Fatherhood and Men's Everyday Time Use in Sweden, 1990/91–2000/01

Martin Dribe
Center for Economic Demography and Department of Economic History
Lund University, Sweden
Martin.Dribe@ekh.lu.se

Maria Stanfors
Center for Economic Demography and Department of Economic History
Lund University, Sweden
Maria.Stanfors@ekh.lu.se

Abstract

Research in many countries indicates that the transition to parenthood intensifies gendered patterns in time use and strengthens a traditional division of labor in which women do more housework and caring than men. This paper investigates the impact of fatherhood on men's everyday time and how it changed over the 1990s by analyzing data from two Swedish *Time Use Surveys*, undertaken by Statistics Sweden in 1990/91 and 2000/01. Specifically, we address: In what way does presence of small children affect the time use of fathers and mothers, respectively? Which types of activities are affected the most by parenthood, and are there any gender differences in this respect? Did the effects of parenthood on gendered time use patterns change following structural and institutional change during the1990s? The results indicate that while parenthood in 1990 clearly strengthened the traditional gender division of labor in the household, this was much less the case in 2000, when parenthood affected men and women in a rather similar way.

Paper for session 48 "Work and Family: A Father's Perspective" at the annual meeting of the Population Association of America, New York, 29–31 March, 2007.

This work has been done within the project "Male Fertility and Fatherhood", financed by the Swedish Research Council. Martin Dribe also acknowledges financial support from the Swedish Council for Working Life and Social Research.

Introduction

During the 20th century women became increasingly engaged in labor market activities with the most dramatic increase in married women's and mothers' employment outside the home. Women's and men's increasingly similar investments in education (at least when it comes to level) and labor market attachment over the life course have, together with the increasing prevalence of the two-earner household, challenged the idea that women first and foremost are the caretakers of home and the family. The two-earner household model has today, to a large extent, overtaken the traditional male breadwinner model in Europe as well as in the United States (Drew et al. 1998; Spain & Bianchi 1996). Partly, this is associated with an erosion of male earnings but it is also associated with a strengthened relative position of women and a changing gender role set within in the household, as well as in the economy and society at large. In Sweden, the establishment of the two-earner household was an ideological break with the past and has been a political goal since the late 1960s.

This development has had demographic implications of which the most notable are delayed marriage, cohabitation and postponement of fertility (e.g. Brewster & Rindfuss 2000; Kohler et al. 2002). Since women and men are spending more time single and childless, and less time bearing and rearing children, they have more time for education, building a career and they have more time to spend on leisure activities at their own discretion. Altogether, economic and demographic factors supported changing gender roles and a household where both women and men take financial responsibility and share paid work. Alongside with this, the notion of what is appropriate male and female behavior has also changed and the normative ideal of today's family is one in which both mothers and fathers are involved and active caretakers (Aldous et al. 1998; Coltrane 1996; Pleck & Pleck 1997).

While female employment rates and women's time in paid work have increased substantially, some argue that their time spent in unpaid work has not declined enough to compensate for this (e.g. Bianchi 2000; Gauthier et al. 2004). Men have increased their time in unpaid work activities but this has also failed to compensate for women's changing employment status since this increase over time has been small and started from a very low level (Coltrane 2000; Gershuny & Robinson 1988; Sullivan & Gershuny 2001). Therefore, women are doing a "second shift" of unpaid work and have less time for leisure than men (Fenstermaker 1985; Hochschild 1989; Sayer 2005).

Another view challenging the second shift, claims that women's and men's time use is converging since women are doing more paid work and less unpaid work while men are doing more unpaid work and less paid work (Gershuny 2000; Gershuny & Robinson 1988; Robinson & Godbey 1997). Convergence is the result of changes on behalf of both women and men supported by the increasing access to household technology and various services that reduced unpaid work in the sense of routine housework. The proponents of convergence argue that the gender revolution has not stalled at all. Change will, according to this view, go on since younger men and women are likely to adopt more gender equal ideals and adapt to a less traditional division of labor and a less gender-specialized use of time.

Several studies find that parenthood intensifies gendered patterns in time use and strengthens a traditional division of labor in which women do more housework and caring for others than men, who on the other hand, do more paid work (see for example Bianchi 2000; Sandberg & Hofferth 2001; Sayer 2005 on the United States; Craig 2005, 2006a, 2006b on Australia; Flood & Gråsjö 1997; Hallberg & Klevmarken 2003 on Sweden; Knijn & Selten 2002 on the

Netherlands; Gershuny & Sullivan 2003; Finch 2006; Sullivan & Gershuny 2001 for international comparisons). In many countries, the daily workload of mothers exceeds that of fathers (Sayer 2005) and women's disproportionate responsibility for unpaid work affects, in many senses, their well-being negatively (Waldfogel 1998).

The aim of this paper is to study how parenthood affects household time allocation in Sweden, and if the transition to parenthood affects the time use of men and women differently. We are especially interested in the impact of fatherhood on men's everyday time use and how it changed during the 1990s, which was a period of severe economic crisis and institutional change in Sweden. The Swedish case is of particular interest since it is the archetype of the Nordic welfare state model and has been in the forefront internationally when it comes to gender equity, active family policy and a strong position of women in the labor market. Moreover, Sweden has a longstanding strong orientation towards work-family policies targeting at men as well as women, even though these policies have not been altogether successful, for example when it comes to the sharing of parental leave and care for sick children (e.g. Ekberg et al. 2005; Meyer 2007; Sundström & Duvander 2002).

We use data from the two Swedish time use surveys based on time diaries, undertaken in 1990/91 and 2000/01 and included in the Multinational Time Use Study (MTUS). Since there is no longitudinal time use data available where the effect of the actual transition to parenthood can be studied, we compare the time use of fathers to young children to that of other men, and mothers to young children with that of other women, controlling for a number of background variables. Specifically, we address the following questions: In what way does presence of young children affect the everyday time allocation of fathers and mothers, respectively? Which types of activities are affected the most by parenthood, and are there any gender differences in this respect? Did the effects of parenthood on gendered time use patterns change following structural and institutional change during the1990s?

The paper is organized as follows. The next section provides a background by discussing basic time use patterns with special focus on the effects on parenthood on time use of men and women, as well as the role of institutions and economic change in Sweden during the 1990s. This is followed by sections that describe the data and definitions, present the empirical results, and finally a concluding discussion of the findings.

Background

An individual has 24 hours, or 1440 minutes, per day to allocate to different activities that together form basically three different sorts of time: paid work, unpaid work and leisure. Sleep is often seen as a residual category and the main research interest is devoted to what people do during their waking day. Men and women also spend similar amounts of time on sleep (about eight hours per day on average) and other personal care.

As a whole, the patterns of time use are rather similar in industrialized countries. This is one of three dimensions of convergence in time use over time identified by Gershuny (2000). The other two are convergence by gender and by class or social status. Gershuny also finds an approximately constant balance between the totals of paid and unpaid work in different industrialized societies. All countries show an increase in leisure time (emanating from a decline in total work that is paid plus unpaid work) during the latter decades of the 20th

century.[1] This is seemingly at odds with the widespread impression that people today are more rushed and running out of time (see Hochschild 1997; Robinson & Godbey 1997 for a discussion on people's perceptions of time in contrast to the real availability of time). Women have, on average, less total free time than men in both Europe and the United States (Eurostat 2006; Sayer 2005).

In the case of leisure, it is important to note the difference between time use data that refer to a person's primary activity at each point in time or data that also take into account secondary activities. Part of the problem of feeling rushed or 'time poor' may be that people have too many activities going on at once so that there is a spillover effect and leisure is not really pure, but constrained (Bittman & Wajcman 2000; Mattingly & Bianchi 2003). Some argue that this is especially a problem for women because they experience time in a different way than men due to their different responsibilities and their inclination to multitask. In particular women's caring for others, such as children and the elderly, seems to be of importance (Adam 1995). This makes their leisure qualitatively different from that of men, even though women have the same amount of free time as men at their disposal.

The total balances of work and leisure for men and women are more or less same across European countries (Gershuny 2000).[2] When it comes to total work, men spend more time on paid work than on unpaid work in Europe and the United States whereas the opposite is true for women. The total hours worked per day is generally fewer for men than for women, except in Sweden, Norway and the United Kingdom where it is (almost) equal (Eurostat 2006). Due to less time in paid work and lower hourly earnings, women are at a disadvantage when it comes to income and well-being (cf. Waldfogel 1998). The general trend over time when it comes to total work is, nevertheless, one of convergence since women, in absolute terms, have increased their time in paid work and do less unpaid work, while men do less paid work and have increased their unpaid work. Convergence is, however, incomplete. This means that women, in general, have improved their position relative to men over time, but that they are still at a disadvantage due to their lower wage rate and their lower participation in paid work.[3] In many countries, the total number of hours worked is even higher for employed women than for employed men. There is thus evidence of more women doing a second shift than men. In this respect, Sweden at the turn of the century is an exception together with Finland, Norway and the United Kingdom (Eurostat 2006).

Unpaid work can be broken down into routine housework, maintenance, and child care of which housework and child care are most time consuming. Women, on average, do more unpaid work than men.[4] The exception is home projects such as repairs and maintenance that are the most typical male tasks in the household. Although men's relative contributions to routine housework have increased and women have reduced their time in these chores,

[1] Some of the richer countries show a small decline in leisure time.

[2] It is interesting to note that the early set of time use studies that document time use patterns according to gender across capitalist and socialist countries (Szalai 1972) show that both women and men in the socialist countries were to a higher degree engaged in paid work than women and men in the OECD countries studied. However, women on average spent the same percentage of time in housework in both capitalist and socialist countries although the explicit socialist goal was to free women from this. In total, women in the communist countries worked longer hours than women in the OECD countries and so did also the men. This difference stayed on in the 1970s and 1980s (Juster & Stafford 1991).

[3] Women are at a disadvantage when it comes to present income but also when it comes to future income opportunities since their specialization in unpaid work leaves them with less work experience and less employment-related human capital.

[4] This is an effect of women doing more unpaid work in absolute terms and relatively larger share of women undertaking different unpaid activities in comparison to men.

women still do more housework than men (Coltrane 2000). The most time consuming of all routine chores in the household is food preparation followed by cleaning. In many countries, the time devoted to these tasks has declined (cf. Bianchi et al. 2000). Change has to do with both technological advances and products that save time and shifts with respect to norms and standard behavior. The norm of what is good housekeeping has definitely changed as women's labor force participation rates increased and it has become more accepted to make use of different services available (cf. Coltrane 2000). Outsourcing of household chores varies, however, greatly between countries. In a comparative context, the overall differences in housework time among women are much smaller than among men (Gershuny 2000; Juster & Stafford 1991; Eurostat 2006).

Previous studies on the effect of parenthood on time allocation not only shows that many men and women resort to a traditional division of labor when they become parents but also that they do so because they experience the transition to parenthood in a highly gendered way (Sanchez & Thomson 1997; Singley & Hynes 2005). Just as women and men are 'doing gender' (West & Zimmerman 1987), new mothers and fathers are 'doing parenthood' (Walzer 1997). They soon find out that the ideals of what is good mothering and fathering differ from each other (Coltrane 1996; LaRossa & LaRossa 1981). Cultural ideals and norms may also be in conflict with one another or with institutional factors (Walzer 1997). For example, in Sweden, both mothers and fathers are expected to be engaged and involved parents and take active part in the care and development of their children (Bergman & Hobson 2002), and the parental leave scheme has also granted this since 1974. However, not all people and workplaces agree with this opinion (see, e.g. Bygren & Duvander 2006) and the gender wage gap still makes the opportunity costs for the woman's time at home less than for the man in most cases. This tends to counteract gender equality and reinforce a traditional division of labor between mothers and fathers.

The difference in time spent on child care between mothers and fathers has declined in recent decades, but mothers still devote more time to child care than do fathers (Bianchi 2000; Hofferth 2001; Sandberg & Hofferth 2001). Child care, and especially care for young children, is different from other unpaid work since it is at the same time constant and erratic and does not follow tight schedules. Child care is also more emotionally based, and it is thus more difficult to escape than routine housework or maintenance work, which may cause stress. Since women often have the main responsibility for the care of children they are more exposed to this stress which often creates dissatisfaction (Coltrane 2000; Craig 2005, 2006b; Crompton 1999). The age of the child is an important determinant of the amount of hours parents put into child care. So is the parents' educational attainment; both mothers and fathers with higher education seem to spend more time with their children than those with lower levels of schooling. This can be seen as a result of parents' wish to invest in the quality of their children and equip them with skills and social capital. It can also be taken as an indication of the fact that child care differs from other unpaid activities undertaken in the household.

Cross-national evidence shows that the time allocation between paid work and unpaid work is affected by the presence of children, especially preschoolers, in the household (Eurostat 2006; Finch 2006; Flood & Gråsjö 1997). For both men and women the total work time increases and the composition of activities changes and indicates a specialization according to a traditional gender division of labor. There is however variation between countries when it comes to the extent of specialization between mothers and fathers. Some argue that this is dependent on what kind of welfare state regime (according to Esping Andersen 1990) the

country adheres to (Finch 2006; Sullivan & Gershuny 2001), how oriented to gender equality the country in question is (Fuwa 2004), and what kind of work-family policies there are available (Kalleberg & Rosenfeld 1990; cf. Jacobs & Gerson 2004). In many ways the Nordic countries can be viewed as more gender equal than other countries, while a country like Italy shows, in comparison to other European countries, a very distinct division of labor between mothers and fathers (cf. Mencarini & Tanturri 2004, 2006). The standard effect of parenthood is that fathers allocate more time to paid work and mothers do more unpaid work because of the time needed for child care and extra housework that emanate from having children. In the Nordic countries, mothers' time in additional unpaid work is to a large extent covered by the parental leave schemes whereas in other countries, such as Italy, mothers withdraw from the labor market and stay at home for a longer time. The general trend, across nations, indicates, however, that the difference between mothers' and fathers' time in child care is narrowing (Bianchi 2000; Gauthier et al. 2004; Hallberg & Klevmarken 2003; Sandberg & Hofferth 2001)

The gender differences in time use, and the gendered effects of parenthood on time use, discussed so far are in line with economic theories of specialization and bargaining related to differences in the earning potentials of men and women. In the specialization model, the earnings potentials are important as determinants of comparative advantages for work in the household and the labor market respectively. This was the traditional economic approach to analyze time allocation within the household. According to this view, the typically higher male wage rate makes men specialize in paid work and women in unpaid work of which routine housework and child care make up large parts (Becker 1965, 1981; Gronau 1977). Bargaining models are either co-operative, in which the total household utility is a function of the two partners' individual utility functions, or non-cooperative, in which one of the partners' utility dominates the other (Lundberg & Pollak 1996; Manser & Brown 1980). In either case, the outcome of bargaining over intra-household allocation of time is affected by the relative earnings potential of the two partners. This can be also connected to what Thomson (1990) defines as the 'power rule' (see also Sanchez & Thomson 1997). In brief, women with higher education are more likely to be professionals and have a career; the higher position and earnings the woman has, the greater is her bargaining power within the couple context. This should lead to a more equal time allocation between partners.

The institutional context, and policies aimed at facilitating the work-family balance for men as well as women, plays a potentially important role in encouraging a more equal division of labor (Fuwa 2004; Jacobs & Gerson 2004). Studies show that the gender division of labor differs between countries according to what kind of welfare state or public policy regime they adhere to (Gershuny & Sullivan 2003; Fuwa 2004; Hook 2006). Sweden and the other Nordic countries stand out as more accommodating to working women and the two-earner household in relation to other European countries and the United States by stressing the role of both men and women as members of the labor force and by reducing time competition between paid work and care giving. A gender-neutral approach to family policy seems to result in more egalitarian outcomes (Gauthier 1996).

Universal welfare provision, relatively generous transfers and extensive public services characterize the Swedish welfare state. The expansion of the welfare state has however increased taxation and tax levels are relative high compared to other countries. Rights to assistance and transfers of any kind are based on citizenship and are individualized rather than based on family status, which is important not least from a gender perspective. In many respects the expansion of the Swedish welfare state has gone together with the increase in

female labor force participation. The increase in public services directed at comprehensive child care and care for the elderly and disabled enabled women to do more paid work. For many women this means work in the public sector in teaching and caring jobs with the big difference that this is work for pay instead of unpaid work at home.

When it comes to parenthood and the care of children, parental leave targets both mothers and fathers. Since 1974 men and women are granted equal rights to take time off from work to care for children. Nevertheless, women take up the major part of parental leave (about 80 percent in 2005). Fathers share has increased slowly over time both as a fraction of users and as a share of total leave. Presently, the Swedish parental insurance grants parents 480 days.[5] With the exception of 60 days, leave can be shared between the parents without restrictions. The 60 days in question are reserved as a quota for either parent and if he/she does not use the time the benefit days will be forfeited. In public discourse, these two months are called 'daddy months' which illuminates that parenthood is a gendered issue.[6] Benefits are related to previous earnings. There is a strong incentive for both men and women to have labor market attachment before becoming parents. The replacement rate is high; 80 percent of previous earnings up to a maximum for most of the period. Public sector employees and many professionals in the private sector are almost fully compensated by their employers. The government otherwise finances the parental leave scheme.

Parental leave benefits are, like most other social transfers, subjected to taxation but also generating pension rights. The tax system puts high taxes on for example labor income. Income taxation is based on individual and not on family income since 1971. This has favored married women's employment and helped create the two-earner household. The combination of strong progressiveness of tax scales and joint taxation of couples imposed a high marginal tax rate on married women's work, which fell considerably when separate taxation was introduced (Sundström 1987). Other tax reforms in the early 1990s reduced marginal taxes substantially[7] and increased labor supply for both men and women, but more for men (Aronsson & Palme 1998; SOU 1995:104). However, the positive effects of tax reform were affected by severe economic crisis, structural change and high unemployment rates for both men and women during much of the 1990s. Not only did the Swedish economy undergo restructuring but so did the Swedish welfare state. The provision of public services was cut back and so were the replacement rates of several transfers. This makes the 1990s an interesting and illuminating decade to study.

Those who were hit the hardest by the development during the 1990s were young people aged 20–24 and families with young children, dependent on public services and transfers. Employment rates dropped dramatically for all, but especially for young people who had a relatively beneficial labor market situation in the late 1980s (see figure 1). Young people's labor market situation was extremely problematic in the early years of the decade. Many thus decided to stay on in education, in order to ameliorate their labor market chances (Björklund et al. 1998; SOU 2000:37). A shift in labor market policy allowed unemployment to rise rapidly. Previous, unemployment in Sweden had been very low in international comparison. As shown in figure 2 unemployment peaked in 1993 at 8.2 percent and then decreased but

[5] The Swedish parental leave scheme is very flexible; days can be used on either a full-time or part-time basis and until the child turns eight years.
[6] In 1995, when the quota was first introduced, the leave was extended correspondingly. In 2002, only the quota was extended, which, affected the number of days that the other parent could take.
[7] The highest marginal personal income tax rates dropped from approximately 80 percent to about 50 percent in 1991.

never returned to its previous low level. Men's unemployment followed the general development pattern and peaked at 9.7 percent in 1993 whereas women experienced the highest unemployment rate (7.5) in 1996/1997, very much due to the restructuring of the welfare state and drop in public sector employment. High unemployment and an increasing share of the population in education and inactivity affected the income of many people negatively. Altogether, the developments affected a large part of the population that experienced a sense of economic insecurity, even though they were not actually unemployed themselves. Those who were employed, on aggregate, tended to work more hours and take less time off. Demographic effects were general delays in important life course transitions such as leaving home, cohabitation and becoming a parent. Fertility rates dropped but not so much as in other European countries (e. g. Adsera 2004, 2005). Despite harsh economic conditions, the 1990s also brought about reforms with the aim to enhance gender equality. Some of these were targeted at parents and at increasing fathers' share up of parental leave.

- Figures 1 & 2 here

Data

We use data from the Multinational Time Use Study (MTUS) for two waves of time diary surveys in 1990/91 and 2000/01 conducted by Statistics Sweden (World 5.5 – release 2, MTUS 2006; see also Gershuny 2000 for a discussion on data collection and data quality). The data includes information on how respondents spend their time on 41 different grouped activities (out of 150 original activity codes) within a 24-hour period. In the version used we have only access to main activities from the diaries, not secondary activities. Time allocated to different activities was reported in 10 minutes intervals for one weekday and one weekend day by a sample of about 7500 individuals in the two waves drawn from the population registers. The first survey was carried out September 1990 to June 1991 and had a response rate of 50 percent, while the second survey was carried out October 2000 through September 2001 and had a response rate of 75 percent. The sample used includes men and women in ages 20–64 years. In this age group we study five different time use activities, which we expect to be related to parenthood:

1. Paid work includes formal work outside the home, paid work at home, and second jobs. We did not include travel to and from work because we are primarily interested in the effect of parenthood on working time, and we do not want to confound this with time allocated to travel. For example if a parent reduces the workday, the travel time to and from work will normally not change (except in cases where rush hours can be avoided due to the shorter work day), but if a parent stays at home one day a week travel time will be affected, and hence the same change in working tome would give different changes in paid work. It also tends to inflate part-time workers time in paid work disproportionately. Since most part-timers are females and part-time work is strongly associated with the presence of young children, this may cause an unnecessary gender bias in the estimates of actual paid work.

2. *Routine housework* is defined as cooking/washing up, doing housework (cleaning, laundry etc), shopping, and domestic travel (for example when shopping). The first two categories are quite straightforward to include in this category, even though some high quality – i.e. non-routine – cooking is also included, especially on weekends. Shopping, on the other hand, includes both routine tasks such as shopping groceries or clothing for the kids, and shopping more as a leisure activity. Since there is no possibility in the data to make a distinction

between different kinds of shopping we have included shopping in the routine housework category because we expect that most of the time devoted to shopping concerns the routine aspects of it.

3. *Maintenance housework* includes gardening and odd jobs (washing the car, repairing the house, walking the dog etc). Most of this work is not a routine activity connected to the house in the same sense as the former category. Repair activities, car washing etc are less regular than for example cooking, which makes it reasonable to treat as a separate category. In a traditional gender division of labor we also expect men to be more involved in this activity, while women are more involved in routine housework, and this is an important reason for keeping them apart.

4. *Child care* includes different aspects of time with children, both more routine activities and more high quality activities. It thus includes changing diapers, bathing children, etc and reading, talking and playing with the kids.[8] It also includes being present at child activities.

5. *Individual leisure* time includes leisure time spent in activities judged to be individually oriented. This does not mean that the activity has to be performed alone, but that it is done for personal benefit and not part of family life more generally. Making this kind of distinction is not unproblematic. We have included activities such as hunting, fishing, playing sports, watching sports at spectator events, going to the cinema, theater, music, parties, dancing, restaurants, visiting friends, reading books (non-work related), newspapers, magazines, entertaining friends, and doing hobbies. We have not included time watching TV, listening to radio, going to church, doing voluntary work, and similar activities. Although TV time has increased, on average, for both men and women between 1990/91 and 2000/01 it is very likely to be an activity that is combined with a secondary activity such as cooking, eating, doing other kinds of routine housework and child care. This we cannot consider since we lack information on secondary activities and other people being present during the activity. Instead we focus on leisure activities reported as main activities that are more 'pure' than watching TV (cf. Bittman & Wajcman 2000; Mattingly & Bianchi 2003). Voluntary work and some other similar activities may very likely be child-related or related to work or the neighborhood community and are also different from other kinds of leisure activities since they are less 'leisurely'.

We look at the time allocated to these five activities for two different periods corresponding to the two waves in 1990/91 and 2000/01. We also distinguish between weekdays (Monday–Friday) and weekends (Saturdays and Sundays) because the time use patterns are likely to be quite different on weekends and weekdays. Due to small sample size we have not been able to study differences in time use between different weekdays or between Saturday and Sunday. Although there are such differences they are likely to be much less pronounced that differences between weekdays on the one hand and weekends on the other.

Basic time use patterns 1990/91—2000/01

Table 1 displays descriptive statistics on the different time uses in the sample. Looking first at weekdays we see that a larger proportion of men spend time in paid work compared to women, and they also work longer days on average than women (534 minutes for men and

[8] Cf. Craig (2006a) for a discussion on different types of child care activities and gendered aspects of time in childcare that may be both quantitatively and qualitatively different.

445 minutes for women in 1990/91). It is also quite clear that the time in paid work declined quite a bit between 1990/91 and 2000/01. For men the proportion not working at all increased from 20 to 28 percent and the mean time in paid work for those who worked declined by 48 minutes. For women the proportion not working also increased while the time worked for those who worked declined by only 13 minutes. The reason behind the seemingly high proportions of both men and women not doing any paid work at all is consistent with the effects of the severe economic crisis during the 1990s. The early years of the 1990s recorded negative economic growth and a dramatic increase in unemployment and fewer people in employment. 1994 was a turning point, but growth can after that be characterized as 'jobless' and there has been a general decline in hours worked throughout the 1990s.[9] Many organizations cut back on personnel in order to increase productivity and competitiveness, which among other things increased exits to pre-retirement and induced more young people to continue studying (SOU 2000:37). Secondary and higher education expanded enormously and a number of new colleges and universities were established all over the country. Björklund et al. (1998) illustrate this by showing that alongside the drop in employment – equivalent to about 400,000 individuals aged 16–34 in the years 1988-1997 – 170,000 individuals resorted to education. Between 1990/91 and 2000/01 the number of students enrolled in higher education increased by more than 50 percent from about 200,000 to 330,000.

- Table 1 here

Comparing weekdays with weekends we see that a much higher proportion do not work in the weekends, which is what could be expected. They also worked shorter days (around 320–330 minutes per day, or about 5.5 hours including breaks), but there were practically no differences between men and women. There was not as much change over time in paid work at weekends as was the case during weekdays, which is consistent with the general decline in hours worked and the fact that people are not very inclined to take up secondary jobs during weekends.

The time spent in housework declined between the two periods. Men reduced the time spent on routine housework by 11 minutes on weekdays and by 24 minutes on weekends. Moreover, the proportion of men not doing any routine housework at all increased from 9 percent on weekdays in 1990/91 to 17 percent in 2000/01, and the corresponding increase on weekends was from 8 to 13 percent. Also the proportion of women not doing any routine housework increased, but from much lower levels: from 2 to 4 percent on weekdays and from 1 to 4 percent during weekends. The major part of the change in time allocated to routine housework can be attributed to the fact that women cut their time. Women, like men, reduced the time spent on routine housework by about one hour per day on weekdays (63 minutes) and by more than one hour per day on weekends (78 minutes). Thus, taken together, Swedish families considerably reduced the time spent on routine housework between the 1990 and 2000 (cf. Bianchi et al. 2000). To a large extent this is explained by less time spent on cooking (see table 2). On average women spent 39 minutes less on cooking on weekdays in 2000/01 than they did in 1990/91, while the corresponding decline for men was 9 minutes. However, also the time spent on cleaning the house declined by 19 minutes for women but increased by 3 minutes for men. The time spent shopping increased somewhat for both men and women during weekdays. Time spent cooking declined even more on weekends than on weekdays for both men and women, while the time spent cleaning the house and doing laundry changed less on weekends than on weekdays. Since outsourcing of domestic work

[9] The decline in hours worked during the 1990s is, according to the Swedish *Labour Force Surveys* some what bigger for men than for women.

and upkeep of the household is expensive due to high tax wedge on labor, it is relatively rare in Sweden. Thus, the decrease in the time devoted to cleaning is likely to be associated with a change in housekeeping standards and perhaps also with gender attitudes that not only make it acceptable for men to do housework but also for women *not* to do it (cf. Bianchi et al. 2000).

- Table 2 here

Turning to time devoted to maintenance work (gardening etc) this did not change a great deal during the weekdays (table 1). Often maintenance is considered the traditional male domain of unpaid work. Men do more maintenance housework than women, both on weekends and weekdays. Men spent about half an hour more than women on this activity in both 1990/91 and 2000/01. On weekends men did about an hour more maintenance work in 1990/91 than did women, but men reduced their time by 26 minutes between the two periods, while there was no change for women. About half of both men and women did no maintenance work at all, similar on weekdays and weekends.

A majority of both men and women spent no time caring for children, which of course reflects the fact that many people without young children in the household are included in the sample. For those who did spend some time on child care, women did about 50 minutes more than men on weekdays in 1990/91, and about half an hour more on weekends in the same period. The differences between the sexes declined during the 1990s to 24 minutes more for women on weekdays and 15 minutes on weekends. It is also interesting to note that both men and women spent less time on child care in 2000/01 than they did in 1990/91, which is opposite to the trends observed for earlier periods in several European countries and the United States (see Bianchi 2000; Gauthier et al. 2004), but in line with trends for Sweden from 1984 to 1993 (Hallberg & Klevmarken 2003).

Finally, we turn to individual leisure time. Men seem to have more time to individual leisure than women and the difference increased somewhat between the periods from 9 minutes more for men on weekdays and 33 minutes more on weekends to 21 minutes more on weekdays and 39 minutes more on weekends. However, both men and women increased their time spent on individual leisure, indicating that some of the time cut off from routine housework was channeled into individual leisure activities.

Parenthood and time use

The main focus of this paper is to study the differences between parents and non-parents in time use to get an idea of how parenthood affects the time allocation in Swedish families. To do this we estimate multivariate regression models to control for important background variables that are likely to have an impact on time use (see table 3). We include *age* and *age squared* to control for linear and non-linear age effects on time use in different activities. *Household type* controls for differences between individuals living in different household contexts. *Activity* indicates the individual's main activity (full-time work including self-employed, part-time work, unemployed, retired, student, or other). We also control for *spousal employment* (full-time work including self employed, part-time work, not in paid work). *Household income* is divided into three categories: highest 25%, middle 50% and lowest 25%. Unfortunately, individual income is not available in the data. Finally we control for the *educational level* of the individual (primary, secondary, or higher education).

- Table 3 here

Our main concern is to assess the differences between men and women regarding the impact of parenthood on time use. We therefore estimate models where sex is interacted with age of youngest child in the household (no children under 18 in the household, 0–4, 5–13, and 13–17). The base effect of age of youngest child indicates the effect for men (reference category for sex) and the interaction effect gives the additional effect, if any, for women.

As was clear from table 1, considerable proportions of individuals spend no time at all on some activities, which violates the normality assumption of ordinary least squares regression. Assuming that the likelihood of spending time in an activity and the actual time spent are both determined by the same factors we estimate a (left-censored) Tobit model[10]:

$$y_i^* = \boldsymbol{x}_i\beta + \mu_i, \quad \mu_i \sim N(0, \sigma^2)$$

where y_i^* is a normally distributed latent (non-censored) variable. The observed dependent variable y_i equals y_i^* if $y_i^*>0$ and 0 otherwise (see, e.g., Long 1997). The reported coefficients indicate the effects of the explanatory variables ($\boldsymbol{x}_i$) on the latent variable y_i^*.

Table 4 displays the tobit estimates for both periods, and tables 5 and 6 show the estimates for the two periods separately. Women clearly spend less time on paid work, maintenance housework and individual leisure than do men, but instead spend more time on routine housework and child care. The picture is quite similar for weekdays and weekends. Comparing the coefficients in table 5 and 6 the general patterns are pretty much the same. Thus, even when controlling for the variables in the model the basic gender differences in time use that we saw in table 1 are still clearly visible.

Tables 4–6 here

There are clear age effects on the time use pattern as could be expected. Older people devote more time to paid work, but the effect declines at higher ages. Older people also spend more time doing routine housework and maintenance housework, while they have less individual leisure time and also spend less time caring for children. Also in these cases the effects are non-linear and get smaller at higher ages. The patterns are very similar in weekdays and weekends.

There are strong effects of type of activity on time spent in paid work both in weekdays and weekends, which is also what one could expect. Activity also affects time spent on other activities, and more so during weekdays than on weekends. Together with students, full-time workers devote the least time to routine housework, maintenance housework, and child care, and also have the least time for individual leisure. Spousal employment affects routine housework in the expected way. Having a spouse working full-time in the labor market increases the time devoted to routine housework both in weekdays and on weekends, which is a clear indication of division of labor in the household.

Given the other variables in the model, people in households with higher income spend less time on routine housework and child care, and instead work more during weekdays. On weekends however the time spent in paid work declines with higher household income (cf. Gershuny 2000 on change in leisure time patterns). People with higher income also devote

[10] OLS estimates using the same explanatory variables yielded highly similar results.

more time to maintenance work, probably because they are more likely to be home owners, have vacation homes, cars etc. It is interesting to note that income does not seem to affect the time available for individual leisure.

Education affects time use in several ways. People with secondary education work less and spend more time doing routine housework during the weekdays than people with higher or lower education. There are also similar differences on weekends. People with higher education do less maintenance work and have more time for individual leisure than people with less education. But here we should remember that activities such as watching TV is not considered as individual leisure, while reading books is, and this may account for this difference. Time devoted to child care also increases with higher education, which has also been found in several other studies (e.g. Craig 2006c; Hill & Stafford 1974, 1985; Robinson & Godbey 1997). In a study using Swedish interview data for 1984 and 1993, however, Hallberg and Klevmarken (2003) did not find an effect of schooling on time spent with children.

Looking finally at changes between periods in time spent in various activities controlling for the other variables in the model it is quite clear that people spent less time on paid work, routine housework, maintenance work (weekends only) and child care in 2000/01 compared to ten years earlier, while they spent more time on individual leisure. This was also indicated by the basic patterns in table 1, and adding the control variables did not change this picture in any considerable way.

We now turn to our main focus: the effect of having young children on time use. As previously mentioned the base effects of age of youngest child in the household show the effects on men (reference category for sex) and the interaction effects show the additional effects for women. Thus, to get the net effect of having children aged 0–4 for women the base effect and the interaction effect have to be added. It is quite clear that having children under five significantly affects the time use patterns for both men and women. Fathers to young children work shorter days, both on weekdays and weekends, than comparable men without young children, and for mothers to young children the effect is even larger on weekdays, but not on weekends (cf. Carlin & Flood 1997; Flood & Gråsjö 1997). There are no statistically significant differences for parents to older children, but from looking at the coefficients we see that the pattern is similar, but the effects are smaller.

Fathers to young children do more routine housework in weekdays than comparable men without young children. The same is true for mothers to young children, and the effects of having children are larger than for men and also present for mothers with children 5–17 years old, which is not the case for fathers. On weekends fathers to young children do not spend more time doing routine housework than other men, but for women there is still an effect of having children under 5.

Naturally, parents to children under 18 devote more time to child care than people without children in these age groups, and the effect gets smaller for older children. What is perhaps more interesting is that the effect of having children under five on the time devoted to child care is larger for women than for men, although only marginally so. For children older than four there are no such gender differences in the impact of parenthood on time devoted to child care.

Parents to young children also have less time for individual leisure than comparable men and women without young children. During weekdays there is no difference in this effect between men and women, but on weekends the negative effect on leisure time of having children under five is larger for women than for men.

Taken together it seems clear that parenthood affects both men and women in the same direction towards less time spent in paid work and individual leisure, and more time spent on routine housework and child care. Especially for paid work and routine housework the effects are larger for women than for men. This may be interpreted as supporting the hypothesis that the gender based division of labor in the household become more traditional following the transition to parenthood, even though the direction of change in time use is the same for mothers and fathers.

Turning to a comparison of the two periods it is clear that the pattern changed a great deal in the 10-year period. In 1990/91 (table 5) there was no effect of parenthood on the time spent by men in paid work, while there was a quite powerful negative effect for women. Similarly there was no statistically significant difference between fathers to young children and other comparable men in time devoted to routine housework, while mothers to young children did considerably more such work than other comparable women. Parents to young children also had less time for individual leisure, but there were no differences between men and women in this regard.

In 2000/01 (table 6) the pattern was rather different. Both mothers and fathers to young children now devoted less time to paid work, even though the effect was still larger for women. This is partly a reflection of the different employment situations for women and men. When it comes to routine housework the previous difference in the effect of parenthood between men and women had now disappeared. Both mothers and fathers to young children (below age 13) devoted more time to routine housework than comparable men and women. Similarly there were no more any differences in the effect of parenthood on men and women in terms of time devoted to child care, and individual leisure (except for a negative additional effect of having older children for women).

Concluding discussion

In previous research there has been an almost general consensus that parenthood strengthens a traditional division of labor in the household. Thus, even though young, childless, people might share household chores rather equally, and work a similar number hours in the labor market before the arrival of the first child, parenthood is likely to change this in a fundamental way. The birth of a child increases the demand for other unpaid work in the household. If this work is to be carried out by one of the spouses (usually the woman), time allocated to paid work is likely to decline, which, depending on different country-specific transfer systems, may induce the other spouse (usually the male) to increase time spent in paid work. Parenthood, in this way, strengthens the division of labor in the household, and increases specialization. The fact that it is most often women who take on an increasing share of unpaid work, while men increase their time in paid work is consistent with actual wage differentials and differences in sectors of employment between men and women, whether a result of intra-household bargaining or simple specialization according to comparative advantages to maximize joint household income.

Our findings seem to give some support to this view, although not in the same profound way as in some other counties that put less stress on the two-earner household. In 1990/91 parenthood did not affect the time spent by men in neither paid work nor routine or maintenance housework, but it did increase the time spent in child care and decrease leisure time. For women the effects of parenthood were much larger, decreasing the time in paid work and increasing the time devoted to housework and child care. Thus, even though men did not actually increase their working time following parenthood, the traditional division of labor was no doubt strengthened by parenthood. The reason why women could work fewer hours despite adding new household members and fathers not increasing their working time, is found in the generous provision of parental leave at high replacement rates and the legal right to reduce work hours when having children under 12 primarily exercised by women, implying that most women actually kept most of their income despite being out of the labor force.

Ten years later, in 2000/01, the picture was entirely different. Fatherhood now changed time use of men in a similar way as motherhood did for women. Time in paid work declined and time devoted to routine housework increased on weekdays as well as weekends. Even though mothers to young children still reduced their time in paid work more than did fathers to young children – and this is also reflected in the unequal sharing of parental leave and temporary parental leave between mothers and fathers and the prevalence of part-time work especially among women with young children (e.g. Meyer 2007; Sundström & Duvander 2002) – there were no observable differences between men and women in the impact of parenthood on the time allocated to routine housework and maintenance housework. Parenthood might also have increased the time devoted to child care somewhat more for women than for men, but the effect was not statistically significant.

Although the sharing of parental leave continues to be unequal, men's share of parental leave increased during the 1990s; from 7 percent in 1990 to 12 percent in 2000, the sharing of temporary parental leave was however constant about 35 percent. Only a limited fraction of fathers exercise their right to take time off from work in order to care full-time or part-time for their children. But the gradual increase, that is still continuing, may be seen as a gradual adjustment on behalf of the fathers to a more gender equal division of labor in the home as well as in the labor market. The fact that highly educated and professional working women and their partners share parental leave more equally (Meyer 2007; Sundström & Duvander 2002) can be seen as an indication of increased bargaining power of women as argued in the literature (Lundberg & Pollak 1996; Manser & Brown 1980, Thomson 1990) and that there is an increasing group of people that try to change their behaviour and be more equal and thus allocate their time in a less traditional way.

It might also be that other institutions matter and affect fathers' involvement in child care and routine housework. This could be a high degree of flexibility in work schedules among an increasingly large part of the working population, a reduction in working hours when having children and easy access to affordable, high-quality child care outside the home. These factors allow both parents to work and care on a daily basis and may favor a more equal sharing of tasks in general (cf. Jacobs & Gerson 2004). During the 1990s, flexibility increased and became an important feature of many organizations. For parents, flexibility enables them to take time off to care and perhaps compensate for this later on (cf. England & Farkas 1986; Presser 1994). When it comes to child care outside the home, the share of children aged 1-6 in public child care increased from 57 percent in 1990 to almost 80 percent in 2000. In Sweden, non-parental child care is organized by the local authorities, it is easily accessible to parents

and highly subsidized, which enables fathers and mothers to spend time with children after work and care for them in a different way than full-time stay-at-home mothers and fathers would do.

Taken together, it seems that time allocation became more similar for men and women, as did the effect of parenthood during the 10-year period under study. Surely, this also has to do with changing norms and gender roles. Active fatherhood was on the political agenda in the 1990s but so were the negative economic effects of motherhood. In the summary of a large investigation of gender equality in Sweden, increased gender equality in the family was seen as an important step to gender equality in society at large (SOU 1998:6). However, real economic factors such as a stagnating gender wage gap and a highly segregated labor market with women being over-represented in the lower-earning jobs probably slowed down change and helped preserve a rather traditional gender division of labor when it comes to the aggregated categories paid and unpaid work. Some even argue that the family-friendly policies in Sweden and the other Nordic countries showed negative effects on women's position in the labor market (Datta Gupta et al. 2006). As long as the replacement rate for parental leave is less than 100 percent there will be economic incentives for the parent with the lowest wage rate to take up most of the leave. Nevertheless, it appears as if parenthood at the turn of the millennium did not strengthen the traditional division of labor between men and women as it did in the early 1990s. However, if we look at the overall gender differences in time use it still supports a traditional division of labor, but parenthood cannot be blamed to the same extent as before.

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Figure 1. Employment rates in Sweden (men and women) 1983-2004.

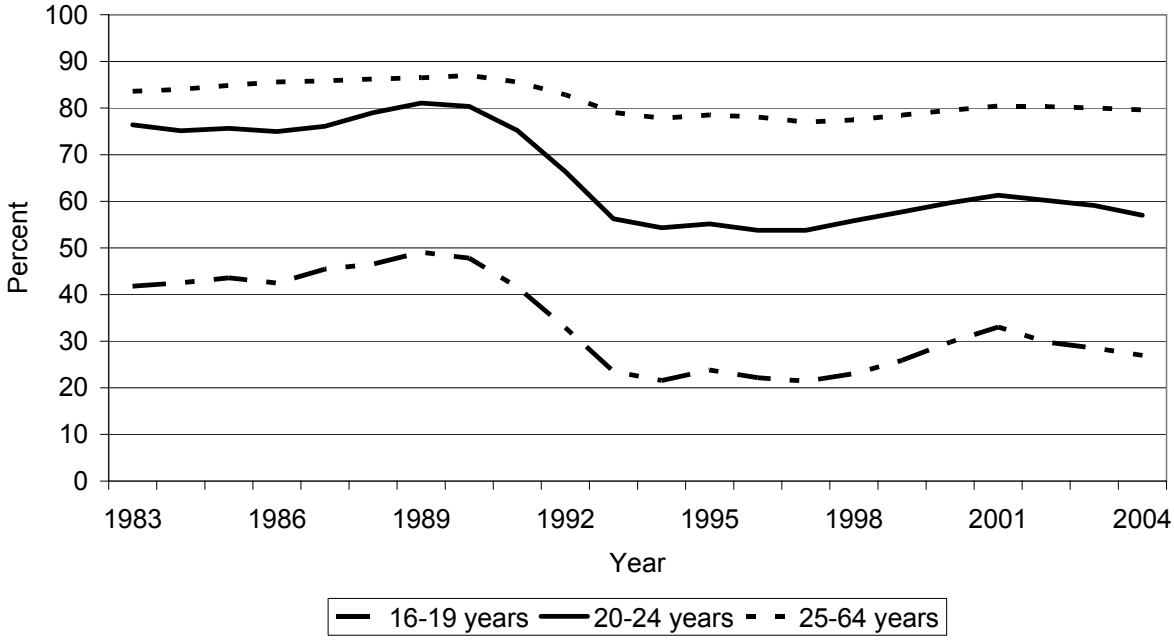

Figure 2. Unemployment rates in Sweden (men and women) 1983-2004.

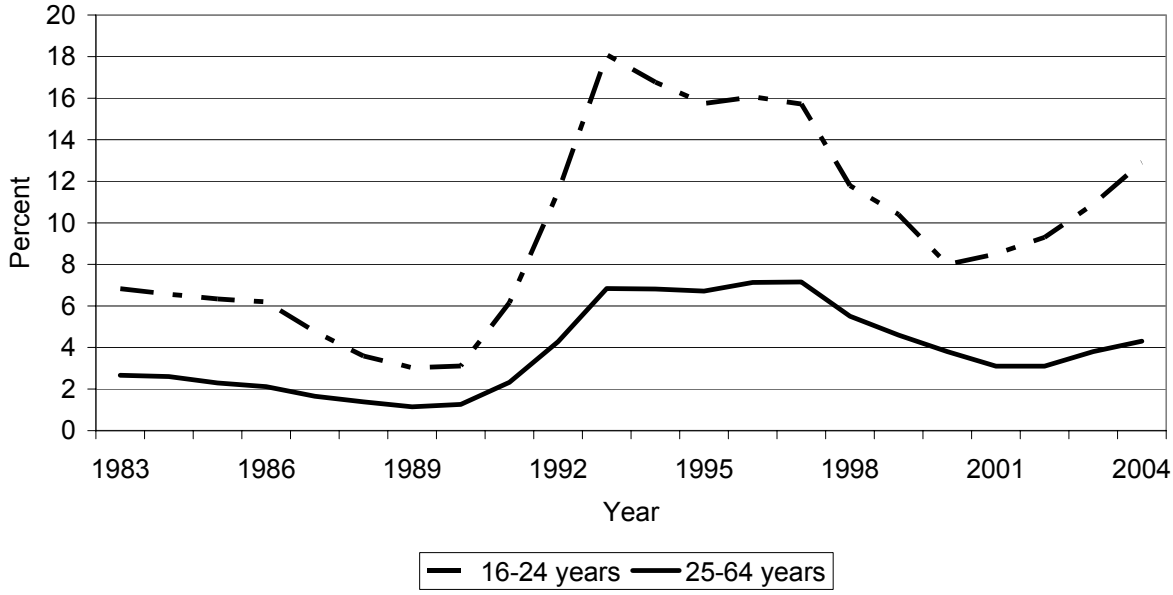

Table 1. Descriptive statistics on the overall time use for selected activities 1990/91 and 2000/01

A. Weekdays

	1990/91				2000/2001			
	Men		Women		Men		Women	
	%t=0	Mean(t|t>0)*	%t=0	Mean(t|t>0)*	%t=0	Mean(t|t>0)*	%t=0	Mean(t|t>0)*
Paid work	20	534	38	445	28	486	43	432
Routine housework	9	104	2	204	17	93	4	141
Housework maintenance	58	89	52	60	57	87	50	58
Child care	76	71	59	124	75	64	57	88
Individual leisure	17	106	14	97	15	157	12	136
N	1752		1745		1467		1914	

B. Weekends

	1990/91				2000/2001			
	Men		Women		Men		Women	
	%t=0	Mean(t|t>0)*	%t=0	Mean(t|t>0)*	%t=0	Mean(t|t>0)*	%t=0	Mean(t|t>0)*
Paid work	78	334	84	327	81	324	84	337
Routine housework	8	143	1	224	13	119	4	166
Housework maintenance	43	142	45	74	47	116	51	73
Child care	74	95	61	126	75	71	62	86
Individual leisure	10	193	9	160	10	236	9	197
N	1764		1744		1461		1882	

*Minutes per day

Table 2. Mean time spent in different sub-categories of routine housework (minutes per day).

	Weekdays			Weekends		
A. Cooking, washing up						
	1990/91	2000/01	Diff(2000/01-1990/01)	1990/91	2000/01	Diff(2000/01-1990/01)
Men	39	30	-9	57	41	-17
Women	82	43	-39	103	60	-43
Total	63	39	-25	82	53	-29
B. Housework						
	1990/91	2000/01	Diff(2000/01-1990/01)	1990/91	2000/01	Diff(2000/01-1990/01)
Men	43	46	3	60	61	1
Women	76	57	-19	85	76	-8
Total	64	54	-10	75	71	-4
C. Shopping						
	1990/91	2000/01	Diff(2000/01-1990/01)	1990/91	2000/01	Diff(2000/01-1990/01)
Men	40	44	4	49	48	-1
Women	45	48	3	49	55	6
Total	43	47	4	49	52	3

Note: Calculations based on individuals with non-zero time spent in the activities.

Table 3. Means of variables in regressions.

	1990/91	2000/01
Sex		
Men	0.502	0.435
Women	0.498	0.565
Age of youngest child in hh		
None under 18	0.584	0.544
0-4 years	0.224	0.220
5-12 years	0.111	0.154
13-17 years	0.081	0.081
Age	40.9	41.7
Age2	1819.5	1880.8
Household type		
One person household	0.175	0.158
Married/cohab. Couple alone	0.283	0.352
Marr./cohab couple w. others	0.454	0.383
Other	0.088	0.107
Activity		
Full time work	0.660	0.658
Part time work	0.190	0.154
Unemployed	0.018	0.003
Retired	0.044	0.021
Student	0.037	0.009
Other	0.052	0.155
Spouse's employment		
Full time work	0.478	0.479
Part time work	0.154	0.109
Not in paid work	0.103	0.124
NA	0.264	0.288
Household income		
Low 25%	0.278	0.221
Middle 50%	0.451	0.514
High 25%	0.254	0.265
NA	0.018	0.000
Educational level		
Primary	0.351	0.178
Secondary	0.417	0.494
Higher education	0.227	0.314
NA	0.005	0.014
N	7005	6724

Table 4. Tobit estimates of time use in different activities. Both waves.

	Weekdays					Weekends				
	Paid work	Routine housework	Maintenance housework	Childcare	Individual Leisure	Paid work	Routine housework	Maintenance housework	Childcare	Individual Leisure
Sex (Men)										
Women	-72.478 ***	60.601 ***	-10.229 **	24.307 ***	-13.275 ***	-83.054 ***	70.514 ***	-25.792 ***	26.842 ***	-22.008 ***
Age of youngest child in hh (None under 18)										
0-4 years	-40.380 **	21.708 ***	5.345	220.484 ***	-41.748 ***	-134.414 **	8.492	8.803	245.684 ***	-38.385 ***
5-12 years	-28.576	9.883	0.691	157.746 ***	-27.287 ***	-58.010	9.475	12.952	154.191 ***	-25.800 **
13-17 years	-19.909	-3.943	7.006	88.694 ***	-3.384	-16.625	3.607	12.767	87.819 ***	7.655
Interaction sex* age of youngest child in hh										
Women*0-4 years	-82.697 ***	18.988 ***	-10.960	41.032 ***	9.425	48.117	13.618 *	-17.656 *	21.059 **	-18.752 *
Women*5-12 years	-22.747	14.056 *	10.546	15.147	15.379	33.722	6.615	-17.251	6.963	5.826
Women*13-17 years	-3.948	20.706 **	0.659	20.358	-12.883	-23.790	4.014	-8.769	3.882	-23.298
Age	14.470 ***	2.464 **	4.214 ***	-0.965	-4.792 ***	4.123	6.969 ***	6.482 ***	-1.185	-5.615 ***
Age2	-0.196 ***	-0.013	-0.031 **	0.021	0.056 ***	-0.060	-0.070 ***	-0.057 ***	0.024	0.055 ***
Household type (1 person)										
Married/cohab. Couple alone	50.810	-18.902	8.888	19.603	-16.051	233.459 **	-19.147	9.588	24.337	-37.068 *
Marr./cohab couple w. others	51.213	-13.983	-0.078	32.179	-18.313	311.723 ***	-15.074	2.304	21.528	-51.137 ***
Other	33.880 *	4.218	5.554	20.024	-3.891	63.353	10.912	10.611	-5.212	-22.701 **
Activity (Full time work)										
Part time work	-103.485 ***	33.486 ***	16.142 ***	12.898 ***	12.101 ***	-38.079	-1.683	-3.678	2.515	6.873
Unemployed	-594.171 ***	67.108 ***	89.356 ***	20.455	51.617 ***	-286.035 ***	-21.821	27.364	-8.500	15.583
Retired	-825.040 ***	83.684 ***	53.751 ***	35.613 ***	65.358 ***	-929.245 ***	-4.918	-11.710	-2.403	41.277 ***
Student	-712.678 ***	14.073	-5.515	-2.789	-9.902	-406.554 ***	-9.966	-9.419	-12.647	12.107
Other	-583.320 ***	59.962 ***	31.626 ***	66.104 ***	36.534 ***	-397.715 ***	-2.857	-3.476	45.425 ***	-10.543
Spouse's employment (Full time)										
Part time work	11.470	-14.496 ***	-0.591	-8.301	0.569	-22.932	-10.538 **	21.794 ***	-3.724	-2.154
Not in paid work	-13.128	-6.618	-9.158	2.402	-3.947	-19.113	6.739	0.105	5.642	-18.953 ***
NA	41.924	-33.045 **	-15.926	6.179	-2.446	192.669 **	-32.328 **	-23.851	16.532	-17.272
Household income (low 25%)										
Middle 50%	9.843	-8.261 **	-0.744	2.549	-4.461	-135.576 ***	3.452	16.195 ***	-0.461	7.217
High 25%	39.123 ***	-16.708 ***	-3.184	-11.789 **	-1.837	-93.599 ***	3.686	25.300 ***	1.434	4.210
NA	4.399	-15.229	-57.925 ***	-50.522 **	-4.590	99.224	-21.618	-43.833 **	-34.271	3.610

Educational level (primary)										
Secondary	-17.084 *	6.315 *	5.455	12.352 ***	5.247	-44.270 *	3.932	8.690 *	13.073 ***	6.934
Higher education	-0.832	-0.353	-12.646 ***	24.806 ***	16.568 ***	-40.568	15.870 ***	-7.457	22.006 ***	26.829 ***
NA	-4.368	12.142	-45.615 **	39.414 **	14.267	-117.499	25.510 *	-16.271	39.078 **	-15.262
Wave (1990/91)										
2000/01	-58.423 ***	-48.049 ***	1.491	-23.243 ***	41.603 ***	-6.406	-53.254 ***	-24.997 ***	-34.133 ***	38.942 ***
Constant	161.470 **	40.181 *	-137.302 ***	-202.127 ***	188.245 ***	-568.353 ***	-10.107	-153.681 ***	-191.138 ***	329.475 ***
/sigma	286.630	105.575	111.278	98.056	119.915	560.504	116.240	140.636	105.852	162.320
N	6878	6878	6878	6878	6878	6851	6851	6851	6851	6851
LR chi2(27)	3303	1881	383	4557	582	263	1182	499	3871	425
Prob	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.046	0.024	0.009	0.131	0.008	0.011	0.015	0.010	0.116	0.005

Table 5. Tobit estimates of time use in different activities. 1990/91.

	Weekdays					Weekends				
	Paid work	Routine housework	Maintenance housework	Childcare	Individual Leisure	Paid work	Routine housework	Maintenance housework	Childcare	Individual Leisure
						No converg.				
Sex (Men)										
Women	-80.268 ***	69.782 ***	-6.961	11.329	-10.487 **		81.538 ***	-27.188 ***	22.334 **	-16.501 **
Age of youngest child in hh (None under 18)										
0-4 years	1.629	-1.784	-2.333	221.441 ***	-37.064 ***		-1.221	2.060	258.182 ***	-27.353 **
5-12 years	0.520	-11.511	-0.442	149.814 ***	-31.331 ***		-2.219	19.130	155.299 ***	9.916
13-17 years	-2.979	-19.605 *	17.871	73.351 ***	-16.367		-22.355 *	18.395	86.118 ***	12.178
Interaction sex* age of youngest child in hh										
Women*0-4 years	-89.050 ***	27.948 ***	-25.694	60.106 ***	15.631		19.815 *	-18.857	28.073 **	-22.945
Women*5-12 years	-30.188	29.683 **	4.018	32.686 **	18.340		11.535	-37.453 **	7.793	3.409
Women*13-17 years	-9.199	27.704 **	-17.931	28.147	9.790		28.816 *	-30.582	-11.972	-12.016
Age	12.269 ***	3.381 **	6.131 ***	-2.914	-5.798 ***		7.326 ***	7.833 ***	-1.886	-5.192 ***
Age2	-0.155 ***	-0.028 *	-0.061 ***	0.047 *	0.065 ***		-0.075 ***	-0.076 ***	0.030	0.054 **
Household type (1 person hh)										
Married/cohab. Couple alone	81.680	5.986	41.718	-0.161	-14.205		50.465	72.991	58.093	54.397
Marr./cohab couple w. others	81.713	13.760	26.043	11.795	-15.474		61.827	65.760	59.940	26.029
Other	45.465 **	-6.779	15.884	32.101 **	-12.656		3.526	13.987	7.307	-20.235 *
Activity (Full time work)										
Part time work	-95.690 ***	35.887 ***	19.561 ***	11.606	14.606 **		3.827	6.883	6.215	10.042
Unemployed	-536.270 ***	61.100 ***	91.144 ***	31.475 **	47.722 ***		-11.979	48.136 **	1.897	36.441 *
Retired	-777.610 ***	80.856 ***	57.799 ***	28.137 *	71.599 ***		-6.093	5.574	27.950	29.119 *
Student	-682.842 ***	-3.429	-12.815	-2.594	-11.336		-10.656	-0.170	-14.649	21.701
Other	-669.489 ***	114.465 ***	52.880 ***	129.796 ***	20.495 **		6.962	-2.363	95.008 ***	-7.153
Spouse's employment (Full time)										
Part time work	-8.704	-0.541	5.997	-0.964	6.203		-8.289	17.190 *	-4.833	6.274
Not in paid work	-48.568 **	-6.286	-2.543	12.782	-5.566		7.120	0.403	5.335	-8.222
NA	68.394	-2.606	8.520	-8.989	1.273		44.958	31.774	50.908	67.384
Household income (low 25%)										
Middle 50%	39.698 **	-24.359 ***	-12.844 *	2.996	-4.988		5.349	24.081 ***	8.187	8.404
High 25%	48.902 **	-25.146 ***	-3.163	-9.747	-1.667		8.170	35.993 ***	9.938	11.994
NA	35.327	-29.558 **	-66.967 ***	-62.324 **	-1.428		-18.015	-34.943	-35.880	5.089
Educational level (primary)										

Secondary	-12.465	7.414	5.655	8.956	-2.476		5.126	10.457	10.695	10.238
Higher education	1.430	3.577	-15.941 **	21.085 **	5.558		15.699 ***	-10.601	25.495 ***	27.245 ***
NA	-92.282	3.369	-46.319	58.125 *	1.510		3.059	-49.693	105.594 ***	28.155
Constant	127.461	8.553	-185.220 **	-153.448 *	216.353 ***		-95.531	-243.305 ***	-230.640 ***	215.312 **
/sigma	270.372	107.635	112.902	99.441	104.719		116.717	147.293	111.311	153.799
N	3497	3497	3497	3497	3497		3508	3508	3508	3508
LR chi2(27)	1920	1208	233	2558	234		632	251	2241	192
Prob	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000
Pseudo R2	0.050	0.029	0.011	0.147	0.006		0.015	0.009	0.129	0.005

Table 6. Tobit estimates of time use in different activities. 2000/01.

	Weekdays					Weekends				
	Paid work	Routine housework	Maintenance housework	Childcare	Individual Leisure	Paid work	Routine housework	Maintenance housework	Childcare	Individual Leisure
						No converg.				
Sex (Men)										
Women	-66.079 ***	50.446 ***	-12.309 **	34.148 ***	-15.379 **		59.185 ***	-23.055 ***	28.479 ***	-26.962 ***
Age of youngest child in hh (None under 18)										
0-4 years	-82.952 *	49.138 ***	8.780	201.934 ***	-63.441 ***		28.033 *	19.134	204.903 ***	-102.220 ***
5-12 years	-57.802	30.341 **	-1.056	148.735 ***	-40.202 **		28.781 *	10.931	127.172 ***	-114.007 ***
13-17 years	-46.574	20.610	-9.187	99.194 ***	-2.715		46.492 **	6.712	71.888 ***	-47.646 *
Interaction sex* age of youngest child in hh										
Women*0-4 years	-68.998 **	-2.508	0.420	15.806	8.136		7.715	-15.847	10.342	-9.916
Women*5-12 years	-20.924	5.759	18.953	-2.413	13.541		6.386	-1.424	5.482	18.946
Women*13-17 years	2.295	11.169	23.175	-1.112	-37.270 **		-25.195	14.315	9.222	-32.952
Age	17.500 ***	-0.180	2.115	2.666	-3.716 **		6.084 ***	4.868 **	0.287	-5.531 **
Age2	-0.241 ***	0.018	-0.001	-0.026	0.046 **		-0.060 ***	-0.034	0.007	0.052 *
Household type (1 person hh)										
Married/cohab. Couple alone	31.241	-15.889	1.320	15.074	-22.271		-6.046	8.302	11.669	-95.488 ***
Marr./cohab couple w. others	41.267	-24.643 *	-0.576	32.349	-10.725		-21.542	-0.212	19.273	-44.801 *
Other	38.266	4.654	-7.580	9.107	15.456		8.580	3.743	-1.050	19.778
Activity (Full time work)										
Part time work	-106.193 ***	26.607 ***	12.206 **	22.032 ***	7.169		-9.872 *	-9.992	7.677	2.737
Unemployed	-2193.270	60.017 *	33.916	-3.608	69.667		-44.575	-40.316	-12.040	-45.847
Retired	-882.096 ***	71.465 ***	43.693 ***	65.000 ***	48.529 ***		6.867	-25.838	-52.293 **	80.130 ***
Student	-655.266 ***	40.148 **	-11.309	18.707	-11.452		-2.733	-16.665	20.472	10.907
Other	-568.664 ***	38.323 ***	22.017 ***	31.100 ***	43.253 ***		-6.296	-4.789	18.454 ***	-16.311 *
Spouse's employment (Full time)										
Part time work	26.988	-22.234 ***	-7.482	-13.596 *	-4.230		-6.339	25.862 ***	-0.393	-13.691
Not in paid work	19.678	-7.464	-14.020 *	-16.661 **	2.895		7.571	3.385	5.081	-32.813 ***
NA	25.277	-25.819 *	-13.754	11.930	-8.878		-24.296	-19.643	8.790	-66.242 ***
Household income (low 25%)										
Middle 50%	-5.764	13.613 ***	8.436	10.471	-0.499		5.791	11.098	0.624	13.325
High 25%	41.029 **	5.982	-5.410	-6.458	4.282		11.013	17.430 *	1.599	2.794
NA										
Educational level (primary)										

Secondary	-14.277	-0.073	2.477	9.039	14.271 **	-1.269	3.992	6.043	4.658
Higher education	2.277	-10.737 **	-12.117 *	21.602 ***	27.936 ***	10.531 *	-8.272	10.018	25.363 ***
NA	7.681	9.159	-42.542 *	37.412 *	25.709	30.941 *	-3.476	2.276	-39.163
Constant	80.318	39.812	-101.283 **	-267.691 ***	200.471 ***	-49.570	-147.428 ***	-206.380 ***	435.323 ***
/sigma	303.445	100.131	108.646	90.383	132.948	114.601	131.871	94.251	169.623
N	3381	3381	3381	3381	3381	3343	3343	3343	3343
LR chi2(27)	1368	589	196	2105	192	397	227	1662	207
Prob	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Pseudo R2	0.040	0.016	0.009	0.122	0.005	0.010	0.010	0.105	0.005