out of poverty. Single parents with young children, disabled workers, and the unskilled will all face significant challenges earning an adequate income, no matter how much they work. The relationship between antipoverty spending and poverty rates is of course complicated, so the arguments discussed above are, at best, suggestive. United States poverty rates among children and the aged are high when compared with those in other industrialized countries. Yet United States economic performance has also been outstanding compared with that in other rich countries. As the British have demonstrated, carefully crafted public policy can certainly reduce poverty. Implementing the policies that would achieve lower poverty rates would also have budgetary costs and perhaps, some efficiency costs that are yet to be unearthed.

Of course, the direct and indirect costs of antipoverty programs are now widely recognized (and frequently overstated) in public debate.<sup>21</sup> The wisdom of expanding programs targeted at children and poor families and older women depends on one’s values and subjective views about the economic, political, and moral tradeoffs of poverty alleviation. For many critics of public spending on the poor, it also depends on a calculation of the potential economic efficiency losses associated with a larger government budget and targeted social programs. It is hard to argue that the United States cannot afford to do more to help the poor; particularly low-skilled lowly paid workers. If the nation is to be successful in reducing poverty, it will need to do a better job of combining work and benefits targeted to low-wage workers in low-income families (e.g., see Ellwood 2000; Danziger, Heflin, and Corcoran 2000). There is already

evidence that such programs produce better outcomes for kids (Clark-Kauffman, Duncan, and Morris 2003).

Given the political disposition of the American public, a 5 percent overall poverty rate is not a plausible goal. A gradual reduction in the overall poverty rate from 17 percent to 10-12 percent using the 50 percent of median standard is certainly feasible, however. Although this rate would represent a considerable achievement by the standards of the United States, it is worth remembering that a 12 percent overall poverty rate is higher than the average poverty rate in the eleven nations examined here, and would just put us just below the poverty levels of our Irish, British, and Italian counterparts.

Korea in contrast, is blessed with more rapid economic growth and more equal wages than the United States. Based on casual impressions, its relative poverty levels are low by international standards. The social policy problem for Korea over the next several decades is to manage this growth in a way that benefits all of its citizens, especially those at the bottom rungs of the economic ladder.

## Endnotes

1. See for UNICEF (2000), Bradbury and Jäntti (1999; 2005); Chen and Corak 2005; for the United Nations (1998; 1999); for the OECD, see Förster and Pellizzari (2005); for the European Union, see Eurostat (1998), Hagenaars, deVos, and Zaidi (1994); and, for LIS, Jäntti and Danziger (2000), Smeeding (2005), Kenworthy (1998), Smeeding, O'Higgins, and Rainwater (1990), and Rainwater and Smeeding (2003).
2. In 1998 the ratio of the United States (four-person) poverty line to median *family* income was 35 percent while the ratio to median *household* income was 42 percent. Median household income (\$38,855) is far below median family income (\$47,469) because single persons living alone (or with others to whom they are not directly related) are both numerous and have lower incomes than do families. (U.S. Bureau of the Census 2003a; 2003b). Families include all units with two or more persons related by blood, marriage, or adoption; single persons (unrelated individuals) are excluded. In contrast, households include all persons sharing common living arrangements, whether related or not, including single persons living alone. Different adjustments for family or household size might also make a difference in making such comparisons. See also Betson (2005) on this topic.
3. See Atkinson, Rainwater, and Smeeding (1995) and Canberra Group (2001) for more on this income definition and its robustness across nations. Note that the use of this "LIS" disposable income concept is not unique to LIS alone. Eurostat and OECD have independently made comparisons of income poverty and inequality across nations using identical or very similar measures of net disposable income.
4. This income definition differs from the Census income definition used in most poverty studies. Still, the internationally comparable measure of income does not subtract work-related expenses or medical care spending. In particular, there is no account for provision of or costs of child care. The EITC and similar refundable tax credits and nearcash benefits such as food stamps and cash housing allowances are included in this income measure, however, as are direct taxes paid.
5. Market income includes earnings, income from investments, occupations (private and public sector) pensions, child support, and other private transfers. For the calculation of poverty rates, MI refers to gross income in all countries but Belgium, Austria, Italy, and Ireland, where MI is net of taxes and social contributions. For poverty gaps, two different figures were calculated, namely poverty gaps on gross market income for the countries where gross data was available, and poverty gaps on net market income for all countries. For countries with gross data only, the net figure has been derived by subtracting from the gross figure the taxes and social contributions in the same proportion as the proportion of market income in total gross income minus means-tested - i.e. non-taxable - benefits.



6. Of course, our measures of the antipoverty effects of benefits are partial equilibrium in nature. That is, poverty measured before government taxes and benefits (using MI) is not the same as poverty in the absence of government, if tax and transfer programs affect ones level of MI. In the case of benefit programs for the elderly, we expect and find larger effects as the size of benefits (percent of GDP spending on cash benefits for the elderly) is correlated 35 with MI poverty. But in the case of the nonelderly, the correlation between MI based poverty and nonelderly social spending is on 14. Thus, we conclude that for the nonelderly general equilibrium effects are modest. For an excellent discussion of behavioral effects and benefit incidence, see Reynolds and Smolensky 1977.
7. Formally, adjusted disposable income (ADPI) is equal to *unadjusted* household income (DPI) divided by household size (S) raised to an exponential value (*e*),  $ADPI = DPI/S^e$ . We assume the value of *e* is 0.5. To determine whether a household is poor under the relative poverty measure, we compare its ADPI to 50 percent of the national median ADPI. National median ADPI is calculated by converting all incomes into ADPI and then taking the median of this “adjusted” income distribution. The equivalence scale which we employ is robust; especially when comparing families of different size and structure (e.g., elders and children). See Atkinson, Rainwater, and Smeeding (1995) for detailed and exhaustive documentation of these sensitivities.
8. Adding another Northern European or Scandinavian nation (Denmark, Norway) would mimic Sweden and Finland. LIS does not yet have year 2000 data from France or Australia. Southern European LIS data (e.g., Italy, Spain, and Ireland) are not well enough reported data to include in measures of real well-being (Table 3). The Central and Eastern European nations have much lower living standards than the others and are, therefore, excluded.
9. We present LIS data on the Unified Germany for 2000. However, trend data for Germany (Table 2) are still restricted to West Germany. The LIS West German poverty rates tend to be 0.9 to 1.2 percentage points below those for all of Germany.
10. Earlier comparisons of microdata based real incomes per equivalent adult and GDP per capita (not shown) reveal a similar ranking and relationship of microdata based and macro data based income levels across these 12 nations. See Smeeding and Rainwater (2004).
11. Unemployment is, of course, cyclical and business cycles differ across nations. However, the 1999-2000 period was one of strong economic performance in every nation studied here. In previous research on this topic, Atkinson, Rainwater, and Smeeding (1995) found no consistent effect of unemployment on overall inequality measured at a point in time. Rather, they concluded that institutional factors were more likely to explain the cross-sectional relationship between unemployment and inequality (or poverty) than were cyclical conditions. Smeeding (2005) found the same result. Still, we must conclude that economic cyclicality probably affects MI based poverty via its effects on wages and

employment. However, we do not know how much difference economic conditions make in a cross-national study such as this.

12. Children are all persons under age 18; elderly are all persons age 65 or over.
13. Were there more time and space, it would be interesting to see how many single parents and elders live in such arrangements and if they would be poor if they lived independently on their own income for a first attempt at this type of analysis see Saunders, O'Connor, and Smeeding (1997) paper on Chinese Taipei Taiwan.
14. The reason why SSI and Food Stamps have no effect on elder poverty is because of their very low value – less than 90 percent of the official United States poverty line and only about 75 percent of the half of median line. See Smeeding (2001) for more on this topic.
15. The United Kingdom and Chinese Taipei-Taiwan do not have education codes that are comparable to the other nations.
16. Education is coded into low (less than high school), median (high school degree), and high (some college or university) by LIS and OECD. The reader can find this code in LIS at <http://www.lisproject.org/techdoc/variabdef.htm>.
17. In fact, United States families for rich children whose MI is below the poverty level pay higher net taxes (even after the Earned Income Tax Credit) than do families in other nations. These taxes are mainly payroll taxes which mean more poverty today, but which may also contribute to reduced poverty in old age or in case of disability. This treatment of payroll taxes in current income, not as payments toward future benefits, should be noted by the reader.
18. Unfortunately, the United Kingdom and Sweden are not among the nations we examine due to lack of hours data. In both cases, other research shows that British lone parents do not work very many hours, while Swedish women work a substantial amount of hours (Smeeding 2002; McLanahan and Garfinkel 1994).
19. A lucid presentation and analysis of this viewpoint can be found in Okun (1975). See also Welch (1999).
20. Notice that these estimates are entirely consistent with those presented in Figures 2a and 3 earlier for the United Kingdom 1999 and United States 2000, using the LIS data. The difference is that we can go beyond the LIS to later years now using these comparable figures.
21. The efficiency costs of public programs are debatable. The recent increase in market work among single mothers who would otherwise be on public support after the 1996 Welfare reform is taken by many to be strong evidence that labor supply responded in part to changes in this program. However, the literature debates the importance of TANF

vs. the EITC and the strong labor market of the late 1990s as primary causes of greater market work among low-income mothers. See Grogger (2003) and Lindert (2004).

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**Table 1.**  
**Macroeconomic Comparison**

<b>Nation (year)</b>	<b>Average Standard of Living:</b>		<b>OECD Standardized Unemployment Rate</b>	<b>OECD Social Expenditures on Non-elderly<sup>2</sup></b>
	<b>GDP/Capita (in 2000 US\$)<sup>1</sup></b>	<b>Index</b>		
United States (00)	35,650	100	4.0	2.7
Canada (00)	28,925	81	6.8	6.0
Ireland (00)	28,141	79	4.3	7.6
Austria (00)	28,025	79	3.7	8.2
Netherlands (99)	26,875	75	3.2	10.9
Sweden (00)	26,580	75	5.6	16.2
Belgium (00)	25,890	73	6.9	8.6
Finland (00)	25,362	71	9.7	13.3
Italy (00)	24,950	70	10.4	4.1
Germany (00)	24,850	70	7.8	8.5
United Kingdom (99)	24,605	69	5.9	8.3
Chinese Taipei/Taiwan (00)	17,743-22,067 <sup>3</sup>	50-63	3.3 <sup>4</sup>	1.3 <sup>4</sup>
Korea (00)	16,351	46	4.3	1.0

Source: OECD Economic Outlook (2004); OECD Main Economic Indicators (2005); OECD Social Expenditure Database (2001); Brandolini and Smeeding (2005), Table 4.

Notes:

<sup>1</sup>2000 constant PPP per capita GDP (volume), CPI adjusted in each nation to correct year.

<sup>2</sup>Total Non-elderly Social Expenditures (as percentage of GDP), including all cash plus near cash spending (e.g., food stamps) and public housing but excluding health care and education spending. Numbers refer to the most recent (1998) values available from OECD.

<sup>3</sup>Using Penn World Table PPP or IMF PPP.

<sup>4</sup>Chinese Taipei (Taiwan) is not a member of OECD. Therefore, we have provided rough estimates based on national sources.

**Table 2.**  
**Trends in Poverty in Twelve Rich Countries:**  
**Percentage Point Change from Initial Year**

Nation	Years	Poverty Rates			Percentage Point Change from Initial Year	
		Initial Year	End Year		Relative <sup>1</sup>	Anchored <sup>2</sup>
United States	1986-2000	17.8	Relative	Anchored	-0.8	-4.3
United Kingdom	1986-1999	9.1	12.4	4.4	+3.3	-4.7
Canada	1987-2000	11.4	11.4	11.0	0.0	-0.4
Netherlands	1987-1999	4.7	7.3	3.5	+2.6	-1.2
Chinese Taipei/Taiwan	1991-2000	6.5	9.1	5.6	+2.6	-0.9
Germany <sup>3</sup>	1984-2000	7.9	8.7	5.6	+0.8	-2.3
Belgium	1985-2000	4.5	8.0	0.1	+3.5	-4.4
Austria	1987-2000	6.7	7.7	5.0	+1.0	-1.7
Ireland	1987-2000	11.1	16.5	1.2	+5.4	-9.9
Italy	1987-2000	11.2	12.7	10.1	+1.5	-1.1
Sweden	1987-2000	7.5	6.5	3.6	-1.0	-3.9
Finland	1987-2000	5.4	5.4	3.5	0.0	-1.9
Average		8.7	10.2	5.6	+1.6	-3.1

Source: Author's calculations with LIS files.

Notes:

<sup>1</sup>Relative numbers show actual change in poverty rates at 50 percent of median (in each year) calculated as the change from the initial year (see also <http://www.lisproject.org/keyfigures/povertytable.htm>).

<sup>2</sup>Anchored numbers show actual change in poverty rates calculated as the change from the initial year (50 percent of median poverty line) to the final year (where the poverty line is the absolute poverty line in first year CPI-adjusted to final year).

<sup>3</sup>Only West Germany is included here.

**Table 3. Trends in Poverty in Twelve Rich Countries, by Age Group:  
Percentage Point Change from Initial Year**

Nation	Years	Overall		Children		Aged	
		Relative <sup>1</sup>	Anchored <sup>2</sup>	Relative <sup>1</sup>	Anchored <sup>2</sup>	Relative <sup>1</sup>	Anchored <sup>2</sup>
United States	1986-2000	-0.8	-4.3	-3.2	-7.4	+1.2	-4.5
United Kingdom	1986-1999	+3.3	-4.7	+2.9	-8.5	+13.9	+0.9
Canada	1987-2000	0.0	-0.4	0.0	-0.6	-4.9	-5.5
Netherlands	1987-1999	+2.6	-1.2	+4.6	-0.6	+2.1	+0.8
Chinese Taipei/Taiwan	1991-2000	+2.6	-0.9	+1.1	-2.3	+7.3	-0.6
Germany <sup>3</sup>	1984-2000	+0.8	-2.3	+0.3	-2.4	-1.7	-8.3
Belgium	1985-2000	+3.5	-4.4	+2.7	-4.0	+5.5	-10.6
Austria	1987-2000	+1.0	-1.7	+3.0	+0.2	-4.8	-10.4
Ireland	1987-2000	+5.4	-9.9	+3.4	-12.3	+21.4	-6.6
Italy	1987-2000	+1.5	-1.1	+2.9	+0.5	+1.1	-3.2
Sweden	1987-2000	-1.0	-3.9	+0.7	-1.9	+0.5	-5.5
Finland	1987-2000	0.0	-1.9	0.0	-1.1	-3.4	-7.6
Average		+1.6	-3.1	+1.5	-3.4	+3.2	-5.1

Source: Author's calculations with LIS files.

Notes:

<sup>1</sup>Relative numbers show actual change in poverty rates at 50 percent of median (in each year) calculated as the change from the initial year (see also <http://www.lisproject.org/keyfigures/povertytable.htm>).

<sup>2</sup>Anchored numbers show actual change in poverty rates calculated as the change from the initial year (50 percent of median poverty line) to the final year (where the poverty line is the absolute poverty line in first year CPI-adjusted to final year).

<sup>3</sup>Only West Germany is included here.

**Table 4.**  
**The Anti-Poverty Effect of Government Spending: Percent of all Persons Poor<sup>1</sup> by Income Source**

<b>Nation (year)</b>	<b>Market Income<sup>2</sup></b>	<b>Social Insurance (and Taxes<sup>3</sup>)</b>	<b>Social Assistance<sup>4</sup></b>	<b>Percent Reduction</b>	
				<b>Social Insurance<sup>5</sup></b>	<b>Overall<sup>6</sup></b>
United States (00)	23.1	19.3	17.0	16.5	26.4
Netherlands (99)	21.0	9.6	7.3	54.3	65.2
Sweden (00)	28.8	11.7	6.5	59.4	77.4
Germany (00)	28.1	10.6	8.3	62.3	70.5
Canada (00)	21.1	12.9	11.4	38.9	46.0
Finland (00)	17.8	11.4	5.4	36.0	69.7
United Kingdom (99)	31.1	23.5	12.4	24.4	60.1
Belgium (00)	34.6	8.9	8.0	74.3	76.9
Austria (00)	31.8	9.1	7.7	71.4	75.8
Italy (00)	30.0	13.7	12.7	54.3	57.7
Ireland (00)	29.5	21.2	16.5	28.1	44.1
<b>Average</b>	<b>27.0</b>	<b>13.8</b>	<b>10.3</b>	<b>47.2</b>	<b>60.9</b>

Source: Author's calculations from the Luxembourg Income Study.

Notes:

<sup>1</sup>Poverty rates are for persons living in households with adjusted incomes below 50 percent of median adjusted disposable income.

<sup>2</sup>Gross market income, including earnings, income from investments, occupations (private and public sector) pensions, child support and other private transfers. In four countries (i.e. Belgium, Austria, Italy and Ireland) this is net of taxes and social contributions.

<sup>3</sup>Includes effect of taxes and social contributions for countries where market income is gross.

<sup>4</sup>This is the same as poverty rate on disposable income. Refunds from the Earned Income Tax Credit (US) and the Family Tax Credit (UK) are treated as social assistance, as are near-cash food and housing benefits such as food stamps and housing allowances.

<sup>5</sup>Market income rate minus social insurance rate as a percent of market income rate.

<sup>6</sup>Market income rate minus social assistance rate as a percent of market income rate.

**Table 5. Pre and Post Tax and Transfer Poverty Rates for Children<sup>1</sup>, by Education Level of Head/Reference Person**

Nation (year)	All Children			Lowest Education Level Parents <sup>2</sup>				Other Education Levels Parents <sup>2</sup>		
	Market Income <sup>3</sup>	Disposable Income	Percent Reduction Overall <sup>4</sup>	Market Income <sup>3</sup>	Disposable Income	Percent Reduction Overall <sup>4</sup>	Percent Parents in Lowest Level	Market Income <sup>3</sup>	Disposable Income	Percent Reduction Overall <sup>4</sup>
United States (00)	23.3	21.9	6.0	53.3	50.8	4.7	15.8	17.5	16.3	6.9
Netherlands (99)	13.8	9.8	29.0	25.3	19.1	24.5	18.4	6.6	2.8	57.6
Sweden (00)	17.4	4.3	75.3	29.6	6.0	79.7	17.3	14.3	3.7	74.1
Germany (00)	16.1	9.1	43.5	35.1	24.5	30.2	11.5	13.1	6.5	50.4
Canada(00)	20.0	15.2	24.0	36.0	28.5	20.8	15.2	17.1	12.7	25.7
Finland (00)	16.2	2.8	82.7	30.2	6.2	79.5	20.2	12.7	2.0	84.3
Belgium (00)	19.2	6.6	65.6	34.0	12.1	64.4	28.0	13.5	4.5	66.7
Austria (00)	24.3	7.6	68.7	46.6	13.4	71.2	12.1	21.1	6.8	67.8
Italy (00)	18.8	16.9	10.1	28.7	25.8	10.1	51.3	8.7	7.8	10.3
Ireland (00)	25.6	17.6	31.3	31.1	20.8	33.1	60.0	17.6	12.8	27.3
Average	19.5	11.2	43.6	35.0	20.7	41.8	25.0	14.2	7.6	47.1

Source: Author's calculations from the Luxembourg Income Study.

Notes:

<sup>1</sup>Poverty rates are for children living in households with adjusted incomes below 50 percent of median adjusted disposable income.

<sup>2</sup>Lowest level is less than a high school degree in the United States.

<sup>3</sup>Gross market income, including earnings, income from investments, occupations (private and public sector) pensions, child support and other private transfers. In four countries (i.e. Belgium, Austria, Italy, and Ireland) this is net of taxes and social contributions.

<sup>4</sup>Market income rate minus disposable income rate as a percent of market income rate.

**Table 6. Total Annual Hours Worked<sup>1</sup> by Head and Spouse in Non-Elderly Poor Households<sup>2</sup>**

<b>Nation (year)</b>	<b>All Non-elderly Poor households</b>		<b>Non-Elderly Poor Households with Children</b>		<b>Non-Elderly Single-Parent Poor Households</b>	
	<b>Market Income<sup>3</sup></b>	<b>Disposable Income<sup>4</sup></b>	<b>Market Income<sup>3</sup></b>	<b>Disposable Income<sup>4</sup></b>	<b>Market Income<sup>3</sup></b>	<b>Disposable Income<sup>4</sup></b>
United States (00)	1,150	1,283	1,552	1,621	1,060	1,044
Netherlands (99)	472	703	770	819	349	321
Germany (00)	354	482	665	660	447	525
Canada (00)	947	963	1,339	1,338	671	524
Belgium (00)	473	738	1,078	1,263	237	143
Austria (00)	859	1,297	1,485	1,559	746	507
Italy (00)	939	1,412	1,813	1,861	622	693
Ireland (00)	663	609	863	776	384	294
Average	732	936	1,196	1,237	564	506

Source: Author's calculations from the Luxembourg Income Study.

Notes:

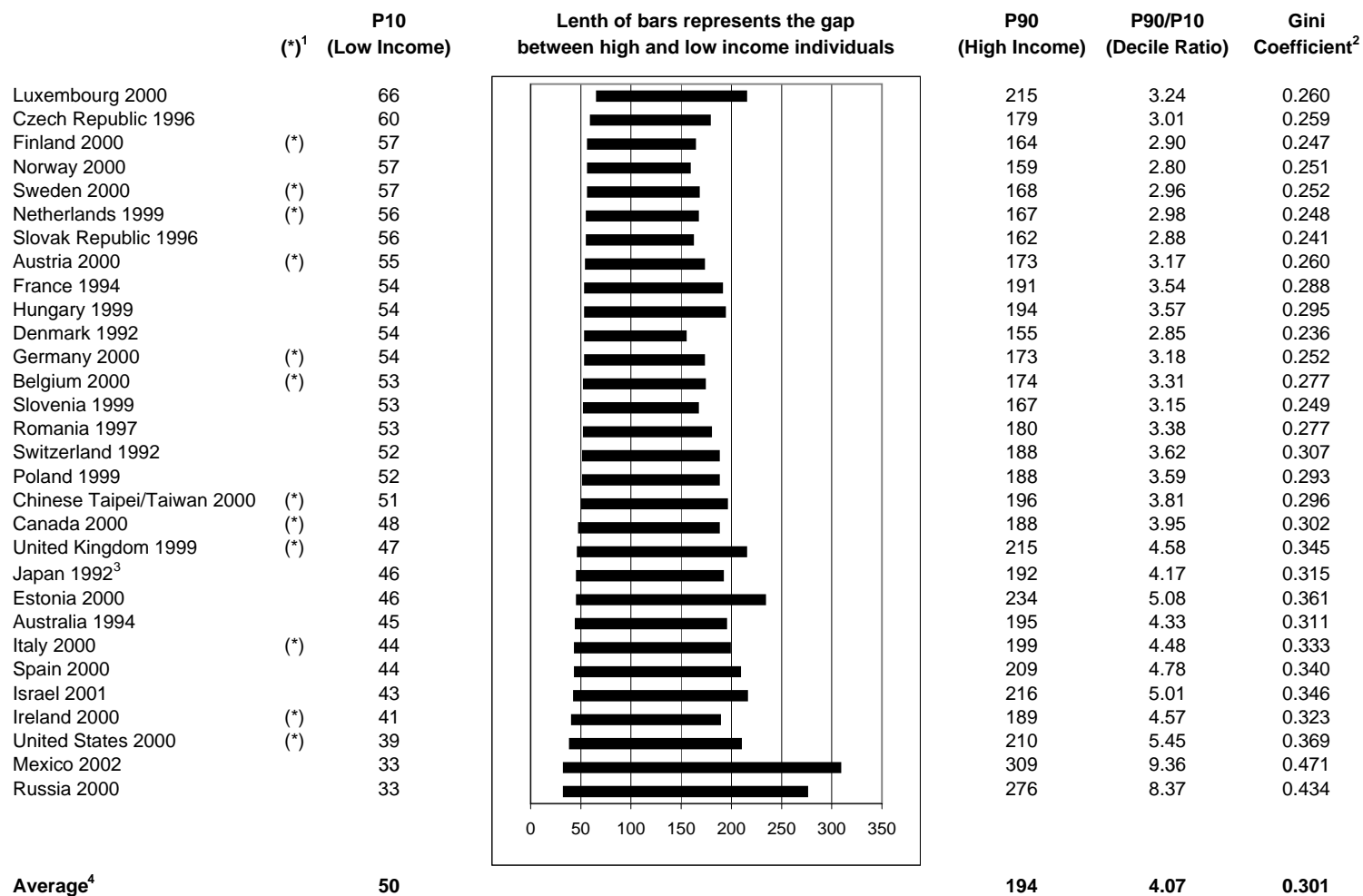
<sup>1</sup>Annual hours of work in each nation for heads and spouses living in poor households, classified by type of household.

<sup>2</sup>Households composed by persons aged under 65.

<sup>3</sup>Households whose market income is lower than half the median adjusted disposable income of all households.

<sup>4</sup>Households whose disposable income is lower than half the median adjusted disposable income of all households.

**Figure 1. Social Distance and Social Exclusion**  
(numbers given are percent of median in each nation and Gini coefficient)



Source: Author's calculations from the Luxembourg Income Study.

Notes: <sup>1</sup>Denotes countries included in later analyses.

<sup>2</sup>Gini coefficients are based on incomes which are bottom coded at 1 percent of disposable income and top coded at 10 times the median disposable income.

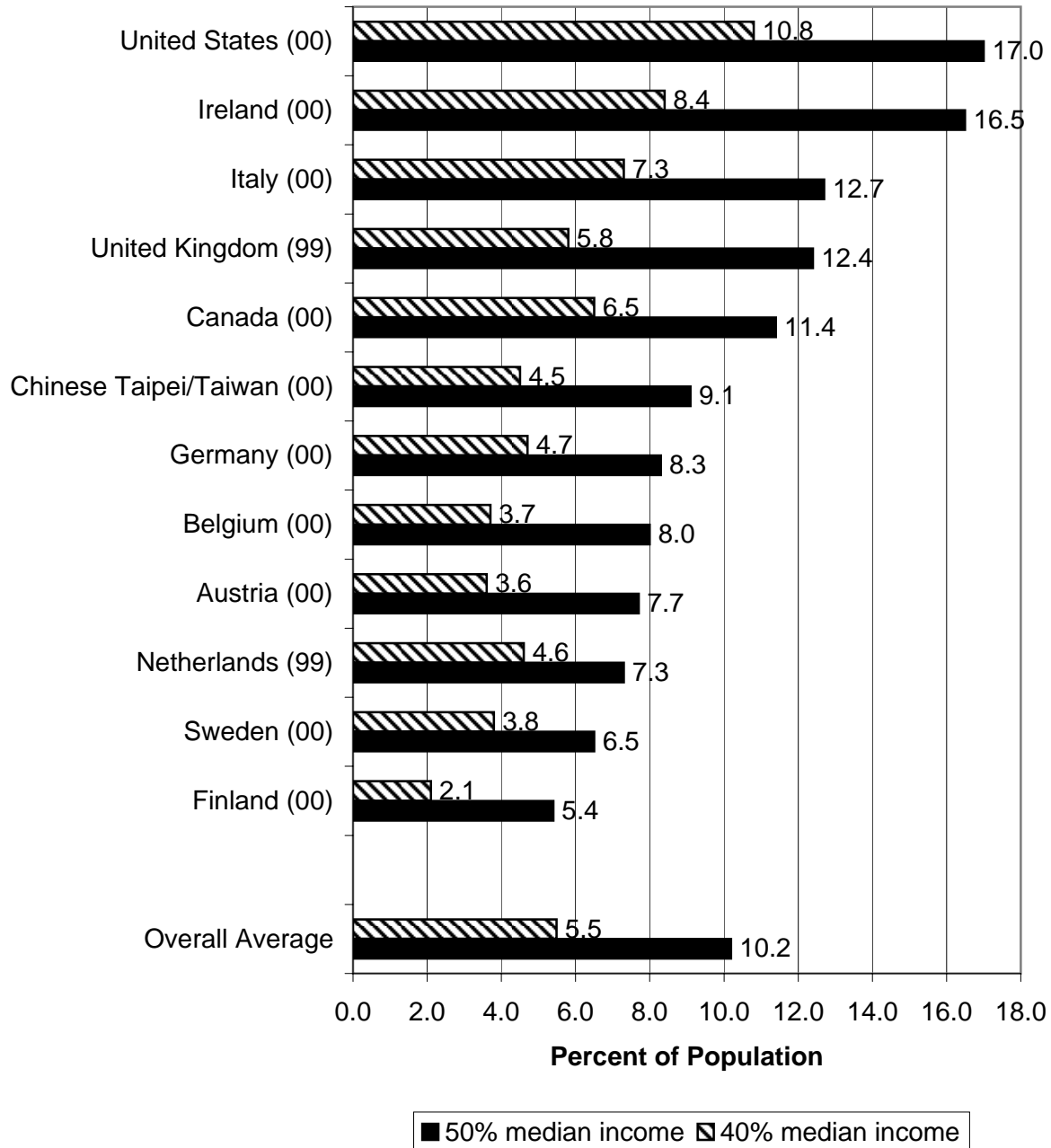
<sup>3</sup>Japanese gini coefficient as calculated in Gottschalk and Smeeding (2000) from 1993 Japanese Survey of Income Redistribution.

<sup>4</sup>Simple average.



**Figure 2a.**  
**Relative Poverty Rates in Twelve Rich Nations at the**  
**Turn of the Century for all Persons**  
 (Percent of **ALL** Persons with Disposable Income Less than 40 percent and 50

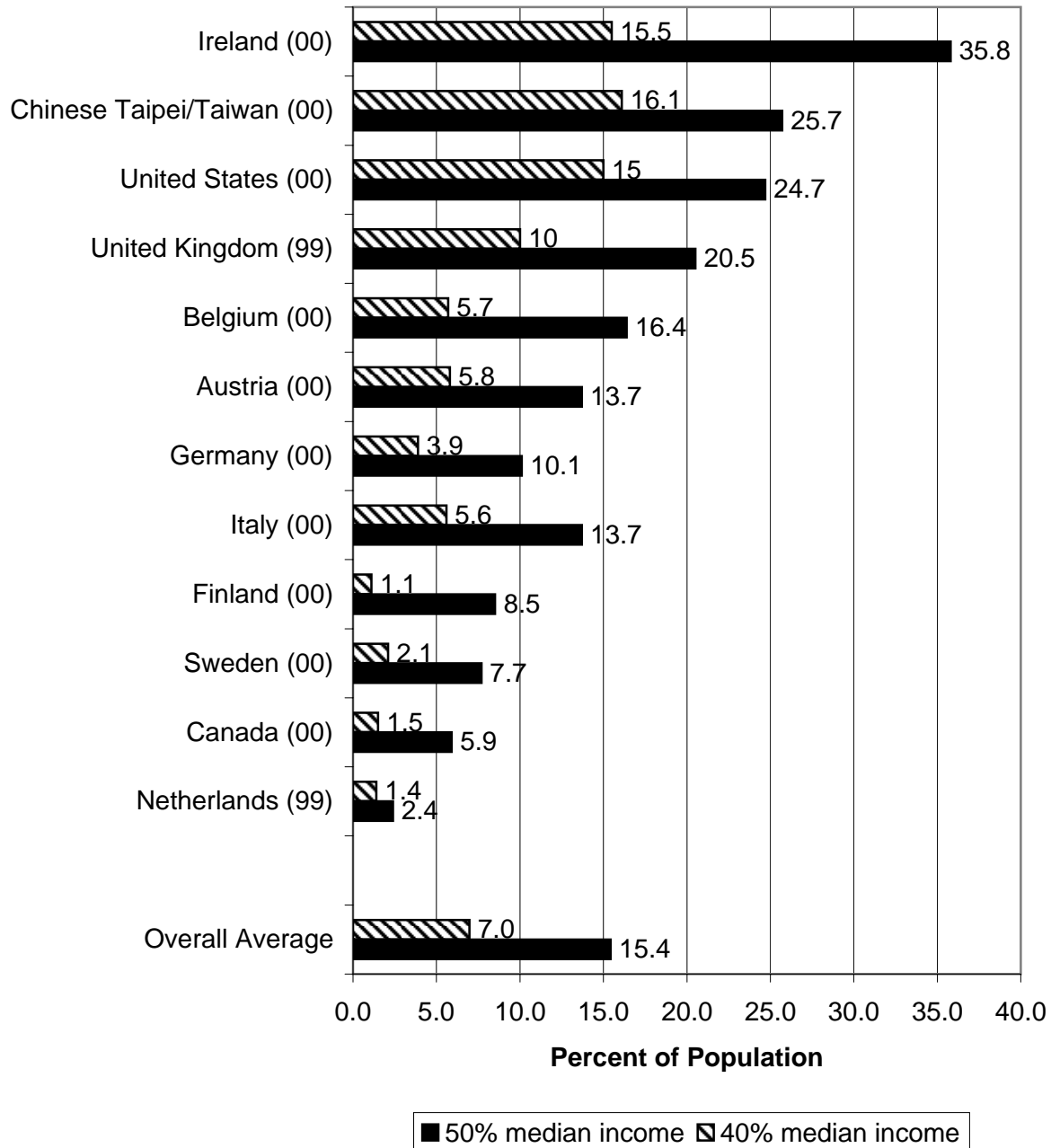
percent of Adjusted National Disposable Median Income)



Source: Author's calculations from Luxembourg Income Study.

**Figure 2b.**  
**Relative Poverty Rates in Twelve Rich Nations at the**  
**Turn of the Century for Elders<sup>1</sup>**

(Percent of **ELDERLY** Persons with Disposable Income Less than 40 percent  
and 50 percent of Adjusted National Disposable Median Income)

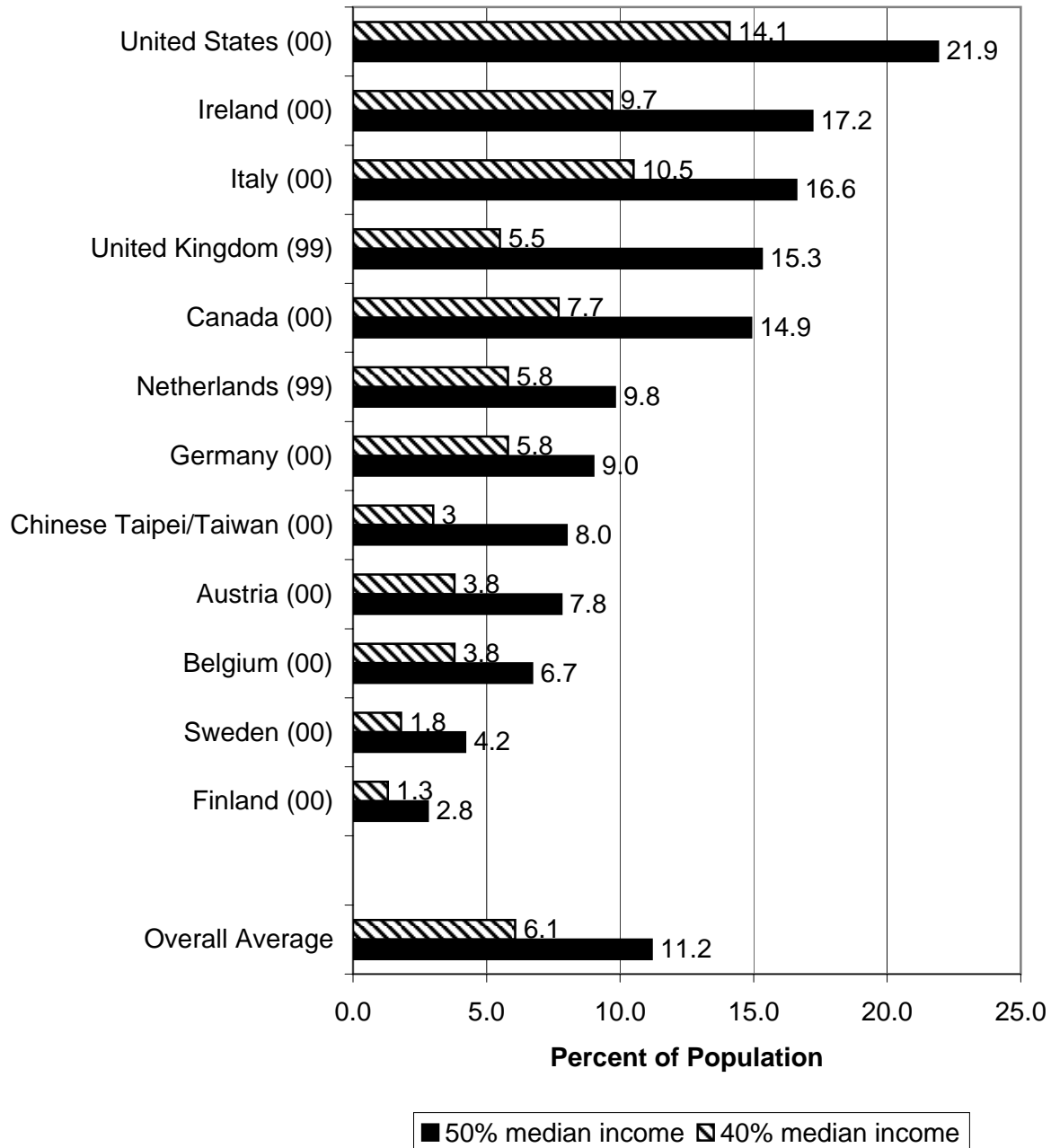


Note:<sup>1</sup> Persons 65 or over.

Source: Author's calculations from Luxembourg Income Study.

**Figure 2c.**  
**Relative Poverty Rates in Twelve Rich Nations at the**  
**Turn of the Century for Children<sup>1</sup>**

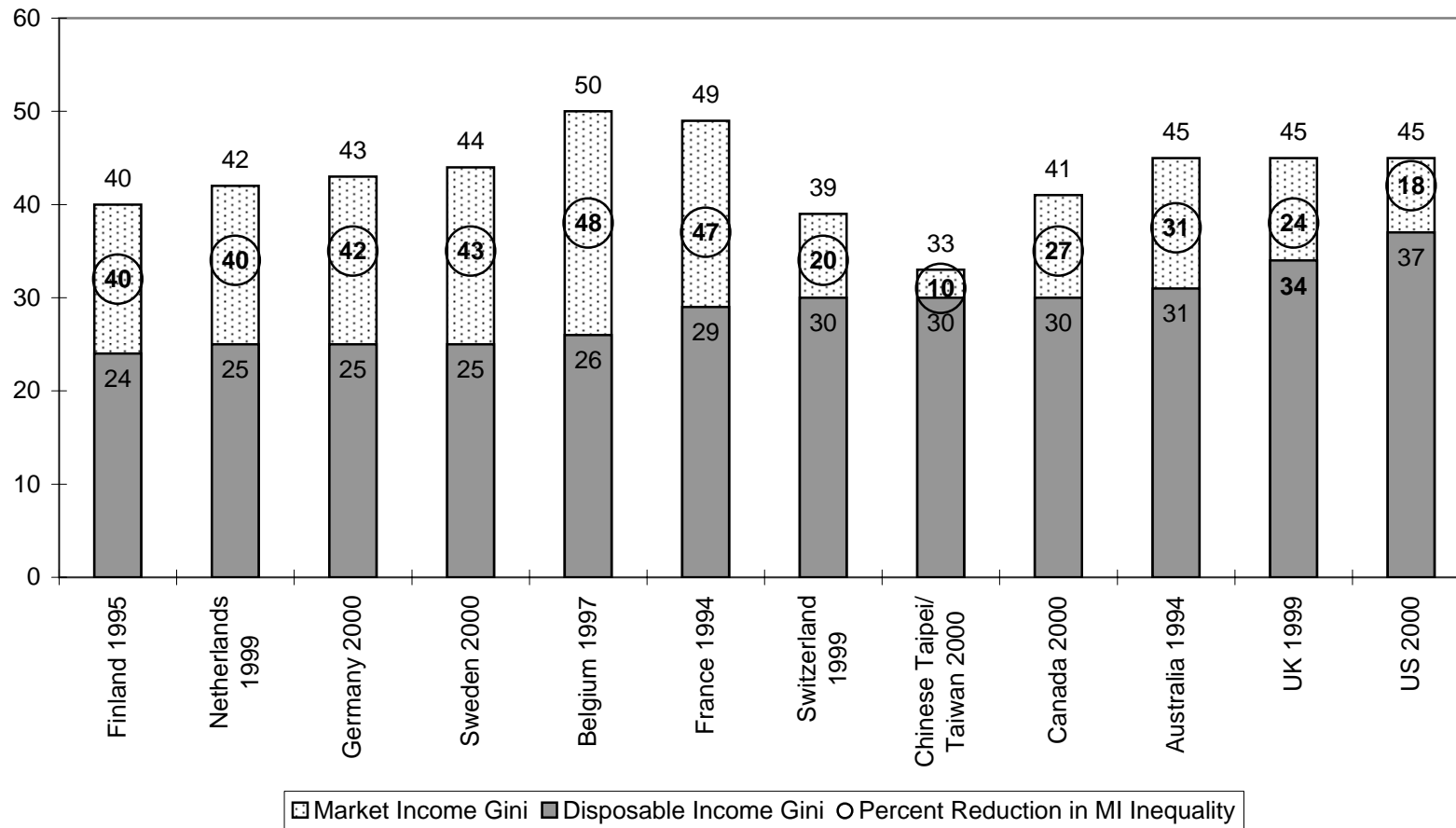
(Percent of **CHILDREN** with Disposable Income Less than 40 percent and 50 percent of Adjusted National Disposable Median Income)



Note:<sup>1</sup> Persons 17 or younger.

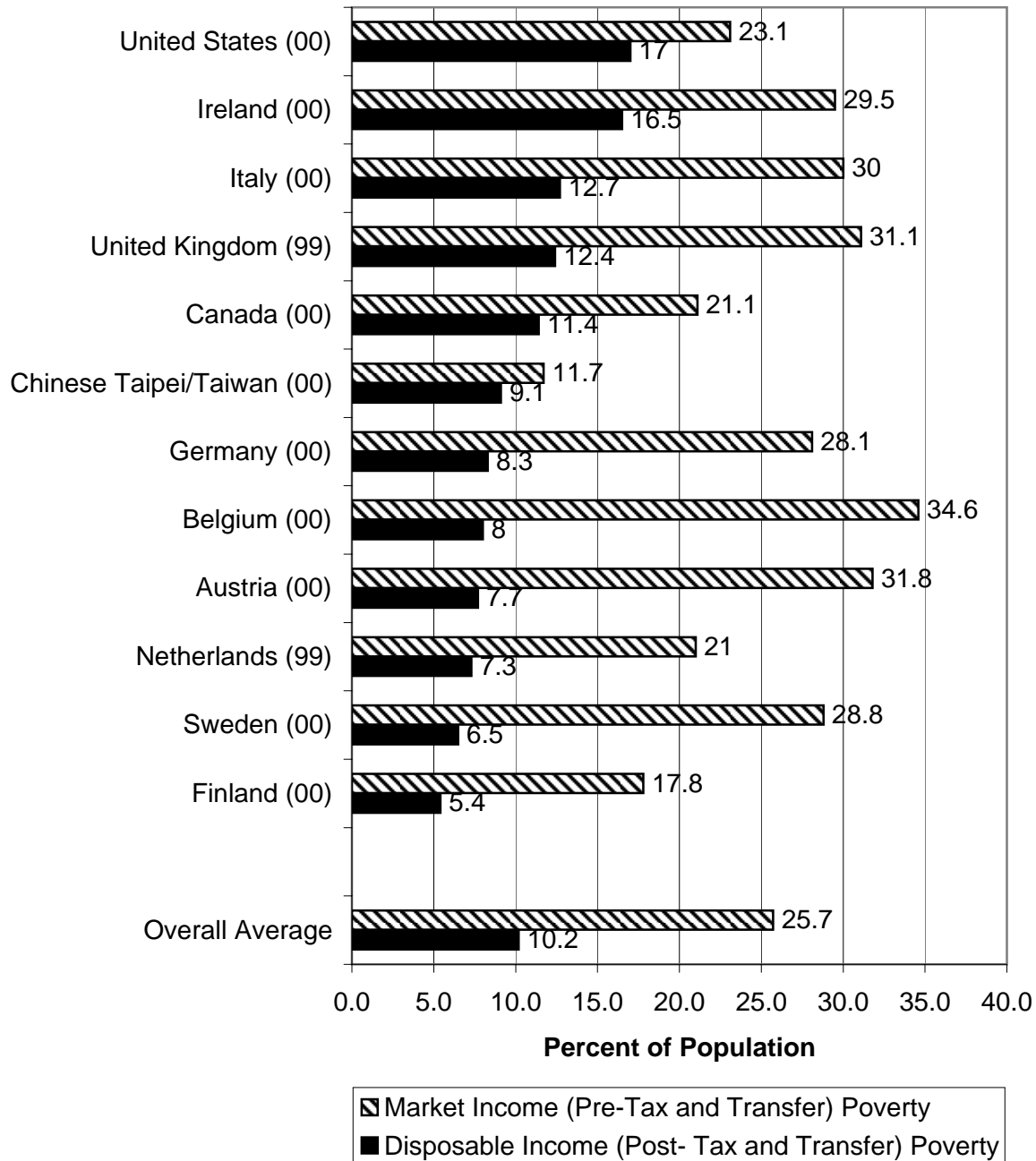
Source: Author's calculations from Luxembourg Income Study.

**Figure 3. Inequality of Market Income and Net Disposable Income in OECD Countries: Gini Coefficients before and after Taxes and Benefits**



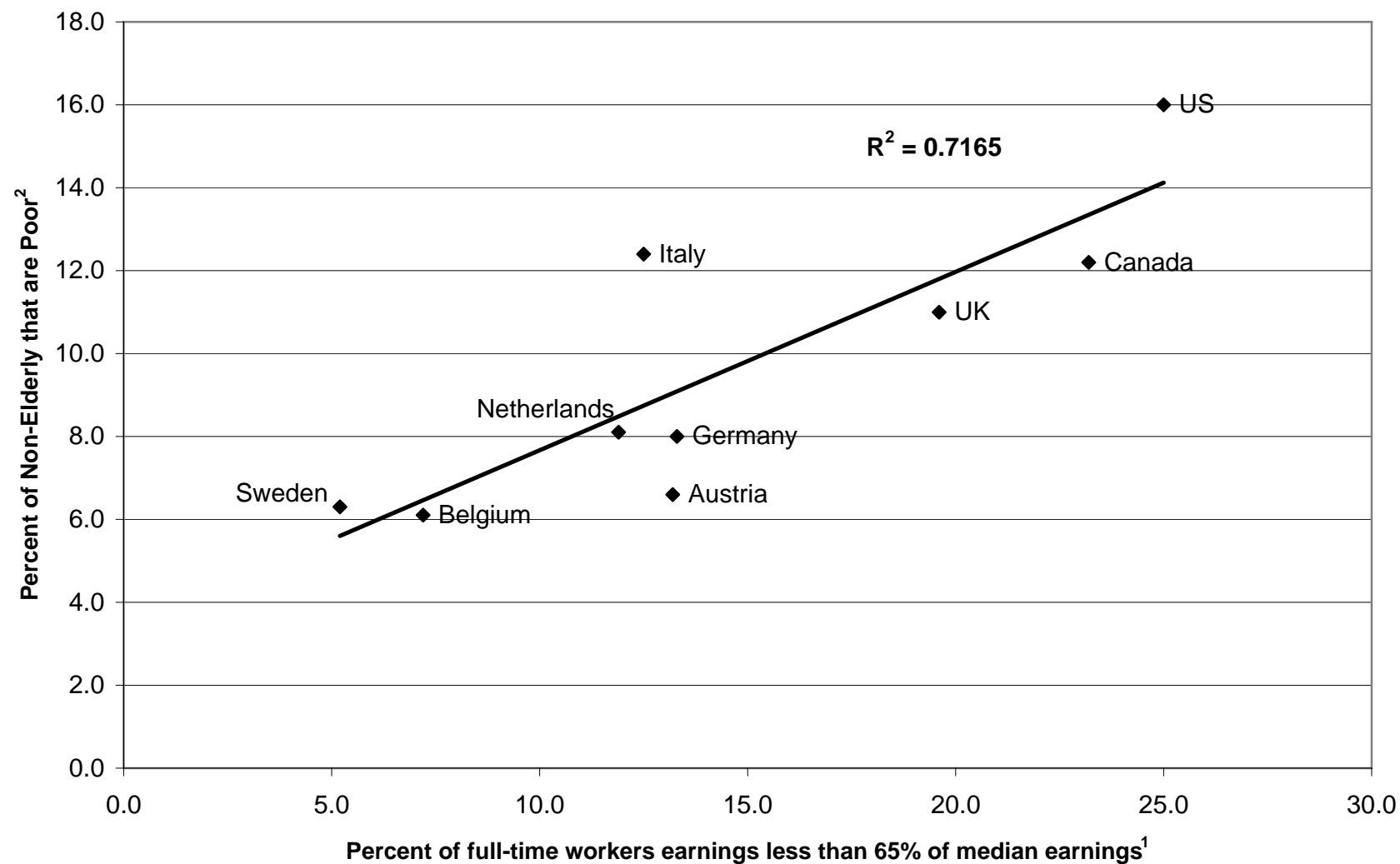
Source: Author's calculations from the Luxembourg Income Study.

**Figure 4.**  
**Relative Poverty Rates and Antipoverty Effects in**  
**Twelve Rich Nations at the Turn of the Century**  
**(Percent of Persons with Market Income and Disposable Income Less than**  
**Half of Adjusted National Disposable Median Income)**



Source: Author's calculations from Luxembourg Income Study.

**Figure 5. Relationship of Low Pay and Non-Elderly Poverty Rates in  
Nine Industrialized Countries circa 2000**



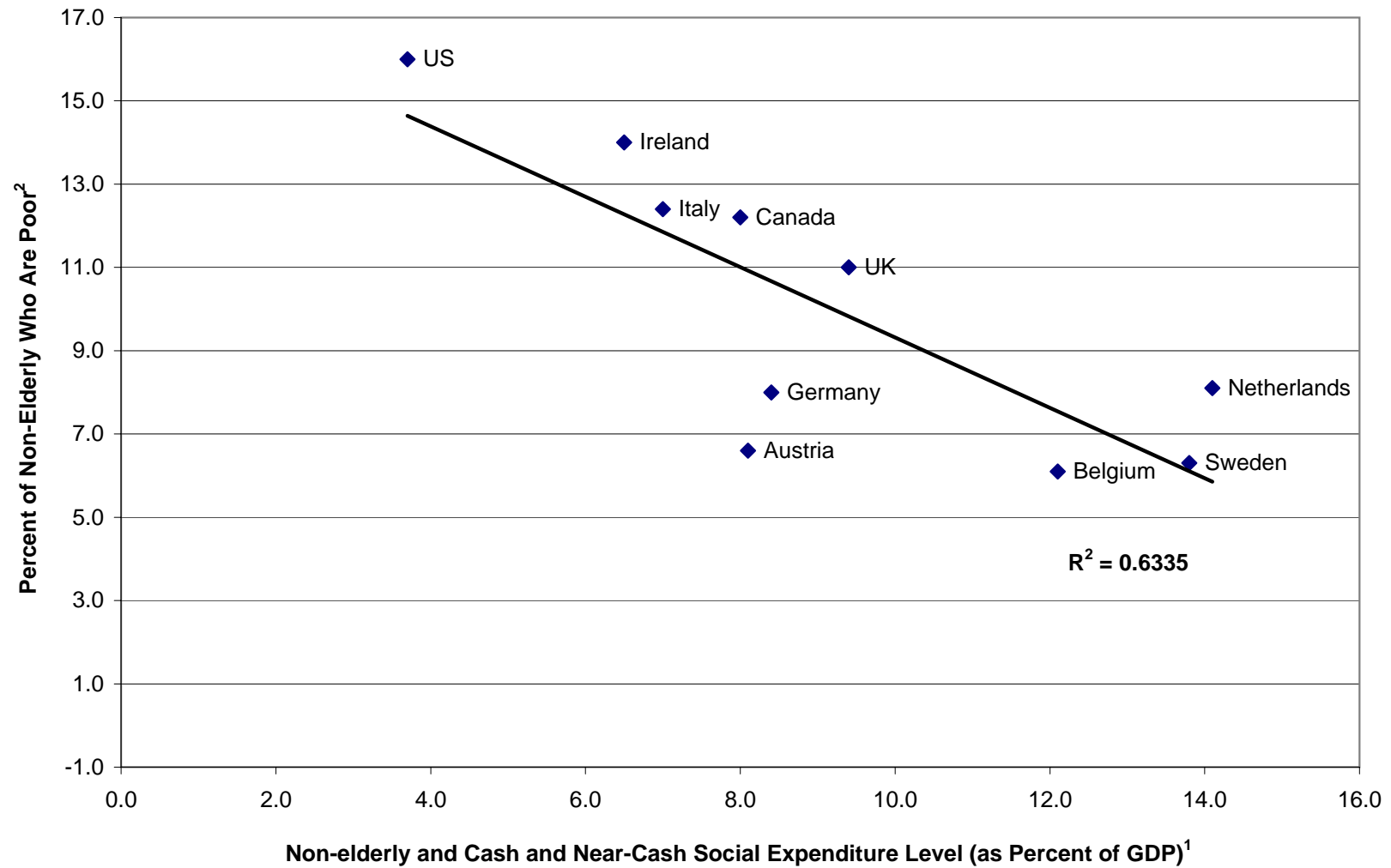
Source: OECD (1996) and authors' tabulations of the LIS data files.

Notes:

<sup>1</sup>Data for Ireland and Finland not available.

<sup>2</sup>Percentage of persons below 65 in poor households.

**Figure 6. Relationship of Cash Social Expenditures and Non-Elderly Poverty Rates in Ten Industrialized Countries circa 2000**



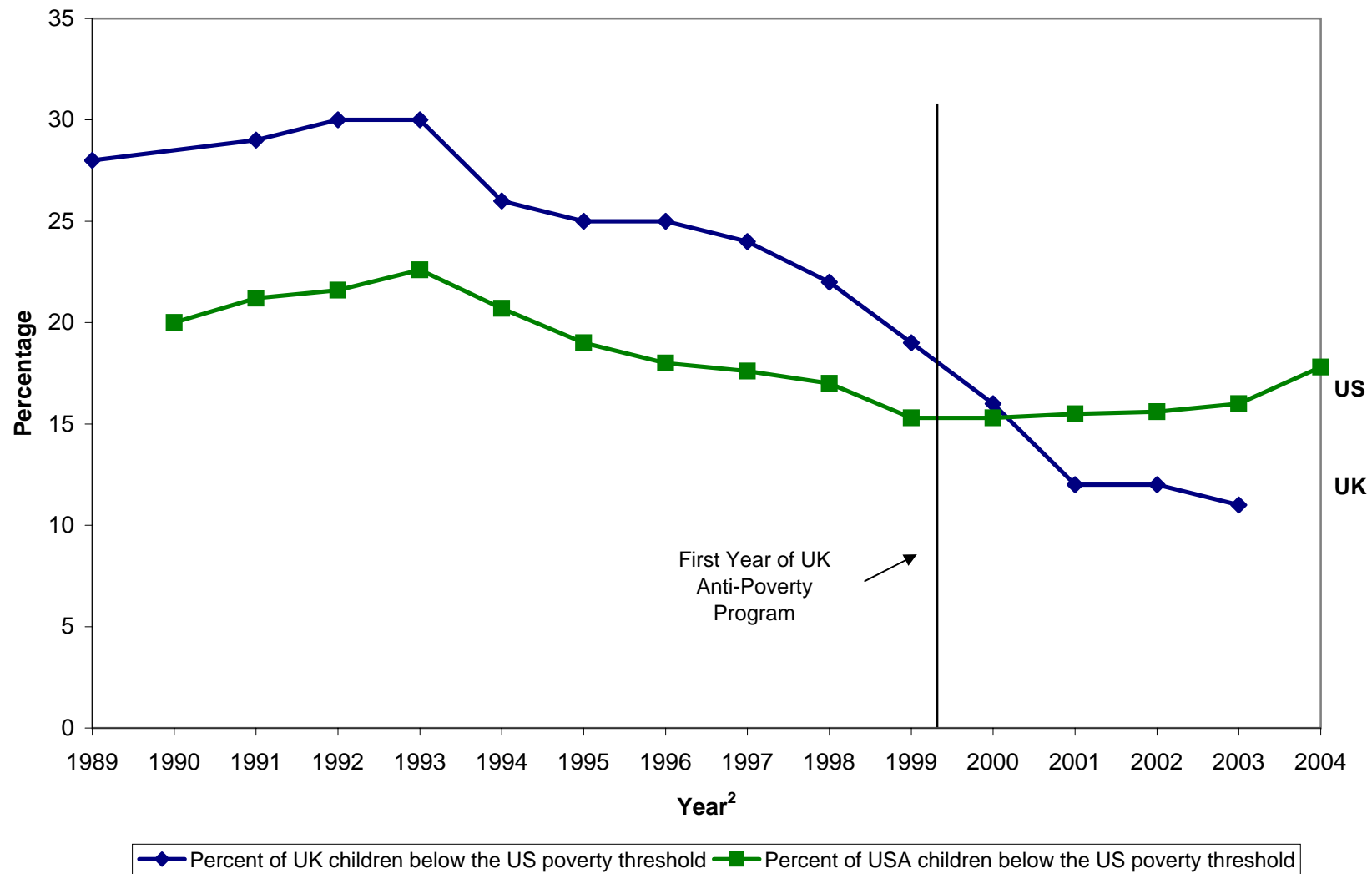
Source: OECD (2001) and authors' tabulations of the LIS data files. Cash and non-cash social expenditures exclude health, education, and social services, but include all forms of cash benefits and near cash housing subsidies, active labor market program subsidies and other contingent cash and other near cash benefits. Non-elderly benefits include only those accruing to household head under age 65.

Notes:

<sup>1</sup>Cash and non-cash social expenditures exclude health, education, and social services, but include all forms of cash benefits and near cash housing subsidies, active labor market program subsidies and other contingent cash and other near cash benefits. Non-elderly benefits include only those accruing to household head under age 65. Data for Finland not available.

<sup>2</sup>Percentage of persons below 65 in poor households.

Figure 7. Trends in Absolute Child Poverty: UK vs. USA<sup>1</sup>, 1989-2004



Source: U.S. Bureau of the Census, UK Department of Work and Pensions.

Notes:

<sup>1</sup>See text for explanations.

<sup>2</sup>Year is calendar year in USA; fiscal year in UK. Thus, figures are for 2004 calendar year in USA and 2003-04 fiscal year in the UK.