

# Luxembourg Income Study Working Paper Series

Working Paper No. 88

Income Inequality in Rich Countries During the 1980s

Timothy Smeeding and John Coder

June 1993

*(scanned copy)*



**DRAFT  
COMMENTS WELCOME**

**"INCOME INEQUALITY IN RICH COUNTRIES  
DURING THE 1980S"\***

**Timothy M. Smeeding  
Professor of Economics and Public Administration  
Syracuse University  
and  
Overall Project Director  
Luxembourg Income Study**

**John Coder  
U. S. Bureau of the Census  
and  
Technical Director  
Luxembourg Income Study**

**prepared for the Eastern Economics Association  
1993 Conference  
Washington, D.C.**

**March 19-21, 1993**

**\* The authors would like to thank Inge O'Connor for excellent research assistance, and Kathleen Klammm for secretarial assistance. The views expressed herein are those of the authors and not necessarily of those for whom they work. They alone assume responsibility for errors.**

## **I. Introduction**

Several recent studies have documented increasing earnings and wage inequality in the United States and widening inequality in the distribution of family income in the United States over the past 15 years. (Levy and Murnane, 1992; Bound and Johnson, 1992; Michel, 1991; U.S. Bureau of the Census, 1991; Duncan, Smeeding and Rodgers, 1992; Danziger and Gottschalk, 1992). We know less about similar changes in other nations.

The causes of these increases in earnings and income inequality in the United States are many and complex. A few of the candidates are: growing and differential returns to education and human capital (Levy and Murnane, 1992; Murphy and Welch, 1992) demographic changes which produces larger population shares for relatively low income groups, (e.g., single parent families and immigrants); growing inequality in financial wealth (Dunca, Smeeding and Rodgers, 1992); and the declining effectiveness of government transfer programs (Michel, 1991). But these changes were not limited to the United States alone. Other industrialized nations also experienced similar changes in earned income inequality (Gottschalk and Joyce, 1992), in single parent families (Ermiş, 1991), and in the returns to education and human capital (Lorenz and Wagner, 1990). But what about the ability of government redistributive tax and transfer policy to offset some of these disequalizing changes?

Smeeding (1992) has shown that many modern Western nations experienced a similar increase in market generated poverty in the 1980s, but that other nations were more effective than the U.S. in combatting these changes. For instance Canada instituted several targeted programs which helped maintain the incomes of otherwise poor families (see also Hanratty and Blank, 1992). Other Western nations have well-established government safety nets which more

effectively moderated changes in pre government poverty in the 1990s, muting market driven changes in poverty by substantially more than did the United States. Did similar changes take place in the entire income distribution? That is, if indeed there was increased earnings or market-generated income inequality in other nations during the 1980s, how did their government tax and transfer policies effect this inequality as compared to the United States?

We examine this question using a sample of six nations observed in two periods during the 1980s: United States, United Kingdom, Canada, Netherlands, Australia and Sweden. We ask the following questions: in addition to changes in earned income inequality, how do other components of market income (occupational pensions, property income and private transfers) effect market or pre government income inequality? Then how does government tax and transfer policy effect this distribution? And finally, what were the trends in market driven inequality, government intervention, and disposable income inequality during the 1980s?

We consider two groups in the population: prime-age households (heads age 25-54) who are most likely to be directly effected by changes in earnings inequality, and all households, adding in a group more sensitive to changes in other components of market income. The next section of the paper discusses the database, income and household concepts and simple measure of income inequality employed here. The third section examines the evidence while the final section discusses the implications of these findings.

## **II. Database, Countries, Measurement Concepts and Definitions**

The data used in this paper are drawn from Luxembourg Income Study (LIS) database which is described in Appendix 1. The six nations data which we use here are outlined in Appendix Table A-1. This set of six nations was chosen because of the similarity in their

databases, because of the similarities in the two time periods during which we observe them, and because of their comparable survey nature. A more complete analysis drawing on a larger number of nations is currently underway for OECD. Somewhat similar studies have been completed by Fritzell (1992) and Gottschalk (1992).

The income sharing unit of analysis employed in this paper is the household--all persons sharing the same living quarters. Two of the six nations studied here, Canada and Sweden, employ different units. In Canada we are forced to use the economic family (all related members living together and sharing resources), while in Sweden we must use the tax unit--persons age 18 or over plus related children. Because these two concepts are more restrictive than is the usual household definition, true household income inequality will be overstated by the units employed here.

Each country's data is annual income measured for a one year period with the exception of the United Kingdom where we employ current income (income last month) as the income measure. Because one usually finds greater inequality when income is measured over shorter periods, the extent of income inequality in the UK is liable to be overstated by the measures employed here. The trend estimates should be less affected since both periods employ monthly income.

The income concepts we use are three:

1. Earnings - all forms of wage and salary income plus self-employment income gross of employee taxes but net of employer taxes.
2. Market income (MI) - earnings plus occupational pensions, interest rent and dividends, and other types of private income (e.g., alimony and child support).
3. Disposable personal income (DPI) - market income plus government cash and near cash benefits minus direct income and payroll taxes.

We make no adjustments for differences in needs due to differences in family size or composition within or across nations. We also ignore any differences in real economic well being or living standards across nations. Each observation is weighted by the number of persons living in the household.

The measures of inequality employed are three: the "percentile" ratio of the income level dividing the bottom quintile of the income distribution to the median income; the ratio of the income level dividing the top quintile to the median income; and finally the ratio of the 80th to the 20th percentile income levels. No further summary measures of inequality are employed. Changes in the relative position of the bottom and top fifths of the distribution are thus captured along with simple measure of the "spread" between the two. The virtue of this measurement technique lies in its simplicity. Because it avoids Lorenz based measures of concentration and general entropy based measures (e.g., see Jenkins, 1991), there is less pressure on full compatibility in the data sources employed. For instance, differences in top and bottom coding of survey income can have significant effects on the tails of the income distribution and thus on sophisticated statistical measures of inequality and concentration (e.g., see Fichtenbaum and Shahidi, 1988). But such differences will not affect the measures used here.

When analyzing prime age households, we examine the effect on inequality of moving from earnings to market income, thus picking up the incomes of some households who have zero earnings, and measuring the effect of other private income sources on those with and without earnings. We do not report the results of the earnings analysis for all households because a large proportion of older households have zero earnings. Because we do not restrict our universe, e.g., to households with non-zero or positive earnings or to full-time earners, the earnings level which

separates the bottom quintile is zero (or nearly zero) in several nations. In Australia, for instance, the 20/50 ratio is zero for the earnings distribution among all households. Thus the percentile ratio for the bottom quintile is artificially deflated if we restrict income to earnings. There is a similar problem with market income, though to a lesser degree. For all groups we concentrate on the effect of government taxes and transfers on inequality as we move from market income to disposable personal income.

### **III. Results**

We present our results in five straight forward tables first examining differences across countries, and then differences over time and across countries. We begin with differences in the distribution of prime age households earnings and market incomes in the mid 1980s:

#### **From Earnings to Market Income**

In the six countries we examine from 1985-1987 the total earnings of the household at the 20th percentile averaged just half of the earnings of the median household (Table 1).

**- Table 1 here -**

At the 80th percentile the average was 1.56 and hence a household at the 80th percentile had 3.36 times the income of a household at the 20th percentile. But these are only averages. In fact, these percentile points vary considerably across countries. U.S. households with earnings at the 20th percentile find themselves relatively worse off than all other nations except for the UK, while high earners are relatively better off in the U.S. than are those in any other nation. And the UK figures, which are based on monthly earnings, may understate the comparable annual

**TABLE 1**  
**Percentile Measures of Income Distribution**  
**for Prime Age Households<sup>1</sup>: From Earnings to Market Income**

<b>Earnings</b>			
	<b>Bottom 20/50</b>	<b>Top 80/50</b>	<b>Top to Bottom 80/20</b>
<b>United States 1986</b>	0.44	1.66	3.75
<b>United Kingdom 1986</b>	0.29	1.65	5.61
<b>Australia 1985</b>	0.56	1.51	2.70
<b>Canada 1987</b>	0.52	1.55	2.99
<b>Netherlands 1987</b>	0.63	1.58	2.52
<b>Sweden 1987</b>	0.55	1.42	2.59
<b>Average</b>	<b>0.50</b>	<b>1.56</b>	<b>3.36</b>
<b>Market Income (MI)</b>			
	<b>Bottom 20/50</b>	<b>Top 80/50</b>	<b>Top to Bottom 80/20</b>
<b>United States 1986</b>	0.47	1.67	3.56
<b>United Kingdom 1986</b>	0.36	1.65	4.59
<b>Australia 1985</b>	0.56	1.52	2.72
<b>Canada 1987</b>	0.52	1.54	2.96
<b>Netherlands 1987</b>	0.63	1.57	2.50
<b>Sweden 1987</b>	0.57	1.43	2.51
<b>Average</b>	<b>0.52</b>	<b>1.56</b>	<b>3.14</b>
<b>Difference: MI - Earnings</b>			
	<b>Bottom 20/50</b>	<b>Top 80/50</b>	<b>Top to Bottom 80/20</b>
<b>United States 1986</b>	0.03	0.01	-0.19
<b>United Kingdom 1986</b>	0.07	0.00	-1.02
<b>Australia 1985</b>	0.00	0.01	0.02
<b>Canada 1987</b>	0.00	-0.01	-0.03
<b>Netherlands 1987</b>	0.00	-0.01	-0.02
<b>Sweden 1987</b>	0.02	0.01	-0.08
<b>Average</b>	<b>0.02</b>	<b>0.00</b>	<b>-0.22</b>

Notes: 1. Prime age households are those with a head age 25-54

earnings ratios which other nations employ here.<sup>1</sup> As a result, U.S. ratio of top to bottom earners is second only to the U.K.

The addition of other components of income--occupational pensions, child support and alimony, and property income--has little effect on the percentile ratio at the 20th percentile, no effect on the 80th percentile, and hence little effect on the ratio of the 80th to the 20th percentile except in the U.K. Apparently earnings and market income distributions varied little among these countries in the late 1980s. As a result, the remainder of our analyses will concentrate on differences between market and disposable income.

#### From Market Income to Disposable Income

While the indirect effects of government redistribution policy (e.g., labor supply, savings, etc.) are already captured by market income, the direct effects of tax and transfer policy are captured by the difference between market and disposable income. Here we compare the effects of government tax and transfer policy on both prime age households (Table 2) and all age households (Table 3). We combine the effects of direct taxes (personal income and payroll taxes) and cash and nearcash transfers because in most nations, they cannot be accurately separated. For instance, refundable tax credits in the U.S. (Earned Income Credit) and child allowances in some nations are administered via the tax authorities. Moreover, in most nations social retirement benefits and other social insurance benefits are fully subject to personal income taxation. As a result, the concept of after tax but before transfer is not clearcut. Our calculations therefore indicated the net effect of adding in government transfer and subtracting out taxes in

---

<sup>1</sup> Moreover, the UK unemployment rate in 1986 was 11.2 percent, the highest of the nations studied. One would expect this unemployment to most affect lower earnings households, e.g., those at the 20th percentile.

one step.

Moving from market to disposable income produces an equalizing effect on the relative position of the 20th and 80th percentile points in every nation (Table 2). On average, the 20th

**- Table 2 here -**

percentile of prime age households gains .10 percentage points or 19.2 percent (i.e., .10 divided by .52) while the 80th percentile loses .11 percentage points or 7.1 percent (.11 divided by 1.56)

The net effect is to cut the average top to bottom ratio from 3.14 to 2.36, a reduction of .78 points (24.8 percent). But not all countries achieve this amount of redistribution. The UK experiences the greatest amount of redistributive change, particularly at the 20th percentile of the distribution. When all is said and done, the U.S. ends up with the highest level of inequality: the highest relative DPI for the 80th percentile, the lowest relative DPI for the 20th percentile, and hence the largest ratio of top to bottom incomes of the countries studied. Other countries tax transfer systems reduces the relative position of the 80th percentile by smaller amounts than does the U.S. (e.g., Australia and Canada), but none provide a smaller net gain at the 20th percentile.

As expected, the market income distribution for all households is less equal than is the distribution for prime age households. (Table 3). On average, the 20th percentile point is lower,

**- Table 3 here -**

the 80th percentile point is higher, and the 80/20 ratio is higher still (compare Table 3 and Table 2). Owing to the relatively high levels of market income in the U.S.A. (e.g., occupational pensions and property income and their distribution) the U.S. has a less unequal market income distribution than the average nation studied. However, it still ends up with the most unequal DPI

**TABLE 2**  
**Percentile Measures of Income Distribution**  
**for Prime Age Households<sup>1</sup>: Market Income to Disposable Income**

<b>Market Income (MI)</b>			
	<b>Bottom 20/50</b>	<b>Top 80/50</b>	<b>Top to Bottom 80/20</b>
<b>United States 1986</b>	0.47	1.67	3.56
<b>United Kingdom 1986</b>	0.36	1.65	4.59
<b>Australia 1985</b>	0.56	1.52	2.72
<b>Canada 1987</b>	0.52	1.54	2.96
<b>Netherlands 1987</b>	0.63	1.57	2.50
<b>Sweden 1987</b>	0.57	1.43	2.51
<b>Average</b>	<b>0.52</b>	<b>1.56</b>	<b>3.14</b>
<b>Disposable Personal Income (DPI)</b>			
	<b>Bottom 20/50</b>	<b>Top 80/50</b>	<b>Top to Bottom 80/20</b>
<b>United States 1986</b>	0.54	1.57	2.90
<b>United Kingdom 1986</b>	0.61	1.52	2.50
<b>Australia 1985</b>	0.64	1.47	2.31
<b>Canada 1987</b>	0.62	1.45	2.34
<b>Netherlands 1987</b>	0.71	1.43	2.01
<b>Sweden 1987</b>	0.61	1.26	2.07
<b>Average</b>	<b>0.62</b>	<b>1.45</b>	<b>2.36</b>
<b>Difference: DPI - MI</b>			
<b>United States 1986</b>	0.07	-0.10	-0.66
<b>United Kingdom 1986</b>	0.25	-0.13	-2.09
<b>Australia 1985</b>	0.08	-0.05	-0.41
<b>Canada 1987</b>	0.10	-0.09	-0.62
<b>Netherlands 1987</b>	0.08	-0.14	-0.49
<b>Sweden 1987</b>	0.14	-0.17	-0.44
<b>Average</b>	<b>0.10</b>	<b>-0.11</b>	<b>-0.78</b>
Notes: 1. Prime age households are those with a head age 25-54			

**TABLE 3**

**Percentile Measures of Income Distribution  
for All Households: From Market Income to Disposable Income**

<b>Market Income (MI)</b>			
	<b>Bottom 20/50</b>	<b>Top 80/50</b>	<b>Top to Bottom 80/20</b>
<b>United States 1986</b>	0.33	1.79	5.43
<b>United Kingdom 1986</b>	0.11	1.86	17.52
<b>Australia 1985</b>	0.32	1.66	5.19
<b>Canada 1987</b>	0.39	1.68	4.34
<b>Netherlands 1987</b>	0.17	1.70	10.25
<b>Sweden 1987</b>	0.15	1.83	12.10
<b>Average</b>	<b>0.25</b>	<b>1.75</b>	<b>9.14</b>
<b>Disposable Personal Income (DPI)</b>			
	<b>Bottom 20/50</b>	<b>Top 80/50</b>	<b>Top to Bottom 80/20</b>
<b>United States 1986</b>	0.50	1.65	3.32
<b>United Kingdom 1986</b>	0.56	1.60	2.85
<b>Australia 1985</b>	0.52	1.54	3.00
<b>Canada 1987</b>	0.56	1.50	2.69
<b>Netherlands 1987</b>	0.65	1.47	2.24
<b>Sweden 1987</b>	0.55	1.44	2.63
<b>Average</b>	<b>0.56</b>	<b>1.53</b>	<b>2.79</b>
<b>Difference: DPI - MI</b>			
<b>United States 1986</b>	0.17	-0.14	-2.11
<b>United Kingdom 1986</b>	0.45	-0.26	-14.67
<b>Australia 1985</b>	0.20	-0.12	-2.19
<b>Canada 1987</b>	0.17	-0.18	-1.65
<b>Netherlands 1987</b>	0.42	-0.23	-9.86
<b>Sweden 1987</b>	0.40	-0.39	-9.47
<b>Average</b>	<b>0.31</b>	<b>-0.22</b>	<b>-6.35</b>

distribution among the nations. Again government redistribution in the United States is relatively meager at the bottom of the distribution, while our net tax burden at the top of the distribution is relatively light. The result is that the United States ends up with the greatest economic distance between the 80th and 20th percentile points of the DPI distribution, even though it begins with a relatively equal MI distribution.

#### Trend In Market Income and Disposable Income

The final set of tables examines the trend in income distribution during the 1980s. The initial period data for these nations runs from 1979 (U.S., UK) to 1981 (Australia, Canada, Sweden) and to 1983 (Netherlands); the second period is as shown in previous tables. Over this period the nations studied experienced mixed economic fortunes. Unemployment rates (as measured by OECD, 1990) rose modestly in the U.S., Australia, Canada, nearly doubled in the UK; stayed very low in Sweden, and fell by one-third in the Netherlands (see rates in Appendix Table B-1). These changes correlate fairly well with the period 1 to period 2 changes in the 20th percentile point for earnings at the top left in Table 4. On average, then, prime age males at the

**- Table 4 here -**

bottom of the distribution lost ground during the 1980s. In contrast, changes in the 80th percentile are not at all correlated with unemployment rate movements. In the UK, for instance, prime age families at the 80th percentile experienced a 9 percent gain relative to the median household over this period, despite a doubling of unemployment rates. On average, the 80th percentile's relative earnings gains (2 percent) matched the bottom 20th percentiles losses, producing a 20 percent increase in the ratio of the former to the latter. Again these changes produced highly unequal results across countries. Economic distance and earnings inequality rose

TABLE 4

**Trends in Percentile Measures of Income Distribution  
for Prime Age Households<sup>1</sup>**

**Earnings**

	Bottom 20/50		Percentage change <sup>2</sup>	Top 80/50		Percentage change	Top to Bottom 80/20		Percentage change
	Period 1	Period 2		Period 1	Period 2		Period 1	Period 2	
United States	0.50	0.44	-0.12	1.57	1.66	0.06	3.14	3.75	0.19
United Kingdom	0.62	0.29	-0.53	1.52	1.65	0.09	2.46	5.61	1.28
Australia	0.35	0.56	0.60	1.58	1.51	-0.04	4.52	2.70	-0.40
Canada	0.54	0.52	-0.04	1.52	1.55	0.02	2.84	2.99	0.05
Netherlands	0.60	0.63	0.05	1.56	1.58	0.01	2.62	2.52	-0.04
Sweden	0.61	0.55	-0.10	1.44	1.42	-0.01	2.36	2.59	0.10
Average	0.54	0.50	-0.02	1.53	1.56	0.02	2.99	3.36	0.20

**Market Income**

	Bottom 20/50		Percentage change	Top 80/50		Percentage change	Top to Bottom 80/20		Percentage change
	Period 1	Period 2		Period 1	Period 2		Period 1	Period 2	
United States	0.51	0.47	-0.08	1.59	1.67	0.05	3.14	3.56	0.13
United Kingdom	0.63	0.36	-0.43	1.51	1.65	0.09	2.40	4.59	0.91
Australia	0.58	0.56	-0.03	1.56	1.52	-0.03	2.71	2.72	0.00
Canada	0.55	0.52	-0.05	1.52	1.54	0.01	2.74	2.96	0.08
Netherlands	0.61	0.63	0.03	1.57	1.57	0.00	2.57	2.50	-0.03
Sweden	0.60	0.57	-0.05	1.43	1.43	0.00	2.37	2.51	0.06
Average	0.58	0.52	-0.10	1.53	1.56	0.02	2.66	3.14	0.19

**DPI**

	Bottom 20/50		Percentage change	Top 80/50		Percentage change	Top to Bottom 80/20		Percentage change
	Period 1	Period 2		Period 1	Period 2		Period 1	Period 2	
United States	0.58	0.54	-0.07	1.48	1.57	0.06	2.54	2.90	0.14
United Kingdom	0.69	0.61	-0.12	1.44	1.52	0.06	2.07	2.50	0.21
Australia	0.66	0.64	-0.03	1.47	1.47	0.00	2.22	2.31	0.04
Canada	0.64	0.62	-0.03	1.44	1.45	0.01	2.25	2.34	0.04
Netherlands	0.72	0.71	-0.01	1.47	1.43	-0.03	2.03	2.01	-0.01
Sweden	0.64	0.61	-0.05	1.26	1.26	0.00	1.98	2.07	0.05
Average	0.66	0.62	-0.05	1.43	1.45	0.02	2.18	2.36	0.08

Notes: 1. Prime age households are those with a head age 25-54

2. Percentage change is defined as period 2 value minus period 1 value divided by period 1 value

dramatically in the U.K.<sup>2</sup> during the 1980s. The second largest increase in economic distance was recorded in the United States where the 80/20 ratio increased by 19 percent.

Moving to market incomes we find a much more consistent pattern: relative economic status declined everywhere but the Netherlands, at the 20th percentile, and increased marginally at the 80th percentile. In general, market income inequality increased but by slightly less than did earnings inequality among prime age units.

Disposable income changes were much more muted on average than were market income changes. However, the relative position of the 20th percentile fell in all nations, while the 80th percentile experienced significant gains only in the U.S. and the UK. The result was an increased spread of 8 percent in the ratio of the 80th to the 20th percentile. The gains in this ratio were largest in the UK (21 percent) and in the U.S. (14 percent). We conclude that for prime age families government policy was generally able to mute but not to fully offset market forces.

The market income and disposable income distributions for the populations at large experienced changes very similar to those among prime age households over this period. (Table 5). Market income inequality widened as the 20th percentile's relative position declined while that of the 80th percentile increased everywhere but the Netherlands

- Table 5 here -

(where the economy grew and unemployment fell). As a result, the top to bottom ratio increased--by a huge amount--in the UK--but by 7 to 17 percent in four of the other five nations. The United States experienced a modest 9 percent increase in market income inequality over this

---

<sup>2</sup> Note that the exact same monthly income accounting period was used in the UK in each period, and hence the bias in the trend in inequality estimates in Tables 4 and 5 are likely to be less than is the bias in the level of inequality estimates in the earlier tables.

TABLE 5

## Trends in Percentile Measures of Income Distribution for All Households

## Market Income

	Bottom 20/50		Percentage change <sup>1</sup>	Top 80/50		Percentage change	Top to Bottom 80/20		Percentage change
	Period 1	Period 2		Period 1	Period 2		Period 1	Period 2	
United States	0.34	0.33	-0.03	1.68	1.79	0.07	4.97	5.43	0.09
United Kingdom	0.36	0.11	-0.69	1.62	1.86	0.15	4.50	17.52	2.89
Australia	0.34	0.32	-0.06	1.66	1.66	0.00	4.84	5.19	0.07
Canada	0.43	0.39	-0.09	1.61	1.68	0.04	3.72	4.34	0.17
Netherlands	0.09	0.17	0.89	1.67	1.70	0.02	17.94	10.25	-0.43
Sweden	0.16	0.15	-0.06	1.74	1.83	0.05	10.56	12.10	0.15
Average	0.29	0.25	-0.01	1.66	1.75	0.05	7.76	9.14	0.49

## DPI

	Bottom 20/50		Percentage change	Top 80/50		Percentage change	Top to Bottom 80/20		Percentage change
	Period 1	Period 2		Period 1	Period 2		Period 1	Period 2	
United States	0.52	0.50	-0.04	1.55	1.65	0.06	2.99	3.32	0.11
United Kingdom	0.57	0.56	-0.02	1.52	1.60	0.05	2.65	2.85	0.08
Australia	0.55	0.52	-0.05	1.53	1.54	0.01	2.76	3.00	0.09
Canada	0.57	0.56	-0.02	1.50	1.50	0.00	2.65	2.69	0.02
Netherlands	0.65	0.65	0.00	1.50	1.47	-0.02	2.30	2.24	-0.03
Sweden	0.59	0.55	-0.07	1.45	1.44	-0.01	2.45	2.63	0.07
Average	0.58	0.56	-0.03	1.51	1.53	0.02	2.63	2.79	0.06

Notes: 1. Percentage change is defined as period 2 value minus period 1 value divided by period 1 value

period.

Government tax-transfer policy had a slightly less progressive effect on the 20th percentile in the second period compared to the first with households losing ground at this income level in all nations, save Netherlands, where they broke even. Changes in DPI position at the 80th percentile were also lessened by tax-transfer policy in all countries. The net effects of changes in government policy are shown in the final row. The top to bottom ratio increased everywhere but in the Netherlands and by the largest percentage (11 percent) in the United States. In fact, only in the United States did we find the period to period increase in the 80/20 spread higher for DPI than for market incomes.

We conclude that the U.S. began the 80's with the highest ratio of the 80th to the 20th percentile of DPI, and during the 1980s this ratio increased relative to other nations. While all governments, including the U.S., are generally redistributive in terms of reducing market-driven income inequality, the level and trend in this effectiveness differ widely by nation. In the United States, government redistribution policy grew weaker in the 1980s, reinforcing widening the top to bottom spread in the market income distribution.

#### **IV. Discussion**

The results of our exploration are not terribly surprising. The United States redistributive system is decidedly weaker than that found in other nations. We appear to be willing to tolerate greater inequality as a nation than do other countries.

However there are some limits to this tolerance. Clearly the benefits of economic growth in the 1980s did not trickle down to the poor in the United States (Blank, 1992; Cutler and Katz, 1991). According to our estimates neither the benefits of economic growth, nor government tax

and transfer policy helped U. S. households at the 20th percentile of the income distribution--households with average incomes of about \$13,000 in 1993.<sup>3</sup> In contrast, households at the 80th percentile, an income level of roughly \$60,000 in 1992, continued to make progress during the 1980s.<sup>4</sup>

But the "trends" observed above are for only two periods, periods which ended at the latest in 1987, and for the United States, in 1986. In the United States, we know that the trend toward greater inequality continued during the later 1980s (U.S. Bureau of Census, 1991; Duncan, Smeeding, Rodgers, 1992). Earnings inequality continued to increase, as did wealth inequality along with the returns to financial investments. Social policy continued to retrench in the United States, and top marginal federal income tax rates were significantly reduced in the United States beginning in 1987. All of these changes should further exacerbate the patterns observed here. While the distributive effect of the recent recession is still in some doubt, it is unlikely to effect the structural and secular patterns found here.

But what happened in other nations? Most of the nations observed here also cut their top marginal income tax rates since 1986 (Steuerle, 1992). Some experienced a minor retrenchment in social policy, e.g., reductions in disability benefits from 81 to 78 percent in Netherlands, but the basic structure and level of government tax and transfer policy remained steady over this period. By this time next year, the LIS should be able to add a third wave from these nations, thus providing additional evidence on international changes in market and disposable income

---

<sup>3</sup> According to the U.S. Census Bureau (1992) the 20th percentile of household income ended at a gross money income level of \$12,588 in 1991. See Table 3.

<sup>4</sup> The 80th percentile of household income began at a level of \$56,760 in 1991. See Table 3 in U. S. Bureau of the Census, 1992.

inequality.

Clearly we know who won and lost in the 1980s in the U.S. and in other nations. We also know that U.S. citizens who "won" kept more of their winnings in U.S. compared to other nations. We also know that U.S. citizens who "lost" were less likely to have their situation improved by social policy intervention than were the citizens in other nations.

As President Clinton begins to struggle with these trends, he faces the twin challenges of promoting economic growth at all levels of the distribution, and sharing the benefits more equally. Any economic reform package which he proposes should help those at the bottom of the distribution to help themselves via better long term earnings prospects, and to help them directly via greater economic security measures, e.g., assured child support, child allowances, or a more generous earned income credit. At the same time the pain of deficit reduction should be spread to those experienced and are continuing to experience the fruits of economic growth, including "middle income" Americans at \$60,000 a year and higher levels of income. Without such steps, there is real danger of long term polarization in the U.S. economy, with the economic distance between the top and the bottom of American society growing even wider than it is today.

## References

- Blank, R. 1992. "Why Were Poverty Rates So High in the 1980s?" to appear in E. Wolff, ed., *Economic Inequality at the Close of the 20th Century*, (New York: MacMillan) in press.
- Bound, J. and G. Johnson. 1992. "Changes in the Structure of Wages in the 1980s: An Evaluation of Alternative Explanations" *American Economic Review*, June: 371-392.
- Cutler, D. and L. Katz, 1992. "Macroeconomic Performance and the Disadvantaged" *Brookings Papers on Economic Activity*, Vol. 2: 1-74.
- Danziger, S. and P. Gottschalk, eds., 1992. "Uneven Tides: Rising Inequality in the 1980s" (New York: Russell Sage).
- Duncan, G., T. Smeeding, and W. Rodgers. 1992. "W(h)ither the Middle Class: A Dynamic View", D. Papadimitriou and E. Wolff, eds., to appear in Economic Inequality at the Close of the 20th Century, (New York: MacMillan), in press.
- Ermisch, J. 1991. "Changes in Single Parent Families in OECD Countries", (Paris: OECD).
- Fichtenbaum, R. and H. Shahidi 1988. "Truncation Bias and the Measurement of Income Inequality" *Journal of Business and Economic Statistics*, Vol. 6, No. 3, July: 335-337.
- Fritzell, Johan. 1992. "Income Inequality Trends in the 1980s: A Five Country Comparison" The Luxembourg Income Study, Working Paper #73, April.
- Gottschalk, P. and M. Joyce, 1992. "Is Earnings Inequality Also Rising in other Industrialized Countries?" 1992. Luxembourg Income Study, Working Paper #66, October.
- Gottschalk, P. 1992. "Changes in Inequality of Family Income in Seven Industrialized Countries--Responses to Growing Earnings Inequality" Luxembourg Income Study, Working Paper #86.
- Green, G. and Coder, J. and Ryscavage, P. "International Comparisons on Earnings Inequality for Men in the 1980s", *Review of Income and Wealth*, 1990.
- Hanratty, M. and Blank, R. 1992. "Down and Out in North America: Recent Trends in Poverty Rates in the United States and Canada" *The Quarterly Journal of Economics* 107,: 107-162.
- Jenkins, S. 1991. "Measuring Income Inequality" in L. Osberg, ed., Readings in Economic Inequality (Armonk, N.Y.: M.E. Sharpe, Inc), December: 1-38.

- Levy, F. and R. Murnane. 1992. "Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations", *Journal of Economic Literature*, Vol.XXX No. 3, September: 1333-1380.
- Lorenz, W. and J. Wagner. 1990. "A Note on Returns to Human Capital in the Eighties: Evidence from Twelve Countries", Luxembourg Income Study, Working Paper #54. July.
- Michel, R. 1991. "Economic Growth and Income Inequality Since the 1982 Recession", *Journal of Policy Analysis and Management*, Vol. 10, No. 2, Spring 1991.
- Murphy K. and F. Welch. 1992. "The Structure of Wages", *Quarterly Journal of Economics*, Vol. 107.
- Office of Economic Cooperation and Development. 1990. *Main Economic Indicators*. (Paris: OECD) January.
- Smeeding, T. 1992. "Why the U.S. Anti-Poverty System Doesn't Work Very Well" *Challenge*, Jan/Feb: 30-35.
- Steuerle, E. 1992. The Tax Decade (Washington: Urban Institute Press).
- U.S. Bureau of the Census. 1992. "Money Income of Households, Families and Persons in the United States: 1991. *Current Population Reports*, Series P-60, No. 91. August.
- U. S. Bureau of the Census. 1991. "Trends in Relative Income: 1964-1989". *Current Population Reports*, Series P-60, No. 177, December.

Table A-1

## AN OVERVIEW OF LIS DATASETS AND UNITS DEFINITIONS USED IN THIS PAPER

Country	Dataset Name, Income Year (and Size) <sup>a</sup>	Population Coverage <sup>b</sup>	Basis of Household Sampling Frame <sup>c</sup>	Unit of Analysis <sup>d</sup>
Canada	<i>Survey of Consumer Finances</i> , 1981 and 1987 (37,900)	97.5 <sup>e</sup>	Dicennial Census	Economic Family <sup>f</sup>
United States	<i>Current Population Survey</i> , 1979 and 1986 (65,000)	97.5 <sup>e</sup>	Dicennial Census	Household <sup>g</sup>
Sweden	<i>Swedish Income Distribution Survey</i> , 1981-1987 (9,600)	98.0 <sup>e</sup>	Income Register	Administrative Unit <sup>h</sup>
Australia	<i>Survey of Incomes and Housing</i> , 1981-82 and 1985-86 (9,000)	97.0 <sup>e</sup>	Dicennial Census	Household <sup>i</sup>
Netherlands	<i>Survey of Income and Program Users</i> , 1983 and 1987 (4,850)	99.2 <sup>h</sup>	Address Register of the Postal and Telephone Companies	Household <sup>j</sup>
United Kingdom	<i>Family Expenditure Survey</i> <sup>k</sup> , 1979 and 1986 (6,800)	96.5 <sup>h</sup>	Electoral Register	Household <sup>j</sup>

<sup>a</sup>Dataset size is the number of actual household units surveyed.

<sup>b</sup>As a percent of total national population.

<sup>c</sup>Sampling Frame indicates the overall base from which the relevant household population sample was drawn. Actual sample may be drawn on a stratified probability basis, e.g. by area or age.

<sup>d</sup>Unit definition used in this paper. All unit definitions are the same in both periods.

<sup>e</sup>Excludes institutionalized and homeless populations. Also some far northern residents (Inuits, Eskimos, Laps, etc.), may be undersampled in Sweden.

<sup>f</sup>The United Kingdom survey collects substantial income data.

<sup>g</sup>Excludes the homeless, institutionalized, and those living in mobile homes.

<sup>h</sup>Excludes those not on the electoral register, the homeless, and the institutionalized.

<sup>i</sup>The economic family in Canada includes all related members which share resources. Unrelated persons living in the same unit are considered as separate units even though they share the same household.

<sup>j</sup>All persons living together and sharing the same living arrangements (housing unit).

<sup>k</sup>Persons age 18 or over plus related children, if there are any, are regarded as one unit. Older children living with their parents are therefore treated as separate units and not as cohabitating members of a single household.

Table A-2  
STANDARDIZED UNEMPLOYMENT RATES  
1977-1989<sup>1</sup>

Country	Year												
	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89
U.S.	7.1	6.0	<b>5.8</b>	7.0	7.5	9.5	9.5	7.4	7.1	<b>6.9</b>	6.1	5.4	5.2
U.K.	5.8	5.7	<b>5.6</b>	6.9	10.6	12.3	13.1	11.7	11.2	<b>11.2</b>	10.3	8.5	6.9
Australia	5.6	6.3	6.2	6.1	<b>5.8</b>	7.2	9.9	9.0	<b>8.2</b>	8.1	8.3	7.2	6.5
Canada	8.1	8.4	7.4	7.4	<b>7.5</b>	10.9	11.8	11.2	10.4	9.5	<b>8.0</b>	7.7	7.5
Netherlands	4.9	5.0	5.4	6.0	8.6	11.4	<b>13.7</b>	11.8	10.6	9.9	<b>9.6</b>	9.2	8.3
Sweden	1.8	2.2	2.1	2.0	<b>2.5</b>	3.1	3.5	3.1	2.8	2.7	<b>1.9</b>	1.6	1.4

Source: OECD (1990), pp. 44-45

Note: <sup>1</sup> highlighted years are those used in this paper



# LUXEMBOURG INCOME STUDY

A Division of CEPS/INSTEAD

## APPENDIX 1



Centre d'Etudes de Populations, de Pauvreté et  
de Politiques Socio-Economiques  
International Networks for Studies in Technologie  
Environment, Alternatives, Development

1/93

## INTRODUCTION AND OVERVIEW

The Luxembourg Income Study (LIS) project began in 1983 under the joint sponsorship of the government of Luxembourg and the Center for Population, Poverty, and Policy Studies (CEPS) in Walferdange. It is now funded on a continuing basis by CEPS/INSTEAD and by the national science foundations of its member countries.

LIS has the following objectives:

1. to test the feasibility for creating a database containing social and economic data collected in household surveys from different countries;
2. to provide a method which allows researchers to use the data under restrictions required by the countries providing the data;
3. to create a system that allows research requests to be received from and returned to users at remote locations;
4. to promote comparative research on the social and economic status of various populations and subgroups in different countries.

Since its beginning in 1983, the experiment has grown into a cooperative research project with a membership that includes countries in Europe, North America, and Australia. The database now contains information for more than 20 countries for one or more years (see next page). Negotiations are in process to add data from additional countries including Korea, Finland, Portugal and Spain. The LIS databank has a total of over 45 datasets covering the period 1968 to 1989. In 1993, additional surveys will be added to represent the period of the early 1990s, for most of these nations. The dataset is accessed globally via electronic mail networks. Extensive documentation concerning technical aspects of the survey data, and the social institutions of income provision in member countries is also available to users. This work is being supported by the U.S. National Institute of Aging, the Statistical Office of the European Community, the OECD and our member nations.

Reports by participants in the LIS project have appeared in several books, articles and dissertations. Each completed study is published in the LIS working paper series, which currently numbers more than 85 papers. The project conducts annual summer workshops to introduce researchers to the database, and to give scholars experience in cross-national analysis of social policy issues related to income distribution. Over 110 students attended the 1988 thru 1992 sessions; 30 more are expected for the 1993 workshop. A LIS Newsletter is published twice yearly and mailed to over 1300 scholars in 25 nations.

The LIS project is supervised by Timothy M. Smeeding (Project Director), Lee Rainwater (Research Director) and Gaston Schaber (President, CEPS/INSTEAD). Further information is available from Caroline de Tombeur at the LIS address below or Timothy M. Smeeding, Metropolitan Studies Program, 400 Maxwell Hall, Syracuse University, Syracuse, NY 13244-1090. Telephone: (315) 443-9045; FAX (315) 443-1081; BITNET; SMEEDING@SUVM.ACS.SYR.EDU

LIS at CEPS/INSTEAD

Téléphone: (352) 33 32 33-220; 33 32 33-1; Fax: (352) 33 27 05

Boîte postale 65, L-7201 Walferdange; Grand-Duché de Luxembourg

EARN-BITNET: SSI ISBB at LUXCEP11; EPLISIR at LUXCEP11

# Available in LIS Databank:

Country	Historical Databases		Wave I	Wave II	Wave III*
Australia			1982	1986	1990*
Austria				1987	
Belgium				1985*	1988*
Canada	1971	1975	1981	1987	
Czechoslovakia			1983	1987	
France		1974	1979	1984	1989*
Germany	1968	1978	1981	1984*	1989*
Hungary			1983	1987*	
Ireland				1987	
Israel			1979	1987	
Italy				1986	
Luxembourg				1985	1989*
Netherlands			1983	1987	
Norway			1979	1986	
Portugal			1980*		1989*
Poland				1986	
Spain			1980-81*		1990*
Sweden	1968	1975*	1981	1987	
Switzerland			1982		
United Kingdom	1969	1974	1979	1986	
United States	1971	1975	1979	1986	
Yugoslavia				1987*	

\*Available after January 1, 1993.

## Partial List of Variables:

V1	GROSS WAGES AND SALARIES	D6	NUMBER OF EARNERS
V4	FARM SELF-EMPLOYMENT INCOME	D7	GEOGRAPHIC LOCATION
V5	NONFARM SELF-EMPLOYMENT INC.	D22	TENURE (OWNED OR RENTED)
V8	CASH PROPERTY INCOME	D27	NUMBER OF CHILDREN
V10	MARKET VALUE OF RESIDENCE	D28	AGE OF THE YOUNGEST CHILD
V11	INCOME TAXES	D1	AGE OF FAMILY HEAD
V16	SICK PAY	D2	AGE OF SPOUSE OF FAMILY HEAD
V17	ACCIDENT PAY	D3	SEX OF FAMILY HEAD
V18	DISABILITY PAY	D8	ETHNICITY/RACE OF HEAD
V19	SOCIAL RETIREMENT BENEFITS	D10	HEAD LEVEL OF EDUCATION
V20	CHILD OR FAMILY ALLOWANCES	D11	SPOUSE LEVEL OF EDUCATION
V21	UNEMPLOYMENT COMPENSATION	D14	HEAD'S OCCUPATION
V22	MATERNITY ALLOWANCES	D15	SPOUSE'S OCCUPATION
V23	MILITARY/VET/WAR BENEFITS	D16	HEAD INDUSTRY CLASSIFICATION
V25	MEANS-TESTED CASH BENEFITS	D17	SPOUSE INDUSTRY CLASSIFICATION
V26	ALL NEAR CASH BENEFITS	D18	HEAD STATUS OF WORKER GROUP
V32	PRIVATE PENSIONS	D19	SPOUSE STATUS OF WORKER
V33	PUBLIC SECTOR PENSIONS	D21	MARITAL STATUS OF FAMILY HEAD
V34	ALIMONY OR CHILD SUPPORT	D25	HEAD DISABILITY STATUS
V39	GROSS WAGES/SALARY HEAD	D26	SPOUSE DISABILITY STATUS
V40	HOURLY WAGE RATE HEAD	LFSHD	LABOR FORCE STATUS OF HEAD
V41	GROSS WAGE/SALARY SPOUSE	LFSSP	LABOR FORCE STATUS OF SPOUSE
V42	HOURLY WAGE RATE SPOUSE	RSHD	HOURS WORKED PER WEEK HEAD
D4	NUMBER OF PERSONS IN FAMILY	HRSSP	HOURS WORKED PER WEEK SPOUSE
D5	FAMILY STRUCTURE	YTAXHD	INCOME TAX HEAD
		YTAXSP	INCOME TAX SPOUSE