

Burtless, Gary; Gornick, Janet; Smeeding, Timothy M.

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## Income distribution, weekly hours of work, and time for child rearing: The US experience in a cross-national context

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**Gary Burtless, Janet Gornick and Timothy M. Smeeding**

**July 2008**



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**Luxembourg Income Study (LIS), asbl**

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# **INCOME DISTRIBUTION, WEEKLY HOURS OF WORK, AND TIME FOR CHILD REARING: THE U.S. EXPERIENCE IN A CROSS-NATIONAL CONTEXT**

*by*

*Gary Burtless* [a], *Janet Gornick* [b], and *Timothy M. Smeeding* [c]

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## *Abstract*

Working-age Americans work longer hours than adults in other industrialized countries. At the same time, the United States has one of the least equal income distributions of any rich country. This paper provides a cross-national analysis of the impact of the exceptional U.S. income distribution and labor supply patterns on time available for child caregiving by comparing the income distributions and work hours distributions of seven rich countries. Our analysis shows that Americans tend to work longer hours than Canadians and Western Europeans at both the top and bottom of the income distribution, but the proportional difference is largest at the bottom of the distribution. Americans at the bottom of the income distribution work longer hours than their counterparts in other rich countries but nonetheless achieve a relative standard of living that is below that enjoyed by working-age adults in other countries who hold a comparable position in their national income distributions. U.S. household heads responsible for rearing children are unusually time constrained. Parents in the middle and top part of the U.S. distribution derive an important advantage from devoting so much of their time to paid employment: They receive higher labor incomes and enjoy greater ability to purchase time-saving household services. Low-income U.S. parents do not derive a comparable advantage from their long hours of work. They work more than parents in other industrial countries who have the same low rank in the income distribution, but their incomes are proportionately further below the median income in their country.

[a] The Brookings Institution, Washington, DC, USA; [b] City University of New York, New York, NY, USA, and Luxembourg Income Study; [c] University of Wisconsin, Madison, WI, USA, and Russell Sage Foundation.

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## **INCOME DISTRIBUTION, WEEKLY HOURS OF WORK, AND TIME FOR CHILD REARING: THE U.S. EXPERIENCE IN A CROSS-NATIONAL CONTEXT**

WORKING-AGE AMERICANS have a high employment rate and a work year that is almost the longest in the industrialized world. The net effect of these key features of the job market is that Americans supply more time to paid employment than their counterparts in other rich countries.(Freeman, 2007; Nickell, 2008) Among high-income industrial countries, only Japan rivals the United States in maintaining such a high level of work hours supplied per working-age adult (Burtless and Jencks, 2003, p. 79; Alesina *et al.*, 2006). High labor supply is one factor that contributes to the U.S. income advantage compared with other wealthy countries. In 1999-2000 real U.S. GDP converted at purchasing-power-parity (PPP) exchange rates was about 40 percent higher than real GDP in the 15-member European Union when measured on a per capita basis. U.S. real income is not very different from that in many rich Western European countries, however, when it is measured on a per-hour-worked rather than a per-person basis (Blanchard, 2004; Osberg, 2002).

At the same time, the United States has one of the least equal income distributions of any rich country. Americans in the bottom fifth of the distribution receive a smaller fraction of aggregate personal income than is typical in the industrialized world, and Americans at the top of the distribution receive a bigger 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. In addition, they are more likely to work – and to work long hours – than their counterparts elsewhere (Smeeding and Rainwater, 2004). This paper provides a cross-national analysis of the impact of the income distribution and labor supply

patterns on time available for child caregiving. We compare the income distributions and work hours distributions in seven rich countries: Austria, Belgium, Canada, Germany, Spain, the United Kingdom, and the United States. These countries share many similar social and political institutions, but they differ in their expectations regarding work and their provision of social benefits to adults who do not work or who work for low wages.

Our analysis suggests that, in comparison with parents in the six other industrial countries, U.S. household heads responsible for rearing children are unusually time constrained. Parents in the middle and top part of the U.S. distribution derive important advantages from devoting so much of their time to paid employment. They receive higher labor incomes, and they enjoy greater ability to purchase time saving services such as child care in the private market. The situation of low-income U.S. parents has much less to recommend it. They work more hours than parents in other industrial countries who have the same low rank in the income distribution. The relative income position that they occupy is much further below the nation-wide average, and they have less money for unsubsidized child care than Americans who are further up in the income distribution (Gornick and Meyers, 2003; Smolensky and Gootman, 2003).

The remainder of the paper is organized as follows. In the next section we describe our data sources and outline the conceptual framework we use to measure income inequality and labor supply patterns in the adult population. The following section presents summary information on the relationship between income and earnings inequality among working-age adults and distributional information about their work time. To provide perspective on the relative position of children in working-age families, the third section summarizes evidence on the relative income position of heads of households containing children and the income sources of these households in the seven sample countries. The next section contrasts the work hours of

adults in households containing children with work hours among adults who live without children, and it considers the impact of single parenthood in the seven countries. We also present a stylized analysis of the time that heads of household have for taking care of children after subtracting out the hours they use for paid employment and commuting. In the following section we examine the sensitivity of our findings on hours of work to alternative estimates of work hours. We compare our main estimates, which are obtained from household income surveys, with alternative estimates obtained from labor force surveys. The paper concludes with a brief summary of findings and consideration of policy implications.

## **I. Data and methods**

In order to compare income distribution and work hours across the countries in our study, it is necessary to find a data source that combines information on household income and on hours of work supplied by individual household members. We use survey data from the Luxembourg Income Study. (We use data from the Wave V, release 2, files. See <http://www.lisproject.org/techdoc.htm> for description and documentation.) The LIS database contains information needed to construct comparable income measures for about thirty countries. 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 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 nations 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.

Household sizes differ, 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 common adjustment, which we use in this paper, 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  $1/2$ .

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 national files in the LIS database, a household head is identified. For convenience, we also classify the spouse 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 work behavior of male and female heads of household, because the social expectations, historical patterns of work, and national customs regarding the two sexes differ so widely across nations. 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.

Unfortunately, the LIS database does not always include information on household members' usual hours of paid work. Many American researchers are familiar with the excellent labor force data in the LIS database for the United States (the Current Population Survey), a labor force survey that ascertains annual income data in a March supplement. No other country in LIS provides a dataset that combines such extensive information about both annual income and weekly and annual labor force engagement. The LIS database was created to compare income distributions of member countries, and its income distribution surveys often contain less reliable or less detailed information about labor force behavior. For some countries the LIS file includes good information on income but little or no data on work hours. The seven countries analyzed here provide both income and work hours data to the LIS database. 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.

The available variables in these LIS datasets allow us to ascertain workers' usual weekly hours but they do not include data on workers' actual hours of paid work, either in the employment reference period or over a full calendar year. This creates two important limitations of our study. The first is that 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 absences from work 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.

The second limitation is that our data 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 when we are concerned with time for child caregiving, which takes place on a daily basis – we recognize that our inability to directly assess annual work hours is problematic. Countries could have similar patterns of hours worked per week, but very 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 obscure the important contribution of variability in weeks worked per year, and thus in annual 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 do not offer much paid leave.<sup>1</sup> 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 actual hours of work and household income in the same reference period, we know of no such files covering a reasonable cross section of countries. In particular, there are few if any cross-national files outside of LIS that combine reliable information on household income with good information on employment and hours worked.<sup>2</sup> In section V below we present alternative estimates of usual and actual work hours based on responses obtained in national labor force surveys.

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 65. We selected the wide age range 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

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<sup>1</sup> See Gornick and Meyers (2003), especially Chapters 5-6, and Waldfogel (2007).

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.

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 micro-census files to the LIS that permit us to measure household income and individual-level work hours and labor earnings. In addition, the data cover a recent calendar year, either 1999 or 2000. The seven countries differ significantly with respect to the institutional arrangements that determine earned income inequality and customary hours worked. In addition, they differ in the program eligibility rules and tax and benefit formulas that redistribute income among working-age families. Our sample unfortunately excludes any representative of the Scandinavian social model, which emphasizes both high employment and narrow income differentials. None of the Scandinavian countries has provided the LIS with an up-to-date file containing reliable information on both income and work hours.<sup>3</sup>

## **II. Adult income distribution and hours of work**

Income inequality can be measured in a variety of ways. In this study we rank countries according to the relative distance between people in different fifths of the distribution of

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<sup>2</sup> See Alesina *et al.* (2006), who use OECD labor force surveys but do not have the added income data included in the LIS database.

household-size-adjusted disposable income. Disposable income is the sum of gross private income, including wages, self-employment income, and capital income, plus public cash and near cash transfers less direct tax payments (income and payroll taxes). A household's adjusted or "equivalent" income expresses income in currency units that reflect the same amount of well-being, regardless of the size of the households being compared. After calculating adjusted income for every person in our sample, 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 18 and adults over 64, and the presence of these people 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 class 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.

The top five rows in Table 1 show 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. The bottom two rows in the table show the ratios of average income, comparing high and low classes in the distribution. One of these rows shows the ratio of average income in the top fifth to income in the bottom fifth of the distribution. Reported incomes at the top and bottom tails of the distribution are affected by misreporting and top coding procedures of national statistical agencies (Atkinson, Rainwater and Smeeding, 1995).

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<sup>3</sup> See McLanahan and Garfinkel (1994) for a comparison of hours worked by lone mothers in Sweden compared to other nations around 1990.

Income reports nearer the middle of the distribution are less affected by these measurement idiosyncrasies. As a supplement to the top/bottom income ratio, we show the ratio of average incomes in the fourth and second fifths of the distribution. Both sets of income ratio statistics show the same cross-national pattern of inequality. Not surprisingly, the cross-national pattern of 18-64 year-old inequality also conforms closely with the pattern uncovered when researchers estimate inequality in the entire population rather than among working-age adults. The rank order of countries in Table 1 is very similar to the rank order found when all-person inequality is measured using the Gini coefficient (see <http://www.lisproject.org/keyfigures/ineqtable.htm>). The published LIS estimates of the Gini coefficient for 1999-2000 show the United States has the least equal income distribution among the seven countries, followed by the United Kingdom and Spain. Austria has the most equal distribution. These rankings are quite similar to those shown in Table 1.

We do not pretend the estimates displayed in Table 1 fully reflect the true differences in economic well-being among the income classes we compare. The estimates only reflect differences in spendable income, using a simple adjustment to capture the possible influence of household size. Public goods, like 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 the services are provided for free or at reduced cost to some groups, such as the indigent 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 differences in inequality would be affected (see Garfinkel, Rainwater and Smeeding, 2006) .

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. The tabulation focuses on people in each country who are members of included households and who are between 18 and 64 years old. The estimates reflect adults who are heads of households as well as those who are not heads of households. People who do not report positive weekly hours are treated as working zero hours per week in this tabulation. The average reported “usual working hours” among employed 18-64 year-olds is 39.1 hours a week.<sup>4</sup> (This estimate is the simple seven-country average and is not weighted to reflect differences in national populations.) Since 72 percent of 18-64 year-olds report working in the reference period, this implies that the average 18-64 year-old, including nonworkers, is usually employed for pay 28.0 hours per week. Table 2 shows average hours of work within adjusted income class in each of the seven countries. The top panel shows average hours relative to a reference level of hours – the average workweek in all seven countries (28.0 hours per week). The lower panel restates the statistics to show average work hours in each income class in relation to the *national* average workweek.

Before discussing the distributional statistics, we consider average work hours across the seven countries. Austrian, Belgian, Canadian, German, and U.K. adults taken as a whole have an average work week that is approximately equal to the seven-nation average. Austrian, German, and U.K. 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

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<sup>4</sup> Among adults at work in a given week, the usual work hours of Americans are close to those of working adults in the European countries. This finding is similar to that of Alesina *et al.* (2006, p.7).

employment rate (77 percent) combined with an above-average work week (40.2 hours per week among those who are employed). The result is that American adults work 10 percent more 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 the 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 V where we examine work hours differences as measured in national labor force surveys.

The difference between U.S. and other countries' average work hours helps explain 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 shows Penn World Table estimates of real GDP per person converted to U.S. dollars using purchasing-power-parity (PPP) exchange rates (see <http://pwt.econ.upenn.edu>). We have measured each country's average income relative to the seven-country (unweighted) average GDP per person. American adults in our sample work 10 percent longer weekly hours than the seven-nation average, and the United States has per capita real income that is 33 percent higher than the seven-nation average. Figure 1 shows the relation between adult working hours as measured in the LIS database and real per capita GDP. Although the statistical relationship displayed in the chart overstates the causal link between average work hours and average real income, it clearly suggests there is a connection between the two variables.

A high employment rate helps boost Americans' average income in comparison with incomes in other countries, but it also means working-age Americans have less free time to devote to activities outside of paid work. Most people value the activities they pursue in their free time as well as the goods and services they can buy with the wages they earn at work. On

average, Americans have more income than residents of other OECD countries, but they are also employed during more years of their life, and they work longer hours on the job. Some of the income advantage enjoyed by Americans represents compensation for their sacrifice of free time. For Americans who earn low hourly wages, the 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).

In each country in our sample, adults in the lower ranks of the adjusted income distribution work fewer hours than adults with a higher income rank. On average, adults in higher income classes are more likely to be employed and to work longer usual hours than adults in lower income classes. The hours gap between top and bottom income recipients is particularly wide in the United Kingdom, where adults in the lowest income class work 59 percent less than the national average work week while adults in the top income class work 36 percent more than the national average. Interestingly, the hours differential between adults in the top and bottom income classes is narrower in the United States than it is in most other countries. While Americans in each income class usually work longer hours than their counterparts in the other six countries, the biggest proportional differences are at the bottom of the income distribution. Americans in the top income class work 5 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 class have average weekly hours that are 22 percent higher than the average usual hours of low-income adults in the other six countries.



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 to obtain those incomes. (U.S. hours are the highest, and by a large margin, in the second quintile from the bottom.) One way to think about the relationship between average hours of work and relative living standards is to measure the average “living standard payoff” that each income class receives per hour that it works. We define the “living standard payoff” from work in the following way. The average payoff in each income class is the ratio of mean adjusted disposable income per adult divided by hours worked per adult in the income class. In order to measure the payoff in a way that provides meaningful comparisons across countries, we measure the payoff in each income class 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 class, 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.)

Table 3 shows estimates of this payoff, by income class, for each of the countries in our sample. Although the “payoff” from work differs by income class, it differs by a notably smaller ratio than incomes (compare the bottom two rows in Table 1 and Table 3). For example, Spanish adults in the bottom income class 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 class have work hours that are just 69 percent of the Spanish average (see the bottom panel of Table 2). For each hour that they work, Spaniards in this income class derive an income that is about half the Spanish average (top row in Table 3). This is a big differential to be sure, but it is smaller than the actual income difference displayed in Table 1. Note that our estimate of the relative “payoff” to work is *not* the same as the net hourly wage. Many households in the

lowest income class derive a large percentage of their income from public transfers rather than labor earnings. Transfers help support living standards at the bottom, and they boost the measured “payoff” ratio, but they are not payments that adults receive in exchange for their work. In many cases, the payments help compensate low-income breadwinners for meager hourly wages or lengthy spells of joblessness.

What is interesting about the “work payoff” ratios displayed in Table 3 is the change in inequality rankings among countries. After accounting for hours of work differences across income classes, the United Kingdom appears less unequal than Canada or Germany. Actual incomes at the top and bottom of the U.K. distribution are more unequal than those in Canada and Germany, but hours of work differences are also much bigger in the U.K. than in the other two countries. In fact, average work hours among low-income Britons are the lowest of any income group in our sample, and average hours in the top U.K. income class are the highest. The incomes of low-income Britons are supplemented 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. Many working-age U.K. households receive no labor income at all and depend entirely on unearned public transfers or private income for support (see top panel of Table 4). In households headed by adults in the bottom one-fifth of the U.K. income distribution, more than one-half report receiving no income from wages or self-employment.

In contrast with the U.K. and the other rich countries, Spain and the United States have few working-age households that do not receive labor earnings (see Table 4). Spanish and U.S. households are therefore more likely to be exclusively or heavily reliant on the incomes they obtain from work. 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, no matter which of these two measures is used. 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. Compared with their counterparts in other industrial countries, low-income Americans must work much harder to achieve their very poor relative position in the income distribution.

### **III. The relative income position of children**

A working-age household can have a low rank in the adjusted income distribution because it receives a small *unadjusted* income or because its income must be divided among a large number of household members. Both explanations help account for the distribution of household-size-adjusted income among working-age adults shown in Table 1. Table 5 shows the distribution of labor earnings, not adjusted for household size, among household heads in our seven-nation sample. The average earnings of household heads in each income class is measured as a percentage of the average earnings of each country’s male heads of household.<sup>5</sup> The top 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 middle panel shows the earnings distribution for female heads.

Note that Table 5 shows average earnings only for those 18-64 year-olds who are household heads. It excludes earnings of 18-64 year-olds who are members of sample households but who are not heads of household. Note also that household heads’ income rank is determined by their size-adjusted disposable incomes, not by their unadjusted labor earnings. Nonetheless, unadjusted gross earnings are monotonically increasing with the income class of

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<sup>5</sup> The gross earnings of Austrian, Belgian, and Spanish workers are not available in the LIS database. Net, after-tax earnings are used instead. In the other four countries, the estimates in Table 5 reflect household heads’ gross (pretax) earnings.

household heads. In fact, in those countries where the LIS file contains information on before-tax earnings, the inequality of unadjusted earnings is proportionately greater than the inequality of size-adjusted personal income (compare the bottom rows in Tables 1 and 5 for Canada, Germany, the United Kingdom, and the United States). Obviously, the inequality of pretax 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-earnings-rank household heads and reduces the size-adjusted incomes of heads who have a high earnings rank.

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), but unadjusted earnings differences between U.S. household heads are not exceptionally large compared with those in the other countries (Table 5). Earnings differences among U.S. male household heads are smaller than those observed in Belgium, Canada, and the United Kingdom, for example. Earnings differences between different classes of U.S. female head earners are also smaller than those in Canada, Spain, and the United Kingdom. These comparisons suggest that the relatively poor income position of adults in the bottom ranks of the U.S. income distribution cannot be explained by exceptionally low labor earnings at the bottom of the U.S. income scale. Instead they are explained by a combination of moderate earned income and very meager income supplementation through public transfer programs. Indeed the largest cash income transfer program for low income Americans, the Earned Income Tax Credit (EITC), is explicitly earnings conditioned. The generosity of this refundable tax credit increases as earnings rise, at least up to a limit. Households without any earned income do not receive EITC payments.

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 two 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 the willingness or ability of a working-age family member to hold a job. 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 class contains exactly one-fifth of a country's 18-64 year-olds. In Canada, adults in the bottom one-fifth of the adult income distribution support 27 percent of Canadian children, while the top one-fifth of adult income recipients supports just 11 percent of children.

There is little evidence that male heads of households containing children earn systematically lower labor incomes than male heads who do not support children. Figure 2 shows the earnings advantage or deficit of household heads of child households compared with heads of no-child households. 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 gross earnings advantage or deficit of heads with children is measured as a percentage of the average gross 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 between 4 percent in Belgium up to 34 percent in Canada. The impact of children on female heads' earnings is much less favorable. In six of the seven countries, women heading households containing children earn less than women who head households without any 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 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 earnings gaps between mothers and fathers, see Connolly, Munzi and Gornick, 2008.)

There is of course a difference in the situation of household heads depending on whether they are married or unmarried. Most male heads of households containing children are married. Married men who head households with children earn significantly higher labor incomes than married men who head households without any children. Married women who head families containing children earn somewhat less than married female heads without children, but the small earnings deficit of wives with children is more than offset by the earnings advantage of their husbands. Single women who head households containing children are in a very different position than married female heads. The earnings capacity of single women who support children is typically quite limited (O'Connor, Saunders and Smeeding, 1998). In addition to this handicap, single-female-head households face two other disadvantages when there are children in the household. The ratio of child dependents to potential adult breadwinners is higher in such families than it is in married-couple households. In addition, women who head households earn substantially less than male heads of household in every country in our sample (see the middle panel in Table 5). These facts help explain the distribution of children across income classes. Children are concentrated in the lower ranks of the income distribution for two main reasons. First, they add to the number of dependents who must be supported out of any given household income and they do not increase the household's earnings capacity. And second, children reared in single-female-head households typically have very little adult earnings capacity relative to the number of child dependents. The prevalence of single parenthood in the United Kingdom and the

United States helps explain the high concentration of children in the bottom income ranks of those two countries (Gornick and Meyers, 2003).

The relative income position of children and 18-64 year-old adults in our sample is summarized in the text table immediately below. 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 average income of adults in households containing children is between 9 and 14 percent lower than the

**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	87	89	91	87	86	89
Children aged 0-17	83	78	72	79	80	65	69

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

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

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. The greater the number of children in a household, the larger the impact on an adult's (and a household's) income position. Thus, children are even more concentrated in the lower ranks of the income distribution than are the adults who support them. The bottom line in the table shows the relative position of an average child in each country. It is highest in Austria, Spain, and Germany and lowest in the United Kingdom and the United States. In the United Kingdom and the United States, the average size-adjusted income of children is 31 percent to 35 percent below the average income of 18-64 year-old adults.

#### IV. Availability of time for child rearing

Compared with other industrialized countries, working-age families in the United States are unusually reliant on the incomes breadwinners obtain through their earnings and the income earned on the property they own. Since public transfers are not generous in supplementing the private incomes of working-age adults, working-age 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 shows the percentage of size-adjusted household income that is derived from gross labor earnings among household heads who are in the bottom one-fifth of the income distribution. (Austria, Belgium, and Spain are excluded from this chart because the LIS database only includes information on respondents' net rather than gross labor income.) Among all household heads in this income range, Americans are the most reliant on labor income. Gross wages and self-employment income account for 83 percent of low-income U.S. households' income. Strikingly, U.K. household heads derive the *smallest* percentage of their adjusted income from this source. Only about half of their income comes from the earnings of the head or some other household member. Among heads of households containing children, heads in the United States and Germany derive the largest proportion of their income from gross earnings, and U.K. heads derive the smallest percentage. The contrast between the United States and other countries is biggest in the case of unmarried female heads of households containing children. All seven countries supplement the incomes of low-income single female heads more generously than they supplement incomes of low-income married-couple households. But the preference for single women rearing children over married couples with children is smallest in the United States. Single U.S. women who head households containing children obtain 71 percent of their size-adjusted income from earnings. In Canada and Germany the comparable percentage is



between 44 percent and 57 percent, and in the United Kingdom it is just 15 percent. The remainder of household income is primarily derived from state transfers, mostly means-tested benefits.

Not surprisingly, American adults who live in households containing children work substantially more than adults in the other countries, and the difference is particularly large among adults living in low-income households. Table 7 shows the distribution of reported weekly work hours among all adults who live in households containing children. The 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.<sup>6</sup> As in Table 2, the top panel shows average hours worked in an income class relative to the seven-country average work week (28.0 hours). The middle panel shows average hours relative to the average work week of 18-64 year-olds in the same country. The results in the table show that Austrian, Belgian, and American adults in child households work more than adults in child households in Canada, Germany, Spain, and the United Kingdom. On average, Americans in child households work 9 percent more than the average 18-64 year-old adult in the seven countries. In the bottom income class, Austrian and American adults in child households have an average work week that is within 20 percent of the seven-country average work week.

The bottom two rows in Table 7 show that the inequality of weekly hours by income classes is narrower in Austria and the United States than it is in the other five countries. Even

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<sup>6</sup> Note that income classes in Table 7 contain an unequal number of adults. The income class of each adult is determined by his or her position among *all* 18-64 year-olds. Since adults in childless households are excluded from the tabulations in Table 7, a disproportionate number of adults with above-average size-adjusted incomes is missing. Thus, in Table 7 the number of adults in low income classes will be larger than the number of adults in high income classes.

though the size-adjusted income of U.S. adults in the bottom income class is relatively lower than it is in the other six countries, the average work hours supplied by these adults is a higher proportion of the average work hours supplied by American adults in the top income class.

One important implication of these results is that American adults spend a bigger fraction of their time at work compared with adults in other industrialized countries, potentially depriving American youngsters of valuable parental time. For convenience in exposition, we focus on the time availability of household heads in households that contain children.<sup>7</sup> 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 a week to commute to a job. This assumption will overstate commuting hours for some workers and understate commuting hours 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 have 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.)

Table 8 shows the availability of household heads' time in the seven countries, both by income class of the head and by marital status of the head. Except in the highest income class, American heads of household have less time available for caregiving than household heads in

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<sup>7</sup> For the purposes of this analysis, we considered all household heads who live in households with children to be parents. We believe that to be a reasonable assumption because the overwhelming majority of heads who live with children are the primary caregivers of those children.

other countries. The difference is particularly large in the lowest income classes, especially for single women who are heads of household. It is interesting that Spanish single women who head households containing children are also constrained in the amount of time they can devote to caregiving, but only a small percentage of Spanish children are members of such households (see the bottom row in Table 6). When combining the results for heads in married-couple and single-female households, there seems to be no shortage of time for caregiving to Spanish children, except in the highest ranks of the Spanish income distribution (see top panel of Table 8). The results in the top panel of Table 8 also suggest that the availability of heads' time for caregiving does not decline with income in the United States. Household heads at the bottom of the income distribution are just as constrained in making time available for their children as U.S. heads at the top of the distribution. In all of the other countries, heads of household at the bottom of the distribution obtain some compensation for their low size-adjusted incomes: They potentially have more time to devote to child rearing. One explanation for this difference is the high proportion of single female heads in the United States. These heads by definition have less available time to divide between work and caregiving than do married-couple heads. The United Kingdom also has a high proportion of single female heads, however. An important difference between the United Kingdom and the United States is that public transfers are relatively much more generous for U.K. single parents. As a result, the hours of work supplied by single female heads is much lower in the U.K. than in the U.S. On balance, the single mothers in the U.K. also have much more time to devote to caregiving.

## **V. 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 analysis in the previous sections was therefore based on adults' usual hours of work. To help us understand the relationship between usual and actual hours of work, we have obtained information from national labor force surveys on both concepts of work hours. 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 smaller in the United States than it is on average in Europe. It therefore follows that the findings presented in the earlier sections tend to understate the labor supply differences between Europe and the United States. 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 these tabulations separately for men and women, and we examined work hours for the entire adult population between 20 and 64 years old. In addition, we estimated hours among 20-64 year-old adults who were household heads or spouses of heads in households containing at least one child under age 15.<sup>8</sup>

Table 9 shows the results of these tabulations. Results in the top panel 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. With few exceptions, actual hours of work in the population are less than usual hours of work. For example, U.K. men between 20 and 64 report usual hours of work on their main job of 36.1 hours per week. However, the average *actual* hours of work of U.K. men is only 32.2 hours per week, 11 percent

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<sup>8</sup> 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.

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. Since workers in these countries are provided paid sickness and vacation time, it seems likely that average overtime hours in Austria and Germany are high enough to counterbalance the effects of this kind of paid absence. Note that men who are parents have higher usual and actual hours of work than adult men in the general population. One reason is that parents in households containing children are typically younger than men in general, 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 reason is the lower employment rate of women compared with men. There is a bigger 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 bigger 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 both for American mothers and for all U.S. women between 20 and 64.

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. 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. Note that these absences, which span an entire week, do not show up in comparisons of usual weekly hours. The work absence patterns are remarkably consistent with what we know about work-family reconciliation policies the six countries.

The labor force survey data give us a somewhat different picture of cross-national differences in work hours than we see in the LIS files. 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 longer 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 have the longest 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. The results in Table 9 strongly confirm our main work hour findings from the LIS file, namely, that

U.S. adults work longer than their counterparts in other rich countries and the hours differences are particularly striking in the case of parents who are rearing children.

## **VI. Conclusion**

Our 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 many 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 smaller role of the state 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 and property 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 shows that usual work hours of working-age adults in low-income U.S. families are higher than is the norm in Canada and 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 largest 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.

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 industrial countries. This is true up and down the income distribution, but it is particularly true in the lower ranks of the income distribution and in households maintained by single women. As a result, the amount of parental time available for child care is more limited in the United States 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 Western Europe, on the other, is particularly large in the case of children in the bottom ranks 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. In the United States, however, low-income children do not receive extra parental time in compensation for their lowly income position. Our calculations suggest that parental time is approximately as scarce in the lowest ranks of the American income distribution as it is in middle- and high-income households.

Our findings that link work hours to households' position in the income distribution are limited, because they refer only to the usual time that adults spend in paid work in weeks when they are fully employed. This limitation results in an understatement of the difference between American and European patterns of work time. Compared with U.S. workers, a larger percentage of European workers have access to paid leave for sickness, vacations, and the birth of a child (Freeman, 2007; Nickell, 2008). Paid and unpaid absences are not taken into account in the main work hours estimates reported in this paper. Consequently, the work hours of Europeans are probably overstated relative to those of Americans. This interpretation is confirmed when we examined work hours differences estimated using responses from comparable labor force surveys.



Of course, information on “usual” work hours per week do not provide direct evidence on the time parents have available to spend with their children. Nor do they provide any information on the quality of care that parents provide when they are with their children. This kind of information can only be obtained in time use surveys or in careful observational studies. Researchers using more direct evidence on caregiving have reached some tentative conclusions about the time parents spend with their children. Recent comparative studies of time use for child care suggest that the economic and social changes that have taken place since the 1960s have not only changed the environment in which children grow up, they also have affected parental investment in children, apparently in a positive way (see Gauthier *et al.*, 2004, and Sayer and Gornick, 2007, who examine parental time constraints in several of the countries studied here). These time use studies reveal that, in the case of two-parent families, paid work does not appear to impinge substantially on the time investment that parents make in their children, at least not directly. Employed parents in two-parent households devote slightly less time to their children than parents who are not employed, but the difference is small compared to the difference between working and non-working parents in time devoted to paid work. Evidently, both parents, but especially mothers, appear to be preserving time with their children, mainly by reducing time devoted to leisure and personal activities (including sleep) and by outsourcing housework. Paid work may, however, have the effect of reducing potential parents’ “taste” for children, because the presence of a child requires a bigger commitment of time to paid and unpaid work. Unfortunately, analysis that is restricted to two-parent families misses the fact that many of today’s children grow up in households that do not contain two married spouses (Heuveline, Timberlake, and Furstenberg, 2003). In many countries’ time use surveys, the number of single-parents is too small to allow historical analysis of parental time use in this kind of household. As

we have seen, single-parent families play a more important role in child-rearing in the United States compared with other rich countries.

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

	<b>Austria</b> (2000)	<b>Belgium</b> (2000)	<b>Canada</b> (2000)	<b>Germany</b> (2000)	<b>Spain</b> (2000)	<b>UK</b> (1999)	<b>USA</b> (2000)
<b>Relative income: Average adjusted disposable income = 100</b>							
Fifths of income distribution							
Bottom	46	41	33	44	35	31	30
Second	73	66	63	71	63	61	60
Middle	92	83	86	89	86	85	85
Fourth	114	103	114	113	115	115	114
Top	175	208	191	183	201	207	211
<i>All</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
<b>Income ratios:</b>							
Top / Bottom	3.8	5.1	5.8	4.2	5.8	6.6	7.0
Fourth / Second	1.6	1.6	1.8	1.6	1.8	1.9	1.9

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-census files.

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

	<b>Austria</b>	<b>Belgium</b>	<b>Canada</b>	<b>Germany</b>	<b>Spain</b>	<b>UK</b>	<b>USA</b>
	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2000)

**Average hours of work in 7 countries = 100**

Fifths of income distribution

Bottom	77	50	65	63	62	41	73
Second	94	91	95	96	83	84	107
Middle	106	108	106	107	91	113	117
Fourth	108	116	112	115	103	129	124
Top	118	124	117	124	112	138	129
<i>All</i>	<i>101</i>	<i>98</i>	<i>99</i>	<i>101</i>	<i>90</i>	<i>101</i>	<i>110</i>

**Average hours of work in own country = 100**

Fifths of income distribution

Bottom	77	51	66	62	69	41	66
Second	94	93	96	95	92	83	97
Middle	105	110	107	106	101	112	107
Fourth	108	119	113	113	114	127	113
Top	117	126	118	123	124	136	117
<i>All</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>

**Average hours ratios:**

Top / Bottom	1.5	2.5	1.8	2.0	1.8	3.3	1.8
Fourth / Second	1.1	1.3	1.2	1.2	1.2	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
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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-census files and Penn World Tables, version 6.2.

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

	<b>Austria</b> (2000)	<b>Belgium</b> (2000)	<b>Canada</b> (2000)	<b>Germany</b> (2000)	<b>Spain</b> (2000)	<b>UK</b> (1999)	<b>USA</b> (2000)
<b>Average disposable income / hours ratio in country = 100</b>							
Fifths of income distribution							
Bottom	60	79	50	70	51	76	45
Second	78	70	66	75	68	73	62
Middle	88	75	80	84	86	76	80
Fourth	106	86	101	100	101	91	101
Top	149	165	162	149	162	152	180
<i>All</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>
<b>Work payoff ratios:</b>							
Top / Bottom	2.5	2.1	3.2	2.1	3.2	2.0	4.0
Fourth / Second	1.4	1.2	1.5	1.3	1.5	1.2	1.6

1/ See note to Table 1 for description of the sample. The estimates show the relative payoff to work in the seven countries. The "payoff" in each income class is ratio of mean adjusted disposable income per adult divided by hours worked per adult in the income class. Entries in the table show the payoff in each income class measured relative to the all-adult average payoff (that is, each country's all-adult average payoff=100).

*Source:* Authors' tabulations of LIS micro-census files.

**Table 4. Percent of Households Receiving No Labor Income in Seven Countries by Income Class and Marital Status, 1999-2000 <sup>1/</sup>**

Hours per week

	Austria (2000)	Belgium (2000)	Canada (2000)	Germany (2000)	Spain (2000)	UK (1999)	USA (2000)
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**All households**

Income class of household head:

Bottom	30	53	31	31	24	58	24
Second	10	12	5	8	7	20	4
Middle	7	5	2	5	2	6	2
Fourth	7	4	2	3	2	2	1
Top	3	2	1	2	1	2	1
All	13	17	9	11	8	20	7

**Households containing children**

Income class of household head:

Bottom	12	38	20	19	11	49	12
Second	1	2	1	1	1	8	1
Middle	1	1	0	0	0	1	0
Fourth	0	0	0	0	1	0	0
Top	0	0	0	0	0	1	0
All	4	9	5	5	4	18	4

**Married-couple households containing children**

Income class of household head:

Bottom	4	30	12	8	9	27	6
Second	0	2	0	1	1	5	0
Middle	1	1	0	0	0	0	0
Fourth	0	0	0	0	0	0	0
Top	0	0	0	0	0	0	0
All	1	5	2	2	3	7	1

**Single-female-head households containing children**

Income class of household head:

Bottom	31	53	33	35	23	71	19
Second	3	5	3	5	0	20	1
Middle	0	10	0	3	0	4	1
...	...	...	...	...	...	...	...
All	19	36	20	26	14	52	11

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

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



**Table 5. Average Earnings, Not Adjusted for Household Size, of Household Heads in Seven Countries by Income Class and Gender, 1999-2000 <sup>1/</sup>**

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

	<b>Austria <sup>2/</sup></b> (2000)	<b>Belgium <sup>2/</sup></b> (2000)	<b>Canada</b> (2000)	<b>Germany</b> (2000)	<b>Spain <sup>2/</sup></b> (2000)	<b>UK</b> (1999)	<b>USA</b> (2000)
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**Male heads of household**

Income class of household head:

Bottom	47	22	21	26	37	17	24
Second	76	62	63	71	70	56	54
Middle	94	84	89	93	88	87	78
Fourth	106	96	114	113	107	115	106
Top	175	226	211	189	200	217	220
All	100	100	100	100	100	100	100

**Female heads of household**

Income class of household head:

Bottom	15	13	13	14	6	7	13
Second	33	33	33	34	14	23	30
Middle	41	43	49	47	26	40	44
Fourth	59	59	68	64	46	61	61
Top	87	73	109	86	90	101	96
All	44	42	51	47	35	44	47

**Ratio of unadjusted earnings, Top / Bottom income class:**

Male heads	3.7	10.4	10.1	7.2	5.3	12.4	9.2
Female heads	5.8	5.7	8.5	6.1	14.3	13.8	7.5

<sup>1/</sup> 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 class measured as a percentage of the mean earnings of male household heads in the national sample.

<sup>2/</sup> 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-census files.

**Table 6. Distribution of Children by Head's Income Class and by Head's Marital Status in Seven Countries, 1999-2000** <sup>1/</sup>

Percent of all children

	<b>Austria</b>	<b>Belgium</b>	<b>Canada</b>	<b>Germany</b>	<b>Spain</b>	<b>UK</b>	<b>USA</b>
	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2000)

**All children, regardless of head's marital status**

Income class of household head:

Bottom	32	23	27	27	31	34	31
Second	29	22	26	27	24	25	24
Middle	17	23	21	21	17	18	20
Fourth	13	19	16	15	15	13	15
Top	9	14	11	11	13	9	11
<i>All</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>	<i>100</i>

**Children in married-couple households**

Income class of household head:

Bottom	25	16	18	17	27	18	18
Second	25	19	21	24	23	20	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
<i>All</i>	<i>88</i>	<i>89</i>	<i>83</i>	<i>86</i>	<i>94</i>	<i>76</i>	<i>77</i>

**Children in single-female-head households**

Income class of household head:

Bottom	7	7	8	9	3	15	12
Second	3	2	3	2	1	4	4
Middle	1	1	1	0	0	1	2
Fourth	0	0	0	0	1	1	1
Top	0	0	0	0	0	0	0
<i>All</i>	<i>12</i>	<i>10</i>	<i>13</i>	<i>12</i>	<i>5</i>	<i>22</i>	<i>19</i>

<sup>1/</sup> For a description of the household sample, see note to Table 1. These tabulations reflect the income classes 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-census files.

**Table 7. Distribution of Unconditional Weekly Hours of Work among Non-aged Adults in Households Containing Children under 18, 1999-2000 <sup>1/</sup>**

	<b>Austria</b>	<b>Belgium</b>	<b>Canada</b>	<b>Germany</b>	<b>Spain</b>	<b>UK</b>	<b>USA</b>
	(2000)	(2000)	(2000)	(2000)	(2000)	(1999)	(2000)

**Average hours of work in 7 countries = 100**

Income class of household

head:

Bottom	86	73	75	72	70	47	81
Second	104	106	103	98	88	96	110
Middle	117	118	114	108	95	119	119
Fourth	118	123	118	114	107	129	124
Top	126	134	118	116	119	134	123
<i>All</i>	<i>107</i>	<i>111</i>	<i>105</i>	<i>100</i>	<i>92</i>	<i>99</i>	<i>109</i>

**Average hours of work in own country = 100**

Income class of household

head:

Bottom	85	75	76	71	78	46	74
Second	103	108	104	97	98	95	100
Middle	116	121	114	107	105	117	108
Fourth	117	126	119	112	119	128	113
Top	125	137	119	115	132	132	112
<i>All</i>	<i>106</i>	<i>113</i>	<i>105</i>	<i>99</i>	<i>103</i>	<i>97</i>	<i>99</i>

**Average hours ratios:**

Top / Bottom	1.5	1.8	1.6	1.6	1.7	2.9	1.5
Fourth / Second	1.1	1.2	1.1	1.2	1.2	1.3	1.1

<sup>1/</sup> For a description of the household sample, see note to Table 1. These tabulations reflect the income classes 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-census files.

**Table 8. Hours Available for Child Rearing among Heads of Household in Seven Countries, 1999-2000** <sup>1/</sup>

Hours per week

	Austria (2000)	Belgium (2000)	Canada (2000)	Germany (2000)	Spain (2000)	UK (1999)	USA (2000)
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**All children in married-couple and single-female-head households**

Income class of household head:

Bottom	127	129	126	127	144	130	116
Second	124	123	123	131	139	124	116
Middle	122	120	119	129	134	119	116
Fourth	123	117	119	125	124	115	113
Top	117	112	119	122	118	113	116
All	123	120	121	127	134	121	115

**Children in married-couple households**

Income class of household head:

Bottom	143	149	146	153	152	160	145
Second	133	131	132	137	142	135	128
Middle	125	122	123	130	136	123	122
Fourth	124	117	121	126	128	117	117
Top	118	114	121	123	119	113	118
All	130	126	129	134	138	131	126

**Children in single-female-head households**

Income class of household head:

Bottom	75	83	81	79	76	93	73
Second	61	62	60	62	62	75	61
Middle	71	57	60	57	50	61	60
Fourth	55	55	60	51	61	56	56
Top	57	64	57	57	50	62	56
All	70	75	72	73	68	85	67

<sup>1/</sup> 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-census files.

**Table 9. Relationship between Usual and Actual Hours Worked Per Week in Six Countries, 2000 <sup>1/</sup>**

	Parents with children <sup>2/</sup>			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 <sup>3/</sup>	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 <sup>3/</sup>	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

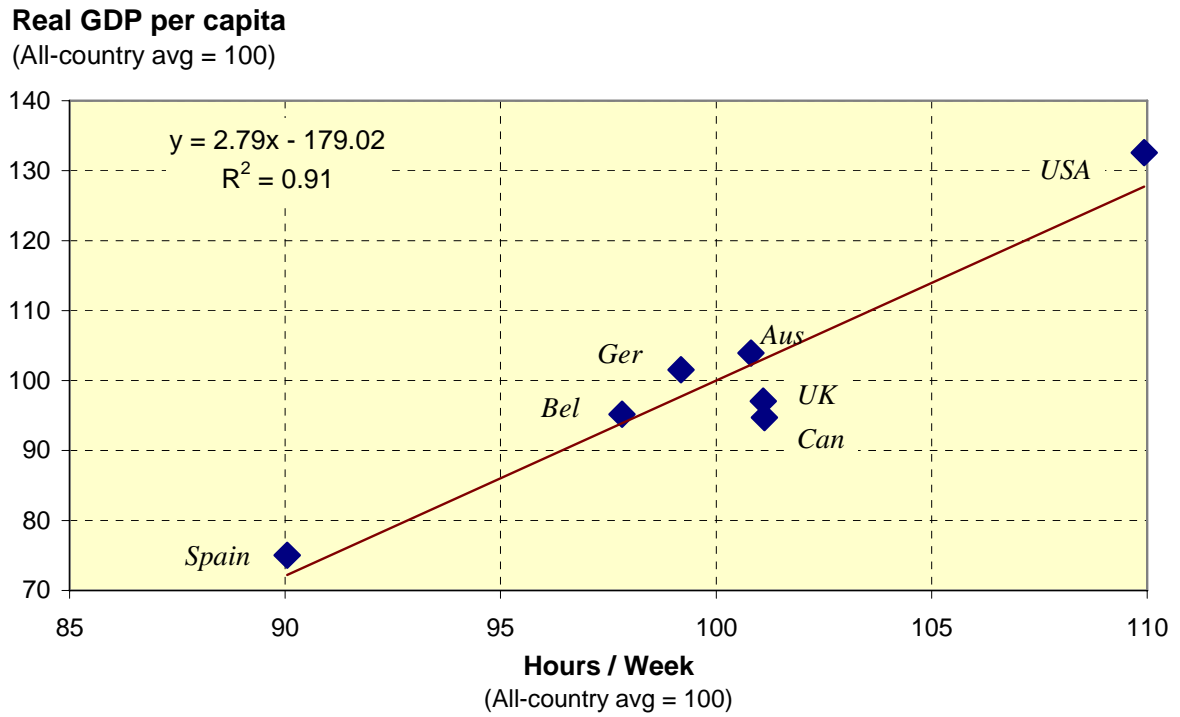
<sup>1/</sup> "Usual" and "actual" hours of work are defined in text. The estimates reflect usual and actual hours of everyone in the indicated populations, including persons who do not work or who may be absent from work.

<sup>2/</sup> "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.

<sup>3/</sup> German data are for 2002.

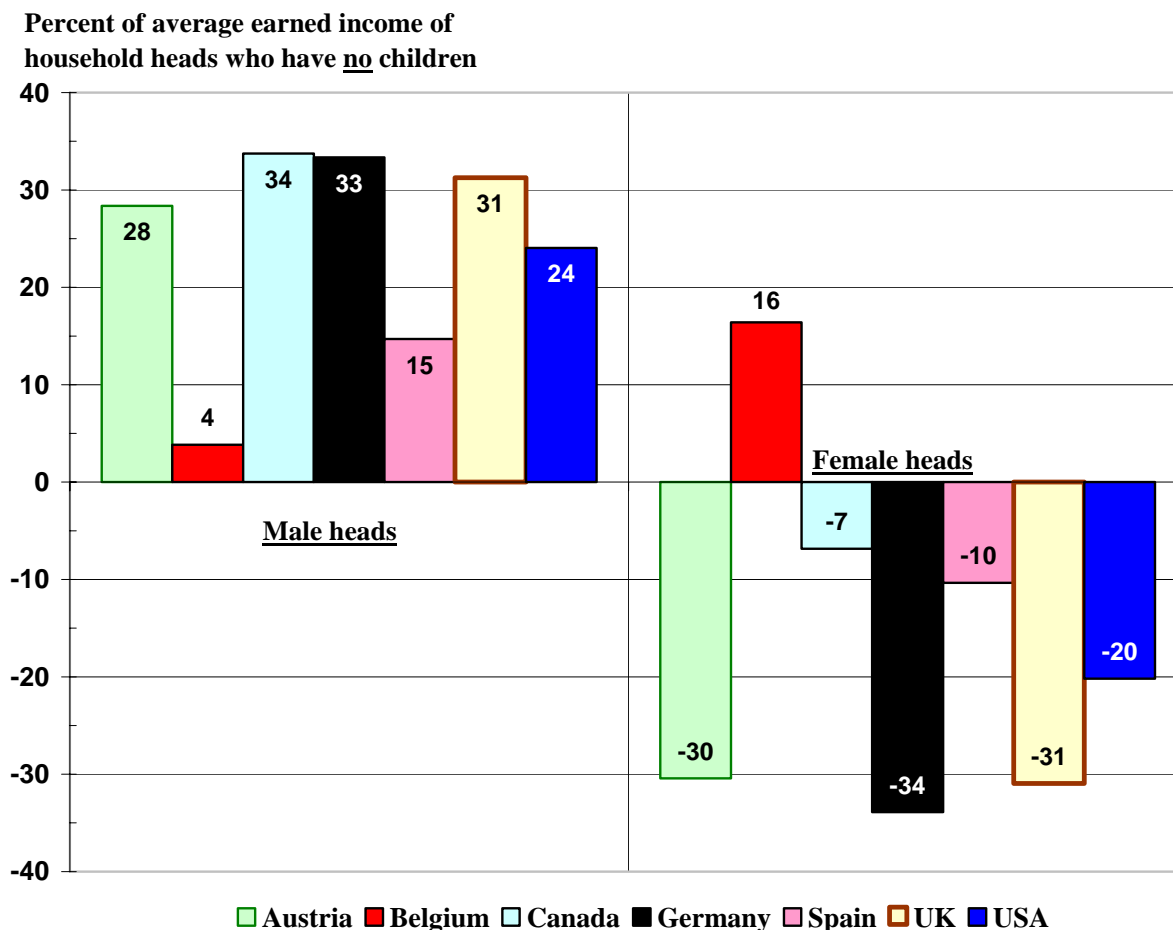
Source: Authors' tabulations of European Labour Force Survey and U.S. Current Population Survey.

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



Sources: **Average hours / week** - Authors' tabulations of LIS micro-census files; **GDP per capita at PPP exchange rates (1999-2000)** - Penn World Tables, version 6.2.

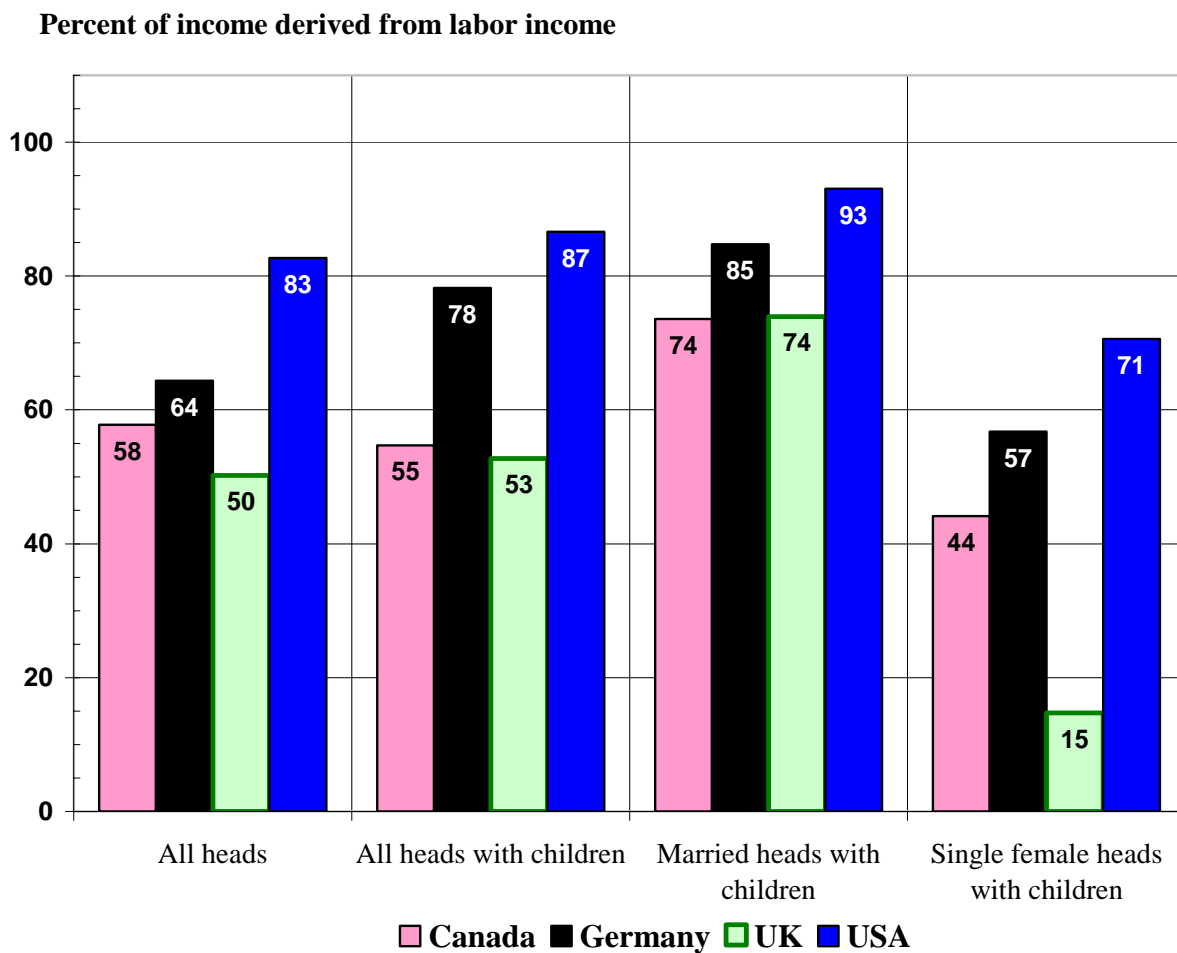
**Figure 2. Earned Income Advantage or Deficit of Heads of Households Containing Children <sup>1/</sup>**



<sup>1/</sup> 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-census files.

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



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

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