
THE INTERNATIONAL CHILD POVERTY GAP: DOES DEMOGRAPHY MATTER?*

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According to the Luxembourg Income Study data, the U.S. child poverty rate is the second highest among 15 high-income nations. The present work reveals that 55% of all American children living in a household headed by a single female with no other adult present live in poverty—the highest rate for any of the five living arrangements in the 15 countries examined in this study. While previous analyses have focused on market forces and governmental redistribution across households, we question the contribution of demographic factors that place children in family structures with different poverty risks relative to other factors such as differential market opportunities and governmental benefits for adults caring for children in various living arrangements. Applying a classic demographic decomposition technique to the overall poverty gap, we find that the distributional effect of demographic behavior contributes little to the U.S. poverty gap with other nations (and none with respect to the United Kingdom). Overall differences in labor markets and welfare schemes best explain the U.S. child poverty gap, although for some countries, the gap is accentuated by the gradient of governmental transfers, and for most countries, by the gradient of market earnings across living arrangements.

In his presidential address to the Population Association of America (PAA), Preston (1984) presented evidence contrary to the expectation that declining fertility and the rapid aging of the U.S. population would have positive consequences for children and adverse ones for the elderly. For several indicators of well-being, he demonstrated favorable trends for elderly Americans but negative trends for American children. One of the least ambiguous indicators of this surprising crossover is childhood poverty. Between 1970 and 1982, the poverty rate decreased among Americans over age 65 and became lower than the poverty rate for children, which saw an increase during the same period. Since 1982, the official child poverty rate has fluctuated in line with all-age poverty, but poverty has remained more prevalent among children under the age of 18 in the United States than among any age group over age 18 (DeNavas-Walt, Proctor, and Lee 2005). In 2005, 17.6% of children lived below the poverty line, compared with 11.1% of working-age adults and 10.1% of seniors. A recent study estimated that the costs associated with childhood poverty total about \$500 billion per year in the United States, or the equivalent of nearly 4% of the country's gross domestic product (Holzer 2007).

Moreover, the U.S. childhood poverty rates stand out unfavorably in cross-national comparisons with other high-income nations. Smeeding, Rainwater, and Burtless (2000) found that for the late 1990s, the United States had a higher relative childhood poverty rate than Australia, Canada, Israel, and 14 Western European nations in the Luxembourg Income Study (LIS) database. With most of these countries, the difference was so large that it raises the question, In what respect is the United States so different from these other high-income countries?

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In the United States, childhood poverty has long been particularly prevalent among households headed by a single mother (Garfinkel and McLanahan 1986). In her PAA presidential address, McLanahan (2004) established that growing up in a household headed by a single mother continues to bring with it fewer resources, both in the United States and elsewhere. In particular, she emphasized that “across all Western industrialized countries, children in single-mother families have much higher poverty rates than children in two-parent families” (p. 619). This finding suggests that international differences in demographic behaviors that result in different distributions of children across living arrangements may be hypothesized to have a direct “distributional” effect on the international poverty gap. A potential *ex ante* objection to this hypothesis is that other nations, particularly in Northern Europe, are known for both low overall child poverty rates and high rates of out-of-wedlock childbearing. Out-of-wedlock births occur much more frequently to unmarried cohabiting parents in Europe than in the United States, however. While American children may be less likely to be born to unmarried parents than children in some European countries, they nevertheless run a higher risk of living in a household headed by a noncohabiting single mother for at least some part of their childhood (Heuveline, Timberlake, and Furstenberg 2003). When other factors remain constant, the higher proportion of children living in a household headed by a single mother in the United States serves to increase the childhood poverty gap between the United States and other nations.

After a thorough comparative analysis of LIS data, however, Rainwater and Smeeding (2003) concluded that demographic factors contributed relatively little to international differences in childhood poverty rates. They reached this conclusion by performing simulations in which the joint distribution of several demographic variables were reweighted, first to impose the U.S. distribution on each of the 14 other countries and then to impose each of the 14 other nations’ distributions on the United States.¹ Variables included the gender and age group of the head of household and the numbers of children, adults other than head and spouse, and persons with earnings in the household. Because these factors were jointly standardized, the specific contribution of family structures was not readily separated out. In addition, the simulations did not involve redistribution between households headed by cohabiting parents and those headed by married parents, which, in the United States at least, operate differently in economic terms (Brines and Joyner 1999; Manning and Lichter 1996; Morrison and Ritualo 2000). Nonetheless, an earlier study that relied on the more straightforward demographic technique of standardization across living arrangements similarly concluded that the actual distribution of children did not make a substantial contribution to cross-national poverty differences (Bradbury and Jantii 1999). In that study, children were grouped into households (1) with a single mother and no other adult, (2) with two married parents and no other adult, and (3) in other living arrangements; poverty rates were recalculated using across countries the same proportions of children in each of the three living arrangements. The third category can be fairly large, however, and includes relatively distinct family structures, including, for instance, households with unmarried cohabiting parents and also three-generation households, which in the United States forms a distinct and important living arrangement for children (DeLeire and Kalil 2002).

Notwithstanding the qualifications noted, the extant literature suggests that the United States’ international ranking in child poverty rates owes less to demographic differences than to two other factors: (1) the comparative lack of labor market regulation in the United States, which permits greater wage dispersion than in other developed countries, and

1. In an earlier paper, Rainwater and Smeeding (1998) performed similar simulations by applying the Dutch demographic distribution to other countries.

(2) the meager amount of government redistribution of monies through taxes and transfers. In Esping-Andersen's (1990) typology of welfare states, the United States embodies the type of "liberal" state most likely to permit wide income inequalities.

In this paper, we seek to make at least three significant contributions to the growing literature on child poverty. First, we reexamine the importance of living arrangements by categorizing these arrangements in a manner that captures significant differences in childhood experiences. We consider five living arrangements: households whose head is (1) married, (2) cohabiting, (3) a single male, (4) a single female without another adult present in the household, and (5) a single female with another adult present.

Second, we provide what we hope will be a more reliable methodological framework for this and future studies. Previous studies have relied on standardizing either on one factor or on a set of factors to compare the international differences in poverty induced by variation in the distribution of demographic feature(s) to the actual poverty gap with the international differences induced by variation with respect to other factors. As discussed in the methodology section to follow, the corresponding results are informative, but an element of arbitrariness is evident in both the choice of the standard distributions and the order in which the successive standardizations are performed. In this paper, we apply the classic demographic approach for the decomposition of a difference between two proportions. Among the possible decompositions, the approach developed by Kitagawa (1955) for two factors has the advantage of treating standardization on each factor in precisely the same manner, and of yielding only two components—each one relating to only one of the two factors—that add up to the total difference in proportions.

Our third goal in this analysis is more substantive. Whereas previous studies of the child poverty gaps have pointed to overall market and transfer differences between countries, we go one step further and consider how specific household categories fare with respect to market earnings and governmental transfers. In other words, we take into account the overall level of household incomes both before and after taxes and transfers, as well as their gradients across household categories. By decomposing the components corresponding to market earnings and governmental transfers into a level factor and a gradient factor, we assess whether a higher poverty rate in the United States originates in a large overall disparity in market earnings or government redistribution (within each household type) or in large disparities between household types. The gradient effects represent the possible interaction of demographic realities with features of the market and with governmental transfer schemes. For instance, single mothers not living with any other adults may be penalized on the market in the absence of childcare structures that allow them to combine full-time employment and motherhood. Likewise, conditional rather than universal entitlements to some forms of governmental assistance will likely translate into a gradient in poverty reduction through tax and transfers across household types. In case of significant gradient effects, the differences in children's distribution across household types will in fact have an impact on the disparities in market earnings and governmental transfers across countries. Taken together, these contributions should provide a more thorough and reliable explanation of the degree to which demographic factors contribute to international differences in childhood poverty rates.

The next section examines the LIS data for the United States and 14 other Western and postsocialist nations discussed in this paper, along with our selected poverty measure and decomposition technique. The following section presents our results, beginning with children's poverty rates in each country and in each of the five living arrangements, both before and after taxes and transfers. We also introduce the decomposition of the childhood poverty gap between the United States and each nation studied into additive components, in which each of these components represents the childhood poverty gap between the United States and another nation if all factors but one (e.g., the distribution of children's living arrangements, or market earnings across living arrangements) are identical in the two countries.

DATA AND METHODS

Data for this research come from the Luxembourg Income Study, or LIS (www.lisproject.org), a collection of national micro-level surveys on household income. All of the data sets that are part of LIS were collected within the respective countries, often by government agencies.² When they are added to LIS, however, the data are “harmonized” in order to facilitate cross-national comparisons. The LIS is thus uniquely suited to study the household-level determinants of child poverty across nations.

This paper compares child poverty in the United States with that in Australia, Canada, and 12 Western and East European nations (Belgium, Estonia, Finland, France, Germany, the Netherlands, Norway, Poland, Russia, Slovenia, Sweden, and the United Kingdom). Data from most of these nations were collected in or about 2000.³

The definition of *child poverty* used here is based on the concepts of “equivalized household income” and “relative poverty.” *Equivalized household income* refers to income adjusted for “household characteristics deemed to affect economies of scale and economies of scope as reflected by differences in household size and composition” (Gottschalk and Smeeding 2000:638). Following a common practice in cross-national poverty research, we use a measure in which

$$\text{equivalized household income} = \text{disposable income} / \text{household size}^{0.5}.$$

This simple correction to household income reflects the intuition that a given level of income does not go as far when divided among many people, but there are also economies of scale in sharing a home.

In this paper, we opt for a relative poverty measure, defining children as *poor* if their equivalized household income is less than 50% of the median in their home countries. This is a very different way to conceptualize and measure poverty than an absolute standard, such as the U.S. government’s poverty line, which remains the same (after adjustment for inflation) as incomes in a society rise and fall. Although debate continues, relative measures are widely considered more appropriate for research on developed economies, where poverty is commonly conceived as a lack of the resources necessary to participate in what might be termed a mainstream lifestyle, rather than as a deficiency in the goods necessary for mere survival (Callan and Nolan 1990; Sen 1992). Relative measures are more dependable and more revealing for cross-national research because they avoid the indeterminacy inherent in evaluating whether an income level, or amount of material possessions, that categorize one as poor in a given nation might be adequate in another nation with a different standard of living (Brady 2003). The most significant drawback of using a relative poverty measure is its essentially arbitrary cutoff point below which children are defined as poor (Callan and Nolan 1990). However, the specific relative measure adopted here (50% of median equivalized income) holds the twofold advantage of being easily understood and widely used, particularly in literature based on LIS data.

Our typology of children’s living arrangements includes several variables that we hypothesize to affect children’s chances of being poor in at least some nations: whether two or more adults are present in the household, as opposed to one adult; whether the household head is male; and whether the household contains a married couple, a cohabiting couple, or neither. Taking these issues into account results in a five-part typology: (1) households

2. LIS data on the United States, for example, come from the Current Population Survey conducted by the Census Bureau.

3. The most recent LIS data available for two nations—France and Australia—frequently discussed in the international literature on poverty derive from 1994. Because we use a relative measure of poverty (as we discuss later), it is possible to compare child poverty rates from different time points as well as from different nations.

headed by a married couple; (2) households headed by an unmarried cohabiting couple; (3) households headed by a single male⁴; (4) households headed by a single female with no other adults present; and (5) households headed by a single, noncohabiting female with other adults present. The data for Australia and Poland are confined to only four categories because cohabiting couples are not distinguished from married couples.

We begin by estimating the distribution of children across these five types of households. We then estimate and compare before- and after-tax (and transfer) poverty rates for children residing in each of the five household types. After-tax poverty is based on net disposable income, which takes into account the income household members earn from the market, the taxes they pay, and the cash and near-cash transfers they receive from the government. Before-tax poverty is based solely upon the income the household receives from employment and from other market sources, such as interest and rents.

We then decompose the difference between the after-tax child poverty rate in the United States (P) and in a given other country (p) into the contributions of the tax redistribution scheme, the poverty gradient across household types, and the distribution of children across household types. There are multiple techniques of decomposition, but here we select the decomposition of rates used in Das Gupta (1993; see also Smith, Morgan, and Koropeckyj-Cox 1996), which extends the classical two-factor decomposition of a difference between proportions in Kitagawa (1955). This approach is particularly attractive for handling the different factors in a symmetrical manner, yielding components that add up to the overall difference in rates, and involving few components (only two in the two-factor decomposition, when all other decompositions yield at least three) that are readily interpretable as the contribution of each factor.

Specifically, we first write P as

$$P = \Sigma D_i \times P_i, \quad (1)$$

where D_i is the proportion of children in household type i in the United States (e.g., D_1 is the proportion of children in households headed by a married couple), P_i is the (after-tax) poverty rate of children in household type i in the United States, and Σ represents the sum across the five household types.

We then rewrite P as

$$P = \Sigma D_i \times B_i \times (P_i / B_i), \quad (2)$$

where B_i is the before-tax poverty rate of children in household type i in the United States. If we define A_i as the ratio of the after-tax poverty rate to the before-tax poverty rate for children in household type i in the United States, P then appears as

$$P = \Sigma D_i \times B_i \times A_i. \quad (3)$$

This first stage allows us to isolate the direct distributional effect of differences in living arrangements (factor D). It also isolates an overall market earning factor and an overall government redistribution factor. To decompose each of those two factors into a level effect and a gradient effect, we then define

$$E_i = B_i / B_1 \text{ and } G_i = A_i / A_1, \quad (4)$$

4. While completeness would demand separating single-male-headed households with and without other adults present, we combine these categories because single-male-headed households of any kind with children remain rare in most of the samples studied here.

where E_i is the before-tax poverty rate of children in household type i relative to the same rate for households headed by a married couple in the United States, whereas G_i is the ratio of the after-tax poverty rate to the before-tax poverty rate for children in household type i relative to the same ratio for children in households headed by a married couple in the United States. P thus appears as a function of five factors: two scalars (B_1 and A_1), and three vectors (\mathbf{D} , \mathbf{E} , and \mathbf{G}):

$$P = A_1 \times B_1 \times \Sigma \mathbf{D}_i \times \mathbf{E}_i \times \mathbf{G}_i \quad (5)$$

So written, the difference between P and p can now be decomposed into the additive contributions of five factors (F_α , F_β , F_δ , F_ϵ , and F_γ) among which the one relating to vector \mathbf{D} corresponds to distributional effects across living arrangements (F_δ), whereas those relating to the vectors \mathbf{E} and \mathbf{G} correspond to the gradient effects of pre-tax market earnings (F_ϵ) and of government redistribution (F_γ), respectively:

$$p - P = F_\alpha + F_\beta + F_\delta + F_\epsilon + F_\gamma. \quad (6)$$

Detailed derivations of the five factors are provided in the Appendix.

In this decomposition, the contribution made by each scalar or vector to the poverty gap between the United States and each other nation is assessed by calculating a counterfactual poverty gap. Specifically, we calculate a hypothetical poverty gap by substituting, for all but the factor in question, identical variable values and vector distributions in place of the values and distributions that prevail in the United States and that country. The component F_δ , for instance, represents the change in the poverty gap between the United States and another nation if the two countries had their own prevailing distributions of children by living arrangements but the same values or distributions for each of the other factors. The equations in the Appendix demonstrate how we chose the counterfactual values and distributions such that the single-factor contributions thus estimated sum to the actual poverty gap between the United States and each country. Because the decomposition is additive, the relative contribution of a factor can be assessed as the ratio of the corresponding component to the overall poverty gap.

The term *contribution* does not in this case have the same meaning as in causal analysis, nor as in the common statement that a given proportion of the variance is “explained” by a certain factor. In the classic decomposition of the difference between two crude death rates, one part of the difference is attributed to differences in age-specific mortality rates, whereas the remainder is attributed to differences in age distribution. Mortality changes, however, contribute to age structural changes, and the *causal* effect of changing mortality conditions might not be fully captured by counterfactually keeping the prevailing age-specific mortality rates while at the same time changing age structures to a common distribution. Governmental policies, markets, and living arrangements would also be endogenous factors in a causal analysis inasmuch as changes in one of these factors are likely to affect the other factors. For instance, the prevalence of children living with single mothers may create pressure to redirect policy efforts toward their needs, while conversely, specific schemes of means-tested government support may have an impact on demographic behavior (e.g., Moffitt, Reville, and Winkler 1998).

The different contributions to child poverty in our decomposition might thus be considered estimates of the first-order effects rather than of the total effects, since it is plausible that extensive changes in the values or distributions of other factors might also affect the distribution of living arrangements that is being kept unchanged in the decomposition. Assessing the full effect rather than the first-order effect of changes in one of the factors requires estimating the elasticity of a factor to changes with respect to other factors, which is beyond the scope of this paper. However, governmental policies, market characteristics, and

demographic behaviors depend on a multiplicity of causes interacting in complex ways. We find it unlikely that variation in any one factor alone, such as government tax and transfer policy, would produce anything more than minor change in one of the other factors, such as children's living arrangements. To the extent this is true, we provide a reasonable approximation of the total impacts of living arrangements, market earnings, and government redistribution through our first-order estimates of those impacts.

RESULTS

Table 1 shows the weighted distribution of children by living arrangement in the United States and the other 14 nations. From a comparative perspective, children in the United States are less likely to live with married parents than in most other nations, but the percentage of children living with married parents (72.3%) is nonetheless higher than in Nordic countries (Sweden, 56.0%; Norway, 64.3%; Finland, 69.4%), Estonia (62.7%) and the United Kingdom (67.2%). With the exception of the United Kingdom, however, the proportion of children living in households headed by a cohabiting couple is much smaller in the United States than in those countries. After the United Kingdom, therefore, the United States has the highest proportion of children living in households headed by a single person rather than a couple (married or not). As for the households typically exhibiting the highest poverty rates—those headed by a single woman with no other adults present—the proportion of children in the United States is higher (13.2%) than in most other nations (third after the United Kingdom, 19.0%, and Sweden, 16.2%), but the proportion is also 10% or above in a number of other nations (Canada, Finland, Germany, and Norway). It is noteworthy that, despite the controversy over family decline in the United States (Giele 2005), the proportion of children living with a single mother and no other potential earners is not unusual in comparative terms. This immediately casts doubt on the hypothesis that living arrangements account for the United States' poor performance in terms of child poverty, at least compared with those nations.

Table 2 shows relative poverty rates before and after income redistribution through taxes and transfers for all children and for children in different living arrangements. The international estimates for the overall (all arrangements combined) after-tax child poverty rate confirm the frequently reported finding that children are more likely to be poor in the United States (22.0%) than in other Western and postsocialist societies; only Russia has a higher overall child poverty rate (23.4%). In addition to comparisons across countries, Table 2 also allows for comparisons across household types and between before- and after-tax child poverty.

Poverty Rates Across Household Types

Table 2 reveals first how children fare across different types of households. In the United States, not surprisingly, we find that children living in households headed by a married couple experience the lowest observed poverty rate, while those living in households headed by a single female with no other adults experience the highest observed poverty rate. Children living with married parents consistently demonstrate a low poverty rate in all countries, and those living with a single female and no other adults have the highest poverty everywhere—save Belgium, where child poverty is highest in households headed by a single male. This exception does not constitute a robust finding, however, given the small sample of such households in Belgium.

The relative poverty of children in other living arrangements varies considerably from country to country. For example, consistent with previous observations that unmarried cohabitation has become virtually indistinguishable from marriage in Sweden (Heuveline and Timberlake 2004; Kiernan 2001), children in households headed by unmarried, cohabiting couples have the same poverty rate as those in households headed by married couples (2.3%). Similarly, child poverty in Norway is even lower in cohabiting-couple

Table 1. Distribution of Children, by Country and Household Type

Country and Measure	Household Type					
	All	Married Couple	Cohabiting Couple	Single Male Head	Single Female Head, No Other Adults	Single Female Head and Other Adults
United States, 2000						
Weighted <i>N</i>	34,589	25,008	1,522	1,314	4,566	2,179
Weighted %	100.0	72.3	4.4	3.8	13.2	6.3
Australia, 1994						
Weighted <i>N</i>	4,548	3,989	— ^a	77	387	96
Weighted %	100.0	87.7		1.7	8.5	2.1
Belgium, 1997						
Weighted <i>N</i>	2,587	2,212	98	49	168	62
Weighted %	100.0	85.5	3.8	1.9	6.5	2.4
Canada, 2000						
Weighted <i>N</i>	17,513	12,802	1,751	683	1,751	543
Weighted %	100.0	73.1	10.0	3.9	10.0	3.1
Estonia, 2000						
Weighted <i>N</i>	4,230	2,652	694	68	537	283
Weighted %	100.0	62.7	16.4	1.6	12.7	6.7
Finland, 2000						
Weighted <i>N</i>	7,386	5,126	1,152	162	842	96
Weighted %	100.0	69.4	15.6	2.2	11.4	1.3
France, 1994						
Weighted <i>N</i>	7,465	5,845	866	7	530	164
Weighted %	100.0	78.3	11.6	0.1	7.1	2.2
Germany, 2000						
Weighted <i>N</i>	5,744	4,480	482	63	620	98
Weighted %	100.0	78.0	8.4	1.1	10.8	1.7
Netherlands, 1999						
Weighted <i>N</i>	3,081	2,536	280	18	213	34
Weighted %	100.0	82.3	9.1	0.6	6.9	1.1
Norway, 2000						
Weighted <i>N</i>	9,144	5,880	1,682	256	1,180	146
Weighted %	100.0	64.3	18.4	2.8	12.9	1.6
Poland, 1999						
Weighted <i>N</i>	28,406	25,082	— ^a	511	1,619	1,193
Weighted %	100.0	88.3		1.8	5.7	4.2
Russia, 2000						
Weighted <i>N</i>	1,962	1,452	155	69	181	106
Weighted %	100.0	74.0	7.9	3.5	9.2	5.4

(continued)

(Table 1, continued)

Country and Measure	Household Type					
	All	Married Couple	Cohabiting Couple	Single Male Head	Single Female Head, No Other Adults	Single Female Head and Other Adults
Slovenia, 1999						
Weighted <i>N</i>	2,364	1,894	258	45	57	99
Weighted %	100.0	80.1	10.9	1.9	2.4	4.2
Sweden, 2000						
Weighted <i>N</i>	7,250	4,060	1,675	225	1,175	123
Weighted %	100.0	56.0	23.1	3.1	16.2	1.7
United Kingdom, 1999						
Weighted <i>N</i>	14,955	10,050	1,346	314	2,841	404
Weighted %	100.0	67.2	9.0	2.1	19.0	2.7

Notes: All data are drawn from the Luxembourg Income Study. Weighted *Ns* equal the share of each national survey's un-weighted sample assigned to each household type after applying weights.

^aMarried and cohabiting couples are grouped together in the data for Australia and Poland.

households (1.6%) than it is in married-couple households (2.1%). In contrast, the poverty rate of children living in households headed by cohabiting couples in the United States (29.7%) is more than twice the rate for children living in households headed by married couples (13.9%).

International Differences for Specific Household Types

The poverty disadvantage faced by U.S. children also exists at the level of specific household types. For each type of household structure, there is never more than one other nation with a higher rate of after-tax child poverty than the United States. This is especially true for the most common childhood living arrangement. The United States' 13.9% poverty rate for children living with a married couple ranks behind only Russia's 20.7%. The United States ranks second only to Russia for households headed by a cohabiting couple, and behind Australia for those headed by a single male. But in each case, the difference is less than one percentage point. Figures in Table 2 also demonstrate that for households headed by a single female, children in the United States have the highest relative poverty rate. In fact, the majority of children in U.S. households are poor if the household is headed by a single female with no other adults (55.4%).

Although the position of the United States changes little no matter which household type is considered, the cross-national range of child poverty rates is more modest with respect to households headed by a married couple (from 1.9% in Finland to 20.7% in Russia) than with respect to households headed by a single female with no other adults present (from 9.0% in Finland to 55.4% in the United States). Another way to document this is by considering the childhood poverty gradient, or the excess poverty of children living in households other than those headed by married couples. This excess poverty reaches 41.5% in the United States for children in households headed by a single female with no other adults present (55.4% vs. 13.9% for children in households headed by married couples). Children living with single mothers and no other adults experience the most excess poverty within each nation, but across nations, the largest gradient is found in the United States.

Table 2. Observed (after-tax/transfer) and Market (before-tax/transfer) Child Poverty Rates, by Household Type

Country and Measure	Household Type					
	All	Married Couple	Cohabiting Couple	Single Male Head	Single Female Head, No Other Adults	Single Female Head and Other Adults
Observed Child Poverty Rates (%)						
United States, 2000	22.0	13.9	29.7	25.6	55.4	36.9
Australia, 1994	16.0	12.1	— ^a	25.8	51.6	27.2
Belgium, 1997	7.7	7.0	10.9	19.0	9.3	12.2
Canada, 2000	14.9	10.4	14.4	13.3	48.3	16.8
Estonia, 2000	13.6	10.2	15.5	10.9	27.3	15.2
Finland, 2000	2.8	1.9	3.0	2.1	9.0	0.0
France, 1994	7.9	5.2	11.7	13.3	27.3	19.0
Germany, 2000	9.0	4.1	12.0	10.0	42.1	11.3
Netherlands, 1999	9.8	6.6	15.9	11.0	38.4	16.0
Norway, 2000	3.4	2.1	1.6	5.4	11.6	8.6
Poland, 1999	12.7	12.2	— ^a	10.5	20.1	15.1
Russia, 2000	23.4	20.7	30.6	16.6	41.0	24.9
Slovenia, 1999	6.9	5.6	7.4	16.8	28.8	14.4
Sweden, 2000	4.2	2.3	2.3	4.2	13.5	7.1
United Kingdom, 1999	15.3	9.2	15.0	21.4	37.3	9.8
Market Child Poverty Rates (%)						
United States, 2000	26.3	16.7	35.1	30.7	65.2	47.0
Australia, 1994	28.4	22.3	— ^a	46.8	79.5	62.5
Belgium, 1997	18.9	15.9	17.9	23.1	45.2	53.5
Canada, 2000	24.0	17.0	26.6	22.6	65.2	47.5
Estonia, 2000	21.2	15.1	22.8	47.1	40.6	31.5
Finland, 2000	18.6	13.2	18.0	22.0	50.6	30.9
France, 1994	17.7	13.7	20.0	17.9	48.4	46.4
Germany, 2000	18.0	10.2	22.3	30.4	65.5	42.4
Netherlands, 1999	15.2	10.5	18.5	28.5	58.1	54.9
Norway, 2000	14.3	7.1	7.1	22.9	56.1	33.4
Poland, 1999	19.4	16.4	— ^a	30.3	42.3	47.5
Russia, 2000	23.9	20.5	26.7	25.2	40.1	37.6
Slovenia, 1999	12.0	10.6	11.1	22.1	25.9	28.4
Sweden, 2000	18.7	11.7	9.9	20.4	51.9	51.9
United Kingdom, 1999	34.4	19.2	33.4	53.4	84.1	51.3

^aMarried and cohabiting couples are grouped together in the data for Australia and Poland.

Poverty Rates Before and After Tax

Another finding emerges from Table 2 and the comparison of overall child poverty rates before and after taxes and transfers. The United States is not so very unusual in its rate of before-tax or market poverty, reflecting the fact that low-income Americans are quite likely to be employed in comparative terms, although at low wages (Rainwater and Smeeding 2003). However, government redistribution reduces the overall child poverty rate only from 26.3% to 22.0%. The difference is more dramatic in most other countries. The United Kingdom, for instance, with the highest before-tax childhood poverty rate of all the countries considered here (34.4%), has a substantially lower (after-tax) childhood poverty rate (15.3%) than the United States. Similarly, Finland has the lowest observed childhood poverty rate of all the countries considered here (2.8%). Without transfers, however, the rate hypothetically would be 18.6%.

A comparison of the pre- and posttax child poverty rates for specific household types suggests that U.S. taxes and transfers do little to pull children out of poverty regardless of the household in which they live. In absolute terms, the difference between child poverty before and after redistribution is smaller for U.S. households headed by a married couple (from 16.7% to 13.9%) than for households headed by a single female with no other adults present (from 65.2% to 55.4%). But the latter decline appears modest in comparison with the poverty reduction achieved through taxes in similar households in the Nordic countries (from 50.6% to 9.0% in Finland, from 56.1% to 11.6% in Norway, and from 51.9% to 13.5% in Sweden) and in the United Kingdom (from 84.1% to 37.3%). In relative terms, it is more difficult to know whether these nations do comparatively more for those households at the highest risk for poverty than for households headed by a married couple, since children living with married parents face a minimal poverty risk after taxes and transfers (1.9% in Finland, 2.1% in Norway, and 2.3% in Sweden).

The decomposition presented in Table 3 allows us to answer with greater certainty the question of whether differential reductions in poverty rates through taxes and transfers across household types actually contribute to the child poverty gap. Table 3 also allows us to combine the three dimensions discussed with respect to Table 2: differences in poverty rates across countries, across household types, and between income before and after redistribution.

Decomposition of the International Differences in Overall Child Poverty Rate

Table 3 presents the results of the decomposition of the child poverty gap between the United States and the other nations studied. For each nation, columns 2–6 represent the contribution of each of the five factors in the decomposition. The first row reports the absolute contributions to the total poverty gap; the second row reports the relative contributions, that is, as proportions of the total gap. Again, because the chosen decomposition technique is additive, the relative contributions add up to 100%.

The sum of columns 2 and 3 represents the contribution of the distribution of market earnings to the observed gap between the United States and a given country; that is, these two columns add up to the poverty gap after standardizing both the distribution of children by living arrangements and the changes in poverty rates due to government transfers for each of the living arrangements (ratio of before- to after-tax household incomes). This contribution is broken down into two effects. The level effect (column 2) is assessed using the observed pretax market earnings for children in households headed by married parents for each country (B_1 in Eq. (5)), but holding everything else constant across countries, including the ratios of pretax market earnings for children in different living arrangements *relative to* the same earnings for children in households headed by married parents. The gradient effect (column 3), on the contrary, is assessed by using the observed ratios of

Table 3. Decomposition of the Total Childhood Poverty Gap Between the United States and Other Countries

	Counterfactual Childhood Poverty Gap Based on a Single Factor					
	Total Childhood Poverty Gap Based on All Factors (1)	Market Earnings in Married-Couple Households (F_{β}) (2)	Household-Type Gradient in Market Earnings (F_{ϵ}) (3)	Distribution of Children by Household Type (F_{δ}) (4)	Income Redistribution in Married-Couple Households (F_{α}) (5)	Household-Type Gradient in Redistribution (F_{γ}) (6)
Australia, 1994						
Unstandardized	5.9	-5.7	1.1	2.2	8.2	-0.7
Standardized	100.0	-96.5	19.1	37.0	139.0	-12.2
Belgium, 1997						
Unstandardized	14.3	0.7	1.2	2.2	8.4	1.7
Standardized	100.0	4.7	8.5	15.3	58.6	12.0
Canada, 2000						
Unstandardized	7.1	-0.4	0.9	0.6	5.6	-0.2
Standardized	100.0	-5.9	12.6	8.2	79.6	-2.3
Estonia, 2000						
Unstandardized	8.4	1.7	2.7	-0.6	3.5	1.2
Standardized	100.0	20.7	31.8	-7.3	41.7	13.8
Finland, 2000						
Unstandardized	19.1	2.5	0.7	1.5	14.7	0.0
Standardized	100.0	12.9	3.6	7.9	76.7	0.2
France, 1994						
Unstandardized	14.0	2.7	1.0	2.4	10.5	-2.7
Standardized	100.0	19.3	7.2	17.4	74.7	-19.2
Germany, 2000						
Unstandardized	12.9	6.9	-3.5	2.7	10.1	-2.6
Standardized	100.0	53.6	-27.3	21.2	78.5	-19.9
Netherlands, 1999						
Unstandardized	12.2	6.7	-2.2	3.2	4.1	0.4
Standardized	100.0	55.1	-17.8	26.6	34.1	3.0
Norway, 2000						
Unstandardized	18.5	7.9	-2.3	2.4	9.3	1.7
Standardized	100.0	42.6	-12.5	13.2	50.2	8.9
Poland, 1999						
Unstandardized	9.2	0.3	1.9	2.0	1.9	2.9
Standardized	100.0	3.1	21.0	21.3	20.3	31.7
Russia, 2000						
Unstandardized	-1.5	-4.7	5.9	0.6	-4.4	0.9
Standardized	100.0	325.9	-405.5	-40.3	306.6	-61.1

(continued)

(Table 3, continued)

	Counterfactual Childhood Poverty Gap Based on a Single Factor					
	Total Childhood Poverty Gap Based on All Factors (1)	Market Earnings in Married- Couple Households (F_{β}) (2)	Household- Type Gradient in Market Earnings (F_{ξ}) (3)	Distribution of Children by Household Type (F_{δ}) (4)	Income Redistribution in Married- Couple Households (F_{α}) (5)	Household- Type Gradient in Redistribution (F_{γ}) (6)
Slovenia, 1999						
Unstandardized	15.0	5.8	2.2	4.1	5.8	-2.9
Standardized	100.0	38.3	14.8	27.1	38.5	-19.3
Sweden, 2000						
Unstandardized	17.7	3.9	0.7	1.1	13.7	-1.0
Standardized	100.0	22.0	3.7	6.1	77.2	-5.4
United Kingdom, 1999						
Unstandardized	6.7	-2.7	-0.9	-2.8	10.5	1.8
Standardized	100.0	-41.1	-12.9	-42.3	157.4	27.1

pretax market earnings for children in different living arrangements *relative to* children in households headed by married parents in each country (E_i in Eq. (5)), holding everything else constant across countries, including the level of pretax market earnings for children in households headed by married parents.

As visible in column 2 of Table 3, the level effect of the market-earning distributions alone appears to account substantially for many of the gaps between the child poverty rates of the United States and other nations. To take one example, the poverty gap between the United States and Germany would be at 6.9%, more than half of the observed poverty gap of 12.9% in column 1. Even if all other factors, including the gradient in pretax child market earnings across different living arrangements, were identical between the two nations, the child poverty rate would still be 6.9% lower in Germany purely because the market earnings in children's households headed by married parents are more evenly distributed than in the United States. Similar contributions to the overall poverty gap may be seen between the United States and the Netherlands (+6.7%), Norway (+7.9%), and Slovenia (+5.8%). However, market earnings inequality for children living with two parents alone yields *less* child poverty in the United States than in Russia (-4.7%) and in the other English-speaking nations—the United Kingdom, Canada, and, notably, Australia (-5.7%). As we will see below, differences in government redistribution reverse the difference between the United States and the other anglophone nations.

Results in column 3 suggest that the gradient effect of market earnings across living arrangements is not a central factor in the overall child poverty gap. At one end of the spectrum, children who do not live in households headed by a married couple appear relatively worse off in Germany than in the United States before income redistribution. This factor alone would yield U.S. childhood poverty rates that are 3.5% lower than in Germany. The opposite is true in the postsocialist nations of Eastern Europe (Estonia, Poland, and Slovenia), where the market income gradient by household type contributes to the U.S. child poverty gap with these nations by 1.9% to 2.7%; this factor alone would give Russia a 5.9% advantage relative to the United States.

Column 4 shows the contribution of the distribution of children across household types. Distributional differences also appear to play only a minor role in explaining child poverty gaps. The United States is usually at a disadvantage compared with other Western nations due to its distribution of children across household types, but the differences amount to only two to three percentage points in most countries (i.e., Australia, Belgium, France, Germany, Norway, and Poland). Slightly larger differences exist between the United States and the Netherlands (+3.2%) and Slovenia (+4.1%). In relative terms (as a percentage of the overall poverty gap), this distributional effect accounts for more than 20% of the overall poverty gap only in Australia (+37.0%), Germany (+21.2%), the Netherlands (+26.6%), Poland (+21.3%), and Slovenia (+27.1%). By contrast, the contribution to the overall gap between the United States and the United Kingdom appears to be negative (−2.8%). British children, having a very low likelihood of living with married parents, would not be poor as often as they are if their distribution of living arrangements were the same as those of their American counterparts.

Columns 5 and 6 show the contribution of income redistribution through taxes and transfers to the observed gap between the United States and a given country, adding up to the estimated poverty gap after standardizing both the distribution of children by living arrangements and pretax market earnings for each of the living arrangements across countries. Similar to the job-market inequality highlighted in column 2, column 5 shows the level effect varying income redistribution through taxes and transfers across countries for children living in households headed by a married couple (A_1 in Eq. (5)), but holding other factors constant, including the income redistribution for children in other living arrangements *relative to* that redistribution for children living in households headed by a married couple. Analogous to column 3, column 6 shows the gradient effect allowing the poverty reduction through government redistribution for children living in different households *relative to* children living in households headed by a married couple to vary across countries (G_i in Eq. (5)), but holding other factors constant, including the level of redistribution for children living in households headed by a married couple.

The results in column 5 indicate that the overall cross-national differences in redistribution to children, ignoring the household gradient, account for a major portion of poverty gaps between the United States and many other nations. While the above factor is relatively modest in the East European nations—only +5.8% in Slovenia, +3.5% in Estonia, +1.9% in Poland, and even negative (−4.4%) in Russia—it plays a larger role in other countries, ranging from 4.1% in the Netherlands to more than 10 percentage points in Finland (+14.7%), France (+10.5%), Germany (+10.1%), Sweden (+13.7%), and the United Kingdom (+10.5%). In all nations, this factor alone yields a poverty gap that is of the same sign as the overall gap. Moreover, the proportional contribution amounts to more than half of the overall gap between the United States and all nations except Estonia, Poland, Slovenia, and more surprisingly, the Netherlands.

As was the case for market earnings, the gradient effect in government redistribution by household type is rarely larger than the level effect of redistribution assessed from the standpoint of children's households headed by a married couple. In addition, column 6 shows that, contrary to expectations, differential poverty reduction through taxes and transfers by living arrangements is just as likely to increase the poverty gap between the United States and other countries as it is to reduce the poverty gap. This factor alone contributes to the poverty gap between the United States and eight nations, which means that if all other factors were standardized, the targeting of government redistribution to households without married parents would reduce child poverty more effectively in over half the nations studied than in the United States. Only in Poland, however, would this hypothetical gap amount to more than two percentage points (+2.9%). The gradient across children's living arrangements in government redistribution alone, on the other hand, lowers by nearly three percentage points (−2.6% to −2.9%) the poverty gap between the United States and France, Germany, and Slovenia.

DISCUSSION

Our results shed light on a well-known statistic of considerable public concern: in 2000, 22.0% of children in the United States were poor in relative terms, a higher proportion than children in Australia, Canada, and 11 of the 12 European nations studied—the sole exception being Russia. Across living arrangements, child poverty rates for American children are always among the highest. Second only to Russian children in households headed by a married or a cohabiting couple and to Australian children in households headed by a single male, American children living with a single female are the poorest among those considered in this study. The majority of American children living in households headed by a single female with no other adults present are poor, and their poverty rate (55.4%) is the highest of any living arrangement for children in any of the nations included in this paper.

As for the factors contributing to these figures, our rigorous examination of the distributional effect of children by living arrangements confirms earlier analyses (Bradbury and Jantii 1999; Rainwater and Smeeding 1998, 2003), suggesting that overall differences between countries in market outcomes and, more than anything else, in antipoverty effectiveness of tax and transfer policies contribute most to the U.S. childhood poverty gap with other countries. The distributional effect often operates in the expected direction: the prevalence of children across living arrangements contributes to the United States' poverty gap with most other nations analyzed here, with the exception of the United Kingdom. But these distributional differences in children's living arrangements account for 20% or more of the overall poverty gap (in standardized terms) in only a few countries (Australia, Germany, the Netherlands, Poland, and Slovenia). In four of these five countries, differences in children's living arrangements still account for less of the poverty gap than does income redistribution.

Our analyses also investigated more fully than other studies the role of demographic factors by assessing how much the performance of markets and governmental transfers vary by living arrangements. Contrary to the perception that single mothers with children receive a disproportionate share of the benefits from governmental antipoverty programs in the United States, we do not find that the United States fares better than most countries in reducing the economic disadvantage that these families face on the market. The extent to which children living in single-female-headed homes and in other nonmarital households benefit more from government redistribution than children in households headed by a married couple is greater in the United States than in a few countries, especially (in this analysis) Germany. In the broader international context, however, redistribution toward children in other living arrangements is not disproportionately generous. The gradient of redistribution actually benefits children who do not live in households headed by a married couple more in Estonia, Poland, Russia, Belgium, Norway, the Netherlands, and the United Kingdom than in the United States. Overall, the redistribution gradient across living arrangements is rarely a major factor in attempting to explain the child poverty gap between the United States and other nations considered.

One limitation that must be acknowledged is that we have taken into account only cash and near-cash redistribution to families with children. Garfinkel, Rainwater, and Smeeding (2004) demonstrated that the United States' welfare state expenditures more closely resemble those of other developed nations if in-kind services such as education, health, housing, and childcare are also considered. Inasmuch as some in-kind benefits are targeted specifically to low-income children in the United States (e.g., higher-earning families are ineligible for Medicaid and State Children's Health Insurance Program (SCHIP)), it is possible that children of U.S. single mothers receive more favorable treatment than this analysis has implied. However, considering that there are numerous unsolved problems in measuring and valuing in-kind benefits (Garfinkel et al. 2004), we chose to concentrate on cash and near-cash redistribution, by far the most common practice in poverty research.

While our focus was to compare the United States to other nations, this work contributes to the continuing debate, inspired by the seminal work of Esping-Andersen (1990), over what “varieties” of welfare capitalism exist (Hicks and Kenworthy 2003). With the exception of Russia, the nations with the smallest poverty gap with the United States are the three English-speaking nations: Australia (5.9%), the United Kingdom (6.7%), and Canada (7.1%). At the other end of the spectrum, the largest poverty gaps are with Sweden (17.7%), Norway (18.5%), and Finland (19.1%), where the overall generosity of income redistribution through taxes and transfers is the main factor. These results are largely consistent with Esping-Andersen’s (1990, 1999) characterization of liberal/residual and socialist/universalist welfare regimes. Notable exceptions include the Netherlands, which Esping-Andersen classified as socialist but which does not match the child poverty patterns of the three Nordic countries, and the United States itself, which constitutes a category of its own as far as child poverty rates are concerned.

The third category in Esping-Andersen’s classification is the conservative/social insurance welfare regime, and the corresponding countries in our analysis are Belgium, France, and Germany. All three countries are characterized here by medium poverty gaps with the United States—between 12.9% (Germany) and 14.3% (Belgium)—in which the largest factor is the overall level of income redistribution. Note, however, that the U.S. poverty gap with Germany is actually reduced by the gradients across living arrangements in market-based poverty (e.g., before taxes and transfers) and in income redistribution through taxes and transfers. In this sense, child poverty patterns in Germany are most consistent with the characterization of a conservative welfare state where policy is designed to promote the traditional family. It is striking that the Netherlands also appears fairly conservative by this measure; Dutch children in married-couple households have low pretax poverty, and children in other living arrangements are not favored by tax and transfer policy compared with those in the United States.

How do the nations of Eastern Europe, which were not included in Esping-Andersen’s scheme, compare? First, Russia is an outlier, the only nation here with a higher overall child poverty rate than the United States. The other three nations of Eastern Europe in our analysis (Estonia, Poland, and Slovenia) also form a relatively distinct group. The extent of income redistribution, as assessed from the standpoint of children living in households headed by a married couple, is not as different from the United States as in some other nations. However, the poverty gradients between children in married-couple households and others are more important in explaining the poverty gaps with Poland and Estonia than they are in accounting for most other gaps. Relatively generous treatment of children who do not live with married parents, which was hypothesized to characterize the United States, actually appears to be most distinctive of Eastern European welfare states, if such a statement may be made on the basis of the results from only two nations. As a result, Polish children who live in single-male-headed households (many of whom are probably living with two cohabiting parents) have an even lower risk of poverty than do those living with married parents. We leave it to others to determine more conclusively whether postsocialist Eastern European regimes merit being spoken of as having their own unique type of welfare capitalism.

In decomposing the comparatively high child poverty rates of the United States in ways that previous analysts have not, we highlighted two possible mitigating factors: (1) whether income redistribution in the United States operates in a less favorable demographic environment because of a high proportion of children in households headed by single mothers, and (2) if this factor offsets a potentially greater reduction of the differences in market-based poverty risks for children in such households in the United States than in comparable nations. The results provide little support for either form of demographic disadvantage, and children in the U.S. households that are most susceptible to poverty are not really faring better, relative to children in households headed by a married

couple, than in comparable countries. We conclude that high child poverty in the United States is not primarily driven by the prevalence of single mother-headed families. Neither is such a high rate in the United States the result of a more family-oriented income redistribution than in other nations. Although children of single parents incontrovertibly face an elevated risk of poverty in the United States, as in other developed nations, its poor international ranking is not mainly a matter of demography. It instead owes more to cross-national differences in overarching welfare policies and labor market institutions. The United States' poor relative standing in child poverty, and its long-term consequences, is thus quite amenable to policy intervention, presuming that policymakers have more control over welfare and labor market factors than over individual adults' family formation behaviors and living arrangements.

APPENDIX

In this appendix, we provide the explicit formulae for the five factors (F_α , F_β , F_δ , F_ϵ , and F_γ) that add up to the difference between the poverty rates P and p :

$$p - P = F_\alpha + F_\beta + F_\delta + F_\epsilon + F_\gamma. \quad (\text{A1})$$

To begin, we treat P as the product of three terms (A_1 , B_1 , and C_1) and p as the product of the corresponding three terms (a_1 , b_1 , and c_1). Das Gupta (1993:8) showed that

$$p - P = F_\alpha + F_\beta + F_\omega, \quad (\text{A2})$$

where F_α is contribution of the difference between A_1 and a_1 , and F_β is contribution of the difference between B_1 and b_1 . The two terms are equal to

$$F_\alpha = (a_1 - A_1) \times \{[(b_1 c_1 + B_1 C_1) / 3] + [(b_1 C_1 + B_1 c_1) / 6]\} \quad (\text{A3})$$

$$F_\beta = (b_1 - B_1) \times \{[(a_1 c_1 + A_1 C_1) / 3] + [(a_1 C_1 + A_1 c_1) / 6]\}. \quad (\text{A4})$$

As for the residual term, it can also be written as

$$F_\omega = (c_1 - C_1) \times \{[(a_1 b_1 + A_1 B_1) / 3] + [(a_1 B_1 + A_1 b_1) / 6]\}. \quad (\text{A5})$$

In addition, since $C_1 = \sum D_i \times E_i \times G_i$ and $c_1 = \sum d_i \times e_i \times g_i$, we can use a second decomposition for the first term in F_ω (Das Gupta 1993:21):

$$c_1 - C_1 = f_\delta + f_\epsilon + f_\gamma, \quad (\text{A6})$$

with the following equations:

$$f_\delta = \{[(\sum d_i \times e_i \times g_i - \sum D_i \times e_i \times g_i) + (\sum d_i \times E_i \times G_i - \sum D_i \times E_i \times G_i)] / 3\} \\ + \{[(\sum d_i \times e_i \times G_i - \sum D_i \times e_i \times G_i) + (\sum d_i \times E_i \times g_i - \sum D_i \times E_i \times g_i)] / 6\} \quad (\text{A7})$$

$$f_\epsilon = \{[(\sum d_i \times e_i \times g_i - \sum d_i \times E_i \times g_i) + (\sum D_i \times e_i \times G_i - \sum D_i \times E_i \times G_i)] / 3\} \\ + \{[(\sum d_i \times e_i \times G_i - \sum d_i \times E_i \times G_i) + (\sum D_i \times e_i \times g_i - \sum D_i \times E_i \times g_i)] / 6\} \quad (\text{A8})$$

$$f_\gamma = \{[(\sum d_i \times e_i \times g_i - \sum d_i \times e_i \times G_i) + (\sum D_i \times E_i \times g_i - \sum D_i \times E_i \times G_i)] / 3\} \\ + \{[(\sum d_i \times E_i \times g_i - \sum d_i \times E_i \times G_i) + (\sum D_i \times e_i \times g_i - \sum D_i \times e_i \times G_i)] / 6\}. \quad (\text{A9})$$

Combining the two decompositions, we can thus write

$$p - P = F_{\alpha} + F_{\beta} + F_{\delta} + F_{\epsilon} + F_{\gamma} \quad (\text{A10})$$

with F_{α} and F_{β} as defined in Eqs. (A3) and (A4), and

$$F_{\delta} = \{[(a_1b_1 + A_1B_1) / 3] + [(a_1B_1 + A_1b_1) / 6]\} \times f_{\delta} \quad (\text{A11})$$

$$F_{\epsilon} = \{[(a_1b_1 + A_1B_1) / 3] + [(a_1B_1 + A_1b_1) / 6]\} \times f_{\epsilon} \quad (\text{A12})$$

$$F_{\gamma} = \{[(a_1b_1 + A_1B_1) / 3] + [(a_1B_1 + A_1b_1) / 6]\} \times f_{\gamma} \quad (\text{A13})$$

The three terms F_{δ} , F_{ϵ} , and F_{γ} can in turn be seen as the contributions of the differences between the distributions D and d , E and e , and G and g , respectively.

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