

Italians' use of time during the economic crisis: implications for the gender division of labour

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Abstract

This article builds on time use micro-data for Italy to analyse the evolution of individuals' time allocation during the 2002–2014 period, with a gender-specific focus. We are particularly interested in comparing changes that occurred between the years prior to and after the onset of the recent economic crisis. We use regression analysis to measure differences between years in the average use of time of men and women for personal care, education, paid work, unpaid work, and leisure over the considered period(s). In order to gain more insight into gender differences in time use behaviours, we further break down unpaid work and free time into detailed activities. We document a decrease of about two hours per week in female housework coupled with a similar increase in male unpaid work over the entire period. However, while signs of this gender convergence were already evident for women in the years before the recession, we do not find any significant change in male unpaid work between 2002 and 2008. It was only after the onset of the economic crisis, and the consequent losses in paid work hours, that men started spending more time on housework and family care.

1 Introduction

How did individuals allocate their forgone hours of market work during the recent economic recession? Was the Great Recession a “Great Vacation”? These are among the questions posed by Aguiar et al. (2014) in their study on Americans' use of time during the recent economic crisis. Results, based on data from the American Time Use Survey for the 2003–2010 period, showed that leisure absorbed more than 50% of the foregone market work hours, with sleeping and television

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watching accounting for most of the increase in the amount of time spent on leisure. About 30% of the foregone market work hours were reallocated to housework, and about 5% were reallocated to child care. The remaining time was absorbed by increasing investments in education, health care, and civic activities (about 12%); whereas a smaller, but still significant, fraction of the foregone working hours were devoted to job search activities (between 2% and 6%). By contrast, Lahart and Zhao (2010) found support for the “Great Vacation” narrative, as they reported evidence for the United States that the unemployed were frittering away their time by devoting 80% of their forgone market work hours to leisure, while barely increasing the amount of time they spent on unpaid work. Folbre (2011) stressed the role of household production as a market substitute for consumer expenditures, noting that in times of economic hardship, individuals can save money by, for example, spending their time preparing meals instead of going to restaurants, cleaning the house instead of hiring a maid, or doing home repairs rather than paying a professional. Individuals can also save money by obtaining help from family members: e.g. grandparents, uncles, and aunts can care for children instead of a paid baby-sitter. In addition, parents can exchange favours, such as driving children to school.

A large body of literature has demonstrated that the effects of the recent and past economic crises differed by gender (for the effects of past crises, see, for example, Rubery 1988). The term “mancession” has been coined to describe the greater employment losses among men than among women during the recent recession (Sierminska and Takhtamanova 2011). According to Karamessini and Rubery (2014), the gendered dimension of the European recession changed over time, moving from being a “he-cession” to a “she-austerity”. In other words, as the initial stages of the crisis mainly hit the manufacturing and construction economic sectors, more men than women lost their jobs, and the gender gap narrowed through the deterioration of the position of men. Yet because the later stages of the crises were dominated by austerity policies, the recession ultimately had a more negative impact on the demand for female labour and on social policies – which, in turn, had negative implications for gender equality. However, according to Périvier (2014), the mancession was particularly acute in Mediterranean countries (including Italy), where, unlike in other European countries, women experienced more favourable employment conditions than men throughout the crisis.

Most existing studies on this topic have analysed the implications of the economic crisis for gender equality from a labour market perspective, whereas only a limited number of studies have examined the impact of the economic crisis on time use among men and women. For example, Aguiar et al. (2014) documented that American men and women responded similarly to market work reductions during the economic downturn, with the exceptions that women were more likely to reallocate time to home production and sleep, whereas men tended to spend more time on education and TV watching. Hofferth and Goldscheider (2010) argued that the reaction of today’s fathers to recessions may differ from those of men

in the Great Depression, when male unemployment challenged the paternal role. They observed that given the relatively recent changes in attitudes towards gender roles, fathers who spend less time on paid work activities may become increasingly involved in family tasks. At the European level, there has been a lack of research on the effects of the economic crisis on time allocation, primarily due to data limitations. As Time Use Surveys (TUS) are not conducted regularly in many European countries, comparing time allocation patterns over recent years is difficult. Based on time use observations for Italy, Slovenia, Turkey, and Spain, Bettio et al. (2012) have suggested that unpaid work may have increased during the crisis in European countries characterised by very large gender disparities in domestic and care activities, thus slowing down the pre-recession trend towards the narrowing of the gender gap in home production. However, at the time the study was conducted, the most recent time use data available for the four countries were for the years around 2009, which did not allow the authors to evaluate the effects of the recession on the gender division of family work over the longer term.

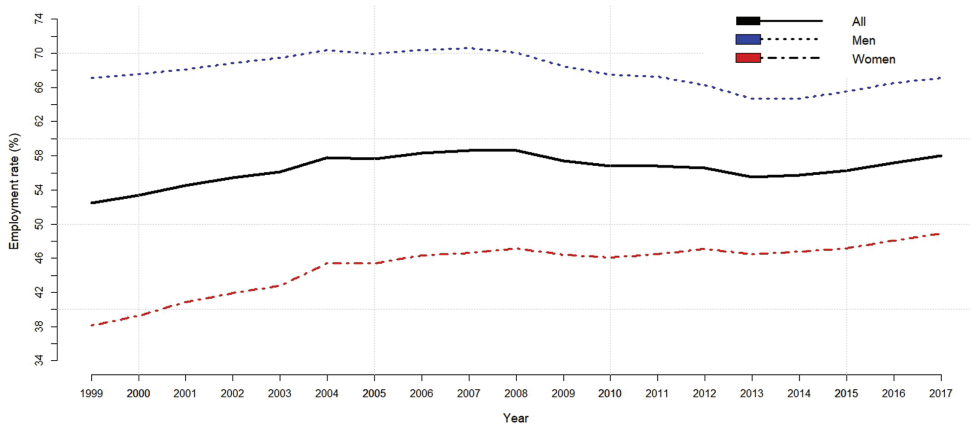
This article draws on Italian time use micro-data to investigate the evolution of gender-specific patterns in the use of time over three years (2002/3, 2008/9, and 2013/4). In particular, we aim to analyse whether and, if so, to what extent the economic crisis has led to reductions in paid work hours, and has thus affected the allocation of time to paid/unpaid work, education, and leisure activities among Italian men and women. The focus on Italy is of considerable interest for several reasons. First, among Western industrialised countries, Italy stands out as having the widest gender gap in household labour (Bloemen et al. 2010; Menniti et al. 2015). Second, Italy is among the European countries that have experienced the most severe consequences of the economic crisis, and, unlike in other European countries, these consequences have been particularly adverse for men during all stages of the recession. Last but not least, as Italy is one of the few European countries where time use surveys are conducted on a regular basis, recent data on time use for the Italian population are available.

The rest of the article is organised as follows. We start with an overview of the Italian context by briefly describing the recent evolution of the country's main male and female employment/unemployment indicators. Then, we outline the data and methods used to measure changes in gender-specific time use behaviours over the considered period. Our main results are presented and discussed in section four. The last section concludes.

2 Country context: recent labour market dynamics

Figure 1 shows the evolution of the employment rate in Italy during the period from 1999 to 2017. Before the recession, Italy's labour market situation was favourable, as the country registered an overall increase of six percentage points (p.p.) in the employment rate between 1999 and 2008. Over this period, levels of employment

Figure 1:
Italy - Employment rate by year and gender



Source: Eurostat, Labour Market Statistics.

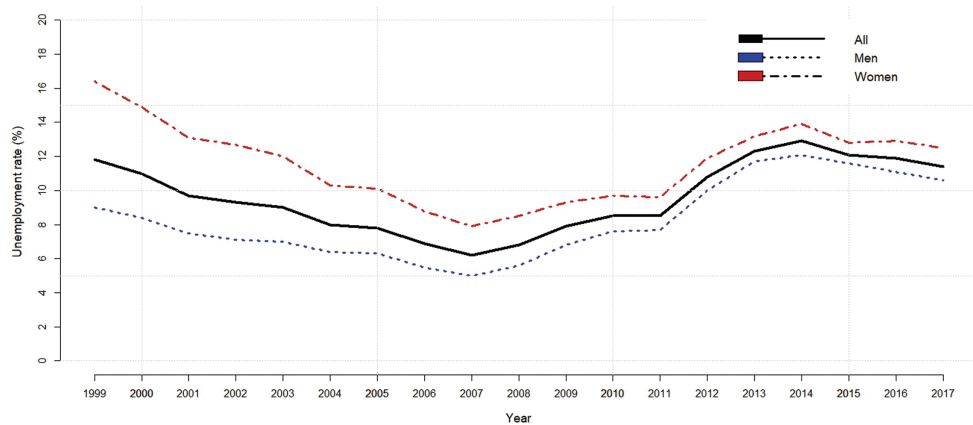
rose by three p.p. for men (from 67.1% to 70.6%), while progress for women was even greater, with levels of female employment growing nine p.p. (from 38.1% to 47.2%). However, despite these improvements in the labour market participation of women, Italy was (and continues to be) far from reaching the Lisbon target of 60% female employment.

Starting in 2008, the employment rate decreased for both men and women, although the decline was greater and more prolonged for men than it was for women. Male employment, which had been fairly stable at the European average of 70%, declined to 64.7% in 2015. By contrast, only a slight decrease in the female employment rate was recorded between 2008 and 2010 (46.1%).

Meanwhile, the female unemployment rate (despite being generally higher) grew less than the male unemployment rate, indicating that women had a relative advantage during the Great Recession (Figure 2). Between 1999 and 2007, the unemployment rate fell from 9% to 5% for men and from 16.4% to 9% for women. The first signs of the recession were already visible in 2008, when the declining trend started to reverse. Unemployment rose to 6.6% for men and 9.3% for women in 2009, and peaked in 2014 at 11.6% for men and 13.8% for women.¹

¹ The increase in female labour market participation is partly attributable to the implementation of the 2008 law on the regularisation of illegal workers in the care sector (the great majority of whom were foreign women).

Figure 2:
Italy - Unemployment rate by year and gender



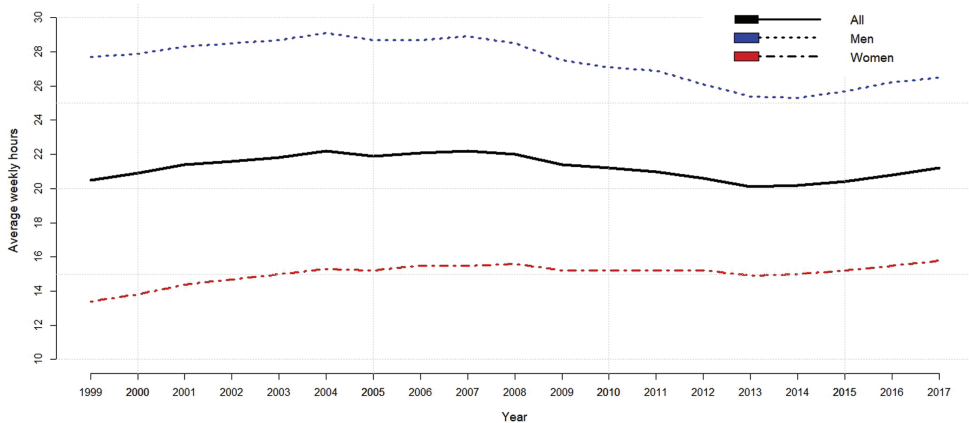
Source: Eurostat, Labour Market Statistics.

The combined effect of decreasing employment and increasing unemployment is also visible in the number of average weekly hours devoted to paid work by the working-age population (Figure 3).

In 1999, men aged 15–64 spent, on average, 28h per week working in the market; compared to 14h per week for women of the same ages.² The number of hours worked was fairly stable for men (about 29 hours per week) and women (15 hours per week) in the following years, until 2008, when it started to decline slightly (although it should be noted that, as in the case of the employment and unemployment rates, the effects of the recession were more visible starting in 2009). Between 2007 and 2014, the average number of hours worked dropped by more than 3h per week for men, but by less than 1h per week for women. The reduction in hours worked at the population level may be attributable not only to the effect of declining employment levels, but to an increase in part-time work. Indeed, in times of economic hardship, a reduction in the working time of employees can be used as an alternative to lay-offs. This observation seems to be confirmed by Eurostat data, which indicate that in Italy, part-time work as a percentage of total employment increased from 4.6% in 2007 to 8.3% in 2017 for men, and from 26.8% to 32.5% for women. During the same period, the share of total part-time employment in the 15–64 age group that was involuntary increased by 24.8 p.p. (from 54% to 78.8%) for men and by 21.3 p.p. (from 35.6% to 56.9%) for women.

² According to Eurostat's calculations, the number of hours worked during the reference week includes all hours (including extra hours, either paid or unpaid), but excludes the travel time between home and the place of work, as well as the main meal breaks.

Figure 3:
Italy - Average weekly hours worked by the population aged 15–64 by year and gender



Source: Eurostat, Labour Market Statistics.

To sum up, the gender gap in employment and unemployment narrowed considerably after 2008, as male workers were hit harder than female workers during the economic crisis. A similar pattern could be observed in virtually all European countries, although the gendered impact of the crisis was stronger in Mediterranean countries, such as Greece, Italy, and Spain (Perévier 2014). In these countries, women had an employment advantage relative to men throughout the economic crisis; whereas in most European countries, employment conditions were more favourable for women than for men only during the first stage of the recession (or the “collapse stage”), when there were more job losses in traditionally male economic sectors. Women’s employment was sheltered not only by sectoral segregation, but by an “added work effect” (e.g. Eydoux et al. 2014). According to the added worker theory, women’s economic behaviour is counter-cyclical: i.e. female labour market participation is likely to increase during recessions, when the main (male) breadwinners experience (or are at risk of experiencing) employment losses; but these women (or the added workers) are likely to exit the labour force again after the economy recovers (e.g. Finegan and Margo 1993).

Based on the statistical information analysed and on the existing literature on the gendered nature of the current economic crisis, we focus in this article on two main research hypotheses. The first hypothesis is that the economic crisis reduced the amount of time men and women spent on paid work, and that this reduction, in turn, affected the time they allocated to other activities. The second hypothesis is that in terms of time use behaviour, Italian men and women responded differently to

the economic crisis. The next section describes the data and methods used to verify these hypotheses.

3 Data and methods

The study builds on micro-data from the Italian Time Use Survey for the years 2002/3, 2008/9, and 2013/14. More specifically, the surveys were carried out during the following periods: from 1 April 2002 to 31 March 2003, from 1 February 2008 to 31 January 2009, and from 1 November 2013 to 3 October 2014. In both the 2002/3 and the 2008/9 editions of the survey, more than 75% of the interviews were conducted in the first year (i.e. in 2002 and 2008, respectively); whereas in the 2013/4 edition, most of the interviews were conducted in 2014 (see Table A.1 in the Appendix). We will therefore refer to 2002, 2008, and 2014 as the years of analysis.

We limit our analysis to the population of working ages (between 15 and 64), which provides us with a total sample size of 114,585 individuals (41,931/33,855/38,779 for 2002/2008/2014). The first step in this study was grouping time use activities into meaningful larger categories that are in line with the Harmonised European Time Use Surveys (HETUS, Eurostat 2009) classification, and with the purposes of our analysis. We have identified five main time use categories that are of interest for this study: personal care, education, paid work,³ unpaid work, and leisure. In addition, we have identified a sixth residual category for other or unspecified use of time. Given that the great majority of time devoted to personal care (as well as a considerable share of individuals' time) is used for sleeping, we further break down personal care into the sub-categories of sleep and other personal care (including activities such eating, relaxing, washing, and dressing). Similarly, unpaid work is broken down into core family work and care activities: namely, housework, child care, and adult care. We know from previous studies that the gender gap in unpaid work is often reflected in leisure inequality between men and women (i.e. women have less free time than men), and that this phenomenon is particularly relevant for Italy (Zannella et al. 2018). In order to gain more insight into gender differences in the allocation of free time, the leisure category is broken down into civic and religious participation, social life, cultural life, TV, other media, hobbies, and sports. Thus, in total, the time use classification adopted in this study includes six main time use categories and 11 sub-categories.⁴

Our goal is to examine how the time devoted to these time use categories/subcategories changed in the study period, with a gender-specific focus. We

³ Paid work refers to time spent working in the individual's main and second jobs, including coffee breaks and travel during/for work.

⁴ Weighted sample estimates of the average use of time of individuals aged 15–64 years for the considered activities are reported in Table A.2 in the Appendix.

are particularly interested in changes that occurred between the pre-recessionary (2002–2008) and the recessionary (2008–2014) years. However, the shifts in time use patterns may be attributable not only to behavioural changes, but to the structural effects of the composition of the population in each of the three years of analysis. We used a χ^2 test to evaluate whether the distribution of the main socio-demographic variables changed significantly between the years. The results of the test show a statistically significant relationship between the distribution of the variables and the survey years (see Table A.3 in the Appendix). Therefore, to measure how the use of time differed over the study period, we regressed the time used by an individual for different time use activities on different years and socio-demographic controls.⁵ Specifically, we used the number of weekly hours devoted to the time use activities under study as dependent variables in our regression analysis. Our explicative variables are year and gender. We are particularly interested in examining the interaction between the period and the time use behaviours of men and women. For this reason, we allow all parameters to differ across years by including an interaction term. The use of time of an individual i is, thus, expressed as follows:

$$\left\{ \begin{array}{l} T_{ki} = \alpha_k + \sum_{j=1}^3 \beta_{kj} Y_{ji} + \sum_{h=1}^2 \gamma_{kh} X_{hi} + \sum_{r=1}^m \delta_{kr} Z_{ri} + \sum_{j=1}^3 \sum_{h=1}^2 \lambda_{kjh} Y_{ji} X_{hi} \\ \quad + \sum_{j=1}^3 \sum_{r=1}^m \varphi_{kjr} Y_{ji} Z_{ri} + \varepsilon_{ki} \\ \sum_{k=1}^6 T_{ki} = 168 \\ i = 1, 2, \dots, n \end{array} \right. \quad (1)$$

where n is the total sample size, T_{ki} are the weekly hours an individual i devoted to a main time use category k ($k = 1, 2, \dots, 6$) (i.e. to personal care, education, paid work, unpaid work, leisure, and other use of time); Y_j is a dummy variable for the year ($j = 1, 2, 3$); X_h is a dummy variable for gender ($h = 1, 2$); Z_r are the dummy control variables ($r = 1, 2, \dots, m$); α_k is the intercept for the time use category k ; β_{kj} is the simple effect of the year j ; γ_{kh} is the simple effect of the gender h ; δ_{kr} is the simple effect of the control variable r ; λ_{kjh} is the interactive effect of the year j with the gender h ; φ_{kjr} is the interactive effect of the year j with the control variable r .

⁵ We include the following demographic controls in the model: the geographical area of residence; the age group; the educational level; marital status; the presence of a child.

Similarly, the weekly hours devoted by an individual i to a sub-category s of the time use activity k is estimated as follows:

$$\left\{ \begin{array}{l} T_{ksi} = \alpha_{ks} + \sum_{j=1}^3 \beta_{ksj} Y_{ji} + \sum_{h=1}^2 \gamma_{ksh} X_{hi} + \sum_{r=1}^m \delta_{ksr} Z_{ri} + \sum_{j=1}^3 \sum_{h=1}^2 \lambda_{ksjh} Y_{ji} X_{hi} \\ \quad + \sum_{j=1}^3 \sum_{r=1}^m \varphi_{ksjr} Y_{ji} Z_{ri} + \varepsilon_{ksi} \\ \sum_{s=1}^{S_k} T_{ksi} = T_{ki} \end{array} \right. \quad (2)$$

where $S_k = 2$ (sleep, personal care other than sleep) for $k =$ personal care; $S_k = 3$ (housework, child care, adult care) for $k =$ unpaid work; $S_k = 6$ (civic and religious participation, social life, cultural life, TV, other media, hobbies, and sports) for $k =$ leisure.

4 The multivariate results

Regression estimates of the differences between years in the average use of time for detailed activities are shown Table 1 (both genders), Table 2 (men), and Table 3 (women).⁶ For the population aged 15–64, the amount of time spent on paid work grew substantially in Italy during the pre-recessionary period, increasing by 1.21 hours per week between 2002 and 2008 (equal to 1h 13 min per week). The largest gains were made by women (+1h 30 min); while the amount of time men spent on market work increased slightly, but the change was not statistically significantly. Men and women spent their free time in similar ways. The amount of time spent on personal care other than sleeping decreased by about 1h per week for both genders. In total, the amount of time spent on leisure did not undergo a statistically significant change due to the combination of two different trends. On the one hand, our estimates show a large increase of more than two hours per week spent by both men and women on sports and hobbies, as well as on TV watching. These results are in line with the literature documenting that the time devoted to watching television has increased significantly in recent decades. For example, Gimenez-Nadal and Sevilla (2012) found an almost universal increase in the time spent watching television from the 1970s to the beginning of the 2000s in seven industrialised countries (Australia, Canada, Finland, France, the Netherlands, Norway, and the UK). On the other hand, we observe an overall reduction of more than two hours in the time

⁶ Additional results of the regression analysis on the average use of time by period are reported in Tables A.4–A.6 in the Appendix.

Table 1:
Changes in the average use of time for detailed activities - Both genders

Time use activity	2008–2002				2014–2008				2014–2002			
	Diff.	StdErr	t value	Pr (> t)	Diff.	StdErr	t value	Pr (> t)	Diff.	StdErr	t value	Pr (> t)
Personal care	-0.55	0.167	-3.269	0.003	1.04	0.155	6.704	<0.001	0.49	0.164	2.992	0.008
<i>Sleep</i>	0.40	0.136	2.948	0.009	0.24	0.126	1.879	0.145	0.64	0.134	4.767	<0.001
<i>Other</i>	-0.95	0.097	-9.738	<0.001	0.80	0.090	8.887	<0.001	-0.15	0.096	-1.528	0.278
Paid work	1.21	0.344	3.528	0.001	-3.77	0.319	-11.819	<0.001	-2.55	0.338	-7.547	<0.001
Education	0.20	0.150	1.336	0.375	0.94	0.139	6.738	<0.001	1.14	0.148	7.706	<0.001
Unpaid work	-0.58	0.216	-2.678	0.020	0.79	0.200	3.959	<0.001	0.21	0.212	1.007	0.573
<i>Housework</i>	-0.39	0.190	-2.039	0.103	0.31	0.176	1.739	0.191	-0.08	0.187	-0.434	0.901
<i>Child care</i>	0.28	0.076	3.747	0.001	0.49	0.070	7.024	<0.001	0.78	0.075	10.426	<0.001
<i>Adult care</i>	-0.48	0.031	-15.238	<0.001	-0.01	0.029	-0.286	0.956	-0.48	0.031	-15.761	<0.001
Leisure	-0.08	0.246	-0.339	0.939	1.02	0.228	4.461	<0.001	0.93	0.242	3.858	<0.001
<i>Civic & rel. part.</i>	-0.52	0.081	-6.391	<0.001	0.23	0.075	3.053	0.006	-0.29	0.079	-3.621	0.001
<i>Social life</i>	0.24	0.128	1.873	0.147	-0.16	0.119	-1.322	0.383	0.08	0.126	0.659	0.787
<i>Cultural life</i>	-0.37	0.061	-6.121	<0.001	-0.16	0.057	-2.836	0.013	-0.54	0.060	-8.894	<0.001
<i>TV</i>	1.07	0.121	8.795	<0.001	-0.12	0.112	-1.109	0.508	0.94	0.119	7.896	<0.001
<i>Other media</i>	-1.70	0.035	-48.030	<0.001	-0.16	0.033	-4.812	<0.001	-1.86	0.035	-53.362	<0.001
<i>Hobbies & sports</i>	1.20	0.158	7.582	<0.001	1.39	0.147	9.463	<0.001	2.59	0.156	16.622	<0.001
Other time use	-0.21	0.035	-5.863	<0.001	-0.18	0.033	-5.543	<0.001	-0.39	0.035	-11.182	<0.001

Note: Estimates are reported in hours per week, whereby decimals represent hundredths of an hour (e.g. 1.75 should be read as 1 hour and 45 minutes; 0.20 should be read as 12 minutes).

Source: Authors' calculations based on Time Use Surveys. Istat 2002/3, 2008/9, and 2013/4.

Table 2:
Changes in the average use of time for detailed activities by period – Men

Time use activity	2008–2002				2014–2008				2014–2002			
	Diff.	StdErr	t value	Pr (> t)	Diff.	StdErr	t value	Pr (> t)	Diff.	StdErr	t value	Pr (> t)
Personal care	-0.75	0.205	-3.660	0.003	0.92	0.198	4.659	<0.001	0.17	0.204	0.839	0.960
<i>Sleep</i>	0.20	0.167	1.171	0.851	0.21	0.161	1.332	0.767	0.41	0.166	2.465	0.135
<i>Other</i>	-0.95	0.119	-7.925	<0.001	0.71	0.115	6.140	<0.001	-0.24	0.119	-2.006	0.338
Paid work	0.88	0.423	2.081	0.297	-5.09	0.408	-12.485	<0.001	-4.21	0.421	-10.002	<0.001
Education	0.20	0.185	1.055	0.899	1.03	0.179	5.756	<0.001	1.22	0.184	6.633	<0.001
Unpaid work	0.50	0.266	1.884	0.412	1.87	0.256	7.302	<0.001	2.37	0.265	8.962	<0.001
<i>Housework</i>	0.56	0.234	2.380	0.163	1.35	0.226	5.981	<0.001	1.91	0.233	8.179	<0.001
<i>Child care</i>	0.26	0.093	2.732	0.069	0.53	0.090	5.852	<0.001	0.78	0.093	8.408	<0.001
<i>Adult care</i>	-0.31	0.038	-8.104	<0.001	0.00	0.037	-0.129	1.000	-0.32	0.038	-8.257	<0.001
Leisure	-0.63	0.303	-2.083	0.296	1.32	0.292	4.517	<0.001	0.69	0.301	2.283	0.201
<i>Civic & rel. part.</i>	-0.45	0.099	-4.509	<0.001	0.42	0.096	4.371	<0.001	-0.03	0.099	-0.293	1.000
<i>Social life</i>	0.20	0.157	1.247	0.814	-0.24	0.152	-1.581	0.611	-0.04	0.157	-0.280	1.000
<i>Cultural life</i>	-0.57	0.075	-7.598	<0.001	-0.11	0.073	-1.543	0.636	-0.68	0.075	-9.118	<0.001
<i>TV</i>	1.00	0.149	6.732	<0.001	-0.14	0.144	-0.961	0.930	0.86	0.148	5.825	<0.001
<i>Other media</i>	-1.94	0.043	-44.721	<0.001	-0.20	0.042	-4.672	<0.001	-2.14	0.043	-49.399	<0.001
<i>Hobbies & sports</i>	1.13	0.195	5.829	<0.001	1.59	0.188	8.441	<0.001	2.72	0.194	14.022	<0.001
Other time use	-0.19	0.044	-4.468	<0.001	-0.20	0.042	-4.835	<0.001	-0.40	0.043	-9.165	<0.001

Note: Estimates are reported in hours per week, whereby decimals represent hundredths of an hour (e.g. 1.75 should be read as 1 hour and 45 minutes; 0.20 should be read as 12 minutes).

Source: Authors' calculations based on Time Use Surveys. Istat 2002, 2008, and 2014.

Table 3:
Changes in the average use of time for detailed activities by period – Women

Time use activity	2008–2002					2014–2008					2014–2002					
	Diff.	StdErr	t value	Pr (> t)	Diff.	StdErr	t value	Pr (> t)	Diff.	StdErr	t value	Pr (> t)	Diff.	StdErr	t value	Pr (> t)
Personal care	-0.34	0.203	-1.671	0.551	1.15	0.192	5.992	<0.001	0.81	0.202	4.017	0.001	0.81	0.202	4.017	0.001
<i>Sleep</i>	0.61	0.166	3.653	0.004	0.26	0.156	1.653	0.563	0.86	0.164	5.257	<0.001	0.86	0.164	5.257	<0.001
<i>Other</i>	-0.95	0.118	-7.980	<0.001	0.89	0.112	7.981	<0.001	-0.05	0.117	-0.454	0.998	-0.05	0.117	-0.454	0.998
Paid work	1.55	0.419	3.688	0.003	-2.44	0.396	-6.161	<0.001	-0.89	0.416	-2.144	0.265	-0.89	0.416	-2.144	0.265
Education	0.21	0.184	1.128	0.870	0.85	0.173	4.917	<0.001	1.06	0.182	5.817	<0.001	1.06	0.182	5.817	<0.001
Unpaid work	-1.66	0.263	-6.290	<0.001	-0.29	0.249	-1.153	0.859	-1.94	0.261	-7.442	<0.001	-1.94	0.261	-7.442	<0.001
<i>Housework</i>	-1.33	0.232	-5.742	<0.001	-0.74	0.219	-3.364	0.010	-2.07	0.230	-8.993	<0.001	-2.07	0.230	-8.993	<0.001
<i>Child care</i>	0.31	0.093	3.391	0.009	0.46	0.087	5.277	<0.001	0.78	0.092	8.442	<0.001	0.78	0.092	8.442	<0.001
<i>Adult care</i>	-0.64	0.038	-16.817	<0.001	-0.01	0.036	-0.328	1.000	-0.65	0.038	-17.274	<0.001	-0.65	0.038	-17.274	<0.001
Leisure	0.46	0.300	1.544	0.636	0.72	0.283	2.528	0.116	1.18	0.298	3.963	0.001	1.18	0.298	3.963	0.001
<i>Civic & rel. part.</i>	-0.58	0.099	-5.934	<0.001	0.04	0.093	0.411	0.999	-0.55	0.098	-5.594	<0.001	-0.55	0.098	-5.594	<0.001
<i>Social life</i>	0.28	0.156	1.814	0.456	-0.07	0.147	-0.499	0.996	0.21	0.155	1.355	0.754	0.21	0.155	1.355	0.754
<i>Cultural life</i>	-0.18	0.075	-2.378	0.164	-0.21	0.070	-2.977	0.035	-0.39	0.074	-5.231	<0.001	-0.39	0.074	-5.231	<0.001
<i>TV</i>	1.13	0.148	7.635	<0.001	-0.11	0.139	-0.795	0.968	1.02	0.147	6.944	<0.001	1.02	0.147	6.944	<0.001
<i>Other media</i>	-1.45	0.043	-33.679	<0.001	-0.12	0.041	-2.933	0.039	-1.57	0.043	-36.760	<0.001	-1.57	0.043	-36.760	<0.001
<i>Hobbies & sports</i>	1.27	0.193	6.558	<0.001	1.19	0.182	6.536	<0.001	2.46	0.192	12.835	<0.001	2.46	0.192	12.835	<0.001
Other time use	-0.22	0.043	-5.110	<0.001	-0.16	0.041	-3.942	0.001	-0.38	0.043	-8.905	<0.001	-0.38	0.043	-8.905	<0.001

Note: Estimates are reported in hours per week, whereby decimals represent hundredths of an hour (e.g. 1.75 should be read as 1 hour and 45 minutes; 0.20 should be read as 12 minutes).

Source: Authors' calculations on Time Use Surveys, Istat 2002, 2008, and 2014.

spent on civic participation and using media other than TV. In particular, according to our regression estimates, the time devoted to other mass media (the majority of which is time spent reading the newspaper and listening to the radio) dropped from about 3h to less than 1h per week for men and from almost 2h to 30 min per week for women. The time spent on cultural life declined by 34 min for men, and decreased slightly for women (–11 min), although the change was not statistically significant. Thus, even though the amount of time devoted to leisure was fairly stable between 2002 and 2008, its composition changed considerably. These findings clearly show that to avoid incomplete (or even misleading) interpretations of time use behaviours, it is important to look at the detailed composition of time use categories, rather than relying on broad classifications.

Women and men displayed different unpaid work patterns. While women reduced the time they spent on family work by 1h 40 min per week, there was no statistically significant change in the time men devoted to family work.

As expected, a comparison of time use regression estimates for 2008 and 2014 points to the existence of a statistically significant negative effect of the recessionary period on paid work (about 3h 45 min less for the total population). In line with the mancession hypothesis, the magnitude of this effect was greater for men than for women (respectively, about 5h and 2h less per week). Indeed, in 2014, paid working hours for women had nearly returned to the pre-crisis level of an average of 17h per week. For men, by contrast, paid working hours continued to be far lower in 2014, at an average of 32h per week, than the initial level of 36h per week. This reduction in time spent on paid work was accompanied by an upward trend in time spent on personal care other than sleep and education for both genders. A statistically significant increase in the time spent on leisure is observed only for men, who devoted considerably more time to hobbies and sports, and slightly more time to religious and civic participation (about 1h 30 min and 25 min more per week, respectively). While female time spent on hobbies and sports grew by more than one hour per week during the 2008–2014 period, this was the only category of leisure activities for women in which there was a significant change in the recessionary years. It is worth noting that during the entire period of observation (from 2002–2014), an upward trend was recorded in the time spent on hobbies and sports, from approximately 11h to 14h per week for men, and from 8h to 11h per week for women. Men and women displayed different unpaid work behaviours during the recessionary years, with the time spent on unpaid work increasing by about two hours per week for the former, while showing no statistically significant change for the latter. The positive association between the recessionary period and male levels of unpaid work can be explained by the increase in the time men spent on child care and housework (approximately 30 min and 1h 20 min more per week, respectively). The increase in the time women devoted to child care was comparable to that among men, whereas the time women spent on housework decreased in the 2008–2014 period. The results for child care are in line with the findings of previous time use studies, which indicate that the employed mothers of today devote roughly the same number hours to child care as the “golden era housewives”

(Bianchi and Milkie 2010); and with the literature on intensive parenting (e.g. Craig et al. 2014). Summarising, our results highlight the existence of a downward trend in female housework during the entire study period, with women spending about 2h less per week on household chores in 2014 than they did in 2002. However, the magnitude of this decline was greater between 2002 and 2008, when the number of hours women spent on paid work was rising. For men, by contrast, the changes in the amount of time spent on unpaid work were concentrated in the recessionary years, whereas differences in household and family care activities were not statistically significant in years prior to the crisis.

5 Concluding remarks

This article draws on micro-data from three different editions of the Italian TUS to study the evolution of the use of time among Italian men and women over the 2002–2014 period, while paying specific attention to changes that occurred in the years before and after the beginning of the Great Recession. Our findings indicate that there was a narrowing of the gender gap in unpaid work during the entire period of observation, with men spending about 2h more per week on unpaid family time, and women spending around 2h less per week on housework between 2002 and 2014. However, while signs of this gender convergence were already visible for women before the recession, it was not until after the beginning of the crisis and the consequent losses in paid work hours that men started to become more involved in household and family care activities.

For women, we observed an increase of about 1h and 30min per week devoted to paid work time that was mirrored by a similar decline in the number of hours spent on housework during the pre-recessionary period; whereas for men, we found no significant increase in the number of hours spent on family work between 2002 and 2008. Earlier empirical evidence demonstrated that Italian men spent an average of 18 minutes more per day (about 2h per week) on unpaid work in 2002/3 than in 1988/9 (Romano 2008). A positive trend in male unpaid work was found in virtually all of the industrialised countries from the 1970s to the early 2000s (e.g. Gimenez-Nadal and Sevilla 2012). According to Fisher et al. (2007), the amount of unpaid work performed by American men significantly rose between 1965 and 2003; however, this change was concentrated within the first decades of the observation period. Our results corroborate the argument made by the scholars that there was a “no change moment” in the time men spent on family work from the late 20th century until the early 2000s.

As expected, we found that the economic crisis negatively affected the time spent on paid work, with an overall decline of about 4h per week, leaving both genders with more time available to devote to personal care. Consistent with the mancession literature, our results showed that the paid work losses were greater for men (–5h per week) than for women (–2h 30 min per week). Whereas the results of Bettio et al. (2012) suggest that the gender gap in unpaid work widened during

the economic crisis, we found that men performed more and women performed less family work during this period. Specifically, we found that between 2008 and 2014, men reallocated some of their foregone market work hours to housework (+1h 20 min) and to child care (+32 min), which led to an overall increase of about 2h per week spent on unpaid work; while the time women spent on housework declined by an average of 44 minutes per week. However, our finding that the reduction in the number of hours women devoted to family time during the recessionary years was smaller in magnitude than it was in the previous period suggests that the more relevant decrease in the number of hours women were spending on unpaid work took place before the onset of the Great Recession.

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Appendix

Table A.1:
Number of time use diaries by year and month

Month/Year	<i>N</i>	Frequency (%)	Cumulative frequency (%)
2002/3			
04/2002–06/2002	11,997	24.3	24.3
07/2002–09/2002	13,071	26.5	50.7
10/2002–12/2002	12,149	24.6	75.3
01/2003–03/2003	12,184	24.7	100.0
Total	49,401	100.0	
2008/9			
02/2008–04/2008	10,652	26.7	26.7
05/2008–07/2008	10,073	25.2	51.9
08/2008–10/2008	10,022	25.1	77.0
11/2008–01/2009	9,196	23.0	100.0
Total	39,943	100.0	
2013/4			
11/2013–01/2014	10,745	26.6	26.6
02/2014–04/2014	10,268	25.4	52.0
05/2014–07/2014	9,743	24.1	76.2
08/2014–10/2014	9,626	23.8	100.0
Total	40,382	100.0	

Source: Authors' calculations based on Time Use Surveys. Istat 2002/3, 2008/9, and 2013/4.

Table A.2:
Weighted sample estimates of the average of use of time by gender, activity, and survey year

Time use activities	Both genders			Men			Women		
	2002	2008	2014	2002	2008	2014	2002	2008	2014
Personal care	78.57	77.87	78.73	78.81	77.95	78.71	78.32	77.78	78.74
<i>Sleep</i>	57.31	57.69	57.85	57.24	57.44	57.59	57.39	57.93	58.10
<i>Other</i>	21.25	20.18	20.88	21.57	20.51	21.12	20.93	19.85	20.64
Paid work	26.16	28.23	24.81	35.63	37.21	32.46	16.76	19.27	17.27
Education	4.33	4.34	5.05	4.18	4.16	4.98	4.48	4.52	5.11
Unpaid work	24.15	23.07	23.47	11.02	11.10	12.50	37.19	35.00	34.29
<i>Housework</i>	20.27	19.74	19.82	8.60	9.16	10.25	31.86	30.29	29.27
<i>Child care</i>	3.06	2.97	3.31	1.81	1.62	1.95	4.30	4.32	4.65
<i>Adult care</i>	0.82	0.35	0.34	0.60	0.31	0.30	1.03	0.39	0.37
Leisure	34.33	34.19	35.65	37.91	37.26	39.08	30.78	31.13	32.28
<i>Civic & rel. part.</i>	2.19	1.82	2.05	1.66	1.37	1.78	2.73	2.27	2.31
<i>Social life</i>	7.68	7.86	7.86	8.50	8.67	8.61	6.87	7.06	7.11
<i>Cultural life</i>	2.41	2.00	1.90	2.52	1.87	1.82	2.31	2.12	1.99
<i>TV</i>	10.58	11.37	11.34	11.72	12.51	12.46	9.44	10.24	10.22
<i>Other media</i>	2.01	0.66	0.52	2.46	0.85	0.67	1.56	0.48	0.37
<i>Hobbies & sports</i>	9.46	10.47	11.99	11.04	11.99	13.75	7.88	8.96	10.26
Other time use	0.46	0.30	0.13	0.45	0.31	0.12	0.47	0.30	0.15

Note: Estimates are reported in hours per week, whereby decimals represent hundredths of an hour (e.g. 1.75 should be read as 1 hour and 45 minutes; 0.20 should be read as 12 minutes). Estimates refer to an average day of the week.

Source: Authors' calculations based on Time Use Surveys. Istat 2002/3, 2008/9, and 2013/4.

Table A.3:
Sample size and Chi Square Independence Test by year and socio-demographic variables

	2002		2008		2014	
	N	%	N	%	N	%
Geographic area						
North	15,218	45.7	11,121	43.3	10,890	42.5
Centre	5,985	18.0	4,451	17.3	4,607	18.0
South	12,124	36.4	10,103	39.3	10,154	39.6
Independence test	$\chi^2 = 92.10$		d.f. = 4		P < 0.001	
Age group						
15–24	5,458	16.4	3,933	15.3	3,859	15.0
25–34	6,918	20.8	4,618	18.0	4,146	16.2
35–44	8,046	24.1	6,401	24.9	5,775	22.5
45–54	6,862	20.6	5,706	22.2	6,577	25.6
55–64	6,043	18.1	5,017	19.5	5,294	20.6
Independence test	$\chi^2 = 436.95$		d.f. = 8		P < 0.001	
Educational level						
High	2,956	8.9	3,131	12.2	4,040	15.7
Medium	13,100	39.3	10,371	40.4	10,894	42.5
Low	17,271	51.8	12,173	47.4	10,717	41.8
Independence test	$\chi^2 = 919.44$		d.f. = 4		P < 0.001	
Couple						
Yes	19,734	59.2	13,943	54.3	12,714	49.6
Not	13,593	40.8	11,732	45.7	12,937	50.4
Independence test	$\chi^2 = 548.36$		d.f. = 2		P < 0.001	
Child						
Yes	11,269	33.8	8,286	32.3	8,118	31.6
Not	22,058	66.2	17,389	67.7	17,533	68.4
Independence test	$\chi^2 = 33.81$		d.f. = 2		P < 0.001	

Source: Authors' calculations based on time use surveys. Istat 2002/3, 2008/9, and 2013/4.

Table A.4:
Regression estimates of the average use of time by activity and survey year - Both genders

Time use activities	2002		2008		2014	
	Mean	StdErr	Mean	StdErr	Mean	StdErr
Personal care	78.01	0.124	77.46	0.111	78.50	0.107
<i>Sleep</i>	57.16	0.101	57.56	0.091	57.79	0.087
<i>Other</i>	20.85	0.072	19.90	0.065	20.70	0.062
Paid work	26.98	0.256	28.20	0.230	24.43	0.221
Education	5.55	0.112	5.75	0.100	6.69	0.097
Unpaid work	22.92	0.161	22.34	0.144	23.13	0.139
<i>Housework</i>	18.12	0.142	17.73	0.127	18.04	0.122
<i>Child care</i>	4.01	0.057	4.29	0.051	4.79	0.049
<i>Adult care</i>	0.79	0.023	0.31	0.021	0.30	0.020
Leisure	34.01	0.183	33.92	0.164	34.94	0.158
<i>Civic & rel. part.</i>	2.13	0.060	1.62	0.054	1.85	0.052
<i>Social life</i>	7.48	0.095	7.72	0.085	7.56	0.082
<i>Cultural life</i>	2.61	0.046	2.23	0.041	2.07	0.039
<i>TV</i>	9.78	0.090	10.85	0.081	10.72	0.078
<i>Other media</i>	2.38	0.026	0.68	0.024	0.52	0.023
<i>Hobbies and sports</i>	9.63	0.118	10.83	0.106	12.22	0.102
Other time use	0.54	0.026	0.33	0.024	0.15	0.023

Note: Estimates are reported in hours per week, whereby decimals represent hundredths of an hour (e.g. 1.75 should be read as 1 hour and 45 minutes; 0.20 should be read as 12 minutes). Estimates refer to an average day of the week.

Source: Authors' calculations based on time use surveys. Istat 2002/3, 2008/9, and 2013/4.

Table A.5:
Regression estimates of the average use of time by activity and survey year - Men

Time use activities	2002		2008		2014	
	Mean	StdErr	Mean	StdErr	Mean	StdErr
Personal care	78.22	0.149	77.47	0.140	78.39	0.139
<i>Sleep</i>	57.06	0.122	57.26	0.114	57.48	0.114
<i>Other</i>	21.16	0.087	20.21	0.082	20.92	0.081
Paid work	36.37	0.308	37.25	0.290	32.15	0.287
Education	5.27	0.135	5.47	0.127	6.49	0.126
Unpaid work	10.13	0.194	10.63	0.182	12.50	0.181
<i>House work</i>	6.74	0.170	7.29	0.160	8.64	0.159
<i>Child care</i>	2.81	0.068	3.06	0.064	3.59	0.063
<i>Adult care</i>	0.59	0.028	0.27	0.026	0.27	0.026
Leisure	37.48	0.220	36.85	0.207	38.17	0.206
<i>Civic participation</i>	1.61	0.072	1.16	0.068	1.58	0.068
<i>Social life</i>	8.24	0.115	8.43	0.108	8.19	0.107
<i>Cultural life</i>	2.68	0.055	2.11	0.052	1.99	0.051
<i>TV</i>	10.96	0.109	11.96	0.102	11.82	0.101
<i>Other media</i>	2.82	0.032	0.87	0.030	0.68	0.030
<i>Hobbies and sports</i>	11.18	0.142	12.31	0.133	13.90	0.132
Other time use	0.53	0.032	0.33	0.030	0.13	0.030

Note: Estimates are reported in hours per week, whereby decimals represent hundredths of an hour (e.g. 1.75 should be read as 1 hour and 45 minutes; 0.20 should be read as 12 minutes). Estimates refer to an average day of the week.

Source: Authors' calculations based on Time Use Surveys. Istat 2002/3, 2008/9, and 2013/4.

Table A.6:
Regression estimates of the average use of time by activity and survey year - Women

Time use activities	2002		2008		2014	
	Mean	StdErr	Mean	StdErr	Mean	StdErr
Personal care	77.79	0.150	77.45	0.137	78.60	0.134
<i>Sleep</i>	57.25	0.122	57.86	0.112	58.11	0.109
<i>Other personal</i>	20.54	0.088	19.59	0.080	20.48	0.078
Paid work	17.59	0.310	19.14	0.283	16.70	0.277
Education	5.83	0.136	6.04	0.124	6.89	0.121
Unpaid work	35.71	0.195	34.05	0.177	33.76	0.174
<i>Housework</i>	29.50	0.171	28.17	0.156	27.43	0.153
<i>Child care</i>	5.21	0.068	5.53	0.062	5.99	0.061
<i>Adult care</i>	0.99	0.028	0.35	0.026	0.34	0.025
Leisure	30.53	0.222	31.00	0.202	31.71	0.198
<i>Civic & rel. part.</i>	2.66	0.073	2.07	0.066	2.11	0.065
<i>Social life</i>	6.73	0.115	7.01	0.105	6.94	0.103
<i>Cultural life</i>	2.53	0.055	2.35	0.050	2.14	0.049
<i>TV</i>	8.61	0.109	9.74	0.100	9.63	0.098
<i>Other media</i>	1.93	0.032	0.48	0.029	0.36	0.028
<i>Hobbies and sports</i>	8.08	0.143	9.34	0.125	10.53	0.122
Other time use	0.54	0.032	0.32	0.029	0.16	0.029

Note: Estimates are reported in hours per week, whereby decimals represent hundredths of an hour (e.g. 1.75 should be read as 1 hour and 45 minutes; 0.20 should be read as 12 minutes). Estimates refer to an average day of the week.

Source: Authors' calculations based on Time Use Surveys. Istat 2002/3, 2008/9, and 2013/4.