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Working Paper No. 523

Families, Time and Money in Canada, Germany, Sweden, the United Kingdom and the United States

Peter Burton and Shelley Phipps

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Families, Time and Money in Canada, Germany, Sweden, the United Kingdom and the United States[1]

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Abstract

Using microdata from the Luxembourg Income Study, we assess 'time crunch' for families with children in Canada, Germany, Sweden, the U.K. and the U.S. Both theory and empirical evidence suggest that both time and money are important inputs to the well-being of parents and children. We present cross-country comparisons of 'total available adult hours' under different assumptions about the varying time needs of families of different size. We also present estimates of 'time shortages.' In all cases, we provide separate estimates for families located at different points in the country income distributions, since being short of both time and money is likely to be particularly problematic. Although paid work hours are highest for high-income families, we nonetheless find significant numbers of lower-income families in which parents work very long hours in the paid labour market; this is particularly the case in the U.S..

Many excellent studies have compared child and/or family poverty across affluent nations (e.g., Bradbury and Jantti, 2001; Micklewright, 2003; Rainwater and Smeeding, 2003). However, although the literature on child development and the literature on 'work/life balance' suggest that both parental time and family income are important resources for children *and* for parents, less attention has been paid to documenting differences across countries in total parental hours of paid work at different points in each country's relative income distribution. Individual well-being for both children and parents is likely to be lower in situations where much higher parental paid work hours are required to generate the same income. While higher-income parents may be able to substitute money for their own time (e.g., by hiring nannies or housekeepers), the same options are not likely to be available for lower-income parents with long paid work hours. Without purchased help, lower-income parents doing long hours of paid work will then have to return home to cook and clean rather than to enjoy leisure time or play with their children, with negative consequences for the well-being of both parents and children. As Duxbury and Higgins (2001) argue, "while money cannot buy happiness, it can sure help people cope with work-life conflict" (p. 61).

Following Becker (e.g., 1991) economists argue that time and money are important inputs to the well-being of *both* parents and children. Consider, first, child well-being. Parents with the same income but less available time will not be able to make the same investments in their children. Curtis and Phipps (2000) demonstrate that children's success at school increases with potentially available parental hours, controlling for family income. Anderson, Butcher and Levine (2003) show that child obesity increases with mother's hours of paid work. And, time and money are also both important inputs to parental well-being. For example, MacDonald,

Phipps and Lethbridge (2005) demonstrate an important association between paid work hours and the stress experienced by Canadian men and women aged 25 to 54, controlling for income. We thus argue that when comparing incomes of families across countries, it is important to consider the amount of paid work time required to earn the income.

In this paper, we utilize microdata from the Luxembourg Income Study to examine patterns of time and money available to families with children in Canada, Germany, Sweden, the U.K., and the U.S.. We have chosen to study these countries, first, because they span Esping-Anderson's (1990) 'three worlds of welfare capitalism' and it is well-known, for example, that child poverty rates are much higher in the 'Anglo' countries (10.9 percent of children in two-parent families were poor in Canada in 2000; 10.0 percent were poor in the U.K. and 14.8 percent were poor in the U.S.) than in the 'Continental' or 'Scandinavian' countries (only 2.7 percent of children in two-parent families were poor in Germany in 2000; 2.3 percent were poor in Sweden).[2]

Second, we know that rates of female labour force participation differ significantly across the countries. Sweden has the highest rates (75.5 percent in 2001). Canada and the U.S. are very similar (70.5 percent and 70.7 percent, respectively). Female labour force participation rates are lower in the U.K. (67.5 percent) and especially Germany (64.5 percent).[3]

Why do we focus on families with children for this study? Not only is it true that a focus on families with children fits within our own on-going research agenda, but we argue that 'time crunch' is likely to be a particularly important issue for families with children. While everyone with a paid job must find ways to balance 'work' and 'life,' these problems are likely to be particularly acute for anyone with both paid work and care-giving responsibilities, which is obviously true for anyone with children. Our focus through most of the paper is on two-parent

families with children because we have sufficient sample for each country to enable comparisons for families at different points in the country's relative income distribution. However, lone-mother families are obviously extremely vulnerable to shortages of both time and money and so the last section of the paper provides some analysis for this group.

An important conceptual issue raised in this paper is how to appropriately 'scale' weekly hours of parental time available, since families with different numbers of children will have different time *needs*. While researchers have long used equivalence scales to adjust family income for differences in financial need, less attention has been paid to the issue of adjusting for differences in time needs. Although we do not attempt to estimate 'time equivalence scales,' we conduct a sensitivity analysis over alternative assumptions (e.g., no economies of scale, complete economies of scale, some economies of scale).

The remainder of the paper is organized in 4 sections. Section 2 discusses the data. Section 3, the most substantive section of the paper, presents results for two-parent households. Specifically, we compare/contrast percentages of one- and two-earner families over-all and at different points of the income distribution. We then calculate total parental hours of paid work (i.e., mother's paid hours plus father's paid hours), again making comparisons both within and across countries. We next provide alternative estimates of 'available adult time' under alternative assumptions about 'time equivalence scales.' Finally, section 3 provides estimates of 'absolute time shortage,' for all two-parent families in each country, as well as at different points of the income distribution. Section 4 discusses the sensitivity of results to alternative samples. Section 5 provides a summary of the same calculations for lone-mother households who are likely to be particularly vulnerable to shortages of both time and money while Section 5 concludes.

2. Data

Our paper makes use of microdata from the Luxembourg Income Study (LIS). For Canada, the LIS data set is the 2000 Statistics Canada Survey of Labour and Income Dynamics with 28970 households. For Germany, the LIS data source is the Deutsches Institut fur Wirschaftsforschung 2000 German Socioeconomic Panel with 6367 households. The Swedish data set is the 1995 Statistics Sweden Income Distribution Survey with 16,260 households.[4] The U.K. survey is the 1999 Family Resources Survey with 24988 observations. Finally, the U.S. data source is the 2000 Bureau of Labor Statistics Current Population Survey with 49633 households. All data are used cross-sectionally with household-level weights.

The measure of time upon which we focus is 'usual weekly hours' of paid work during the past year because in many studies of 'time crunch' it is weekly rather than annual hours which matter most (e.g., Marshall, 1993).[5] Since weekly hours are capped at 90 for each adult in the German data, we apply the same rule to all other countries (hence, maximum weekly hours for a couple is 180 in all countries).

For the analysis of two-parent families which is the focus of the paper, we select observations with both a head and a spouse and at least one child aged less than eighteen years present. The analysis for lone-mother households analogously selects observations with a lone mother and children less than eighteen years present. Dealing with situations in which either the head or the spouse is unemployed is problematic, since we do not wish to count such time as welfare-enhancing (i.e., it seems inappropriate to treat the unemployed as 'rich in time'). And, while problems of 'work/life balance' undoubtedly exist for unemployed individuals who must arrange childcare while searching for work, the issues may not be the same as for individuals juggling paid jobs and family responsibilities. Thus, in our general analysis, we exclude

households in which either partner reported weeks of unemployment [6] and, again, report on the sensitivity of our results. This leaves us with samples of 1318 for Germany; 6120 for Canada; 3968 for Sweden, 12,302 for the U.S. and 5520 for the U.K..

We do, however, examine the sensitivity of our conclusions to these restrictions of the sample by, first, repeating all analyses with the unemployed families included and, second, repeating all analyses for the sub-sample of families with children aged 0 through 5 years, since time needs of families with young children are likely to be particularly high (see section 4).

3. Empirical Analysis for Two-Parent Families

3a "Parental Participation in Paid Work"

We are particularly interested in comparing parental paid work patterns for families located at different points of their respective country's relative income distribution because we want to know whether, for example, very high rates of labour-force participation are primarily restricted to high-income professional couples who may be able to purchase substitutes for unpaid work (e.g., nannies and house-cleaners) or whether there is also a problem for families who are 'crunched' by lack of both time and money. And, we want to know if this differs across countries?

In order to locate families with children within the country's relative income distribution[7] we use the full sample population for each country to calculate decile cut points in terms of equivalent after-tax income using a Luxembourg Income Study (square root of family size) equivalence scale. We then locate two-parent families with children within that country's relative income distribution. We are thus assessing the living standards of individuals in two-

parent families with children relative to all individuals in that country (not just relative to other two-parent families with children).

This approach to deciding where two-parent families fit within the income distribution follows past work comparing child poverty or income inequality across countries. This means, in our case as in most work on poverty or income inequality, that we are describing outcomes which are partially the result of choices people have made (e.g., to get an education, to get married, to have children, to do paid work or not) and partially the result of factors beyond their control (e.g., some people can't afford an education, get pregnant by accident or have health problems which limit their ability to do paid work).

An alternative approach would be to order families by market wages, following past work comparing distributions of wages or earnings across countries. This, however, raises both conceptual and practical problem when we are studying families with children. First, families with children could only be compared to wage-earners, not to the full population. Second, there could be no adjustment for differences in needs by family size. Third, differences across countries in the extent to which the state supports family incomes (e.g., through transfer policies) at different points in the income distribution would be ignored, as would other available sources of income (e.g., from capital). Fourth, it is not obvious how to attribute a 'wage' to a couple (as an average of husband's wage and wife's wage?). A further problem would be the imputation of market wages to those not currently engaged in paid work. While one might simply order families according to the husband's wage, this is probably not appropriate for the countries studied here where the modal case is generally for both parents to be engaged in paid work. Also, ordering by male wages would make our analysis of lone mothers impossible. Finally, LIS data do not provide hourly wages for all countries studied.

Given the important caveat that some of what we will observe as differences across the countries in 'time/money' packages may be a reflection of differences in tastes across the countries (for more money/less time in one country and for less money/more time in another), we have decided to keep our focus on a description of outcomes for families with children. Our idea is to extend discussion of poverty in terms of after-tax/transfer income to a discussion of poverty in terms of *both* income and time.

We begin, then, by comparing parents' patterns of labour-force participation (e.g., one- versus two-earners), over-all, and across the after-tax/transfer relative income spectrum. Notice, in Table 1, that the position of families with children in country income distributions differs somewhat across the 5 countries studied here. For example, more couples with children are found in the bottom decile of the country's income distribution in Canada, the U.S. and the U.K. (6.8 percent of Canadian couples with children are located in the bottom decile; 5.3 percent are in the bottom decile in both the U.S. and the U.K. compared to 1.6 percent in Germany and 3.1 percent in Sweden).

[Table 1 about here]

The second panel of Table 1 reports patterns of labour force participation for parents in the 5 countries.[8] Having both parents in paid work is most likely in Sweden (75 percent), followed very closely by Canada and the U.S.. In terms of participation in paid work, Canada and the U.S. look almost identical, with 72 percent of Canadian two-parent families having two earners (71 percent in the U.S.); 25 percent having one earner (27 percent in the U.S.). Two-earner families are somewhat less common in the U.K. (68 percent) and least common in Germany (58 percent). Swedish 2-parent families are particularly likely to be located in the

upper part of the income distribution.

Of course, these patterns look very different, within all countries, at different points of the income distribution. It is rather unlikely in all countries but Sweden, for two-parent families located in the bottom decile of the country income distribution to have two earners (e.g., 34 percent in Canada; 26 percent in the U.S.; 28 percent in Germany and 28 percent in the U.K. versus 50 percent in Sweden). On the other hand, two-parent families in the 9th decile are nearly certain to have two-earners in most countries (90 percent in Canada; 84 percent in the U.S., 81 percent in Sweden, 85 percent in the U.K. compared to only 65 percent in Germany). Interestingly, in the 'Anglo' countries, the probability of having two earners falls slightly moving from the 9th to the 10th deciles, presumably because one parent earns an *extremely* high income, providing the opportunity for 'richness' in terms of both time and money.

3b "Parental Hours of Paid Work"

However, it is important to go beyond a consideration only of patterns of parental labour market participation, since total parental paid work hours for 'one-earner' or 'two-earner' families can vary enormously, both within and across countries.[9] As noted above, the literature on work-life balance indicates that it is usual 'weekly' rather than annual hours which are likely to be most important in terms of perceived time stress, and this seems particularly likely for families with children since many childcare-related activities (feeding, washing, helping with homework, listening to problems) cannot be put off until next week or next month when paid work responsibilities are less onerous. The first row of Table 2 reports total weekly parental hours of paid work (i.e., father's weekly paid hours plus mother's weekly paid hours) for each country. We find that, despite fairly similar patterns of parental labour-force participation, U.S.

parents, on average, spend considerably more time doing paid work each week than parents in the other 4 countries studied here (69.0 hours compared to 63.5 hours in Canada, 63.4 hours in the U.K., 59.0 hours in Germany and 56.5 hours in Sweden).

[Table 2 about here]

While interesting, over-all averages can mask differences within as well as across countries. Table 2 thus also reports total parental paid work hours for families located in each decile of the relevant country equivalent income distribution (see also Figure 1).[10] It is clear, for all countries, that average parental hours of paid work are lowest for families at the bottom of the income distribution and increase fairly steadily for families higher up the distribution. Of course, this is not surprising, since more hours of paid work will, other things equal, increase family income.

[Figure 1 about here]

It is also evident that at almost every point of the relative income distributions, U.S. parents do more paid hours than their counterparts in other countries. Exceptions are the bottom decile, where Canadian parents do, on average, 42.8 hours compared to U.S. parents who do 42.7 hours and the top decile, where British parents do 80.8 hours compared to U.S. parents who do 75.3 hours. Cross-country differences in total paid parental hours are perhaps most striking in the low-middle range of the country income distributions. For example, in the 4th decile, U.S. parents report, on average, 67.0 paid hours per week compared to 59.5 in Canada, 52.2 in Germany, 50.9 in Sweden and 54.5 in the U.K..

3c ‘Time Needs of Parents and Children in Families of Different Size”

Looking only at total parental paid hours does not address one issue of central concern to us, which is “how much adult time[11] is available within families to meet both children’s needs and parent’s needs?’ That is, we want to think about time as a resource (like money) which families can use to enhance well-being. We argue that there are many parallels between the ideas of money as a resource and time as a resource. For example, families may choose to spend their money in ways which are more or less ‘good for them’ (e.g., on fruit versus potato chips). The same is true for time. There is evidence of systematic differences across parents in how they use available time. For example, Gauthier (2004) notes that parents with higher educations are more likely, other things equal, to spend time directly with their children, perhaps because they realize the importance of parental time as an input to child development? Money may or may not be used to benefit all family members equally, and the same is again true with respect to time. Our own (Phipps, Burton and Osberg, 2001; Macdonald, Phipps and Lethbridge, 2005) and much other research (e.g., Bittman and Wajcman, 2000; Bittman, 2002) emphasizes that there can be important gender inequities in access to time for self within families. Finally, as noted above, available time, like available income, is partially the result of choices made by family members.

Recognizing these limitations of family income as an indicator of individual well-being, much excellent research on child poverty is nonetheless derived from the study of available family income. We propose, analogously, to study ‘available parental time.’

For income, it is commonly accepted that a couple with 2 children will need a higher income, but not double the income of a couple with no children, in order for members of both households to be equally well off. The same seems likely to be true for time – a couple with two

children will need more time than a couple with no children for members of the two households to be equally well-off. Parents with four children will need more time than parents with two children, but not twice as much time, etc.

There is a considerable literature using time diary data which calculates, for example, how much time parents spend on ‘childcare’ or ‘with children.’ For example, Gauthier (2004) uses microdata from the Multinational Time Use Study to compare hours on childcare and hours ‘with children’ for 6 countries including Canada, Sweden and the U.S.. Notice, however, that while very informative, such studies are asking a somewhat different question than is of interest to us here. That is, the time diary studies are not asking how much extra time children with additional siblings need to be *as well off* as children without siblings, for example. Rather, they are simply asking how much extra time is actually spent with children in families of different sizes. In fact, we do not really know how much additional parental time is required per child for, say, the children in a two-child family to have the same level of well-being as an only child, for example.

From the perspective of individual children, should parental time be characterized as essentially a public good (e.g., stories are read to two children at the same time; adults and children play a game together) or essentially a private good (e.g., children have different homework assignments so that only one can be helped at any given time)? Presumably, something between these two extremes is most appropriate. That is, while it seems likely that there are economies of scale in parental time needed for children in larger households to be as well off as children in smaller households, other things equal, parental time is unlikely to be entirely public (see also Klevmarken and Stafford, 1999).

And what about parental time needs? Certainly, the ‘per capita’ time cost of cooking a meal, for example, should be lower as the number of people in the household increases (more vegetables may need to be chopped, but cooking for four rather than one does not increase the required time four-fold). And, there are likely to be ‘public’ aspects of time use when, for example, parents experience leisure time and/or exercise jointly with their children (e.g., a family hike or swim). However, there are times when such joint time might more appropriately be classified as ‘childcare’ rather than ‘time off’ from the parent’s perspective, and the appropriate label for the experience presumably varies from day to day with the mood of both parent and child. At any rate, while there are clearly some economies of scale available, there seems a limit to the ‘publicness’ of adult time as an input to adult well-being (e.g., parents may sometimes wish to watch a video other than ‘Shrek’ or ‘The Incredibles’).

A further complication connected to thinking about time needs of family members is that some time diary studies are quite clear that childcare is particularly likely to be recorded as a ‘secondary activity’ by parents. Mothers, in particular, are likely to ‘multi-task’ (i.e., cook dinner while minding the children, or in other words, use their time very intensively compared to individuals without children -- Craig and Bitman, 2004). Keep in mind that if parents are particularly likely to ‘multi-task,’ then they are likely more ‘stretched’ than we are suggesting here (relative to childless adults with similar amounts of ‘available time’). We are not able to deal with this issue at all (nor are time diary studies unless secondary activities are recorded).

In this paper, we make no attempt to estimate an equivalence scale which would adjust for differing time needs of families of different size. Rather, we simply examine the sensitivity of our results to 3 alternative, admittedly extreme, potential ‘time scaling’ assumptions. First, we assume that weekly ‘available adult time’ is entirely public in nature (i.e., that all non-paid hours

are used for cleaning or cooking so as to benefit all family members and/or all family members play in the park together or watch and enjoy the same movies on television). We calculate 'available adult time' as total parental weekly hours, less sleeping time (8 hours[12]), less paid work hours (i.e., 2 X (24 - 8) X 7 - total paid work hours).

Second, we assume that weekly available adult time is entirely private (i.e., can benefit only one person, adult or child, at a time). However, we assume benefits are equally shared among all family members, including both parents and children (e.g., we divide total weekly available adult time by family size -- a 'per capita' scaling of time which assumes, for example, that help with homework is provided to one child at a time for the same amount of time and that each parent also has this amount of time to go to the gym or do yoga). 'Per capita available adult time' is thus calculated as: [2 X (24 - 8) X 7 - total paid work hours]/(number in the household).

Finally, we assume that economies of scale are available, but that available adult time is not entirely public. One way to operationalize this 'middle ground' assumption about the differing time needs of families of different size is to 'equivalize' time, using a LIS (square root of family size) scale, again assuming that the benefits accruing from parental time are equally shared by all family members. (Notice that this is probably the most common approach to adjusting income to account for the differing needs of families of different size.) Thus, 'equivalent adult time' is calculated as: [2 X (24 - 8) X 7 - total paid work hours]/(square root of family size) and can be interpreted as the amount of time a single adult living alone would require to be as well off as several individuals living and sharing time together.

Unfortunately, the LIS data which we use here do not provide information about hours of either unpaid work and/or free time. This limits our ability to examine gender issues here,

because knowledge about unpaid work is critical for such an analysis. Moreover, there are important conceptual issues in understanding what constitutes ‘work’ or ‘leisure.’ This applies equally to both paid or unpaid activities -- is a business lunch ‘work’?; is taking children to a park ‘work’? In either case, the answer may be yes or no, depending upon circumstances. However, we believe attending to gender would be an extremely important direction for future work in this area.

We are also unable to study patterns within the week of work and/or leisure. Bittman and Wajcman emphasize, for example, that leisure constituted from a few minutes here and there is not equal to several hours off at once. Merz et al (2004) documents many German households with ‘fragmented’ work days. Nor can we say anything about whether mother and father are at work/at home at the same or different times, though the welfare implications for both parents and children may be quite different, given the same total hours, if time away from paid work happens at the same time (spouses and parents/children can enjoy quality time together -- see Osberg and Jenkins, 2002); on the other hand, if parents go to paid work at the same time, then no-one will be available to care for young children whereas if they work separate shifts, childcare may be simplified (see Presser, 1994). Finally, the LIS data do not document hours spent commuting to work, though this should certainly not count as ‘available time,’ and may differ across countries.,

3d “Available Parental Time Under Alternative Time Scaling Assumptions”

Table 3 presents both national averages for each measure of ‘available adult time’ as well as averages for families located in different parts of the income distribution. We find, to start, that on average, Canadian two-parent families have160.5 hour of parental time available each week, if we assume that adult time is a public good. If, to take the opposite extreme assumption,

we assume that adult time can only be used to benefit one individual at a time, then we find, on average, that members of Canadian two-parent families potentially each have access to 40.9 adult hours per week (40.9/7 = 5.8 hours per day, with presumably more on week-end days and less on week-days). Finally, taking the 'middle road' and assume that some time is public and other time is private, we find that each family member potentially has access to 80.5 equivalent adult hours per week. That is, each family member has access to an amount of time which would make him/her as well-off as a single individual with 80.5 hours of available time per week (80.5/7 = 11.5 hours per day, again presumably with more on week-ends and less on week-days).

[Table 3 about here]

If we compare these over-all averages across countries, it is clear that two-parent families with children living in the U.S. have less time available, by any of the measures calculated here. If adult time is viewed as a 'pure public good,' U.S. families have 12 hours per week less than Swedish families, 10 hours less than German families and 5 hours less than Canadian or British families. If adult time can be used to benefit only one person at a time (i.e., if time is viewed as a purely private good), families in the U.S. again stand out as having only 39 hours of adult time available per person week, compared to 45.2 in Sweden and 44.2 in Germany. Finally, the 'equivalized' time estimates again rank U.S. families with children as having the least available time (77.2 equivalent hours) while Swedish families have the most (86.9 equivalent hours). These findings are consistent with Gauthier (2004) who finds that U.S. parents spend less time on childcare or with children than parents in Canada or Sweden.

Table 3 also looks at 'available adult' hours at different points in the country relative income distribution using alternative time scaling assumptions. Within each country, and

corresponding with patterns of paid work noted earlier, average available adult hours are highest toward the bottom of the income distribution (even though we are excluding households in which either parent experienced unemployment during the year), regardless of scaling approach employed.

However, cross-country comparisons look somewhat different depending upon scaling approach because, while over-all average family size for two-parent households is roughly similar across the countries (1.9 children in the U.S., U.K. and Sweden, 1.8 children in Canada and 1.7 children in Germany), patterns of family size across income deciles are not (see Table 1). The U.S. has the largest differences across income deciles, with a ratio of family size in the 1st decile to family size in the 9th decile of 1.50, followed by the U.K. with a ratio of 1.38, compared to 1.31 for Canada, 1.19 for Sweden and 1.06 for Germany. For both Germany and Sweden, family sizes are larger in the 2nd through 5th deciles than in the bottom; in Canada, the U.S. and U.K., family size falls quite continuously until the 9th decile. In summary, family size differs most across the countries for families at the bottom of the country income distribution. For two-parent households in the bottom decile in the U.S. distribution, the average number of children is 2.4 compared to 2.2 in the U.K., 2.1 in Canada, 1.9 in Sweden and 1.6 in Germany. For two-parent households in the 9th decile, average number of children is 1.6 in Canada, the U.S., Sweden and the U.K.; average number of children is 1.5 in Germany.

An implication is that while two-parent families in the bottom decile in Canada and the U.S. do almost the same total weekly hours of paid work (see Figure 1), weekly available ‘equivalent adult hours’ are higher in Canada because family size is smaller (see Figure 2). In fact, pretty much across the income distribution equivalent available adult hours are lower in the U.S. than in any other country. The exception is the top decile, where families in the U.K. have

less available time. The U.K. stands out in Figure 2 as the country with the largest differences in available equivalent hours between the top and bottom of the income distribution. Sweden stands out as having the most available time in deciles 6 through 10.

[Figure 2 about here]

3e "Absolute Shortages of Time"

As well as considering average time available, we are also particularly interested in families who are 'crunched' for time. Even if lower income households have, on average, more available time, it may still be the case that *some* families have very little time or money.

Our approach to this issue is to use an 'absolute' definition of time shortage. Under an absolute interpretation, we assume that adults and children need some given amount of time or their welfare suffers (e.g., adults do not get enough sleep or exercise and/or children are neglected). Under this interpretation, even if everyone else in your social group is working as many hours as you are, you might all still feel short of time.[13]

We define a family as 'absolutely short of time' if they have *less* available adult time than a couple with two children with each parent doing 40 hours of paid work per week;[14] we define the family as 'very short of time' if they have *less* available adult time than a couple with two children with each parent doing 45 hours of paid work per week; we define the family as 'severely short of time' if they have *less* than the time available to a couple with two children in which each parent does 50 hours of paid work per week. Choosing any specific threshold is obviously arbitrary, and that is why we conduct a sensitivity analysis over alternative possibilities.

How much time would be ‘available’ in the 3 scenarios described above depends upon our time scaling assumption. First, if we assume adult time is a pure public good, being ‘short of time’ would translate to the family having less than 144 hours of total available adult time, being ‘very short of time’ would translate to having less than 134 hours; being ‘severely short of time’ would mean having less than 124 hours of adult time per week. If we assume adult time can benefit only one person at a time (adult or child), then being ‘short of time’ means having less than 36 hours of available adult time for each family member; being ‘very short of time’ means having less than 33.5 hours per person, being ‘severely short of time’ means having less than 31 hours per person. Finally, if we use an ‘equivalized’ measure of available time, the absolute time shortage thresholds are: 1) having family equivalent time less than 72; 2) less than 67 and; 3) less than 62 hours, respectively.[15]

Results on absolute time shortage, over-all and by equivalent income decile, are reported in Table 4,5 and 6. Table 4 simply reports percentages of families in which parents do more than 80, more than 90 or more than 100 paid hours of work per week. (Given our framework, this can also be interpreted as assuming adult available time is a pure public good.) Over-all, roughly one-quarter of two-parent families in the U.S. and the U.K. devote more than 80 hours per week to paid work (25.2 percent in the U.K. and 24.9 percent in the U.S.), compared to 17.6 percent in Canada, 14.7 percent in Germany and only 5.3 percent in Sweden. Percentages are considerably lower if we ask how many parents jointly do more than 90 hours per week: 12.4 percent in the U.K., 11.6 percent in the U.S., 8.2 percent in Canada, 6.2 percent in Germany and only 1.6 percent in Sweden. Finally, 6.0 percent of couples with children work more than 100 hours per week in the U.K.; 4.2 and 4.0 percent of U.S. and Canadian couples do more than 100 paid hours; only 2.8 and 1.0 percent of German and Swedish parents report such very high hours of

paid work.

[Tables 4, 5 and 6 about here]

How does this vary across equivalent income deciles (see Figure 3)? Here we see even more striking differences across countries as well as interesting patterns within countries. Canada and the U.K. stand out as having the highest probabilities that low-income couples with children will do more than 80 paid hours per week -- 14.3 percent of Canadian couples in the bottom equivalent income decile and 11.2 percent of British couples report more than 80 paid hours. Swedish bottom decile couples are next most likely to report more than 80 paid hours (9.8 percent), followed by U.S. couples (6.2 percent) and German couples (3.2 percent). This ranking of the countries basically holds if we ask how many low-income couples do more than 90 or even more than 100 paid hours. It is most likely for Canadian bottom decile couples to report more than 100 paid hours (6.3 percent), compared to 4.1 percent in the U.K., 3.2 percent in both Sweden and Germany and only 1.9 percent in the U.S..

[Figure 3 about here]

In the top income decile, the U.K. results stand out: 49.1 percent of couples with children located in this decile report more than 80 hours per week; 31 percent report more than 90 hours per week; 16.2 percent report more than 100 hours per week. While U.S. couples in the top decile also report very high hours of paid work, they do not come close to the British: 37.4 percent report more than 80 hours, 19.9 percent report more then 90 hours, 6.6 percent report more than 100 hours. Thus, while over-all ‘time shortage rates’ are very similar in the U.S. and U.K., families in lower-middle/middle positions in the income distributions are more likely to report long hours in the U.S. (e.g., 10. 6 percent of those in the 2nd decile report more than 80

paid hours in the U.S. compared to 4.8 percent in the U.K.; 12.8 percent of those in the 3rd decile report more than 80 hours in the U.S. compared to 6.9 percent in the U.K.); high income British families are more likely than their U.S. equivalents to be short of time.

Sweden exhibits a rather different and very interesting pattern. As noted above, very few Swedish two-parent families report long hours of paid work. And, those who do report long paid hours are more likely to be low-income than high-income families (the opposite pattern to that noted in the Anglo countries). In fact, notice that after the 5th decile, *no* Swedish families report more than 100 hours of paid work per week. Garhammer (1999) argues that Europeans have for many years had the perspective that 'time prosperity' is as important as financial wealth. In fact, Garhammer (1999, p. 69) argues that Germans aspire 'not to be rushed.' This contrasts with a North American 'work ethic' in which many professionals are reluctant to admit that they do not work very long hours. A European culture emphasizing leisure time as a valuable contributor to quality of life is certainly consistent with patterns apparent in these data.

Table 5 reports on absolute 'per capita' time shortage while Table 6 reports on 'equivalent' time shortage, over-all and across income deciles. Since it seems plausible that there are some economies of scale in adult time use within families, the discussion focusses on Table 6 (see also Figure 4). The first point to make is that once we acknowledge the additional time needs associated with additional household members (i.e., children in this case), rates of 'time shortage' increase in all countries, but particularly for lower and lower-middle income families in the U.S. where roughly 1/3 of families in this range are 'short of time,' roughly 20 percent are 'very short of time' and roughly 10 percent are 'severely short of time.' A striking pattern in the U.S. is that the 'equivalized' rates of time shortage are fairly constant across income deciles beyond the first. By contrast, rates of time shortage increase with income level in both the U.K.

and Canada. In all of the 'Anglo' countries, but particularly in the U.S., it is clearly the case that 'time crunch' is not exclusive to affluent professional couples who might be able to purchase some substitutes for their time but is characteristic of a significant proportion of low and middle income families as well.

[Figure 4 about here]

4. Sensitivity Analysis

As noted above, we have also conducted all analyses for two alternative samples. Over-all, our basic story is not affected by alternative selection of sample. Table 7 compares summary results with those obtained for our basic sample. A first sensitivity check adds back to the basic sample (i.e., including all children less than 18) any households in which either parent reported unemployment. In this case, while paid work hours are, on average, somewhat lower and consequently, rates of time shortage are also somewhat lower, no substantive difference from the pattern of results discussed above is apparent.

[Table 7 about here]

Second, we restrict attention to families with children aged 0 to 5 (again leaving out households in which parents experienced unemployment) with the rationale that pre-school children need very large amount of parental time. In all countries except Sweden, total parental paid hours are slightly lower for families with young children; paid hours are markedly lower for Germany (i.e., 51.2 parental paid hours per week for families with young children compared to 59.0 for all families with children). Although most international patterns noted above continue to hold for the sample of families with young children, Germany and Sweden 'switch places.' It is

perhaps worth emphasizing the high levels of 'time shortage' for two-parent households with young children, particularly in the U.S..

5. Lone-Mother Families, Money and Time

It is well-known that lone-mother families are particularly vulnerable to low income; with only one adult present in the household, it seems likely that they will also be vulnerable to problems of time shortage. Small sample sizes have restricted possibilities for repeating the 'two-parent' family analysis by income decile, but Table 8 presents a summary table of national averages for lone mothers for all measures discussed above. A first important point to note is that labour force participation rates for lone mothers are high in the U.S. (81 percent) compared to other countries (78 percent in Canada, 74 percent in Germany, 58 percent in Sweden and only 44 percent in the U.K.). Total paid work hours are correspondingly highest in the U.S. (31.4 hours, on average, per week), followed quite closely by Canada (26.5 hours) and Germany (24.8 hours). Paid work hours per week are much lower in Sweden (19.4) and especially the U.K. (12.9). At the same time, average number of children in lone-mother households is the same as in two-parent families in the U.S. (1.9) while lone mothers have, on average, fewer children than two-parent families in the other countries studied here (1.6 in Canada, 1.4 in Germany, 1.6 in Sweden and 1.8 in the U.K.). There is clearly potential for time as well as money shortage for lone mothers, especially in the U.S..

And, Table 8 indicates that this is, in fact, the case. First, not surprisingly since there is only one adult present in the household, *total* 'available' adult hours[16] per week are dramatically lower than is true for two-parent households in each country studied despite low average hours of paid work by lone mothers. Thus, lone-mother families have 53.3 percent as much 'total time'

available as two-parent families in Canada, 51.8 percent as much time in the U.S., 52.8 percent in Germany, 55.3 percent in Sweden and 61.7 percent in the U.K.. And, lone mothers in the U.S. have less available time than lone mothers in any of the other countries.

Time available per person is obviously less dramatically different between two- and one-parent families, but even by this measure, members of lone-mother families still have significantly less time available. This is true in all countries, but there are important differences across countries in the extent of time short-fall experienced in lone-parent families compared to two-parent families. In the U.S., members of lone-parent families have 71.3 percent as much time per capita as members of two-parent families compared to 75.8 percent in Canada, 81.2 percent in Germany, 84.5 percent in Sweden and 87.8 percent in the U.K..

It is not particularly common for lone parents to do more than 40 hours of paid work per week in any country (interestingly, this is most likely in Germany where 15.9 percent of lone mothers report more than 40 hours per week). Only very small numbers work more than 45 or 50 hours per week (only 4.5 percent work more than 50 hours in the U.S. where this is most likely). Nevertheless, members of lone-parent families are more likely to end up ‘severely short of time’ than members of two-parent families. Remember that being ‘severely short of time’ has been defined as having less adult time than is available to a two-parent, two-child family in which each parent works 50 hours per week. Although lone mothers are less likely to work 50 hours, severe time shortage is more likely because only one parent is available. Notice however, that rates of ‘severe time shortage’ for lone-mother families vary tremendously across countries. Thus, for example, 87.1 percent of lone-mother households in the U.S. are ‘severely short of time’ (using the equivalized measure) in the U.S., compared to 78 percent in Canada, 68.9

percent in Germany, 58.8 percent in Sweden and 54.4 percent in the U.K..

6. Conclusions

The issue of time availability is important both for children, who need income and parental time in order to thrive, and for parents, who also need both income and some 'time for self' to preserve quality of life and personal health. Although in most countries parental paid hours tend to increase with income, there are also a significant number of lower-income families with children in which parents work very long hours in the paid labour market. But this varies across the five countries studied here. In the U.S., for example, many low and middle-income families do very long hours of paid work. Combined with relatively larger families and hence potentially greater time needs, this creates a situation of 'severe time shortage,' whether we assume there are economies of scale in parental time or not. By contrast, although rates of parental labour-force participation are higher in Sweden, Swedish parents do not tend to work very long hours and thus are dramatically less likely to be 'short of time' than U.S. parents. From the perspective of either parents or children, it is important to keep information about parental time availability in mind when comparing well-being across countries. We know that Swedish families with children are much less likely to have low incomes than U.S. children; this paper also indicates that they are less 'crunched for time' suggesting that they are even better off, by comparison with, say, the U.S. than earlier studies had indicated. Our addition of 'available time' to the cross-national comparison thus adds another way in which the 'Anglo' world of welfare capitalism differs from the 'Scandinavian' world (Esping-Andersen, 1990).

Our results also emphasize the vulnerability of lone-mother households who, in most countries, not only have less money available but also have significantly less available parental

time than two-parent families. Again, however, there is important variation across the countries studied here, with lone-mother households being much more seriously short of time in Canada and the U.S. than in Sweden or the U.K..

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2. LIS Key Figures, http://www.lisproject.org/keyfigures, accessed May 2004.

3. OECD in Figures. 2003 edition. http://www1.oecd.org/publications/e-book/0103061E.pdf, accessed May 2004.

4. Although there is a 2000 survey for Sweden included in LIS, it unfortunately does not provide information about weekly hours of paid work.

5. Specifically, we use the 'hrshd' and 'hrssp' variables from LIS, which are 'usual hours worked per week, including overtime and second job' by head and spouse, respectively. Surveys asked respondents about 'usual hours' during the past year except in the Canadian case, where 'hrshd' and 'hrssp' are calculated as 'total annual hours from all jobs divided by 52.'

6. Weeks of unemployment are unavailable for Sweden, hence we exclude households in which either the head or spouse received unemployment compensation in this case.

7. That is, we want to compare families with children to all other households, not just to other families with children.

8. Technically, these are not 'labour-force participation rates' since households in which either parent reported any weeks of unemployment have been excluded. For comparability across the countries, we identify 'one-earner' as households in which either the head or spouse reported positive earnings during the year; 'two-earner' means both reported positive earnings.

9. Osberg, 2002a,b finds that simulating Canadian patterns of labour force participation for individuals in the U.S. has little impact on income inequality.

10. We are unable to report results for German families in the bottom decile because sample size is too small.

11. We pay no attention here to *child* time as an input to well-being, on the assumption that children are less likely than adults to be 'crunched' for time and that they do less paid work or home production. Of course, long hours of homework or practice for sports, music, dance, etc as well as part-time jobs for teen-agers may mean this is no longer actually true.

12. We know (from personal experience), that parents do not always get 8 hours of sleep, but we subtract 8 hours on the grounds that in 'long-run equilibrium,' something like 8 hours would be 'necessary.' Of course, it is also true that sleep needs differ across individuals, with some people able to go for very long periods with very little sleep. We make no effort to deal with this.

13. Time shortage could also be constructed as a relative concept if, for example: 1) social

institutions reflect/support particular norms for paid employment (e.g., daycare is only available for 'standard work weeks' causing extra stress for those working longer than usual hours); 2) individuals judge themselves relative to norms in their society and so are less likely to perceive themselves as short of time if everyone else is in the same situation. Following standard practice in the literature on measuring financial poverty, one might define families to be 'relatively short of time' if they have less than 50 percent of the population-wide per capita available adult time. Bittman and Goodin (2000) and Bittman (2002) propose such an approach, though in terms of *leisure* time. However, there may be some conceptual difficulties in implementing such an approach in our context. For example, families with children are unlikely to expect to have as much available time as, say, retired individuals (and proportions of retired may vary significantly across countries). Finally, given the upper bound on possible available time, we would expect less inequality in the distribution of time than the distribution of income making it unclear whether the usual '50 percent of median' is the most appropriate threshold. Nonetheless, 'relative time poverty' would be an interesting direction for future research.

14. Having two children and two earners is the modal case in all countries studied.

15. We calculate the 'per capita' cut-offs as total possible adult time (less 8 sleep hours for each parent), less 80, 90 and 100 total paid hours, respectively, divided by 4 (since we are normalizing to a 2-parent, 2-child norm). The 'equivalized' cut-offs are calculated as total possible adult time less 8 sleep hours per adult less 80, 90 and 100 paid hours, respectively, divided by 2 (i.e., the LIS scale for a family of 4).

16. This is calculated as 16 X 7 - paid work hours.

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Table 1

Percent of Two-Parent Families in Income Decile, Number of Earners by Decile, and Number of Children

Couples with Children < 18 in House [1, 2 ,3, 4]

	Canada 2000	U.S. 2000	Germany 2000	Sweden 1995	U.K. 1999
percent in decile 1	6.8	5.3	**	3.1	5.3
2	8.5	8.0	6.2	4.4	6.5
3	9.6	9.7	11.1	6.6	8.5
4	10.5	10.3	10.8	8.2	10.5
5	11.7	11.1	13.4	10.2	12.3
6	11.3	12.0	13.5	13.5	12.7
7	12.2	12.5	12.0	13.6	12.7
8	11.1	11.7	10.9	14.5	12.1
9	9.6	10.2	10.3	13.7	10.3
10	8.8	9.4	10.3	12.2	9.1
number of earners (%)	0 1 2	0 1 2	0 1 2	0 1 2	0 1 2

all	3.	25.	72.	2.	27.	71.	2.	40.	58.	16.	9.	75.	7.	26.	68.
decile 1	24.	41.	34.	15.	59.	26.	**	**	**	33.	17.	50.	24.	48.	28.
2	4.	46.	50.	5.	49.	46.	6.	69.	25.	28.	26.	46.	25.	54.	20.
3	3.	41.	56.	3.	38.	59.	4.	57.	38.	20.	23.	57.	17.	42.	41.
4	3.	31.	66.	1.	31.	68.	2.	50.	47.	19.	14.	67.	10.	30.	60.
5	2.	24.	75.	1.	24.	75.	2.	24.	73.	14.	8.	76.	5.	26.	69.
6	2.	18.	80.	0.	19.	80.	0.	37.	62.	17.	7.	76.	1.	19.	80.
7	1.	16.	83.	1.	18.	81.	1.	29.	70.	13.	7.	80.	2.	19.	80.
8	1.	12.	87.	0.	16.	83.	0.	38.	62.	15.	4.	82.	0.	16.	84.
9	0.	10.	90.	0.	16.	84.	0.	35.	65.	15.	4.	81.	1.	14.	85.
10	2.	21.	78.	0.	26.	73.	3.	35.	62.	14.	2.	84.	0.	19.	80.
number of kids, all	1.8			1.9			1.7			1.9			1.9		
decile 1	2.1			2.4			**			1.9			2.2		
2	2.1			2.3			2.0			2.1			2.2		
3	2.0			2.1			1.9			2.3			2.3		
4	2.0			2.0			1.6			2.3			2.0		
5	1.9			2.0			1.8			2.1			1.9		
6	1.8			1.9			1.7			2.0			1.8		
7	1.7			1.8			1.6			1.8			1.7		
8	1.6			1.7			1.8			1.7			1.7		
9	1.6			1.6			1.5			1.6			1.6		
10	1.7			1.7			1.4			1.5			1.7		

[1] Families in which either parent experienced unemployment are excluded from the analysis.
[2] Decile cut points using ALL individuals (not just couples with kids).
[3] Income decile 1 numbers not presented because the sample size is too small for accurate estimation (33 observations).
[4] Weighted by household weight and not individual weight.

Table 2

Total Weekly Paid Work Hours by Decile

Couples with Children < 18 in the House [1, 2, 3, 4]

	Canada 2000	U.S. 2000	Germany 2000	Sweden 1995	U.K. 1999
all	63.5	69	59	56.5	63.4
total work hours					
decile 1	42.8	42.7	**	39.6	40.1
2	53.6	55.3	44.8	44.2	34.5
3	57.1	61.7	49.9	44.6	45.3
4	59.5	67.0	52.2	50.9	54.5
5	65.0	69.3	57.5	56.6	62.0
6	66.6	73.4	62.2	55.4	67.8
7	68.7	74.0	66.2	59.9	69.7
8	70.5	75.5	63.1	60.2	73.8
9	72.1	77.7	67.0	60.5	78.1
10	69.0	75.3	62.9	63.5	80.8

[1] Families in which either parent experienced unemployment are excluded from the analysis.

[2] Decile cut points using ALL individuals (not just couples with kids).

[3] German income decile 1 numbers not presented because the sample size is too small for accurate estimation (33 observations).

[4] Weighted by household weight and not individual weight.

Table 3

Total Weekly 'Available' Adult Hours, Adult hours per Person, Equivalent Adult Hours per Person

Couples with Children < 18 in House [1, 2, 3, 4]

	Canada 2000	U.S. 2000	Germany 2000	Sweden 1995	U.K. 1999
total available adult hours [5], all	160.5	155.0	165.0	167.5	160.6
decile 1	181.2	181.3	**	184.4	183.9
2	170.4	168.7	179.2	179.8	189.5
3	166.9	162.3	174.1	179.4	178.7
4	164.5	157.0	171.8	173.1	169.5
5	159.0	154.7	166.5	167.4	162.0
6	157.4	150.6	161.8	168.6	156.2
7	155.3	150.0	157.8	164.1	154.3
8	153.5	148.5	160.9	163.8	150.2
9	151.9	146.3	157.0	163.5	145.9
10	155.0	148.7	161.1	160.5	143.2

total available adult hours per person in household [6]. all	40.9	39.0	44.2	45.2	41.0
decile 1	44.4	42.6	**	50.5	45.5
2	42.0	40.0	44.4	45.9	46.0
3	41.5	39.7	44.8	44.7	42.7
4	41.4	38.5	47.2	42.5	42.7
5	40.2	38.4	43.2	42.5	41.0
6	40.1	38.1	42.2	43.7	40.7
7	40.1	38.4	42.5	44.4	40.2
8	40.3	38.6	43.3	46.1	39.6
9	40.1	38.7	43.6	47.2	38.8
10	40.3	39.5	46.6	47.5	37.6
total equivalent adult hours per person [7]. all	80.5	77.2	84.9	86.6	80.7
decile 1	89.1	87.0	**	95.9	90.8
2	84.0	81.4	88.7	90.2	92.6
3	82.7	79.6	87.7	88.9	86.7
4	82.1	77.1	89.6	85.3	84.5
5	79.5	76.6	84.4	83.9	81.0
6	79.0	75.3	82.3	85.4	79.3
7	78.5	75.4	81.3	85.0	78.4
8	78.2	75.3	83.2	86.6	76.8
9	77.7	74.9	82.4	87.5	74.8
10	78.5	76.2	86.2	87.0	73.0

[1] Families in which either parent experienced unemployment are excluded from the analysis.

[2] Decile cut points using ALL individuals (not just couples with kids).

[3] German income decile 1 numbers not presented because the sample size is too small for accurate estimation (33 observations).

[4] Weighted by household weight and not individual weight.

[5] (16*2*7)- total paid parental hours.

[6] total non-work hours divided by the number of people in household.

[7] total non-work hours divided by the square root of the number of people in household.

Table 4

Percentage of Couples with Children < 18 Working Over 80, Over 90, and Over 100 Paid Hours per Week [1, 2, 3, 4]

		Canada 2000	U.S. 2000	Germany 2000	Sweden 1995	U.K. 1999
> 80 hours	all	17.6	24.9	14.7	5.3	25.2
	decile					
	1	14.3	6.2	**	9.8	11.2
	2	13.1	10.6	1.0	15.0	4.8
	3	12.1	12.8	9.2	4.5	6.9
	4	14.3	16.5	5.2	3.8	11.7
	5	18.9	21.8	7.3	4.4	19.1
	6	19.7	28.0	20.2	3.9	25.1
	7	17.5	29.0	24.7	3.1	27.2
	8	21.4	32.5	15.3	2.8	36.3
	9	20.0	40.0	24.8	5.0	45.4
	10	22.3	37.4	20.4	10.0	49.1

> 90 hours	all	8.2	11.6	6.2	1.6	12.4
	decile					
	1	7.3	3.4	**	5.8	6.6
	2	7.9	5.9	0	5.4	2.6
	3	6.2	6.5	2.9	2.4	3.8
	4	7.3	7.8	3.4	2.6	5.2
	5	8.1	9.5	2.4	2.6	7.6
	6	7.1	11.9	6.4	0	9.2
	7	8.6	12.6	10.4	1.0	11.8
	8	9.3	14.0	8.6	1.0	17.8
	9	7.3	18.9	7.9	1.0	23.2
	10	13.0	19.9	12.5	2.2	31.0
> 100 hours	all	4	4.2	2.8	1	6
	decile					
	1	6.3	1.9	**	3.2	4.1
	2	4.7	2.0	0	2.7	1.5
	3	3.5	2.1	1.4	1.4	2.7
	4	3.2	3.2	1.6	1.4	3.0
	5	4.2	3.5	1.2	1.9	2.8
	6	4.1	4.5	1.7	0	3.7
	7	3.6	5.0	3.5	0	6.3
	8	2.6	5.7	4.5	0	6.9
	9	2.4	5.6	2.4	0	11.5
	10	7.1	6.6	8.4	0	16.2

[1] Families in which either parent experienced unemployment are excluded from the analysis.

[2] Decile cut points using ALL individuals (not just couples with kids).

[3] German income decile 1 numbers not presented because the sample size is too small for accurate estimation (33 observations).

[4] Weighted by household weight and not individual weight.

Table 5

Rates of Absolute 'Per Capita' Time Shortage

Couples with Children < 18 in the House [1, 2, 3, 4]

		Canada 2000	U.S. 2000	Germany 2000	Sweden 1995	U.K. 1999
short of time [5]	all	30.4	37.2	21.4	16.9	33.6
	decile					
	1	26.3	30.8	**	15.5	26.4
	2	29.8	35.5	14.9	23.4	23.3
	3	29.4	36.1	23.1	24.6	31.9
	4	29.1	37.6	15.0	26.2	29.8
	5	32.3	39.8	20.5	24.1	32.1
	6	32.9	40.3	27.3	23.5	32.0
	7	29.6	37.1	23.0	15.3	32.2
	8	30.8	38.1	24.3	10.5	36.1
	9	28.9	36.6	25.3	9.0	41.2
	10	32.9	35.3	20.4	9.1	45.6
very	all	22.6	28.7	12.8	14.8	23.7

short of time [6]	decile					
	1	20.7	27.8	**	14.4	19.0
	2	22.6	30.0	8.5	15.3	17.4
	3	21.8	30.3	13.9	22.0	23.7
	4	23.0	29.7	10.1	24.1	22.7
	5	22.2	31.7	14.1	23.7	21.4
	6	22.0	30.4	14.6	21.6	20.6
	7	22.1	26.6	14.0	13.2	22.7
	8	22.2	27.2	16.9	9.2	24.0
	9	22.9	25.8	11.6	7.9	28.7
	10	26.3	27.0	12.5	6.3	34.9
severely short of time [7]	all	16.9	23.1	8.2	9.7	16.1
	decile					
	1	16.1	24.3	**	8.0	11.3
	2	17.3	25.6	3.4	10.2	10.3
	3	16.2	25.3	10.8	18.0	14.6
	4	14.3	25.7	5.0	13.5	16.8
	5	18.1	26.2	8.7	17.4	15.0
	6	18.5	24.8	8.8	12.7	14.4
	7	16.4	22.7	9.7	8.7	15.9
	8	15.7	20.6	13.7	4.6	16.0
	9	15.7	17.6	5.7	6.2	19.1
	10	21.0	19.1	8.4	4.5	24.8

[1] Families in which either parent experienced unemployment are excluded from the analysis.

[2] Decile cut points using ALL individuals (not just couples with kids).

[3] German income decile 1 numbers not presented because the sample size is too small for accurate estimation (33 observations).

[4] Weighted by household weight and not individual weight.

[5] 'Short' of time refer to families having fewer adult hours per capita than a 2-child, 2-parent family in which both parents work 40 hrs (i.e., < 36 hours per person).

[6] 'Very short' of time refer to families having fewer adult hours per capita than a 2-child, 2-parent family in which both parents work 45 hrs per week (i.e., < 33.5 hours per person).

[7] 'Severely short' of time refer to families having fewer adult hours per capita than a 2-child, 2-parent family in which both parents work 50 hrs per week (i.e., < 31 hours per person).

Table 6

Rates of Absolute 'Equivalent' Time Shortage

Couples with Children in House [1, 2, 3, 4]

		Canada 2000	U.S. 2000	Germany 2000	Sweden 1995	U.K. 1999
short of time [5]	all	24.9	33.5	15.5	13.4	27.4
	decile					
	1	18.4	18.8	**	15.3	15.3
	2	20.8	26.3	4.1	18.6	9.8
	3	21.5	29.7	14.1	14.5	15.4
	4	21.7	31.8	9.4	18.6	21.1
	5	25.5	35.7	11.1	21.3	24.7
	6	28.5	37.2	21.3	16.9	25.9
	7	26.0	36.1	20.8	13.4	29.2
	8	28.6	36.1	19.6	8.3	34.4
	9	26.1	37.7	19.9	8.1	39.7
	10	28.5	35.4	15.3	8.6	45.5
very	all	15.5	22.7	8.4	6.9	16.3

short of time [6]	decile					
	1	13.8	13.6	**	8.6	8.8
	2	15.0	19.8	1.2	7.4	5.0
	3	10.9	22.4	5.0	7.1	9.0
	4	12.5	22.3	5.1	7.6	11.7
	5	17.2	23.6	6.8	14.2	13.3
	6	16.3	25.1	7.6	7.8	14.5
	7	17.2	24.3	12.8	7.3	16.0
	8	16.3	22.7	13.0	3.3	20.3
	9	15.2	23.3	9.9	5.6	24.3
	10	19.5	23.9	12.6	4.2	33.1
severely short of time [7]	all	7.5	11.1	4.4	1.5	8.9
	decile					
	1	8.9	7.7	**	4.1	5.6
	2	8.4	10.1	0.0	4.3	3.0
	3	5.3	10.9	2.0	1.6	4.1
	4	5.9	12.4	1.0	3.1	5.2
	5	9.2	11.0	4.6	3.5	6.9
	6	8.4	11.3	2.6	1.3	7.9
	7	6.4	11.3	7.2	1.1	9.0
	8	7.0	11.5	12.0	0.1	9.9
	9	5.3	11.1	3.1	0.6	14.8
	10	11.2	11.2	5.7	0.2	19.8

[1] Families in which either parent experienced unemployment are excluded from the analysis.

[2] Decile cut points using ALL individuals (not just couples with kids).

[3] German income decile 1 numbers not presented because the sample size is too small for accurate estimation (33 observations).

[4] Weighted by household weight and not individual weight.

[5] 'Short' of time refer to families having fewer adult hours per capita than a 2-child, 2-parent family in which both parents work 40 hrs (i.e., < 72 hours per equivalent person).

[6] 'Very short' of time refer to families having fewer adult hours per capita than a 2-child, 2-parent family in which both parents work 45 hrs per week (i.e., < 67 hours per equivalent person).

[7] 'Severely short' of time refer to families having fewer adult hours per capita than a 2-child, 2-parent family in which both parents work 50 hrs per week (i.e., < 62 hours per equivalent person).

Table 7

Sensitivity to Alternative Choices of Sample[1]

	Canada 2000	U.S. 2000	Germany 2000	Sweden 1995	U.K. 1999
Couples with Children < 18					
Total paid work hours	63.5	69.0	59.0	56.5	63.4
Total equivalent available hours	80.5	77.2	84.9	86.6	80.7
Percent more than 80 paid hours	17.6	24.9	14.7	5.3	25.2
Percent 'Short of equiv time'	24.9	33.5	15.5	13.4	27.4
Sample size	6120	12302	1318	3968	5520
Couples with Children 0 to 5					
Total paid work hours	60.7	66.9	51.2	57.4	59.1
Total equivalent available hours	82.3	77.4	89.5	84.0	82.6
Percent more than 80 paid hours	14.6	22.4	5.3	4.5	19.1
Percent 'Short of equiv time'	21.7	33.1	7.1	17.4	21.6
Sample size	2454	5748	980	1382	2580

Couples with Children < 18, including households in which either parent experiences unemployment					
Total paid work hours					
Total equivalent available hours	60.5	68.9	56.0	51.6	61.1
Percent more than 80 paid hours	82.1	77.3	86.7	89.0	81.8
Percent 'Short of equiv time'	15.4	24.3	13.8	4.1	23.9
	22.5	33.3	14.8	11.3	26.0
Sample Size					
	7728	13589	1594	3332	5841

[1] Weighted by household weight and not individual weight.

Table 8

Lone Mothers with Children < 18 in House [1, 2]

	Canada 2000		U.S. 2000		Germany 2000		Sweden 1995		U.K. 1999	
number of kids	1.6		1.9		1.4		1.6		1.8	
number of earners (%)	0	1	0	1	0	1	0	1	0	1
	22	78	19	81	26	74	42	58	56	44
total work hours	26.5		31.4		24.8		19.4		12.9	
'Available' Adult Hours [3]										
total hours	85.5		80.6		87.2		92.6		99.1	
total per person in household	31		27.8		35.9		38.2		36	
total per equivalent person in household [4]	50.9		46.6		55.4		59		59	
working over 40 hours of paid work per week	9.1		12.4		15.9		1.3		9.2	
working over 45 hours of paid work per week	5		8.6		6.6		0.7		5	
working over 50 hours of paid work per week	2.7		4.5		2.8		0.3		1.8	
Absolute 'Per Capita' Time Shortage [5]										
short of time	59.7		66.9		41.9		28.9		47.3	
very short of time	57.6		64.9		36.3		28.2		43.9	
severely short of time	54.4		63.1		32.8		27.2		39.7	
Absolute 'Equivalent' Time Shortage [6]										
short of time	91.1		95.4		88.7		77.5		80.7	

very short of time	89.8	95	88.2	76.5	78
severely short of time	78	87.1	68.9	58.8	54.4

[1] Weighted by household weight and not individual weight.

[2] Lone mother families that experienced unemployment are excluded from the analysis.

[3] (16*7)- total paid maternal hours.

[4] Total non-work hours divided by the square root of the number of people in household.

[5] 'Short', 'very short', and 'severely short' of time refer to families having fewer adult hours per capita than a 2-child, 1-parent family in which the parent works 40 hrs, 45 hrs, and 50 hrs per week (i.e., < 36, 33.5, and 31 hours per person).

[6] 'Short', 'very short', and 'severely short' of time refer to families having fewer adult hours per equivalent person than a 2-child, 1-parent family in which the parent works 40 hrs, 45 hrs, and 50 hrs per week (i.e., < 72, 67, and 62 hours per person).