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**Income Distribution, Weekly Hours of Work,
and Time for Child Rearing:
The U.S. Experience in a Cross-National Context**

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INCOME DISTRIBUTION, WEEKLY HOURS OF WORK, AND TIME FOR CHILD REARING: The United States in Cross-National Perspective

by

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Abstract

This article uses microdata from the Luxembourg Income Study to assess income distributions, weekly work hours, and time for childrearing in seven rich countries: Austria, Belgium, Canada, Germany, Spain, the United Kingdom and the United States. Focusing on the U.S. in comparative perspective, we first assess the relationships among income inequality, earnings inequality, and the distribution of working time. We supplement these analyses by considering potential time available to parents to care for children. We find that although Americans tend to work longer hours (unconditioned on employment) than Canadians and Western Europeans at both the top and bottom of the income distribution, the proportional differences are greatest at the bottom of the distribution. This means that Americans at the bottom of the income distribution spend more time working for pay than do their counterparts in a number of other rich countries. But, nonetheless, they achieve a relative standard of living below that enjoyed by working-age adults (in other countries) who hold the same position in their national income distributions. Likewise, the amount of parental time potentially available for child care is more limited in the United States, overall, than it is in the other six countries included in this study.

(200 words)

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INCOME DISTRIBUTION, WEEKLY HOURS OF WORK, AND TIME FOR CHILD REARING: The United States Case in Cross-National Perspective

1. Overview and Research Questions

WORKING-AGE AMERICANS have a comparatively high employment rate and work hours that are among the longest in the industrialized world. The combined effect of these two key features of the U.S. labor market is that Americans supply more time to paid employment than do their counterparts in many other rich countries (Freeman 2007; Nickell 2008). Among high-income countries, only Japan currently rivals the United States in maintaining such long work hours per working-age adult (Burtless and Jencks 2003; Alesina *et al.* 2006).¹ High labor supply is one factor that contributes to the U.S.' income advantage compared with other rich countries (Osberg 2002a). In 1999-2000 real dollars (purchasing-power-parity-adjusted), per capita GDP in the U.S. was about 40 percent higher than average real per capita GDP in the 15-member European Union.²

At the same time, the United States has one of the least equal income distributions of any rich country. American households in the bottom fifth of the distribution receive a smaller

1 It is important to note that cross-national differences in working time have shifted in recent decades; that is especially true vis-à-vis annual hours (among the employed). Over the last 20 years, average annual hours decreased in most European Union countries and, in several, some portion of that decrease is attributed to declining full-timers' hours. In some European countries, average hours also declined due to a rising percentage of workers, mostly women, employed part-time. Japan and the U.S. offer rich contrasting cases. In Japan, annual work hours also declined during the 1980s and 1990s, but to a level well above that seen in EU countries. In the U.S., in contrast to both the EU countries and Japan, average annual hours actually increased during the last two decades, overtaking the Japanese level (see Gornick and Heron 2006 for a review of working time trends in the U.S., Europe, and Japan.)

2 However, GDP per worker-hour in the U.S. is not exceptional relative to many rich Western European countries, indicating cross-national productivity differentials (Blanchard 2004).

fraction of aggregate household income than is typical in the industrialized world, and Americans at the top of the distribution receive a larger share (Smeeding 2006a). While Americans on average enjoy high incomes, those at the bottom of the income distribution do not fare well in comparison with their counterparts in many other rich countries: their incomes are relatively lower and their work hours are longer (Smeeding and Rainwater, 2004). One consequence of their long working hours is that their time for caring for their children is constrained.

In this article, using data from the Luxembourg Income Study (LIS), we assess income distributions, weekly work hours, and time for childrearing in seven rich countries: Austria, Belgium, Canada, Germany, Spain, the United Kingdom, and the United States. Because the U.S. is well-known for having both high levels of labor supply and a highly unequal income distribution, we treat it as the core case. Focusing on the U.S. in comparative perspective, we assess the complex relationships among income inequality, earnings inequality, and the distribution of working time. In addition, we specifically address the economic position of children in working-age families. We supplement these analyses by considering potential time available to parents to care for children.

The LIS microdata have traditionally been used to study income – mainly income inequality and poverty – but, since the middle 1990s, several studies have used the LIS data to assess aspects of working time and its interplay with household income and/or earnings.³ Osberg (2002a) analyzed the extent to which cross-national variation in income inequality is explained by differing rates of paid employment; he concluded that measured trans-Atlantic differentials in (money-based) income inequality understate the actual well-being gap. In addition, Osberg

³ See, for example, Anxo and Flood 1999; Bardasi and Gornick 2008; Burton and Phipps 2007; DiPrete and Verbakel 2008; Frase and Gornick 2009; Goodin, Rice, Parpo and Eriksson 2008; Gornick and Jacobs 1996; Osberg 2002a, 2002b, 2002b).

concluded, “in the USA, the less affluent work significantly harder for their greater relative poverty (p.22)”. Burton and Phipps (2007) focused on the “time crunch” among families with children in five high-income countries. Using LIS-based measures of paid working time, they assessed “total available work hours” under multiple assumptions. Like Osberg (2002a), a number of Burton and Phipps’ key findings focused on the U.S.; they found “significant numbers of lower-income families in which parents work very long hours in the paid labor market; this is particularly the case in the U.S. (p.460).” DiPrete and Verbakel (2008), similarly, conclude that cross-national comparisons of well-being that ignore time are insufficient. They too focus on the American case, calling into question the standard claim that the U.S. offers greater well-being to more of its citizens than do many European countries. Goodin et al (2008), likewise, argued that well-being measures that do not account for levels of “discretionary time” are incomplete; supplementing LIS data with time-use data, they concluded that discretionary time varied markedly across six high-income countries.

In this article, we extend on the work of, especially, Osberg (2002a) and Burton and Phipps (2007). We update Osberg’s analyses to a later time period, and extend Burton and Phipps’ work by including some less-frequently studied cases: Austria, Belgium and Spain. We also add an assessment of the link between market income, states taxes and transfers, and working time -- introducing a new measure that we term the “payoff from work”. This indicator captures the net change in income, from market and state sources, associated with each additional hour of work.

1.1 Organization of the article and research questions

The remainder of the article is organized as follows. In Section 2, we describe our data and the main income and working time measures that we use in this study; we also introduce our indicator of time available for child rearing. In the three subsequent sections, we present our results.

In Section 3, we present summary results on the relationships among income inequality, earnings inequality, and the distribution of working time. We also consider the relationship, across countries, between average weekly work hours and per capita GDP, and we assess what we call the “payoff to work”, which refers to the additional household income – from the market and the state – associated with additional hours of paid work. We organize our findings in this section around *four* research questions:

- 3.1. How does the distribution of household income among non-aged adults vary across countries?
- 3.2. How do *average* weekly work hours vary across countries and what is the association between average work hours and GDP per capita?
- 3.3. How does the distribution of average work hours by income quintile group vary across countries?
- 3.4. How does the distribution of the “payoff to work” – i.e., the ratio of disposable income to work hours – vary cross-nationally?

In Section 4, to provide perspective on the economic position of children in working-age families, we present evidence on the relative income position of heads of households containing children and the income sources of these households in our study countries. In this section, we address *three* specific questions:

- 4.1. How does the distribution of children by income group and family structure vary across these countries?
- 4.2. What is the relationship between parental status and earned income, and how does that vary across countries?
- 4.3. How do the average incomes of adults and children vary cross-nationally?

In Section 5, we assess the time availability that parents *potentially* have for child rearing. We address this in stages, first considering the percentage of parents’ income that comes from

earnings, and, then more directly, the amount of time that parents spend in paid work each week. We then present a stylized analysis of the time that parents have for taking care of those children; we derive that indicator from the hours that parents invest in paid employment and estimated commuting time. In this final results section, we address *three* research questions:

- 5.1. Among low-income families, what percentage of disposable income derives from labor income – and how does that vary cross-nationally?
- 5.2. How does the distribution of average work hours, among parents, by income quintile group, vary across countries?
- 5.3. How does the distribution of hours available for child rearing, by income quintile group, vary across countries?

In Section 6, we compare our main estimates, which are obtained from household income surveys, with alternative estimates obtained from labor force surveys. The purpose of this analysis is to examine the sensitivity of our findings on hours of work to alternative estimates of work hours. The article concludes, in Section 7, with a brief discussion of the main findings.

2. Data and Methods

This study uses harmonized microdata from the Luxembourg Income Study (LIS), a cross-national archive containing datasets based on household surveys. LIS is the only existing data source that provides detailed data on weekly work hours and household income and that includes the U.S. as well as European countries. Specifically, we used seven datasets from LIS' Wave V (release 2) – which is centered on the year 2000. See <http://www.lisproject.org/techdoc.htm> for detailed descriptions of the original surveys and dataset documentation.

Countries included. Our analysis compares the relationship between income distribution and weekly hours of work in seven countries: Austria, Belgium, Canada, Germany, Spain, the United Kingdom, and the United States. These countries provide microdata files to LIS that permit us to measure household income and individual-level work hours and earnings. The data

pertain to a calendar year, either 1999 or 2000. The seven countries vary substantially with respect to the institutional arrangements that determine earned income inequality and customary hours worked. In addition, they vary in the program eligibility rules and tax and benefit formulas that redistribute income among working-age families. Unfortunately, our sample does not include a representative of the Nordic social welfare model, which emphasizes both high employment and narrow income differentials. None of the Wave V datasets from the Nordic countries (Denmark, Finland, Norway, Sweden) include data on weekly work hours. Finally, we limited our study to countries in which the LIS data on average weekly work hours produced results that were very similar to those obtained in independent labor force surveys; that criterion caused us to exclude the Netherlands.

Households and persons included. To analyze the relationship between national income distributions and the pattern of usual weekly hours of work, we focus on the population that should be most affected by this relationship: working-age people and their dependents. We define working-age adults as people between 18 and 64. This age range may appear too wide for a study of rich industrialized countries. Many young adults in these countries do not leave formal schooling until their early or mid-twenties, and many older people exit the workforce long before reaching age 65. We selected the wide age range, however, because we wanted our analysis sample to include an overwhelming percentage of the people in each country who are expected to support themselves by working for pay. Our household sample consists of all those households where the household heads are between 18 and 64. If a household is headed by a married couple, both members of the couple must be between 18 and 64. Note that this sample selection criterion means that some 18-64 year-olds are excluded from our sample. In particular, people in this age range who are members of households where one or both heads are older than

64 or younger than 18 will be excluded. About 3 percent to 5 percent of 18-64 year-olds are excluded by this selection criterion, and the excluded adults are usually near retirement age.

A crucial requirement of our study is information on the work hours of different household members, particularly the people who are heads of households. In each of the LIS datasets, a household head is identified. For convenience, we also classify the spouse/partner of the LIS-identified head as a household head. In some of our tabulations we distinguish between households headed by a married couple and those headed by an unmarried person. Where possible we follow the convention of treating as “married” any couple that lives in a marriage-like relationship, whether or not the pair is legally married. Many of our work-hours tabulations distinguish between the employment outcomes of male and female heads of household, because the social expectations, historical patterns of work, and national customs with respect to gender vary so widely across countries. Under our terminology, a woman is classified as a head of household if she is an unmarried person who is identified as the household head in the LIS database or if she is the spouse of the male head of household.

Measuring income. Our preferred measure of income is based on the broadest income definition that still preserves comparability across the countries in our sample. The best current definition is disposable cash and noncash income (that is, money income minus direct income and payroll taxes and including all cash and near cash transfers, such as food stamps and cash housing allowances, and refundable tax credits, such as the U.S.’ earned income tax credit). For cross-national comparisons of disposable income, the household rather than the family is the best unit for income aggregation. Moreover, the household is the only comparable income-sharing unit available for the seven countries in our study. Note that a household can contain two or more families, and some individuals within a household may be unrelated to the head of household.

While the household is the unit used for aggregating income, the person is our preferred unit of analysis for measuring inequality. We assume household income is equally shared among individuals within a household, and we assign every household member an identical income.

Equivalizing income across households. Household sizes vary, of course, and household spending needs will vary as a result. One way to deal with differences in the number of household members is to estimate the change in expenditure required to hold living standards constant when a household gets larger or smaller. In principle, such an adjustment allows us to calculate “equivalent” incomes for households of different sizes. A household’s adjusted or equivalent income expresses income in currency units that reflect the same level of well-being, regardless of the size of the households being compared. A common adjustment, which we use in this article, assumes that a household’s spending requirements increase in proportion to the square root of the number of household members. Formally, adjusted disposable income (ADPI) is equal to unadjusted household income (DPI) divided by household size (S) raised to an exponential value (e), that is, $ADPI = DPI/S^e$. Our assumption implies the value of e is $\frac{1}{2}$, which reflects the mid-point between two extreme assumptions, that is, no economies of scale and perfect economies of scale.

Measuring weekly work hours. The seven countries analyzed in this article include both detailed income data (as do all LIS datasets) and data on *usual* weekly work hours (which are present in only a subset of LIS datasets). We measure work effort using respondents’ answers to questions inquiring about employment status in a recent reference period and their usual weekly hours of work in the designated period. Note that the reference period covered by the employment questions is usually different from the reference period covered by the LIS income questions. For example, for U.S. respondents the employment question covers the second week

in March 2001 while the income questions cover the 2000 calendar year. For some countries the reference period covered by the employment questions is included in but is shorter than the reference period covered by the income questions. We top-coded work hours at 90 per week per person, to remove a small percentage of extreme values (less than 1 percent in each country).

Ideally, we would have data on both *actual* and *usual* hours of work, but (with the exception of the U.S. data) data on actual hours of work are not available in these LIS datasets. The use of usual hours in a cross-national study of working time introduces some uncertainty because workers' usual weekly hours may diverge from their actual weekly hours – and the difference between usual and actual hours could vary across countries, both in direction and in magnitude. People who usually work overtime hours should include an estimate of those hours in their survey response. But a problem arises for people who usually work a regular, full-time schedule but occasionally work overtime hours. Their usual weekly work hours will understate their average actual weekly work hours. On the other hand, paid and unpaid short-term absences from the workplace will also cause usual weekly hours of work to differ from average actual weekly hours, although in this case workers' usual hours would exceed their actual hours.

One reason that we believe that the use of usual weekly hours may miss important cross-national variation in working time is that many rich countries have social and labor market policies requiring employers to provide employees with paid leave for sickness, holidays, vacations, and the birth or adoption of a child. Some of these public policies enable employed adults (especially parents) to be absent from work for entire weeks or months; others enable workers to take off smaller number of hours within a given day or week. Few employees in the United States are covered by such laws, and a large percentage of U.S. workers hold jobs that not offer very limited or no paid leave. Thus, in comparison with workers in some Western European

countries, workers in the United States may have actual hours of work that are closer to their usual hours of work. In contrast, wage and salary workers in Western Europe may have actual hours of work that over the course of a year fall considerably below their reported usual hours of work. While we would greatly prefer to use datasets that include reliable information on both actual and usual hours of work (and household income) in the same reference period, for both European countries and the U.S., no such data are available. To assess the implications of our use of usual hours, in Section 6 below, we present alternative estimates of usual and actual work hours based on responses obtained in national labor force surveys. While these labor force surveys include working time data that are more substantially more detailed than do the LIS datasets, they could not have served as the basis for this study, however, because they contain little to no data on household income.

One further limitation is that our microdata enable us to study weekly work hours across countries, but not *annual* hours. Although we believe that weekly work hours are a crucial indicator of family wellbeing – most especially because we are concerned with time for child caregiving, which generally takes place on a daily and/or weekly basis – we recognize that our inability to directly assess annual work hours limits our study. Countries could have similar patterns of hours worked per week, but quite different patterns with respect to weeks worked per year. And, in fact, we know that employed Americans work substantially more weeks per year than do their counterparts in other rich countries (Alesina et al., 2006; Gornick and Meyers, 2003). That means that our findings on cross-national variation in weekly work hours do not reflect the contribution of variability in weeks worked per year, and thus in annual hours.

Measuring inequality. To assess income inequality, we divide all working-age adults into five equal-size groups depending on their rank in the adjusted income distribution. Note that this

division of the sample refers solely to 18-64 year-old members of the households in our sample. Many of these 18-64 year-olds live in households containing children under age 18 and adults over 64, and the presence of these individuals will affect the size-adjusted income imputed to each household member. But only the working-age adults are ranked in order to determine the income group of each adult and household. (In order to express adjusted incomes using a common metric for the seven countries, average incomes in each one-fifth of the distribution are measured as a percentage of the country's average size-adjusted income per 18-64 year-old.) Throughout this study, we capture income inequality by comparing average incomes in different fifths of the income distribution. (We use the same approach to capture disparities in earnings and in weekly work hours.) In some parts of our analysis, we use other standard inequality measures as well, including the 95th/5th percentile ratio, the Gini, the Theil, and the coefficient of variation.

Measuring time available for child rearing. In our final empirical analysis, using the LIS microdata, we estimate time available for child rearing, considering the distribution of this indicator within and across countries. To assess this, we used the following assumptions. Suppose each head of household has 100 hours per week to divide between commuting and paid work, on the one hand, and time with their children, on the other. A household headed by a married couple could provide up to 200 hours a week to children in the household; a household headed by an unmarried adult could provide up to 100 hours. To calculate household heads' time availability for children, we assume that every employed head requires 5 hours per week to commute to a job. This assumption will overstate commuting hours for some workers and understate them for others, but it crudely captures the reality that in weeks when workers are fully employed they devote more time to their jobs than reflected in their usual weekly hours in

paid employment. With this set of assumptions, we calculated the time available for children in households headed by two kinds of heads – married-couple heads and single women. (Only a very small percentage of children lives in a household headed by an unmarried man.)

3. Results -- Adult Income Distribution and Hours of Work

3.1 Income Distribution

We first focus on the cross-national variability in income inequality across these seven countries. The top five rows in Table 1 report the average adjusted income in each fifth of the adjusted income distribution measured as a percentage of the national average adjusted income received by 18-64 year-old adults. Below that, we report two key inequality indicators: the ratio of average income in the top fifth to average income in the bottom fifth and, likewise, the ratio of income in the fourth quintile group to that of the second quintile group. Following those indicators, as a robustness check, we report four other summary indicators of inequality: the 95th/5th percentile ratio, the Gini coefficient, the Theil index, and the coefficient of variation.

The main result evident in Table 1 is that the United States has the least equal income distribution among the seven countries – on every measure. The U.S. reports the highest “top/bottom” ratio (7.0) and the highest “fourth/second” ratio (1.9 – tied with the UK). It also has the highest 95th/5th percentile ratio (9.1), the largest Gini coefficient (36), the highest result on the Theil index (23) and the largest coefficient of variation (0.8). The U.S. is followed by the United Kingdom and Spain, again with a strong finding across indicators. Austria has the most equal distribution, as indicated by all of these measures (albeit tied with Belgium on the fourth/second ratio).

Table 1. Distribution of Adjusted Disposable Income among Non-aged Adults in Seven Countries, 1999-2000 1/

	Austria (2000)	Belgium (2000)	Canada (2000)	Germany (2000)	Spain (2000)	UK (1999)	USA (2000)
Relative income: Average adjusted disposable income = 100							
Fifths of income distribution							
Bottom	87	88	98	88	90	91	90
Second	93	91	100	91	93	91	90
Middle	92	90	89	90	87	87	80
Fourth	118	111	117	113	110	117	118
Top	170	183	190	182	201	200	210
All	100	100	100	100	100	100	100
Income ratios:							
Top / Bottom	3.8	8.2	0.8	8.2	0.8	7.7	7.0
Fourth / Second	1.7	1.7	1.8	1.7	1.8	1.9	1.9
Inequality measures:							
90/0 Percentile ratio	8.7	8.9	7.8	0.0	7.9	7.8	9.1
Gini coefficient	20	28	32	28	33	38	37
Theil index	11	10	18	18	19	20	23
Coefficient of Variation (CV)	0.5	0.7	0.7	0.6	0.7	0.7	0.8

1/ Non-aged adults are between 18-64 years old. The sample is restricted to 18-64 year-olds who are members of households in which both the head and spouse of head, if one is present, are between ages 18-64. A small number of 18-64 year-olds, who live in households where at least one head is older than 64 or younger than 18, are excluded from the sample.

Source: Authors' tabulations of LIS micro-data files.

We do not claim the estimates reported in Table 1 fully reflect the differences in economic well-being among the income groups we compare – either within or across countries. These estimates reflect only differences in spendable income, using a simple adjustment to capture the influence of household size. Public goods, including parks, access to basic health care, and decent schools, are also important to well-being, and people in different income groups and different countries have differential access to them. Some privately-consumed services, such as health care, are provided to households wholly or partly at public expense. In many countries, all households have equal access to these services, while in other countries some of these

services are provided for free or at reduced cost to some groups, such as the indigent and/or the aged, and at full cost to the less needy. If the effects of these factors on well-being were taken into account, cross-national variation in inequality would surely be affected (see Garfinkel, Rainwater and Smeeding 2006). For example, any assessment of economic well-being in the U.S. is incomplete without taking into account out-of-pocket health care costs; the average American household now faces out-of-pocket health care spending that is 2.5 times the amount spent in Germany and 3.5 times the amount spent in the United Kingdom (OECD 2006) and this spending burden is not evenly distributed throughout the American income distribution. Nevertheless, the available microdata allow us only to consider income-based well-being.

3.2 Average Work Hours

We next consider the distribution of average work hours by income quintile group and the relationship between average work hours and GDP per capita. The results, in Table 2, include persons who report zero usual hours of paid work. Average reported “usual working hours” among employed 18-64 year-olds is 39.4 hours a week (results not shown).⁴ Because 70.1 percent of 18-64 year-olds report working during the reference period, this implies that the average 18-64 year-old, including non-workers, is usually working for pay 27.6 hours per week. (These estimates are simple seven-country averages and are not weighted to reflect variation in country populations.)

⁴ Among *employed* adults, Americans’ average usual work hours are relatively similar to those of employed adults in these European countries. This has been reported by Alesina *et al.* 2006. Frase and Gornick (2009) find that, among the employed, American men’s average weekly hours are not especially long but American women’s average weekly hours are longer than those of women in most other high-income countries.

Table 2. Distribution of Unconditional Weekly Hours of Work among Non-aged Adults in Seven Countries, 1999-2000 1/

	Austria (2000)	Belgium (2000)	Canada (2000)	Germany (2000)	Spain (2000)	UK (1999)	USA (2000)
Average hours of work in 7 countries = 100							
Fifths of income distribution							
Bottom	74	50	54	60	57	41	70
Second	93	28	91	97	81	88	107
Middle	106	110	103	109	91	116	118
Fourth	108	118	110	117	104	132	125
Top	118	125	117	127	112	143	131
All	100	99	95	102	89	104	110
Average hours of work in own country = 100							
Fifths of income distribution							
Bottom	74	50	57	59	64	39	64
Second	93	93	96	95	91	84	97
Middle	106	111	108	106	102	112	107
Fourth	108	119	116	115	116	127	114
Top	118	127	123	124	125	137	118
All	100	100	100	100	100	100	100
Average hours ratios:							
Top / Bottom	1.6	2.5	2.1	2.1	2.0	3.5	1.9
Fourth / Second	1.2	1.3	1.2	1.2	1.3	1.5	1.2
Memo: Real GDP per capita at PPP exchange rates (1999-2000) 2/							
7-country avg. = 100	104	95	102	97	75	95	133

1/ For description of sample, see note to Table 1. "Unconditional hours of work" is defined as the average "usual weekly hours" reported by 18-64 year-old adult respondents, including zeros for respondents who do not report working. After estimating this value for 18-64 year-olds in our sample for each country, we estimated the average value across the seven included countries (28.0 hours per week). The seven-country average is not weighted to reflect country size.

2/ Source: Penn World Tables, version 6.2.

Sources: Authors' tabulations of LIS micro-data files and Penn World Tables, version 6.2.

Table 2 reports average hours of work within adjusted income groups in each of the seven countries. The top panel reports average hours relative to a reference level of hours: the average workweek across all seven countries (27.6 hours per week). The lower panel

reconfigures the results to report average work hours in each income group in relation to the *national* (“own country”) average workweek.

Before discussing the distributional results (below), we consider *average* work hours across the seven countries. Austrian, Belgian, Canadian, German, and British adults taken as a whole have an average work week that is approximately equal to the seven-country average. German, and British adults work slightly more than this average, while Belgians and Canadians work slightly less. Spanish adults work substantially less than average, and this is mainly the result of the low employment rate of Spanish women. The United States has the highest adult employment rate (75 percent) combined with an above-average work week (40.6 hours per week among those who are employed). The result is that American adults work 10 percent more hours than the seven-country average and 12 percent more than average usual hours in the other six countries. For reasons mentioned in the previous section, our estimate of work-hours differences between Americans and residents of other rich countries probably understates the difference in actual hours worked. This conjecture is confirmed in Section 6 where we examine working time patterns as measured in national labor force surveys.

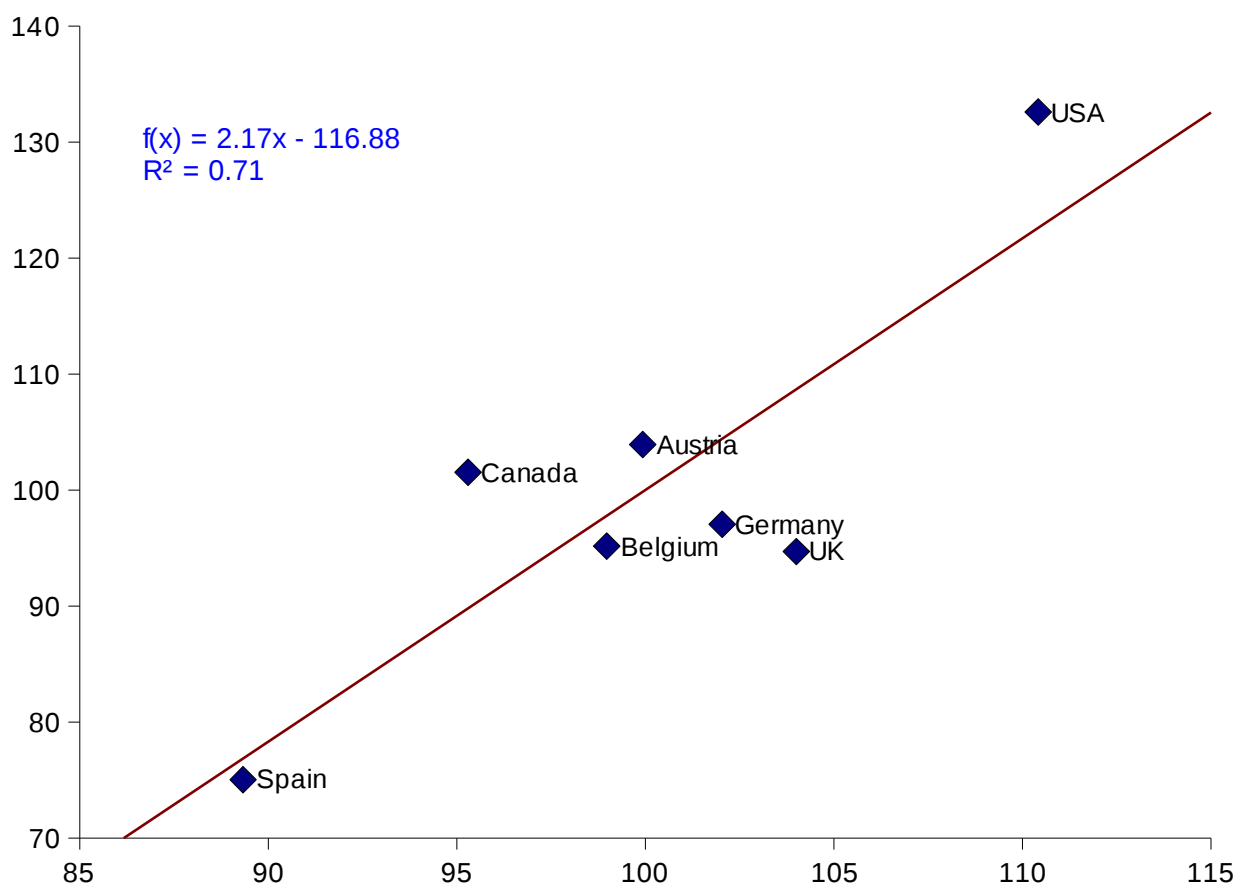
The difference between average weekly work hours in the U.S. and in other countries explains some of the income advantage enjoyed by Americans (see Scarpetta *et al.* 2000; Smeeding 2006b; and Burtless and Jencks 2003). The bottom line in Table 2 reports estimates of real GDP per capita using PPP-adjusted exchange rates (see <http://pwt.econ.upenn.edu>). Here, we measure each country’s average income relative to the seven-country (unweighted) average per capita GDP. American adults in our sample work 10 percent longer weekly hours than the

seven-country average, and the United States has per capita real income that is 33 percent higher than the seven-country average.⁵

The association between average weekly working hours (as measured in the LIS database) and real per capita GDP is further illuminated in Figure 1. There is a positive correlation between the two indicators ($R^2=.71$, $R=.84$), although that result is clearly driven largely by the U.S. and Spain. Although this simple association does not clarify the causal link between weekly hours and per capita GDP, Figure 1 strongly suggests a connection between the two. The relatively long average weekly work hours in the U.S., in the aggregate, do seem to raise the U.S. real income vis-à-vis these six comparator countries. (See Appendix Table 2 for real household income, PPP-adjusted, by quintile group).

5 Some of the remaining unexplained differential is due to the comparatively high number of weeks worked annually in the U.S.

Figure 1. Relationship of Real GDP per Capita and Average Weekly Work Hours among 18-64 Year-old Adults in Seven Countries, 1999-2000



1/ For a description of the household sample, see note to Table 1.

Source: Authors' tabulations of LIS micro-data files (hours) and Penn World Tables (GDP per capita).

A high employment rate, combined with relatively long weekly hours, helps boost Americans' average income in comparison with incomes in other countries, but it also means that working-age Americans have less time to devote to activities outside of paid work. Most people value the activities they pursue in their non-work time as well as the goods and services they can buy with their earnings. Some of the income advantage enjoyed by Americans

represents compensation for their sacrifice of non-work time. For Americans who earn low hourly wages, however, that compensation is not very large. Many Americans who are pushed into jobs or lengthy work schedules earn low hourly wages. Although their incomes would be sharply lower if they did not work at all, their earnings do not add much to total U.S. income because hourly pay at the bottom of the U.S. wage distribution is so low in absolute as well as relative terms (Smeeding 2006b).

3.3 Distribution of Hours by Income Group

We turn to the question of the distribution of average work hours by income quintile group and how that varies across our study countries. To understand the correspondence between income disparities, on the one hand, and usual hours of work, on the other, we tabulated usual weekly work hours in each fifth of the adjusted income distribution (see Table 2).

In each country in our sample, on average, adults in higher income groups are more likely to be employed and to work longer usual hours than adults in lower income groups. The hours gap between top and bottom income recipients is particularly wide in the United Kingdom, where adults in the lowest income group work only 39 percent of the national average work week while adults in the top income group work 37 percent more than the national average. Interestingly, the hours differential between adults in the top and bottom income group is narrower in the United States than it is in most other countries. While Americans in each income group usually work longer hours than their counterparts in the other six countries, the largest proportional differences are at the bottom of the income distribution. Americans in the top income group work 6 percent more than high-income recipients in the other six countries, and middle-income Americans work 12 percent more than their middle-income counterparts abroad; Americans in the bottom income group have average weekly hours that are fully 25 percent higher than the average usual hours of low-income adults in the other six countries (results not shown but obtainable from Table 2).⁶ Americans in the bottom ranks of the income distribution receive the smallest relative incomes of any low-income group in our sample, and – with the exception of the lowest-income adults in Austria – they work the longest average hours in order

⁶ We also compared weekly work hours, across countries, by vingtile. That exercise confirmed and clarified that it is in the lower half of the income distribution that Americans' weekly hours especially exceed those in several European countries. A figure summarizing these vingtile results can be obtained from the authors.

to obtain those incomes. (U.S. hours are the highest, and by a large margin, in the second quintile group as well).

3.4 The “Payoff to Work”

One way to think about the relationship between average hours of work and relative living standards is to measure the average payoff that each income group receives per hour that it works. We define the “living standard payoff” from work in the following way. The average payoff in each income group is the ratio of mean adjusted disposable income per adult divided by hours worked per adult in the income group. In order to measure the payoff in a way that provides meaningful comparisons across countries, we measure the payoff in each income group relative to the all-adult payoff in the country. (In other words, we estimate the ratio of adjusted disposable income to work hours in each income group, and we then measure this ratio as a percentage of the ratio of adjusted disposable income to work hours in the country’s entire adult population.)

It is crucial to stress that our estimate of the relative payoff to work is *not* the same as the net hourly wage, nor any other measure of earnings per hour worked. Many households in the lowest income group derive a large percentage of their income from public transfers rather than, or in addition to, earnings. In many cases, these transfers help to compensate low-income breadwinners for meager hourly wages or lengthy spells of joblessness. Transfers help support living standards at the bottom, and they boost the measured payoff ratio, but, again, they are not payments that adults receive *in exchange* for their work. In fact, in many cases, longer work hours reduce income transfers; with this indicator, we are capturing the *net* payoff from earnings and transfers.

Table 3 reports estimates of this payoff, by income group, for each of the countries in our study. Although the payoff associated with working time differs by income group, it differs by a notably smaller ratio than incomes (compare the “top/bottom” and “fourth/second” rows in Table 1 and Table 3). For example, Spanish adults in the bottom income group receive an average income that is 35 percent of the average Spanish income (top row in Table 1). At the same time, working-age Spanish adults in this income group report work hours that are fully 64 percent of the Spanish average (see the bottom panel of Table 2). For each hour that they work, Spaniards in this income group derive an income that is just over half the Spanish average (top row in Table 3). This last differential is large, to be sure, but it is substantially smaller than the actual income difference reported in Table 1.

Table 3. Ratio of Adjusted Disposable Income to Hours Worked by Income Group in Seven Countries, 1999-2000 1/

	Austria (2000)	Belgium (2000)	Canada (2000)	Germany (2000)	Spain (2000)	UK (1999)	USA (2000)
Average disposable income / hours ratio in country = 100							
Fifths of income distribution							
Bottom	73	88	89	78	88	78	87
Second	79	77	78	70	79	73	72
Middle	87	81	82	88	80	77	79
Fourth	100	93	101	99	99	92	101
Top	147	140	109	147	160	100	178
All	100	100	100	100	100	100	100
Work payoff ratios:							
Top / Bottom	2.0	1.6	2.7	2.0	2.9	1.9	3.8
Fourth / Second	1.3	1.2	1.0	1.3	1.8	1.3	1.7

Source: Authors' tabulations of LIS micro-data files.

What is interesting about the “work payoff” ratios reported in Table 3 is the change in inequality rankings across countries. After accounting for work-hour differences across income groups, the United Kingdom now appears less unequal than Canada or Germany. Actual incomes at the top and bottom of the British distribution are more unequal than those in Canada and Germany (see Table 1), but hours of work differences are also much larger in the United Kingdom than in these other two countries (Table 2). Indeed, average work hours among low-income British adults are the shortest of any income group in our sample, and average hours in the top British income group are the longest. However, the incomes of those at the bottom of the distribution in the United Kingdom are bolstered by state transfers, which allow adults in this group to enjoy a relatively more comfortable standard of living per hour worked than their counterparts in Canada or Germany. In fact, as reported in Table 4, many working-age British households receive no labor income at all and depend entirely on unearned public transfers or private income for support. In households headed by adults in the bottom fifth of the British income distribution, more than half of all households (and nearly three-quarters of household headed by a single mother) report receiving no income from wages or self-employment.⁷

⁷ Compared with the United Kingdom and the other rich countries in this study, Spain and the United States have few working-age households that do not receive earnings (see Table 4). Spanish and U.S. households are therefore more likely to be exclusively or heavily reliant on labor market earnings.

Table 4. Percent of Households Receiving No Labor Income in Seven Countries by Income Group and Marital Status, 1999-2000 ^{1/}

Hours per week		Austria	Belgium	Canada	Germany	Spain	UK	USA
		(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2000)
All households								
Income group of household head:								
Bottom		30	03	31	31	24	09	24
Second		10	12	0	8	7	18	4
Middle		7	0	2	0	2	6	2
Fourth		7	4	2	3	2	2	1
Top		3	2	1	2	1	2	1
All		00	00	0	00	0	00	0
Households containing children								
Income group of household head:								
Bottom		12	38	20	19	11	01	12
Second		1	2	1	1	1	7	1
Middle		1	1	.	.	.	1	.
Fourth		.	.	.	.	1	.	.
Top		.	.	.	.	.	1	.
All		0	0	0	0	0	00	0
Married-couple households containing children								
Income group of household head:								
Bottom		4	30	12	8	9	28	6
Second		.	2	.	1	1	4	.
Middle		1	1	.	.	.	.	.
Fourth		.	.	.	.	.	.	.
Top		.	.	.	.	.	.	.
All		0	0	0	0	0	0	0
Single-female-head households containing children								
Income group of household head:								
Bottom		31	03	33	30	23	72	19
Second		3	0	3	0	.	18	1
Middle		.	10	.	3	.	2	1
Fourth		...	...	...	...	...	...	...
All		19	36	20	36	14	02	11

^{1/} For a description of the household sample, see note to Table 1.

Source: Authors' tabulations of LIS micro-data files.

One key finding is that the inequality *rank* of the United States does not depend on whether inequality is measured using actual income differences (reported in Table 1) or the

“living standard payoff” from work (reported in Table 3). The U.S. is the most unequal country in our sample, according to both measures. In fact, the gap between U.S. inequality and that in the other six countries appears even wider in Table 3 than it does in Table 1. Relative to their counterparts in other industrial countries, low-income Americans must work much harder to achieve their very poor relative position in the income distribution.

The relationship between the distribution of income and the payoff from work is further illuminated when we consider the earnings distribution. Table 5 reports the distribution of earnings, not adjusted for household size, among household heads in our seven-country sample. The average earnings of household heads in each income group is measured as a percentage of the average earnings of each country’s male heads of household.⁸ The upper panel in Table 5 shows the unadjusted earnings distribution of male heads of household (including zero amounts for household heads who report no labor income) and the lower panel shows the earnings distribution among women heads of households.

⁸ The gross earnings of Austrian, Belgian, and Spanish workers are not available in the LIS database. Net (post-tax) earnings are used instead. In the other four countries, the results in Table 5 reflect household heads’ gross (pre-tax) earnings.

Table 5. Average Earnings, Not Adjusted for Household Size, of Household Heads in Seven Countries by Income Group and Gender, 1999-2000 ^{1/}

Earnings as a percent of mean earnings of country's male household heads

	Austria ^{2/}	Belgium ^{2/}	Canada	Germany	Spain ^{2/}	UK	USA
	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2000)

Male heads of household

Income group of household head:

Bottom	47	20	22	27	38	17	20
Second	77	72	70	72	71	09	07
Middle	94	97	93	93	89	90	82
Fourth	107	112	119	114	108	118	110
Top	174	180	200	187	197	208	209
All	100	100	100	100	100	100	100

Income ratios:

Top / Bottom	3.7	9.0	9.2	6.9	5.2	12.1	10.5
Fourth / Second	1.4	1.6	1.8	1.6	1.0	2.0	2.0

Inequality measures:

90/0 Percentile ratio	8.3	7.2	31.9	26.2	10.8	12.9	26.3
Gini coefficient	30	29	43	37	37	37	44
Theil index	17	18	32	20	24	24	30
Coefficient of Variation (CV)	0.7	0.7	0.9	0.8	0.8	0.8	1.0

Female heads of household

Income group of household head:

Bottom	10	10	13	14	7	7	13
Second	33	38	34	34	14	24	32
Middle	41	00	01	47	27	42	46
Fourth	09	78	70	74	47	73	73
Top	87	84	112	87	91	103	98
All	100	100	100	100	100	100	100

Income ratios:

Top / Bottom	3.8	8.2	0.8	6.2	0.8	7.7	7.0
Fourth / Second	1.7	1.7	1.8	1.7	1.8	1.9	1.9

Inequality measures:

90/0 Percentile ratio	12.9	12.0	32.4	30.0	27.7	17.9	32.0
Gini coefficient	34	29	40	43	43	41	43
Theil index	19	17	30	31	31	29	33
Coefficient of Variation (CV)	0.7	0.7	0.9	0.8	0.9	0.9	0.9

^{1/} For a description of the household sample, see note to Table 1. Entries in the top panels of the table show average labor earnings per household head in the income group measured as a percentage of the mean earnings of male household heads in the national sample.

^{2/} Net, after-tax earnings are used instead of gross earnings for Austria, Belgium and Spain. For the other four countries, "earnings" are estimated using gross or pre-tax earnings.

Source: Authors' tabulations of LIS micro-data files.

Note that Table 5 reports average earnings only for 18-64 year-olds who are household heads. Note also that household heads' income rank is determined by their size-adjusted disposable household incomes, not by their unadjusted earnings (that is, these are the same quintile groupings as in the earlier tables). Nonetheless, unadjusted gross earnings are monotonically increasing with the income group of household heads. In fact, in those countries where the LIS database contains information on pre-tax earnings, the inequality of unadjusted earnings is proportionately greater than the inequality of size-adjusted disposable income (compare the inequality results in Tables 1 and 5, for Canada, Germany, the United Kingdom, and the United States). Obviously, the inequality of pre-tax earnings contributes substantially to overall inequality, but it is partially offset by the impact of the tax and transfer system, which boosts the size-adjusted incomes of low-earning household heads and reduces the size-adjusted incomes of high-earning heads.

However, it is clear that the cross-national pattern of earnings inequality does not fully explain the cross-national pattern of overall inequality. The United States has the highest size-adjusted income inequality among working-age adults (see Table 1); unadjusted earnings inequality among U.S. household heads is less exceptional (Table 5). These cross-country comparisons suggest that the relatively poor income position of adults in the bottom of the U.S. income distribution cannot be explained by exceptionally low earnings at the bottom of the distribution. Instead they are explained by a combination of moderate earned income and meager income supplementation through public transfer programs.

4. Results -- The Relative Income Position of Children

4.1 Distribution of Children

We turn next to the distribution of children by income group and family structure. Households with modest incomes can also have low size-adjusted incomes if they contain many dependents, especially dependents who are too young or too old to work. An additional child can reduce size-adjusted household income in multiple ways. First, it directly reduces size-adjusted income by increasing the number of household members who must be supported by the household's income. And second, the presence of an additional child may reduce parents' (especially mothers') employment rates, their hours, and/or their hourly earnings.

The direct and indirect effects of child dependents on adults' income position are reflected in Table 6, which shows the distribution of child dependents across different household income groups. Recall that each income group contains exactly one-fifth of a country's 18-64 year-olds. So, for example, in the United Kingdom, adults in the bottom one-fifth of the adult income distribution support 34 percent of British children, while the top one-fifth of adult income recipients supports just 9 percent of children. In contrast, in Belgium, adults in the bottom fifth support 23 percent of Belgian children, while the top one-fifth of adult income recipients supports 14 percent of children. While the slope of the gradient varies across these countries, children are everywhere over-represented in lower-income households. (Appendix Table 2 presents the average number of children per household, again by income quintile group. This Appendix table reveals a strong pattern in which households in the lowest fifth have more children than do their counterparts in the highest fifth.)

Table 6. Distribution of Children by Head's Income Group and by Head's Marital Status in Seven Countries, 1999-2000 ^{1/}

Percent of all children								
	Austria	Belgium	Canada	Germany	Spain	UK	USA	
	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2000)	
All children, regardless of head's marital status								
Income group of household head:								
Bottom	22	23	27	27	31	34	31	
Second	29	22	26	27	24	20	24	
Middle	17	23	21	21	17	18	20	
Fourth	13	19	16	10	10	13	10	
Top	9	14	11	11	13	9	11	
All	100	100	100	100	100	100	100	
Children in married-couple households								
Income group of household head:								
Bottom	20	16	18	17	27	18	18	
Second	20	19	21	24	23	21	19	
Middle	16	22	18	20	16	17	17	
Fourth	13	19	14	14	14	12	13	
Top	9	13	11	11	13	9	10	
All	100	100	100	100	100	100	100	
Children in single-female-head households								
Income group of household head:								
Bottom	7	7	8	9	3	10	12	
Second	3	2	3	2	1	4	4	
Middle	1	1	1	.	.	1	2	
Fourth	.	.	.	.	1	1	1	
Top	.	.	.	.	.	.	.	
All	100	100	100	100	100	100	100	

^{1/} For a description of the household sample, see note to Table 1. These tabulations reflect the income groups and marital status of the head of each child's household. Note that the head of household is not necessarily the natural or adoptive parent of the child. "Married" heads include couples not formally married who maintain a marriage-like relationship.

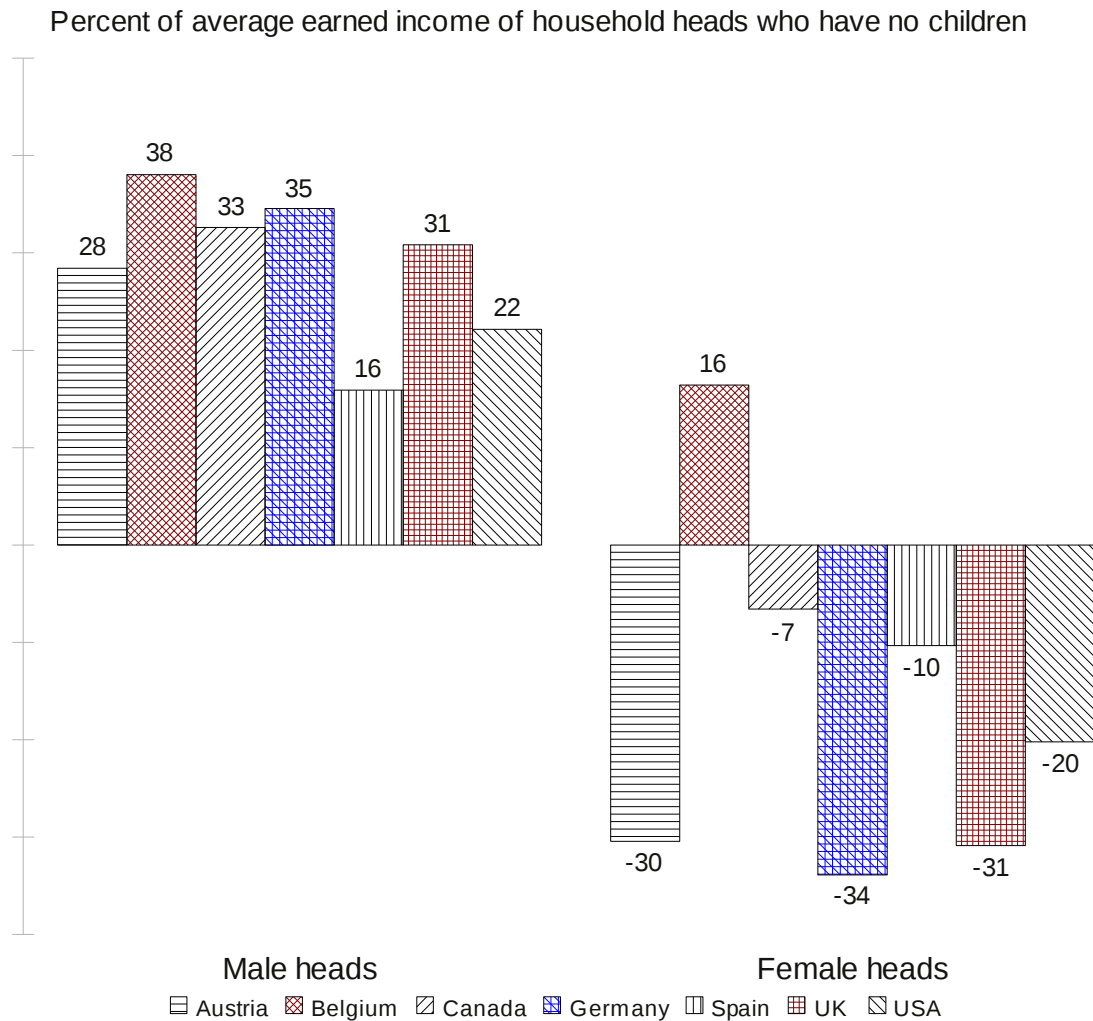
Source: Authors' tabulations of LIS micro-data files.

4.2 Parental Status and Earned Income

Here we assess the relationship between parental status and earned income. Figure 2 reports the earnings advantage or deficit of household heads in households with children compared to heads of childless households. These parent-nonparent differences pick up

differences in employment rates, work hours, and hourly earnings. Results for male heads (whether married or unmarried) are shown on the left; results for female heads (both married and unmarried) are shown on the right. The earnings advantage or deficit of heads with children is measured as a percentage of the average earnings received by household heads who do not have children. Male heads typically enjoy a substantial earnings advantage if they have children, with the advantage ranging from 16 percent in Spain up to 38 percent in Belgium. The relationship between the presence of children and earnings is much less favorable for women who head households. In six of the seven countries, women heading households containing children earn substantially less than women who head households without children. The earnings deficit of women who head families containing children ranges from 7 percent in Canada up to 34 percent in Germany. Only in Belgium do female household heads with children have higher earnings than females who head families that do not contain any children. (For a review of cross-national research on the relationship between parental status and earnings, see Gornick and Meyers 2003).

Figure 2. Earned Income Advantage or Deficit of Heads of Households Containing Children ^{1/}



^{1/} The earned income advantage or deficit of household heads rearing children is measured as difference between average labor earnings (not adjusted for household size) of household heads with and without child dependents. The difference is then converted to a percentage of the average labor earnings of heads of households without children under 18. Note that gross (or pre-tax) earnings are used for Canada, Germany, the U.K., and the U.S., while net (or after-tax) earnings are used in the case of Austria, Belgium, and Spain.

Source: Authors' tabulations of LIS micro-data files.

4.3 Average Income of Adults and Children

Finally, in this section, we consider how average income among adults in different types of households, and among children, varies across these countries. The relative income position of children and 18-64 year-old adults in our sample is summarized in the text table immediately below.

Text Table. Average Size-Adjusted Income of Adults and Children in Seven Countries*

Mean 18-64 year-old's size-adjusted income = 100

Subpopulation	Austria	Belgium	Canada	Germany	Spain	UK	USA
All adults aged 18-64	100	100	100	100	100	100	100
Adults aged 18-64 in households containing children	88	95	92	91	87	85	89
Adults aged 18-64 in households without children	109	104	106	105	111	110	110
Children aged 0-17	82	90	85	86	84	76	80

* Sample of households, adults, and children is described in the text.

Source: Authors' tabulations of LIS micro-data files.

For ease of comparison, the average size-adjusted income of 18-64 year-olds in each country is designated as 100, and the average size-adjusted income of other populations is measured relative to this benchmark. The results indicate that the average income of adults in households containing children is between 9 and 15 percent lower than the average income of all adults. An important reason for this difference, as noted above, is that the presence of children increases the number of household members without increasing the number of potential earners in the household, a factor that tends to reduce the relative income position of adults who support children. A second factor is that the presence of children tends to exert downward pressure on their mothers' labor supply and earnings.

The bottom line in the table shows the relative position of an average child in each country (where, parallel to the adult indicator, children's average income refers to children's average household income). Here, we see that, in none of our study countries, does children's

average income exceed 90 percent of the average income of all adults. In the U.S. and the U.K., the average size-adjusted income of children is fully 20 to 24 percent below the average income of 18-64 year-old adults.

5. Results – Availability of Parents’ Time for Child Rearing

Our final analyses concern the availability of time that parents⁹ *potentially* have for child rearing. We assess this in stages, first considering the percentage of parents’ income that derives from earnings -- garnering earnings generally requires time away from one’s children -- and, more directly, the amount of time that parents spend working for pay each week.

5.1 Income from Labor

Among low-income families, what percentage of disposable income derives from labor income – and how does that vary across countries? Compared with other industrialized countries, working-age families in the United States are unusually reliant on income gained via the market. Because public transfers are not generous in supplementing the private incomes of working-age adults, American breadwinners in the bottom ranks of the income distribution are pushed into the labor market and toward longer work schedules, regardless of the presence of children and regardless of the marital status of the household head. Figure 3 reports the percentage of size-adjusted household income that is derived from gross labor earnings among household heads

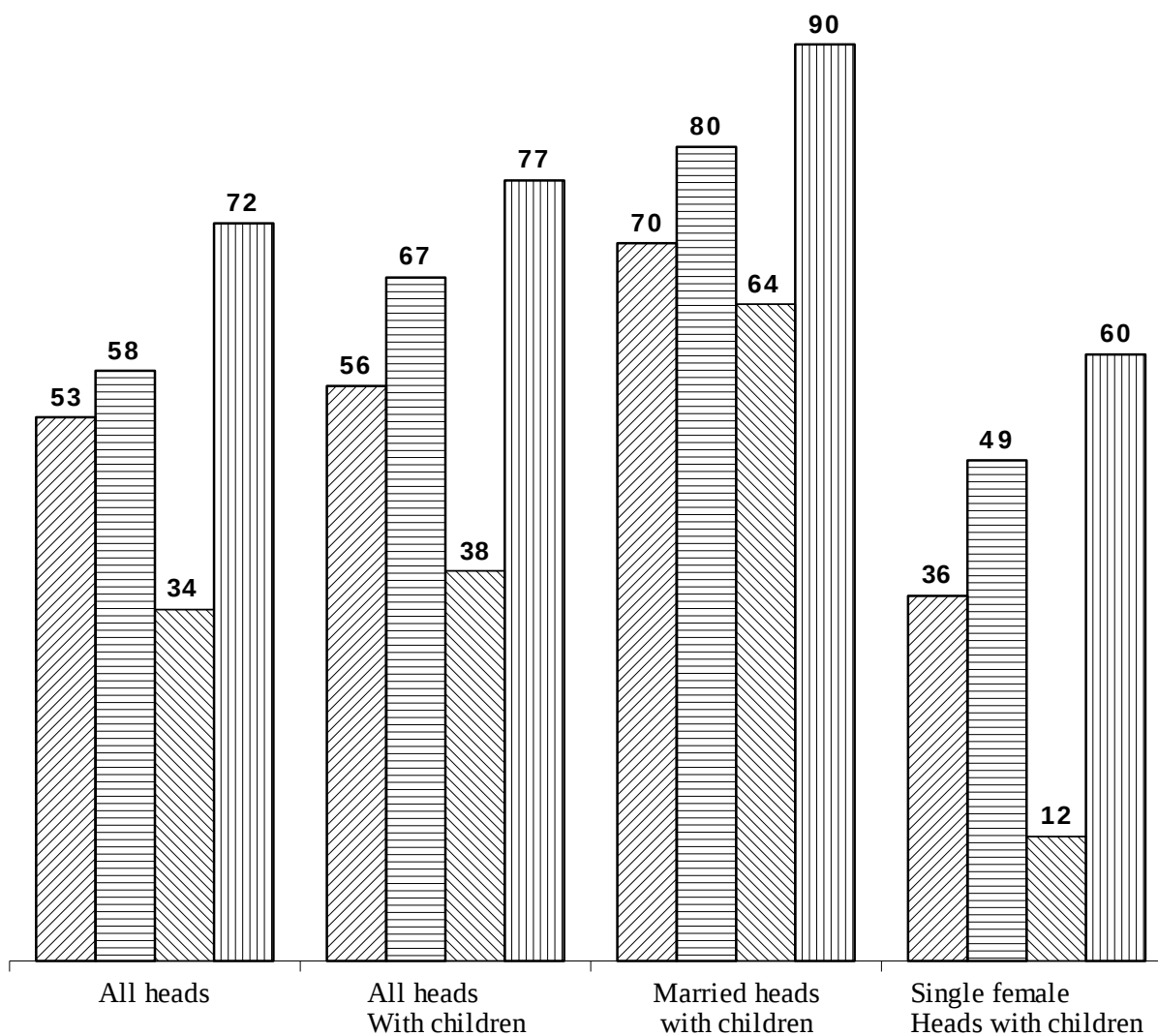
⁹ As noted in the methods section, for ease of exposition, throughout this section, we use the term “parents” to refer to all household heads (as defined earlier) who live in households with children. Likewise, we refer to single female household heads as “single mothers”. We believe these to be reasonable assumptions because, in all of these countries, the overwhelming majority of household heads who live with children are, in fact, the parents (or other primary caregivers) of those children.

whose incomes place them in the bottom fifth of the income distribution.¹⁰ Among all household heads in this income range, Americans are the most reliant on labor income. Gross wages and self-employment income account for 72 percent of low-income U.S. households' income. Strikingly, British household heads derive the *smallest* percentage of their adjusted income from this source. Only one third (34 percent) of their income comes from the earnings of the head or other household members.

Turning our attention to parents, American and German parents receive the largest share of their income from earnings, while British parents derive the smallest percentage. The contrast between the United States and other countries is greatest in the case of single mothers. All seven countries supplement the incomes of low-income single mothers more generously than they do low-income married-couple households. Yet there is substantial variation across these countries and, among single mothers, the share of income coming from transfers is the least in the United States. American single mothers receive fully 60 percent of their household income from earnings. In Canada and Germany the comparable percentages are 36 percent and 49 percent, and in the United Kingdom just 12 percent. Among these households, the remainder of income is primarily derived from state transfers, mostly means-tested benefits.

¹⁰ Austria, Belgium, and Spain are excluded from this chart because the LIS database only includes information on respondents' net rather than gross labor income.

Figure 3. Percentage of Net Disposable Income Derived from Gross Labor Income among Household Heads in Bottom One-Fifth of Income Distribution
1/



1/ Percentage is calculated as gross labor earnings (adjusted for household size) divided by disposable income (adjusted for household size).

5.2 Distribution of Parents' Work Hours by Income Group

Table 7. Distribution of Unconditional Weekly Hours of Work among Non-aged Adults in Households Containing Children under 18, 1999-2000 ^{1/}

	Austria	Belgium	Canada	Germany	Spain	UK	USA
	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2000)

Average hours of work in 7 countries = 100

Income group of household head:

Bottom	84	75	66	71	66	47	79
Second	104	107	101	99	88	100	111
Middle	118	122	112	110	96	122	120
Fourth	116	127	119	116	109	133	126
Top	123	138	119	119	120	140	124
All	106	114	102	101	92	102	110

Average hours of work in own country = 100

Income group of household head:

Bottom	80	75	69	70	74	45	72
Second	104	108	106	97	98	96	100
Middle	118	124	118	108	108	118	108
Fourth	116	128	125	113	122	128	114
Top	123	139	125	116	134	135	113
All	106	115	107	99	103	98	99

Average hours ratios:

Top / Bottom	1.5	1.8	1.8	1.7	1.8	3.0	1.6
Fourth / Second	1.1	1.2	1.2	1.2	1.2	1.3	1.1

^{1/} For a description of the household sample, see note to Table 1. These tabulations reflect the income groups and marital status of the head of each child's household. Note that the head of household is not necessarily the natural or adoptive parent of the child. "Married" heads include couples not formally married who maintain a marriage-like relationship.

Source: Authors' tabulations of LIS micro-data files.

Not surprisingly, American parents work substantially more hours each week than do their counterparts in the other countries, and the difference is especially large among parents in low-income households. Table 7 shows the distribution of reported weekly work hours among all adults who live in households containing children. (This table presents calculations that are equivalent to those shown in Table 2, except that the sample in Table 7 is limited to 18-64 year-olds who live in households containing children while Table 2 shows results for all 18-64 year-

olds.¹¹) As in Table 2, the top panel indicates average weekly hours worked by income group relative to the seven-country average work week (28.0 hours). The middle panel reports average hours relative to the average work week of 18-64 year-olds in the same country. The results in Table 7 indicate that Austrian, Belgian and American parents work longer weekly hours than do adults in similar households in our other study countries. On average, Americans parents work 10 percent more hours each week than the average 18-64 year-old adult across these seven countries. In the lowest income group, American parents work nearly 80 percent as many hours as do all adults, when averaged across the seven countries; only low-income Austrian parents work longer hours.

11 Note that income groups in Table 7 contain an unequal number of adults. The income group of each adult is determined by his or her position among *all* 18-64 year-olds. As our earlier results suggest, the number of adults (with children) in lower income groups will be larger than in the higher income groups.

Table 8. Hours Available for Child Rearing among Heads of Household with Children in Seven Countries, 1999-2000 ^{1/}

Hours per week							
	Austria (2000)	Belgium (2000)	Canada (2000)	Germany (2000)	Spain (2000)	UK (1999)	USA (2000)

Married-couple and single-female-head households

Income group of household head:

Bottom	122	123	123	123	144	128	113
Second	122	121	120	128	139	122	113
Middle	122	119	117	128	132	117	114
Fourth	123	116	118	124	123	113	112
Top	116	110	118	121	118	110	110
All	111	111	111	111	111	111	111

Married-couple households

Income group of household head:

Bottom	143	149	150	154	153	171	147
Second	133	130	132	138	143	134	128
Middle	120	121	123	130	136	122	122
Fourth	124	116	121	120	127	116	117
Top	118	112	120	123	118	111	118
All	111	111	111	111	111	111	111

Single-female-head households

Income group of household head:

Bottom	70	82	83	80	77	94	74
Second	72	72	71	72	72	70	71
Middle	71	60	71	69	49	70	71
Fourth	60	60	71	61	71	67	67
Top	67	74	67	67	68	73	67
All	66	66	66	66	66	66	66

1/ For a description of the household sample, see note to Table 1. Weekly hours "available for child rearing" are calculated by subtracting reported work hours (including estimated commuting time) from 100 hours per week for each adult head in the household. With two household heads, we assume the heads of household have a combined total of 200 hours per week to divide between paid employment, commuting, and child rearing. Unmarried heads of household have 100 hours.

Source: Authors' tabulations of LIS micro-data files.

5.3 Hours Available for Child Rearing

We close by addressing our final question, which concerns cross-national variation in hours available for child rearing, by income quintile group. One important implication of the results in Table 7 is that American adults – with children – spend a larger fraction of their time in

paid work compared to adults in these other industrialized countries, potentially depriving American children of valuable parental time.

The availability of parents' time in these seven countries, by income group and marital status, is reported in Table 8. (See the assumptions underlying this indicator in the methods section and in the notes to the table.) Considering married-couple and single-mother households together (the top panel), we see that, on average, American parents have less time available for child rearing than do parents in all of the other countries – 113 hours per week compared to 118 to 134 hours in the other six countries. It is also remarkable that, in the United States, the availability of time for child rearing does not rise as income falls. As indicated in the top panel of Table 8, American parents at the bottom of the income distribution are just as constrained, in fact slightly more so, in making time available for their children than are their counterparts at the top of the income distribution. In all of the other countries in this study, parents at the bottom of the distribution receive some compensation for their low household incomes: they potentially have more time to devote to child rearing.

The results are made more complex when we disaggregate by marital status (see the bottom two panels of Table 8). In both marital status groups, American parents are, on average, somewhat more time-constrained than are parents in these other countries. The result is striking when we consider single mothers. American single mothers have, on average, 68 hours per week (potentially) for child rearing, compared to 69 to 75 in the most of the other countries, and a remarkable 85 hours in the United Kingdom. One important difference between the United

Kingdom (which also has a high share of single mothers) and the United States is that public transfers are relatively much more generous for British single mothers. As a result, the hours of work supplied by single mothers is much lower in the United Kingdom than in the United States. On balance, single mothers in the United Kingdom have much more time to devote to caring for their children.

Yet, disaggregating by marital status also reveals that, in the U.S., *within* marital status groups, there is in fact a negative association between child rearing time and household income. Clearly, then, the overall relationship is flat (see top panel) largely because single mothers – a relatively large group in the U.S. and a group that is disproportionately represented in the lowest income groups – are pulling down the average child rearing hours in the bottom fifth. It is interesting, in contrast, that Spanish single mothers are also constrained in the amount of time they could potentially devote to caregiving (69 hours), but only a small percentage of Spanish children live in single-mother households (see the bottom row in Table 6). When combining the results for married-couple and single-mother households, there seems to be no shortage of time for caregiving for Spanish children, except in the highest ranks of the Spanish income distribution (see top panel of Table 8). The story is quite different, as we have seen, in the United States.

6. Alternative Estimates of Work Hours

Most of the datasets in the LIS database provide data on *usual* hours of work in a week when respondents are fully employed, while only a few provide information on *actual* hours in a reference week. All of the analyses in the previous sections were therefore based on adults' usual hours of work. To help us understand the relationship between usual and actual hours of work,

we obtained data from national labor force surveys pertaining to both concepts of work hours. Using data from European Labour Force Surveys for five of our study countries (Austria, Belgium, Germany, Spain, and the United Kingdom) and from the Current Population Survey for the United States, we are able to estimate adults' usual and actual hours of work on their main jobs.

We performed tabulations separately for men and women, and examined work hours for 20-64 year-old adults who are household heads (or partners of heads) in households containing at least one child under age 15 and, in addition, for the entire population aged 20 to 64.¹² Our analysis of these labor force data suggests that actual hours of work tend to be lower than usual hours of work, especially for mothers, and that the difference between usual and actual hours of work is less in the United States than it is, on average, in these European countries. It therefore follows that the findings presented in the earlier sections tend to understate the labor supply differences between Europe and the United States. Results in the top panel of Table 9 show work hours estimates for men, and results in the bottom panel show estimates for women. Estimates of both usual and actual hours include zeros for those who are not employed.

12 Because of small sample sizes in Austria, Belgium, and Spain, the results represent an average for 1999-2001. In Table 9 the household heads and spouses of household heads are labeled "parents with children" though in some cases in the United Kingdom the children in the household may be the offspring of another adult who lives in the same household.

Table 9. Relationship between Usual and Actual Hours Worked Per Week in Six Countries, 2000 ^{1/}

	Parents with children ^{2/}			All adults, age 20-64		
	Usual hours/ week	Actual hours/ week	Actual as % of usual hours/week	Usual hours/ week	Actual hours/ week	Actual as % of usual hours/week
<i>Men</i>						
Austria	39.1	39.0	100	32.8	32.5	99
Belgium	38.2	35.3	92	29.7	27.4	92
Germany ^{3/}	37.4	37.6	101	30.9	30.8	100
Spain	39.2	36.8	94	32.3	30.2	94
United Kingdom	41.3	36.8	89	36.1	32.2	89
United States	41.6	40.2	97	36.2	34.9	96
<i>Women</i>						
Austria	22.1	18.0	81	21.7	19.6	90
Belgium	20.9	18.0	86	17.7	15.7	89
Germany ^{3/}	16.4	14.1	86	19.3	18.3	95
Spain	16.1	14.4	90	16.2	14.8	92
United Kingdom	17.3	14.3	83	21.1	18.0	85
United States	24.5	22.7	93	25.9	24.2	93

^{1/} "Usual" and "actual" hours of work are defined in text. The estimates reflect usual and actual hours of everyone in the indicated populations, including persons who do not work or who may be absent from work.

^{2/} "Parents" are heads of household or spouses of household heads in households containing at least one child under age 15. All parents included in tabulation are age 20-64. In every country except the U.K., at least one of the children under 15 must also be classified as the child of the household head.

^{3/} German data are for 2002.

Source: Authors' tabulations of European Labour Force Survey and U.S. Current Population Survey.

With few exceptions, actual hours of work in the population are less than usual hours of work. For example, British men between the ages of 20 and 64 report average usual hours of work on their main job of 36.1 hours per week. However, the average *actual* hours of work of British men is only 32.2 hours per week, 11 percent lower than reported usual hours of work. Part of the difference is due to absence from work for part or all of a week, possibly as a result of sickness, holidays, or vacation time. Another part is due to overtime hours or involuntary short hours. In Austria and Germany, men's actual hours of work are very close to their reported usual hours of work. Because workers in these countries are granted paid sickness and vacation days, it seems likely that average overtime hours in Austria and Germany are high enough to counterbalance the effects of these kinds of paid absences. Note that men who are parents have higher usual and actual weekly work hours than do adult men in the general population. One reason is that parents in households containing children are typically younger, so a smaller proportion of them are retired.

In all six countries the usual and actual work hours of women are lower than those of men. One reason is that the average work week of employed women is lower than that of employed men; another factor is the lower employment rates of women compared with men. There is a larger discrepancy between actual and usual hours of work among women than there is among men. In the United States, for example, the actual work week of adult men is 96 percent of the usual male work week. Among adult American women, actual hours of work are only 93 percent of usual work hours. In five of the six countries, the proportional difference between usual and actual hours of work is larger in the case of mothers with children under 15 than it is

among all adult women. The United States is an exception to this pattern. The actual work week is 93 percent of the usual work week for American women both with children and overall.

Most of the difference between women's usual and actual hours of work is attributable to absences from work, usually for an entire week. Overall, we find that the difference in the percentage "employed" versus "employed and at work" in a given week is consistently greater among parents than among all adults, consistently greater among women than men, and, aside from Spain, greater in Europe than in the United States (results not shown). Among mothers, for example, the "at work" rate is lower than the employment rate by 12 percentage points in Austria and is lower by 7 or 8 percentage points in Belgium, Germany, and the United Kingdom. In the United States, however, the difference is only 4 percentage points and in Spain it is just 3 percentage points. Clearly, mothers in a number of European countries are absent from their workplace relatively often, which means that they spend fewer hours at work than their American or Spanish counterparts. The work absence patterns are remarkably consistent with what we know about work-family reconciliation policies the six countries.

These labor force survey data give us a somewhat different picture of cross-national differences in work hours than we see in the LIS data. The results for men and women in Table 9 can be combined to determine the ranking of each country's adults with respect to usual and actual hours of work. The labor force survey data suggest that U.S. adults have usual work hours that are 21 percent higher than the usual work week in the five European countries; Americans have *actual* work hours that are 24 percent higher than the five-country European average. Among the European countries, the United Kingdom, Austria, and Germany have the highest level of usual hours, while Austria, the United Kingdom, and Germany report the highest actual work hours. The ranking of the European countries is sensitive to the use of usual as opposed to

actual work hours. British adults have the longest usual work hours in Europe, but Austrians have longer actual hours. Both Spain and Belgium have relatively short work hours, and this is true whether adults in those countries are ranked by their usual or their actual work weeks. What is especially interesting is that the results in Table 9 strongly confirm our main work-hour findings from the LIS data, namely, that U.S. adults work longer weekly hours than their counterparts in these other rich countries -- and that is the case for all adults, men and women and those with and without children.

7. Conclusion

This article paper sheds light on the interaction between the distribution of U.S. living standards and the American time crunch, especially as that time crunch is experienced by parents in the bottom ranks of the income distribution. Along with previous studies, this paper shows that income inequality among working-age adults is greater in the United States than it is in other industrialized countries. One explanation for greater American inequality is the more limited role that the state plays in redistributing income from rich to poor through the tax and transfer system. In comparison with Canadian and West European households, U.S. households at the bottom of the income distribution rely heavily on private labor income to support themselves. Because the American state plays a smaller role in boosting the net incomes of low-income households, these households are more reliant on earned income than is the case in other rich countries.

Our analysis also shows that the usual work hours of working-age adults in low-income U.S. families (unconditioned on employment) are higher than is the norm in Canada and in these five Western European countries. Although Americans tend to work longer hours than Canadians and Western Europeans at both the top and bottom of the income distribution, the proportional

differences are greatest at the bottom of the distribution. This means that Americans at the bottom of the income distribution work longer hours than their counterparts in a number of other rich countries but nonetheless achieve a relative standard of living that is below that enjoyed by working-age adults in other countries who have the same position in their national income distributions.

We also found that the inequality *rank* of the United States does not depend on whether inequality is measured using actual income differences or the “living standard payoff” from work that we reported. The U.S. is the most unequal country among these seven, no matter which of these measures is used. In fact, the gap between U.S. inequality and that in the other six countries appears even wider when we consider our payoff-from-work indicator than it does when we compare regular income distributions. Relative to working-age adults in other high-income countries, poor Americans must spend more time working for pay to achieve their lowly position in the income distribution.

When we focused specifically on households containing children, our analysis showed that American adults in such households typically worked longer hours than their counterparts in other industrialized countries. This is true throughout the income distribution, but it is particularly true in the lower ranks of the income distribution and in households maintained by single mothers. As a result, the amount of parental time available for child care – using our stylized measure – is more limited in the United States, overall, than it is in the other six countries included in our study. The gap in parental time availability between the United States, on the one hand, and Canada and our European study countries, on the other, is particularly large in the case of children in the lower parts of the income distribution. In most rich countries, children in lower-income families tend to have more parental time available to them than

children in higher income families because low-income parents tend to work fewer hours than parents in higher-income households. Our results indicate that, when we consider all family types together, parental time is approximately as scarce in the lowest ranks of the American income distribution as it is in middle- and high-income households. That suggests that, in cross-national terms, the U.S. income distribution and the working time patterns may present comparatively greater challenges not only for working-age adults but for their children as well.

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