The Effects of the French 35-Hour Workweek Regulation on Intra Household Time-Allocation

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Extended abstract

France has undergone a major working time reform at the end of the 1990ies and beginning of the 2000's: the 35hours legal workweek. The aim was to reduce working time in order to share work and thus decrease unemployment. Several studies have tried to evaluate the impact of the reform on employment. They have found mixed results: either a slight positive effect or no effect on the level of employment (Bunel & Jugnot, 2003; De Coninck, 2004) while working conditions have been worsening (Afsa & Biscourp, 2004). The policy evaluation of such reform in terms of labour market consequences is of course of great interest, but this reduction of work schedule has also individual consequences in terms of well-being and quality of life. For instance, people declare that their personal quality of life has improved, thanks to a reduction of time constraints (Estrade et al., 2001; Cette et al., 2004).
Beyond the economic consequences, such an exogeneous shock is also of great interest for time. Less working hours is likely to relax time constraints, and involve a new allocation for the worker that could affect also the other members of the family. To what activities people reallocate this new free time? Do they spend more time with their children/spouse? Do they spend more time for sleeping or doing domestic tasks? Up to now, only few studies have tried to evaluate the effect of the working time reforms on time use. One reason is that such an exogeneous shock of labour supply is quite scarce. Japanese workers spend more time on leisure and personal care after a reform in the 1990's (D. Kawaguchi, J. Lee, D.S. Hamermesh 2012). The same authors find similar effects for a reform of work regulation implemented in the beginning of 2000's in Korea, but with also an increase of time spent on housework. A recent study on France shows that workers who are affected by the reform have shorter working hours, but also husbands of wives who were affected by the 35h (Goux et al., 2011). Thus, there are spill-over effects. In a survey conducted just after the reform, people declare they have more time for rest, small repairs & gardening, and more time with children, women more than men (Estrade & Meda, 2002; Cette et al., 2004). But this survey is based on self-declaration and does not allow measuring the precise impact of the 35 hours legal workweek on time use.

Our aim is to evaluate how the 35h workweek regulation has affected time allocation with the most recent (and the first one since the 35hours reform generalization) time-use survey performed in 2009-2010. In other words, how does an independent variation in working hours affect intra-household time allocation?

French working time reforms

The reduction of working hours has a long story. From 1982, the legal workweek has been 39 hours. Workers could overwork with a maximum of 130 hours a year and overtime was paid 25% more. In 1996, in a context of economic crisis, a law was passed by the conservative government in order to give incentives to firms that reduce working time and hire workers. But the impact of this reform was very limited, only 2% of workers being affected.
In 1998 and 1999, two laws were passed to generalize the reduction of working time, i.e. the Aubry Laws. The legal workweek was set at 35 hours in the private sector in 2000. From the 1rst January 2001, all firms in the private sector with 20 workers and more had to negotiate in order to decrease

working time, the other firms had to start the negotiation in 2002. The legal workweek was 35 hours, and overtime was set to a maximum of 48 hours a week and 130 hours a year, overtime bonus being 25%, and 10% in small firms until 2003. Concretely, all workers affected by the reform do not work 35 hours a week; some workers, mainly executives can work longer hours, these extra-hours being cumulated and used as half or full days off, called "RTT days" (with a maximum of 4 hours a week).
In April 2002, the Conservative government came back to power and stopped the process. At that time, 35% of the workforce was affected by the reform. Then the government passed several laws to increase overtime contingent and to maintain a reduced overtime bonus in small companies, but did not cancelled the 35 hours legal workweek. In our empirical analysis, we will take profit of the fact that all workers are not affected by the reform and that being affected or not is exogenous.

Data

Time Use Surveys represent a unique and precious source of information on daily activities. They use the time diary technique, whereby individuals report their time use during a period of 24 hours – day randomly distributed – providing extremely detailed information on the activities performed during that day, based on a grid of 10 minute-intervals of time, with a description of the main activity carried out by the respondent, the concurrent activity, their location and the presence of other persons. Besides the diary, all the data sets contain rich sets of information on the background and socio-economic situation of individuals and households. We use the most recent time use survey that was conducted in 2009-2010 by the French national statistical Institute of Statistics (INSEE) and select a sample of wage earners. We also use former time use surveys (1985 and 1998) to display the long term evolutions in time use.

We concentrate on main activity carried out by the respondent, using standard definitions of activities:

- *Paid work*: Employment-related activities, work breaks, + transport associated to these activities
- *Unpaid work*
    - → *Housework*: home maintenance, shopping, paying bills and household management + transports related to these activities + care of other family members
    - → *Childcare*: Interactive childcare, physical care, transports and minding only with the children in the household
- *Leisure*
- *Self-care*: sleeping, eating, etc.

Method

In order to evaluate the impact of the reform, we use matching method that consists in measuring the difference in time use between two groups, those affected by the reform, i.e. *35h employees* (treated) and *the others* (controls), dealing with the differences in observable characteristics.
To define treated and controls, we use information on usual weekly working hours and "RTT days" (since we have no direct information on legal workweek in the firm). We concentrate on those who work 35 hours a week with no RTT days. Our control group is composed of people who work 39 hours and more and do not have RTT days (see boxes in table 1). For sure this last group is not affected by the reform.
Each treated observation is matched with one or a set of observations of the controls. We compute a propensity score, i.e. the probability of an individual to be treated. The set of covariates used to compute this propensity score are: Age, sex, type of household, occupation, size of the firm, day (+ spouse work schedule). Individuals who have similar propensity score are matched together. We have used several matching methods (Nearest neighbors, Kernel + standard error bootstrapping, caliper) and obtained results are robust to the different specifications. We have also checked that

common support is large, i.e that treated and controls populations share enough common traits. The balancing property are right, i.e, after matching, the differences between treated and controls are not significant any more. We observe the Average treatment effect on the treated (ATT).

Table 1 : Sample size of different group of workers according to the firms workweek legislation

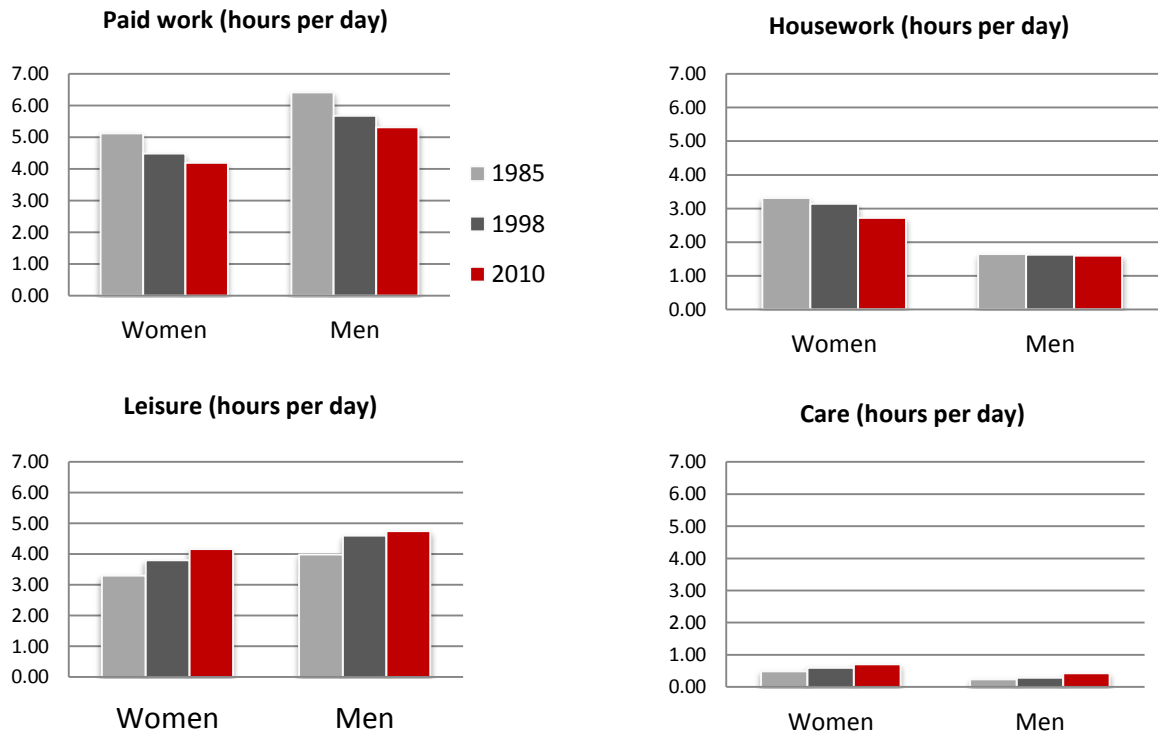
	Workweek		
	35 h	36h-38h	39h +
RTT days	N : 796	RTT N : 777	RTT & overtime N : 2013
No RTT days	35h N : 1617	35h+Overtime N : 632	Overtime or no reform of working time N : 1638

First results

Descriptive statistics

The figure 1 graphs display the evolution of time use from the 1980ies. It shows a trend in decreasing working time and increasing leisure for men and women since the 80ies. We can note that the decrease in working time started before the 35 hours workweek regulation, and that the decrease was higher during the 1990ies than later. Housework has decreased for women while it is stable for men. Childcare time has slightly increased.

Figure 1: Evolution of time main activities



The table 2 displays for men and women separately time devoted to activities by treated (35 hours) and controls. Of course, men and women who benefited from the reform spend less time on work during the weekday. We observe that men and women who benefit from the reform spend more

time on leisure on weekdays. Men also spend significantly more time on domestic work (the opposite result for women is not significant). No significant differences is observed on weed-ends (Table 3).

Table 2 : Global effect of 35h reform for men and women on weekday

Weekday	Women			Men		
	35 hours	control	difference	35 hours	control	difference
Domestic	142,8	166,4	-23,6	99,2	65,5	33,7
Work	326,4	344,6	-18,2	368,2	435,3	-67,1
Leasure	201,9	196,5	5,4	248,4	217,2	31,2
Self-care	630,1	620,0	10,1	602,7	597,7	5,0
Childcare	55,2	38,5	16,7	30,7	32,5	-1,8
N	479	354		464	631	

Table 3 : Global effect of 35h reform for men and women on week-end

week-end	Women			Men		
	35 hours	control	difference	35 hours	control	difference
Domestic	199,8	220,8	-21,0	132,1	137,8	-5,7
Work	78,0	76,2	1,9	94,4	72,6	21,8
Leasure	348,2	328,4	19,8	415,5	432,9	-17,4
Self-care	681,0	699,3	-18,3	675,8	683,7	-7,9
Childcare	51,7	40,3	11,3	37,2	38,8	-1,6
N	381	287		378	458	

Table 4: Effect of 35h reform for men and women on weekday according family situation

	Women in childless couple		**Women in couple with children**		**Men in childless couple**		**Men in couple with children**	
	difference (T-C)		difference (T-C)		difference (T-C)		difference (T-C)	
Domestic	0.9		-12.8		14.0		39.5	***
Work	-85.5	**	-7.4		-27.0		-91.2	***
Leasure	45.5	**	-10.4		37.6		30.3	*
Self-care	16.1		23.0		-20.8		14.3	
Childcare			3.6				4.5	
	T	C	T	C	T	C	T	C
N	118	107	219	157	120	142	228	349

The 35h workweek regulation has not affected similarly workers. In particular, their family situation might have modulated or deep the effects. For instance (table 4), leisure has increased for men with children and childless women. The main result is that men, in particular men in couple with children, have a higher participation to domestic work on weekdays. Thus the reform has contributed to reduce of gender inequalities. But when we look more carefully on the type of tasks they have increased, whether it is cooking, cleaning, ironing, … etc, results (not shown here) show that their participation still follow gender stereotypes and norms and that the situation is not reversed : Within housework, 35 hours men spend more time in “male-oriented” activities such as doing small repairs and gardening and shopping, rather than “feminine oriented tasks”.

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