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ABSTRACT

Telework, the Timing of Work, and Instantaneous Well-Being: Evidence from Time Use Data*

In this paper, we analyze the time allocation decisions of teleworkers, and compare them with their commuter counterparts. Using data from the American Time Use Survey for the years 2003 to 2015, we analyze the time spent working, the timing of work, and the instant enjoyment experienced while working, of teleworkers and commuters. Results show that teleworkers devote 40% less time to market work activities than do commuters, and less than 60% of both male and female teleworkers work at 'regular hours', vs around 80% of similar commuters. A higher percentage of teleworkers than commuters are engaged in leisure and non-market work at the central hours of the day. Using additional information from the *Well-being Module* for the years 2012 and 2013, we find that male teleworkers experience higher levels of satisfaction while working than do commuters, net of differences in socio-demographic and job characteristics. Our results point towards male telecommuters being happier in their job tasks than commuters, which may lead to a higher productivity of the former, and explains why teleworkers are able to work fewer hours per day.

JEL Classification: D13, J22

Keywords: telework, market work time, instantaneous well-being, American Time Use Survey

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1. Introduction

In this paper, we analyze the amount of time spent in market work activities, the timing of market work, and the instant enjoyment experienced during market work activities, of male and female teleworkers (i.e., workers who do not commute to/from work), in comparison with their commuter counterparts. We also analyze leisure and non-market work of teleworkers and commuters, in order to test whether telework may be thought as a practice to improve the work-life balance of workers. In a world where commute represents a significant part of any working day (Susilo and Maat, 2007: Gimenez-Nadal and Molina, 2014; Gimenez-Nadal et al., 2018), commute has been shown to be one of the most unsatisfactory activities performed by workers in terms of "instant enjoyment" (Kahneman et al., 2004; Kahneman and Krueger, 2006), and leads to a series of negative outcomes for workers and firms/employers (Wener et al., 2003; Gottholmseder et al., 2009; Roberts et al., 2011; van Ommeren and Gutiérrez-i-Puigarnau, 2011; Gimenez-Nadal et al., 2017). Telework, which allows workers to work at home, is often considered to be beneficial for both firms and employees (Toffler, 1980; Apgar, 1998; Kemerling, 2002; Safirova, 2002).[1]

Although telework was banned in some US industries from the 1940s to the 1990s, (see Allen et al. (2015) for a review), the practice of teleworking has increased in recent decades, becoming a topic of public and academic interest given its associated benefits (Edwards and Field-Hendery, 2002; Allen et al., 2015). For instance, there are positive implications in terms of job satisfaction, organization, stress reductions, savings in office costs, and reduction of travel costs (Golden and Veiga, 2005; Golden, 2006; Gajendran and Harrison, 2007; Fonner and Roloff, 2010; Sardeshmukh et al., 2012; Duxbury and Halinski, 2014). Also, some evidence points toward teleworkers being more productive (Stavrou, 2005; Dionne and Dostie, 2007), although Gajendran et al. (2014) find non-significant differences in the self-reported performance of teleworkers and commuters, and Rhee (2008) argue that teleworkers tend to have less opportunities of job promotion, and employers often loss control over teleworkers' work process.

[1]Telework may be also beneficial for the whole society, since it has been largely associated with environmental benefits in terms of reductions in agglomeration, traffic congestion, air pollution, and energy consumption (Nilles et al., 1976; Sampath et al., 1996; Hill et al., 1996; White et al., 2007; Rhee, 2008). Nonetheless, these environmental benefits are usually overestimated, and emission and air pollution savings are relatively modest (Nelson et al., 2007, Hynes, 2014).

One hypothesized benefit of teleworking on workers is the improvement of the work-life balance. Dockery and Bawa (2017) find that telework contributes to an equitable division of household responsibilities, and Gajendran and Harrison (2007) and Allen et al. (2013) find a small but significant negative relationship between work-family conflicts and teleworking. Thus, in the same way that self-employment stands as a possible way for mothers to have greater control over the timing of work (flexible hours) and thus improve their work-life balance (Gimenez-Nadal, Molina and Ortega, 2012), telework may also allow workers to have more flexibility, improving their work-life balance.The better balance between work and household responsibilities with teleworking may be especially relevant for female workers, as most of the household responsibilities continue to be carried out by women in developed countries (Aguiar and Hurst, 2007; Gimenez-Nadal and Sevilla, 2012, Gimenez-Nadal and Molina, 2016).

Under this framework, we analyze the time spent in market work, non-market work and leisure, by commuters and teleworkers. To that end, we use the American Time Use Survey (ATUS) for the years 2003 to 2015, and we find that teleworkers devote less time to market work activities, and more time to non-market work activities. These differences are not explained by different occupations/industries, scheduled work hours, full-time jobs, or wage differences.We also analyze differences in the distribution of market work, non-market work, and leisure activities during the day. We find differences in the timing of market work, as less than 60% of the male and female teleworkers are working at regular hours, vs around 80% of similar commuters. Instead, a higher percentage of teleworkers than commuters are doing leisure and non-market work at central hours of the day. Thus, teleworkers work less, and do more non-market work time and have more leisure than commuters during their working days, and specifically during the central hours of the day, which sheds light on the relationship between teleworking and a better work-life balance. Alternative explanations for these results, such as the loss control over teleworkers' work process are also possible (e.g., shirking), although we cannot elaborate more on this explanation.

A better work-life balance could lead to happier individuals, as individuals may have fewer problems to reconcile their work and household obligations. Thus, we test whether teleworkers are happier than commuters, analyzing the "instant enjoyment" (e.g., Kahneman et al., 2004; Kahneman and Krueger, 2006) experienced by workers in their job activities. Using the *Well-being Module* of the ATUS from years 2012 and

2013, we find differences in the instantaneous well-being between commuters and teleworkers for males, after controlling for socio-demographics, overall life satisfaction, occupation, industry, and work characteristics. Given the link between happiness and productivity of workers (Oswald, Proto and Sgroi, 2015), teleworkers may be more productive in their job tasks than commuters, offsetting the difference in total market work time. The fact that we do not find differences in instantaneous well-being of female workers may indicate that teleworking women still have difficulties in balancing their work and household responsibilities (Gimenez-Nadal and Sevilla, 2011), consistent with the Household Responsibilities Hypothesis (Gimenez-Nadal and Molina, 2016).

The contributions of the paper are twofold. First, we analyze the amount of time and the timing of market work, non-market work, and leisure of commuters and teleworkers, and our results point towards teleworkers being able to balance their work and family responsibilities better than commuters. To the best of our knowledge, this is the first empirical analysis of the timing of market work, leisure, and non-market work of teleworkers vs commuters. Second, we study the relationship between instantaneous well-being during work episodes and teleworking. We find that male teleworkers are happier while at work than male commuters, but we do not find significant differences among females. Our results suggest that males appear to have the ability to take advantage of teleworking with greater satisfaction than females, which makes male teleworkers happier at work than commuters, and thus more productive. Furthermore, we find that these satisfaction differences do not depend on preferences about the timing of work, and thus may be attributed to telework.

The rest of the paper is organized as follows. Section 2 describes the data. Section 3 sets the empirical relationship between telework, the time devoted to market work, the timing of work, and the times spend in leisure and non-market work. Section 4 shows the results concerning the analysis of telework and happiness. Finally, in Section 5 we summarize the main conclusions of the paper.

2. Data and variables

We use the American Time Use Survey (ATUS) from years 2003 to 2015 to develop the empirical analysis. The ATUS provides us with information on individual time use,

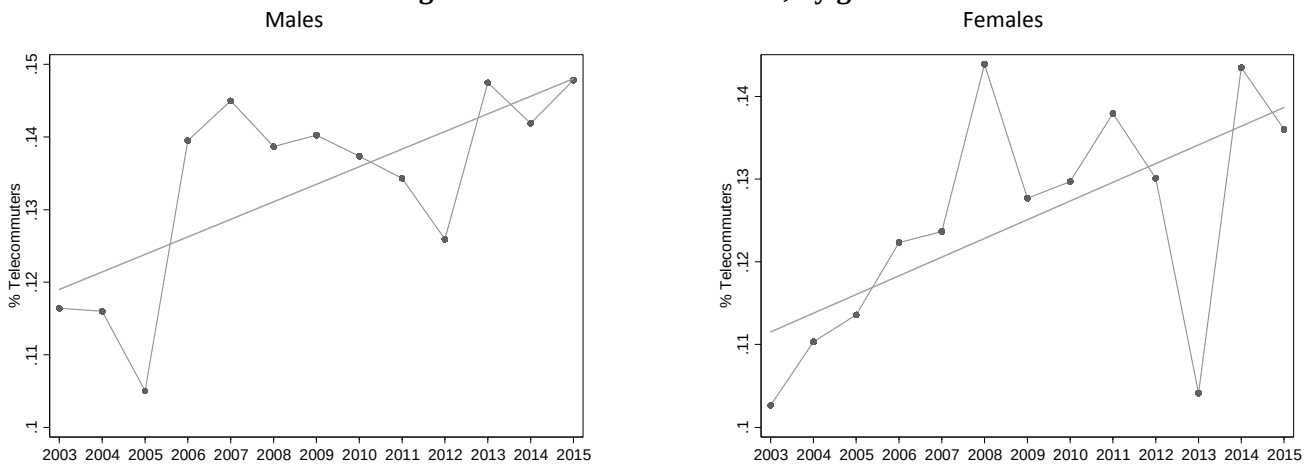
based on diaries in which respondents report their activities throughout the 24 hours of the day (from 4am to 4am of the next day). The ATUS is considered the official US time use survey, and it is administered by the US Bureau of Labor Statistics (http://www.bls.gov/tus/).

We restrict the sample used throughout the empirical analysis to employee workers between the ages of 16 and 65 (inclusive). We omit self-employed workers, since they may operate home-based business, or have types of jobs in which commuting is not required (e.g., taxi drivers), and thus they should not be classed as teleworkers (Walls, 2004; O´Keefe et al., 2016). Additionally, the self-employed may consider certain activities, such as time spent with colleagues or clients, as part of their work, while employees may not consider it as market work, and so potential biases may emerge (Gimenez-Nadal et al., 2012). Furthermore, given that workers may have been asked to fulfill the diaries during non-working days, thus having no time spend on working activities, we restrict the analysis to days when workers devote at least 60 minutes to market work activities, excluding commuting. We finally eliminate the observations that can be considered outliers in multivariate data using the blocked adaptive computationally efficient outlier nominators algorithm proposed by Billor et al. (2000). That way, we identify atypical data, and eliminate biases arising from strange or unusual work days. These restrictions leave us with a final sample of 22,083 males and 21,291 females.

The ATUS does not directly characterize teleworkers. However, we can identify teleworkers from the diary-level information as those workers who, having devoted at least 60 minutes to market work activities, excluding commuting, do not report any period of time of "commuting to/from work" (definition consistent with Pinsonneault and Boisvert, 2001; Golden, 2006; Kossek et al., 2006; Pearce, 2009; Morganson et al., 2010). This leaves us with 5,619 teleworkers, of whom 2,913 are males and 2,697are females. We can observe a higher (but not significant at standard levels) percentage of teleworkers among males (13.19%) than among females (12.67%). Figure 1 shows the evolution of the percentages of male and female teleworkers from 2003 to 2015, according to the sample. We observe an increasing linear-fitted trend of around three percentage points in both cases, from 11.6% to 14.8% in the case of males and from 10.2% to 13.6% in the case of females. The increasing trend in teleworking in our

sample is consistent with general trends in the US, which indicates that our sample is a good representation of the general population regarding teleworking.

Figure 1. Evolution of telework, by gender



Note: The sample (ATUS 2003-2015) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting). The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work.

The ATUS allows us to define the time devoted to market work as the sum of the times devoted to main market work activities, excluding commuting. We aggregate the time devoted to market work using the following activity codes: work, main job (at home, not at home) "50101", working nec (at home, not at home) "50199", work-related activities nec (at home, not at home) "50299", work & related activities nec (at home, not at home) "59999", and waiting work related activities (at home, not at home) "50205. In addition to the time of market work, we define the time devoted to leisure, as the sum of time spend in activities such as watching television, sports, general out-of-home leisure, gardening, pet care, and socializing, not at work. We apply the same definition of leisure than in Aguiar and Hurst (2007), Gimenez-Nadal and Sevilla (2012) and Giménez-Nadal, Molina and Velilla (2017). Furthermore, we also analyze the time devoted to and the timing of non-market work activities, which represents all the time spend in domestic or household activities (e.g., cooking, set table, wash/put away dishes, cleaning, laundry, ironing, clothing, repair, home repairs, maintain vehicle, and other domestic work), care of children, and personal care.[2]

[2]Care may be considered as a part of housework, but it could also be considered separately (Aguiar and Hurst, 2007; Gimenez-Nadal et al., 2012). Given that the specific study of the different uses of time is not one of the scopes of this paper, we consider care and domestic work in a single category. The time spend in the care of elderly people is

Table 1. Summary statistics, by gender

	MALES					FEMALES				
Panel A:	**Commuters**		**Teleworkers**			**Commuters**		**Teleworkers**		
Person-Level Variables	Mean	S.D.	Mean	S.D.	*p*-value	Mean	S.D.	Mean	S.D.	*p*-value
Minutes at market work	506.942	145.211	371.140	234.745	(<0.01)	463.750	135.233	320.621	202.207	(<0.01)
Fraction at work at:										
3am	0.059	0.235	0.056	0.229	(0.494)	0.037	0.188	0.029	0.168	(0.040)
Noon	0.753	0.431	0.514	0.499	(<0.01)	0.778	0.415	0.502	0.500	(<0.01)
9pm	0.148	0.355	0.196	0.397	(<0.01)	0.116	0.320	0.184	0.388	(<0.01)
Minutes of leisure	87.792	85.923	124.999	107.229	(<0.01)	79.219	79.622	115.525	103.498	(<0.01)
Minutes of non-paid work	151.867	87.235	189.172	125.185	(<0.01)	205.616	104.747	254.992	143.362	(<0.01)
Age	41.696	11.241	43.869	10.711	(<0.01)	42.323	11.559	44.009	10.962	(<0.01)
Primary ed.	0.086	0.281	0.041	0.199	(<0.01)	0.063	0.243	0.036	0.187	(<0.01)
Secondary ed.	0.283	0.451	0.207	0.405	(<0.01)	0.264	0.441	0.171	0.377	(<0.01)
University ed.	0.630	0.483	0.751	0.432	(<0.01)	0.673	0.469	0.793	0.405	(<0.01)
Being white	0.837	0.369	0.844	0.363	(0.382)	0.790	0.407	0.803	0.397	(0.103)
Being American	0.814	0.389	0.846	0.361	(<0.01)	0.850	0.357	0.879	0.326	(<0.01)
Live in couple	0.660	0.474	0.680	0.467	(0.030)	0.544	0.498	0.582	0.493	(<0.01)
Partner labor status	0.445	0.497	0.461	0.499	(0.109)	0.464	0.499	0.504	0.500	(<0.01)
Number of children	0.998	1.164	0.980	1.114	(0.434)	0.940	1.092	0.926	1.087	(0.545)
Family size	3.004	1.524	2.926	1.483	(<0.01)	2.827	1.427	2.804	1.413	(0.441)
Full-time worker	0.827	0.379	0.834	0.373	(0.366)	0.670	0.470	0.654	0.476	(0.094)
Scheduled work hours	43.467	14.515	44.368	16.683	(<0.01)	37.812	13.287	38.605	15.903	(<0.01)
Hourly earnings	8.420	11.042	6.881	11.678	(<0.01)	8.095	9.893	6.239	10.145	(<0.01)
Metropolitan status	0.832	0.374	0.845	0.362	(0.075)	0.830	0.376	0.854	0.353	(<0.01)
N. Individuals	19,170		2,913			18,594		2,697		
Panel B:										
Episode-Level Variables										
Life satisfaction ladder	7.053	1.841	7.162	1.582	(<0.01)	7.127	1.801	7.110	1.821	(0.449)
Happiness	3.914	1.525	3.937	1.539	(0.840)	4.083	1.527	3.828	1.668	(0.061)
Sadness	0.658	1.251	0.425	1.026	(0.010)	0.704	1.394	0.800	1.422	(0.437)
Stress	2.169	1.822	1.928	1.661	(0.064)	2.411	1.931	2.814	1.848	(0.018)
Pain	0.836	1.455	0.643	1.204	(0.060)	0.874	1.583	1.069	1.722	(0.168)
Tiredness	2.345	1.811	2.000	1.807	(<0.01)	2.567	1.939	2.855	1.951	(0.093)
Net affect	2.413	2.147	2.688	2.032	(0.076)	2.443	2.288	1.943	2.545	(0.015)
u-Index	0.297	0.457	0.281	0.450	(0.615)	0.319	0.466	0.400	0.470	(0.050)
Length of work episode	203.776	137.632	166.379	130.512	(<0.01)	196.822	127.185	145.111	113.957	(<0.01)
N. Individuals	1,113		263			896		221		
N. Episodes	1,292		329			1,032		252		

Note: T-type test p-values in parentheses. The sample in Panel A (ATUS 2003-2015) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting). The sample in Panel B(ATUS*Well-being Module*2012-2013 at diary level) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting) and to episodes of paid work (excluding commuting).The self-employed are not included in the samples. Teleworkers are defined as those workers who do not commute to/from work.Work episodes are measured in minutes. Minutes at market work, minutes at non-paid work, and minutes of leisure are measured in minutes per day.Age is measured in years. Scheduled work hours are measured in hours per week. Hourly earnings are measured in real $ per hour of work. Life satisfaction ladder indicates how respondents personally feel about where they stand in the present with regard to the best/worst possible life for them, and takes values from 0 ("worst possible life") to 10 ("best possible life"). Happiness, Sadness, Stress, Pain and Tiredness measure how much happiness/sadness/stress/pain/tiredness respondents felt during the correspondent activity, and take values from 0 ("not at all") to 6 ("very"). Net affect takes any value from -6 to 6. The u-Index takes values 0 or 1.

Table 1 shows summary statistics of our variables of interest, by whether respondent is a teleworker or commuter. We also develop the analysis by gender, given previous evidence showing the different time allocation decisions of men and women

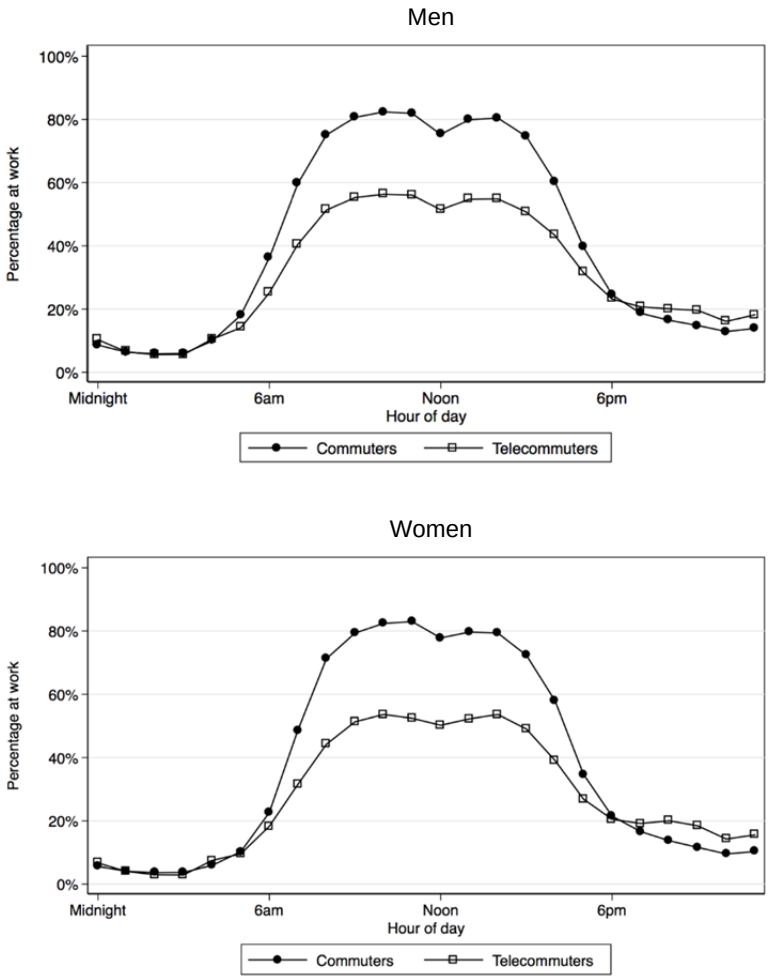
considered in the ATUS within civic, voluntary, and religious activities, and then it is not included in the analysis as domestic work.

(Gershuny, 2000; Aguiar and Hurst, 2007). We compare teleworkers against commuters where we apply a t-type test of the equality of means to check if differences in average values are statistically significant. Fo rcommuters, the average time spend in market work activities in a working day is 507 and 464 minutes for males and females, while the time for teleworkers is 371 and321 minutes for males and females, respectively. The difference between teleworkers and commuters are statistically significant at standard levels for both male and female workers. In the case of non-market work, male and female teleworkers devote 189 and 255 minutes per day to these activities, while male and female commuters devote 152 and 205 minutes per day to these activities, respectively. Thus, male and female teleworkers devote 37 and 50 more minutes to non-market work, with these differences being statistically significant at the 99% confidence level. Furthermore, male commuters devote, on average, 87.8 minutes to leisure, in contrast to the 125 minutes devoted by male teleworkers, while female commuters devote, on average, 79.2 minutes to leisure, vs. 115.5 minutes of the teleworkers, with these differences being also significant at standard levels.

The ATUS also allows us to identify the timing of the different activities throughout the day, that is, the parts of the day when workers are doing market work, doing non-market work, or having leisure. In this sense, we have the starting time and end time of all the activities, which allows us to divide the day in 24 one-hour periods, and compute the proportion of time spent in each activity in each time band of the day. Following Hamermesh (1999), we divide the day in 24 time-bands, and we analyze the profile of the different activities. For example, Figure 2 shows the proportion of workers doing market work activities, for both commuters and teleworkers. Consistent with Hamermesh (1999), who shows that workers prefer to work at “regular hours” (e.g., central hours) instead of at evening or night shifts, we observe that the vast majority of workers work in the period between 6am and 6pm.Table 1 shows the fraction of workers at work at three particular times, e.g., 3am, Noon, and 9pm. We can observe how at 3am there are around 6% of male workers at work, with non-significant differences between commuters and teleworkers. However, at 3am there are 3.7% of female commuters at work, vs 2.9% of teleworkers, with the difference being significant. At Noon, there is a significantly higher percentage of male and female commuters at work (75.3% and 77.8%, respectively), than the correspondent percentages of teleworkers (51.4% and 50.2%). Oppositely, at 9pm, the trend reverses

and there is a slightly higher percentage of male and female teleworkers and work (19.6% and 18.4%, vs 14.8% and 11.6%, respectively).

Figure 2. Percentage of male and female commuters and teleworkers at market work, by period of time



Note: The sample (ATUS 2003-2015) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting). The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work. Figures represent the percentage of workers who spend some time working in each time band. The following time bands are considered: 0-1 am ("Midnight"), 1-2 am (1am), 2-3 am (2am), 3-4 am (3am), 4-5 am (4am), 5-6 am (5am), 6-7 am (6am), 7-8 am (7am), 8-9 am (8am), 9-10 am (9am), 10-11 am (10am), 11-12 am (11am), 12-1 pm ("Noon"), 1-2 pm (1pm), 2-3 pm (2pm), 3-4 pm (3pm), 4-5 pm (4pm), 5-6 pm (5pm), 6-7 pm (6pm), 7-8 pm (7pm), 8-9 pm (8pm), 9-10 pm (9pm), 10-11 pm (10pm), 11-12 pm (11pm).

To sum up, teleworkers devote less time to market work activities, and more time to non-market work and leisure activities, during their working days. These differences are concentrated on central hours of the day, when workers prefer to carry out their job tasks, as there are fewer teleworkers working and more doing non-market work and leisure, in comparison to commuters. This would be consistent with the idea that

telework allows for a better work-life balance, as teleworkers are able to do non-market and leisure at times when commuters must be working.

However, in our analysis we have not considered so far that teleworkers and commuters may have different characteristics, which would explain differences in the allocation of time. Thus, in next Section we analyze differences in time allocation decisions of commuters and teleworkers, net of personal observed heterogeneity in socio-demographics and job characteristics.

3. Telework and the allocation of time

In this Section, we analyze the amount of time that male and female teleworkers spend in market work, non-market work, and leisure activities, in comparison to workers who commute to/from work. We also difference in the timing of these activities. We first estimate OLS models on the total time devoted to market work, non-market work, and leisure (estimates include personal weights provided by the ATUS).[3] For a given individual *i*, we estimate the following equation:

$$Y_i = \beta_0 + \beta_1 T_i + \beta_2 X_i + \alpha + \varepsilon_i. \quad (1)$$

where Y_i represents the daily minutes devoted to the reference activity (e.g., market work, non-market work, leisure), T_i the dummy that identifies teleworkers, and X_i the vector of individual controls. The parameter α represents fixed effects at state level, and ε_i represents the error term. Individual controls include age, education (primary, secondary, or University education), being white (vs non-white), being American (vs non-American), living in couple (vs being single), couple's labor status (1 if partner works, 0 otherwise), the number of children, family size, being a full-time worker (vs part-time worker), the scheduled weekly work hours, hourly earnings, and the metropolitan (vs non-metropolitan) status of the place of residence of individuals. Nominal hourly earnings from the ATUS have been deflated using the deflator of the Federal Reserve Bank of St. Louis.

[3]We may observe "zero" time devoted to non-market work during the diary day, for instance, and thus there can be some controversy regarding the selection of alternative models, such as that of Tobin (1958). Gimenez-Nadal and Molina (2014,2016) show that the use of Tobit or OLS models lead to similar conclusions, and thus we rely on OLS models, and results for Tobit models are available upon request.

We also control for the industry and occupation of workers, as differences in time allocation decisions may be due to differences in the type of job. To that end, the ATUS includes information about the 2002/2010 Census Occupation Classification and the 2002/2007 Census Industry Classification. The ATUS aggregates industries in the following 14 categories: Agriculture, forestry, fishing, and hunting; Mining; Construction; Manufacturing; Trade; Transportation and utilities; Information; Financial activities; Professional and business services; Educational and health services; Leisure and hospitality; Other services; Public administration; and Armed Forces. For occupations, the following 11 categories are defined: Management, business, and financial; Professional and related; Service; Sales; Office and administrative support; Farming, fishing, and forestry; Construction; Installation, maintenance, and repair; Production; Transportation and materials moving; and Armed Forces.

If we explore differences in socio-demographic and job characteristics between teleworkers and commuters, we observe an average age of 41.7 (42.3) years for male (female) commuters, vs 43.9 (44.0) years for male (female) teleworkers. A higher fraction of male and female teleworkers than male and female commuters have attended to University, indicating that jobs that allow to telework require a higher level of formal education than jobs where teleworking is not allowed. There are relatively more American teleworkers than American commuters, both among males and females. With regards to family variables, a higher proportion of teleworkers live in couple and have a working partner than commuters. On the other hand, the average number of children is statistically similar at standard levels for male and female commuters and teleworkers. Finally, there is a higher proportion of full-time teleworkers than full-time commuters, although the difference is not significant for males, and significant only at the 90% for males. Then, different types of works in terms of part-time/full-time schedules appear not to explain the differences in the total amount of time spent working between commuters and teleworkers. Indeed, the amount of weekly scheduled work hours is significantly higher for teleworkers (44.4 hours per week for males, and 38.6 for females) than for commuters (43.5 and 37.8 hours, respectively).

In terms of hourly wages, commuters earn significantly more than teleworkers, maybe to compensate the monetary and temporary costs of commuting (e.g., efficiency wages, Shapiro and Stiglitz (1984), Gimenez-Nadal, Molina and Velilla (2017)). Furthermore, given that commuters have higher hourly wages than teleworkers, a higher

opportunity cost of time (Becker, 1965) could explain the higher labor daily supply of commuters in comparison to teleworkers. Thus, we need to control for differences in hourly wages if we want to compare commuters and teleworkers.

Table 2. Estimates on the daily minutes of (market) work

	Baseline model		Plus F.E.		Plus controls	
	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Male	Female	Male	Female	Male	Female
Being a teleworker	-97.94***	-113.1***	-99.62***	-114.3***	-98.47***	-111.4***
	(5.149)	(5.045)	(5.128)	(4.988)	(4.995)	(4.678)
Age	7.775***	6.014***	7.100***	4.929***	3.774***	1.818***
	(0.755)	(0.740)	(0.747)	(0.744)	(0.716)	(0.683)
Age squared	-9.364***	-6.906***	-8.578***	-5.689***	-4.574***	-1.889**
	(0.898)	(0.879)	(0.888)	(0.880)	(0.854)	(0.809)
Secondary ed.	6.168	15.78***	8.996**	12.36**	2.543	7.014
	(4.476)	(4.885)	(4.545)	(4.886)	(4.437)	(4.717)
University ed.	0.154	27.03***	5.898	16.47***	-3.935	8.978*
	(4.234)	(4.621)	(4.605)	(4.900)	(4.494)	(4.760)
Being white	8.842***	-4.495	6.878**	-4.183	2.959	-3.254
	(3.175)	(2.975)	(3.255)	(2.972)	(3.145)	(2.823)
Being American	5.360*	3.545	2.329	0.125	2.362	-0.527
	(3.009)	(3.255)	(3.164)	(3.476)	(3.112)	(3.294)
Live in couple	24.12***	0.670	19.99***	-0.503	11.82***	1.700
	(3.596)	(4.249)	(3.538)	(4.181)	(3.455)	(4.064)
Couple labor status	-9.480***	-9.504**	-7.616**	-10.54***	-5.676**	-7.516*
	(3.019)	(4.162)	(2.984)	(4.078)	(2.844)	(3.842)
N. of children	-4.557***	-8.394***	-4.363***	-7.656***	-1.974	-3.020*
	(1.171)	(1.224)	(1.158)	(1.217)	(1.978)	(1.801)
Family size	-	-	-	-	-1.376	-0.317
					(1.617)	(1.431)
Full time worker	-	-	-	-	31.12***	40.35***
					(3.245)	(2.637)
Scheduled work hours	-	-	-	-	2.086***	2.322***
					(0.113)	(0.126)
Log-hourly earnings	-	-	-	-	-1.644*	-0.226
					(0.906)	(0.821)
Metropolitan status	-	-	-	-	-4.595	-5.086
					(3.310)	(3.152)
Constant	343.9***	337.4***	370.1***	394.8***	329.3***	349.3***
	(14.97)	(15.04)	(22.47)	(34.63)	(22.32)	(31.07)
State F.E.	No	No	Yes	Yes	Yes	Yes
Industry F.E.	No	No	Yes	Yes	Yes	Yes
Occupation F.E.	No	No	Yes	Yes	Yes	Yes
Observations	22,083	21,291	22,083	21,291	22,083	21,291
R-squared	0.053	0.072	0.071	0.095	0.124	0.177

Note: Robust standard errors in parentheses. The sample (ATUS 2003-2015) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting).The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work. The dependent variable is the daily minutes devoted to paid work (excluding commuting). Work episodes are measured in minutes. Age is measured in years. Age squared is defined as $age^2/100$.Scheduled work hours are measured in hours per week. Hourly earnings are measured in real $ per hour of work. Reference category for education variables: Primary education. Industry F.E. include the following categories: Mining; Construction; Manufacturing; Wholesale and retail trade; Transportation and utilities; Information; Financial activities; Professional and business services; Educational and health services; Leisure and hospitality; Other services; Public administration (ref: Agriculture, forestry, fishing, and hunting). Occupation F.E. include the following categories: Professional and related; Service; Sales and related; Office and administrative support; Farming, fishing, and forestry; Construction and extraction; Installation, maintenance, and repair; Production; Transportation and materials moving (ref: Management, business, and financial).
* Significance at the 90%. ** Significance at the 95%. *** Significance at the 99%.

We estimate Equation (1) in Table 2, by gender. Columns (1) and (2) show estimates for males and females of the baseline models, in which we control for basic

socio-demographic characteristics which include ages, age squared divided by 100, education, being white, being American, living in couple, couple labor status, and the number of children. In Columns (3) and (4) we include State, occupation, and industry fixed effects, to control for specific job and state heterogeneity, and then compare teleworkers with similar commuters in terms of work characteristics. Finally, in Columns (5) and (6) we also include family size, scheduled work hours, log-of-real hourly earnings, and the metropolitan/non-metropolitan status of the place of residence, to control for household responsibilities, a more complete set of work characteristics (in addition to occupation and industry fixed effects), and differences arising from rural/urban areas, such as the availability of child-care services (Gimenez-Nadal et al., 2012).

Results are in line with the differences documented in the previous Section, as teleworkers devote less time to market work activities, and more time to non-market work and leisure activities. We find that male teleworkers devote between 97.9 and 99.6 fewer minutes per day to market work activities, in comparison to commuters, while the difference in the case of females is between 111.4 and 114.3 minutes per day. Regarding non-market work and leisure time, Table 3 shows the results of estimating Equation (1) for these two activities using the model with all the controls (see Table A1 in Appendix for the results of all the explanatory variables). We observe that male teleworkers devote around 23.6 and 32.5 more minutes per day to non-market work and leisure activities, in comparison to commuters, while the difference in the case of females is 38.0 and 35.0 minutes per day for non-market and leisure time.

Table 3. Estimates on the daily minutes of leisure and non-paid work (main results)

	Leisure time		**Non-paid work time**	
	(1)	**(2)**	**(3)**	**(4)**
VARIABLES	**Male**	**Female**	**Male**	**Female**
Being a teleworker	32.48***	34.97***	23.61***	37.96***
	(2.527)	(2.758)	(2.536)	(3.084)
Observations	22,083	21,291	22,083	21,291
R-squared	0.064	0.120	0.033	0.037

Note: Robust standard errors in parentheses. The sample (ATUS 2003-2015) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting).The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work. The dependent variable is the daily minutes devoted to leisure (Columns (1) and (2)), or to non-paid work (excluding commuting) (Columns (3) and (4)).
Additional estimates on the complete set of explanatory variables are shown in Table A1 in the Appendix.
* Significance at the 90%. ** Significance at the 95%. *** Significance at the 99%.

Among other factors related with the time devoted to market work, we find an inverted U-shaped relationship between ages and the time spend working, while living in couple is negatively related to market work times for males, indicating that men who live in couple devote12 more minutes per working day to market work activities. However, female workers in whose families both household members work devote less time to market work. Full-time workers devote more time to market work, as expected, and especially those workers with longer work schedules. The relationship between market work time and income is non-significant for males, and positive but significant only at the 90% for females. Given that the estimates of parameters associated with the dummy that identifies teleworkers are robust to the inclusion of controls in Columns (5) and (6), we can conclude that differences in terms of market work times between commuters and teleworkers are not explained by different rates of full employment, different scheduled work hours, or different wages.

The timing of work activities

We now compare how commuters and teleworkers allocate their work activities throughout their working day. We intend to investigate whether teleworkers prefer to work at regular hours (morning and afternoon), which according to Hamermesh (1999) is considered as preferable, or in the contrary they prefer to work at evening or night and have more free time to fulfill their household responsibilities during central hours of the day, when children are awake and go to school. A similar analysis for Spanish self-employed mothers can be read in Gimenez-Nadal et al. (2012).

Figure 2 shows the percentage of (male and female) commuters and teleworkers that are at work (axis Y), for all the 24 time-bands of the day (axis X). We can observe a similar "ω-inverted" pattern for both commuters and teleworkers: a positive slope from3am to 10am, followed by a slight valley from 10am to 2pm with a local minimum at Noon, and a negative slope from 2pm to Midnight. For instance, from 7am to 5pm, more than the 80% of male and female commuters are at work. On the other hand, the greater percentages of male and female teleworkers at works are reached from 7am to 4pm, when between 40% and 60% of them are working. In the evening and until Midnight, however, there are more teleworkers at work than commuters, although the differences are smaller than at regular hours (around 20% of the teleworkers are at

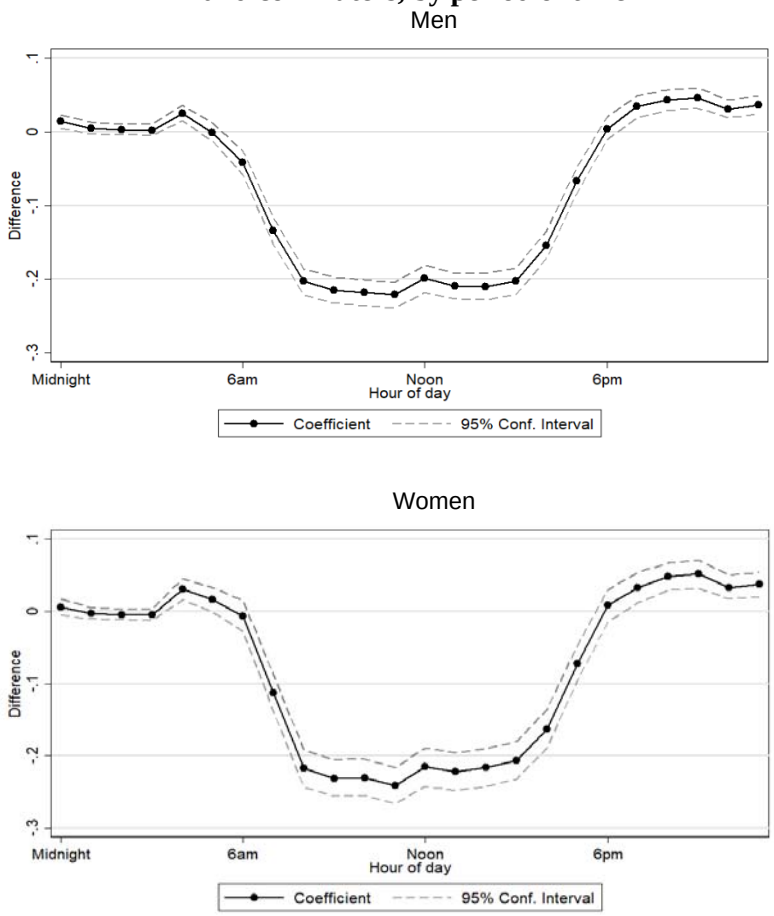
work, vs 15% of the commuters). These results indicate that there is a lower percentage of teleworkers working at central hours of the day, in comparison with commuters. Furthermore, results show that, in some cases, working from 6pm to Midnight may be preferable for teleworkers. These results confirm that both teleworkers and commuters prefer to work at regular hours, consistent with Hamermesh (1999), although teleworkers may slightly prefer to work at evening and night and do more non-market work and leisure at central hours of the day.

In order to take into account the observed heterogeneity of workers in the timing of activities, we follow Hamermesh (1999) and define, for each individual *i* and time period *t*=0, 1, 2…, 23, a dummy variable W_{it} identifying whether individual *i* is working (1) in period *t*or not (0). For each *t*, we estimate the following OLS model:

$$W_{it} = \beta_{0t} + \beta_{1t}T_i + \beta_{2t}X_i + \alpha + \varepsilon_{it}, \qquad (2)$$

where T_i represents the dummy that identifies teleworkers, X_i the vector of individual controls, α fixed effects at state level, and ε_i represents the error term.

Figure 3. Estimate differences in fraction at work between male and female teleworkers and commuters, by period of time



Note: The sample (ATUS 2003-2015) has been restricted to employees who devote at least 60 minutes to work activitiesduring the diary day (excluding commuting).The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work. We estimate the following Ordinary Least Squares: $W_{ij}=\alpha+\beta X_i+\varepsilon_{ij}$, where W_{ij} represents a dummy variable indicating whether the worker "i" is doing a market work activity (1) or not (0) in time band "j" (j = "Midnight", …, 11pm). The vector X_i includes socio-demographic characteristics of workers, which are the following: being a teleworker, age, age squared, secondary ed., University ed., being white, being American, live in couple, couple labor status, n. of children, family size, full-time worker, scheduled work hours, log-hourly earnings, metropolitan, and State, industry and occupation F.E. Coefficients shown in Figure 3 are the estimated coefficient and 95% Confidence Interval of the variable "being a teleworker", and coefficients and robust standard errors are shown in Tables A2 and A3 in the Appendix. Results for the variables X_i are available upon author request.

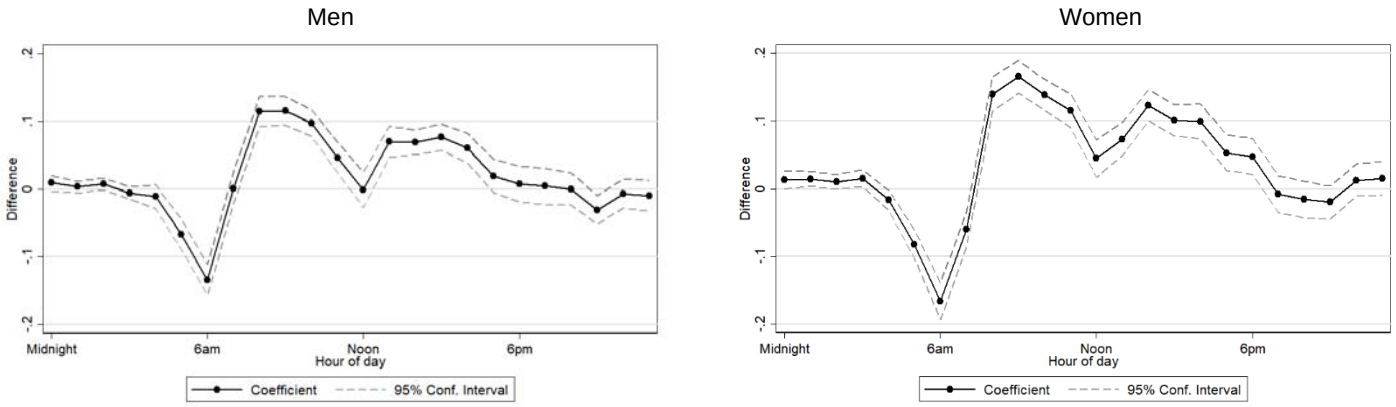
Figure 3 shows estimates and 95% Confidence Intervals of the parameter β_{1t} associated with the variable "being a teleworker", thus measuring the estimated difference between commuters and teleworkers.[4] We observe that the descriptive differences between commuters and teleworkers shown in Figure 2 are robust to the observed heterogeneity measured in vector X. In particular, Figure 3 shows that differences in favor of commuters (i.e., a higher percentage of commuters than teleworkers at work) are significant from 6am to 6pm at standard levels. Besides, from 8am to 3pm the higher differences are achieved, when the percentage of commuters at work is more than 20% higher than the percentage of teleworkers at work. On the other hand, in the evening and until Midnight, differences are of 3 percentage points, and significant at standard levels, in favor of teleworkers (a higher percentage of teleworkers than commuters at work). That is to say, the percentage of commuter workers who are at work at regular hours is around 20% higher than the corresponding percentage of teleworkers, while in the evening and early night, the percentage of teleworkers at work is around 3% higher than the percentage of commuters at work. From Midnight to 5am differences are negligible.

Figure 4 shows difference between commuters and teleworkers in the timing of non-market work and leisure (results of estimating Equation (2) are available upon request). We observe that a higher proportion of male teleworkers are involved in non-market work activities in the periods 8am-11am and 1pm-5pm, and in the period 8am-6pm for female teleworkers, in comparison to their commuter counterparts. On the contrary, a lower proportion of teleworkers are involved in non-market work at around 5am and 6pm. In the case of leisure, we find that a higher proportion of teleworkers are involved in leisure activities in the period 7am-5pm.

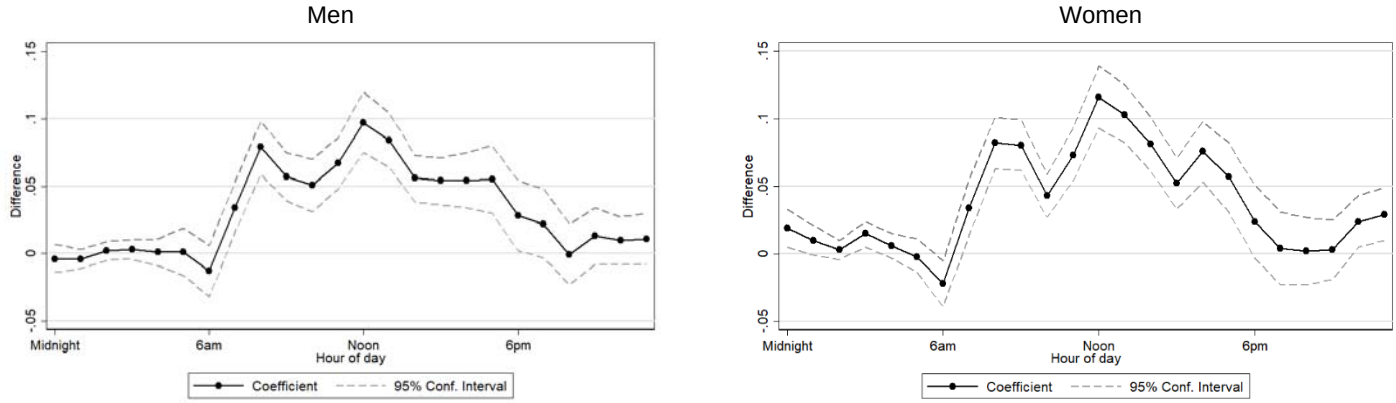
[4]Estimated parameters are shown in TablesA2 and A3 in the Appendix.

Figure 4. Estimate differences doing leisure and non-paid work between male and female teleworkers and commuters, by period of time

Panel A. Non-market work



Panel B. Leisure



Panel B.

Note: The sample (ATUS 2003-2015) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting). The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work. We estimate the following Ordinary Least Squares: $Y_{ij}=\alpha+\beta X_i+\varepsilon_{ij}$, where Y_{ij} represents a dummy variable indicating whether the worker "i" is doing a leisure (Panel A) or non-paid work (Panel B) (1) or not (0) in time band "j" (j = "Midnight", …, 11pm). The vector X_i includes socio-demographic characteristics of workers, which are the following: being a teleworker, age, age squared, secondary ed., University ed., being white, being American, live in couple, couple labor status, n. of children, family size, full-time worker, scheduled work hours, log-hourly earnings, metropolitan, and State, industry and occupation F.E. Coefficients shown in Figure 4 are the estimated coefficient and 95% Confidence Interval of the variable "being a teleworker". Results for the variables X_i are available upon author request.

Discussion of results

One of the hypothesized benefits of telework is that of a better balance of work and household responsibilities. In the same way that self-employment allows parents to have a greater flexibility in their work schedules in comparison to employees (Gimenez-Nadal, Molina and Ortega, 2012), telework may also allow workers to have more flexibility in their working hours, improving their work-life balance. After analyzing the time and the timing of market work, non-market work and leisure, we find that teleworkers work fewer hours and spend more time in non-market and leisure activities during their working days, and that they spend more time in non-market work and

leisure activities during standard work hours and leave market work responsibilities to non-standard work hours. This evidence is consistent with the hypothesis that teleworking allows for a better work-life balance, as market work responsibilities may be postponed to non-standard work hours in favor of household responsibilities.

One of the reasons why people choose teleworking can be the presence of children in the household. If parents must be available when children are at the school, wake up and go to bed, and do their extracurricular activities, this is at central hours of the day. Instead of being working, they can be doing non-market work (e.g., childcare) or leisure (e.g., going to children's events) activities. The fact that teleworkers spend more time in non-market work and leisure activities during standard work hours and leave market work responsibilities to non-standard work hours would be consistent with this idea.

Another possibility of telework is that it may allow parents to take care of their children (e.g., supervision of children in activities such as study, or internet surfing) while they are working. In order to analyze this idea, we exploit the information included in the ATUS through 2 variables. The first variable refers to the "who else is present" question, and allows to know who else was present while doing the activity. We can identify whether children are present while their parents are working. The second question refers to the "in care of child <13", which allows to identify whether the parent reported to be in care of any child under 13 at the time of the activity. We compute the total market work time reported as with child, or in care of any child under 13. Given that non-parents do not need to take care of children, we restrict the analysis to teleworkers and commuters with at least one child under 13.

If we compare the time devoted to market work and with a child present, we find that male and female teleworkers spend 14.27 and 12.01 minutes of market work time with the presence of at least one child, while male and female commuters devote 2.41 and 3.06 minutes per working day. The differences between teleworkers and commuters are statistically significant at the 99% confidence level. If we now compare the time devoted to market work where parents report to be in care of at least one child under 13, we find that whereas male and female teleworkers spend 49.12 and 62.44 minutes of market work time in care of children, male and female commuters spend 3.56 and 8.35, with the differences between teleworkers and commuters being also statistically significant. Thus, we find that teleworkers spend more time with their children while working in comparison to their commuter counterparts. This evidence is again

consistent with the idea that teleworking allows a better work-life balance, especially for parents.

Despite we cannot disentangle other channels, such as the loss of control over teleworkers' work process, which may lead teleworkers to shirking in their job tasks, the evidence presented so far points toward teleworking allowing workers to have a better balance of their work and household responsibilities. The difference between commuters and teleworkers cannot be explained by socio-demographic or job characteristics, and thus the unobserved heterogeneity of workers (e.g., preferences) play a determinant role in such differences.

4. Telework and well-being at job tasks

We analyze the well-being of workers in their job tasks, comparing teleworkers and commuters. Oswald, Proto and Sgroi (2015) provides evidence on the causal link between well-being and performance, showing that happier workers may be more productive. Thus, differences in happiness of commuters and teleworkers experienced at work would point, *ceteris paribus*, to differences in productivity.

The ATUS conducted a *Well-being Module* during the years 2010,2012 and 2013, aimed at measuring the instantaneous well-being experienced by individuals throughout the diary day (e.g., hedonic happiness) using the *Day Reconstruction Method* (Kahneman et al., 2004; Kahneman and Krueger, 2006).[5] Respondents fill out their diaries, and on the post-diary day individuals provided information about their feelings while doing three randomly chosen activities among all the episodes of the diary day. These feelings are measured in five items: pain, happiness, sadness, fatigue, and stress, that take values on a 7-point scale, from 0 ("did not experience the feeling at all") to 6 ("feeling was extremely strong"). Furthermore, respondents were asked in 2012 and 2013 about their subjective well-being ("*how respondents personally feel about where they stand at present in regards to the best/worst possible life for them*"), and a "life satisfaction ladder" is defined, taking values 0 ("worst possible life) to 10 ("best possible life"). It is important to consider differences in subjective life satisfaction of individuals, since the instantaneous well-being while working may depend on the

[5]There are other methodologies to link activities and feelings, e.g., the *Activity Enjoyment Ratings* (Juster and Stafford, 1985), the *Experience Sampling Method*, or the *Yesterday Day* (Szalai, 1972). See Sevilla, Gimenez-Nadal and Gershuny (2012) for a review.

overall life satisfaction, and otherwise results could be biased. We select the years 2012 and 2013 in order to analyze differences in instantaneous well-being net of differences in subjective well-being.

For consistency with the previous analyses, we restrict the sample to employee workers who spend at least 60 minutes working throughout the day, excluding commuting, and eliminate self-employed workers. We consider whether workers are teleworker or commuters, depending on whether they did any commuting during their working day or not. Furthermore, we restrict the sample to market work activities (excluding commuting) in which information about the five subjective happiness scales is available, in order to analyze instantaneous well-being during market work activities. These restrictions leave us with 2,905 episodes of market work, corresponding to 2,493 individuals.

We define two well-being variables from the five items measuring instantaneous well-being, following Kahneman and Krueger (2006). First, we define the "net affect" of individual i during activity j, A_{ij}, as the average score of the positive feelings of individual i associated to activity j, minus the average score of the respective negative feelings. In our particular case with only one positive feeling (happiness), $A_{ij}$is defined as the score of the happiness scale, h_{ij}, minus the average score of the pain, p_{ij}, sadness, s_{ij}, fatigue, f_{ij}, and stress, st_{ij}, scales:

$$A_{ij} = h_{ij} - \left(p_{ij} + s_{ij} + f_{ij} + st_{ij}\right)/4. \quad (1)$$

The net effect is a cardinal measure that takes any value from -6 to 6, and represents the utility derived from a given experience under the assumption that utility is time-separable (Kahneman et al., 2004). This variable depends on the scale of measurement, and on the interpretation of respondents of that scale.

The second variable defined from the five items is the "u-index", (also called "misery index"), U_{ij}, defined for each individual i and activity j as 1 if the maximum score of the negative feelings (pain, sadness, fatigue, and stress) strictly exceeds the score of the happiness scale, and 0 otherwise:

$$U_{ij} = \begin{cases} 1 \ \ if \ \ \max\left(p_{ij}, s_{ij}, f_{ij}, st_{ij}\right) > h_{ij} \\ \\ 0 \ \ otherwise \end{cases} \quad (2)$$

That way, the u-Index is a dummy variable that measures whether the proportion of time spent by individual *i* in a given activity *j* is unpleasant (1), or not (0), and thus it is a measure of "unhappiness". It avoids the problem of scales and then complements the information provided by the net affect, but depends on the feelings included in the questionnaire. We will analyze both the net effect and the u-index.

Table 1 (Panel B) shows summary statistics of the instantaneous well-being of workers during market work activities. In terms of the net affect and the u-index, it can be observed an average net affect of 2.69 among male teleworkers, and an u-index of 0.28, vs 2.41 and 0.30 for male commuters. Differences are significant only at the 90% in the case of the net affect, revealing only slightly descriptive differences in the instantaneous well-being experienced while at work between male commuters and teleworkers. For females, commuters are in general happier than teleworkers while performing market work activities, with a net affect of 2.44 and a u-index of 0.32, vs 1.94 and 0.40 for female teleworkers, respectively. The average life satisfaction ladder is of 7.05 and 7.16 over 10 points for male commuters and teleworkers, respectively, indicating that male teleworkers are more satisfied (with the difference being significant at standard levels) with their overall life than their commuter counterparts. On the other hand, there are non-significant differences between female commuters (7.13 over 10) and female teleworkers (7.11 over 10). Nonetheless, these are only descriptive evidence, and we need to control for observed personal characteristics in we want to capture differences between teleworkers and commuters net of personal heterogeneity.

Empirical strategy and results

For a given individual *i* and market work episode *j*, we estimate the following OLS model:

$$Y_{ij} = \beta_0 + \beta_1 T_i + \beta_2 X_i + \beta_S S_{ij} + \alpha + \varepsilon_{ij}. \quad (2)$$

where Y_{ij} represents the net effect/u-index, T_i is the dummy that identifies teleworkers, X_{ij} the vector of socio-demographic characteristics of the individual "i",S_j is a vector of episode-level controls, and ε_{ij} represents the error term. X_i includes the same variables than in Equation (1), plus the life satisfaction ladder. S_{ij} includes the presence of other people while doing the activity (Kahneman et al., 2004; Kahneman and Krueger, 2006), the length of the activity, and the period of day in which the work activity is performed

(Kahneman and Krueger, 2006), dividing the day in six periods, morning (from 8am to Noon), afternoon (from Noon to 4pm), evening (from 4pm to 8pm), evening-night (from 8pm to Midnight), night (from Midnight to 4am), and finally the period between 4am and 8am, which is taken as the reference period. We use the weights provided by the ATUS to avoid biases arising from the choice of activities selected for the *Instantaneous well-being* module.

Table 4. Estimates on the net affect and u-Index

	NET AFFECT				U-INDEX			
	Baseline		Plus interactions		Baseline		Plus interactions	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	Males	Females	Males	Females	Males	Females	Males	Females
Being a teleworker	0.497***	-0.217	0.638**	-0.026	-0.109**	0.00693	-0.130*	-0.103
	(0.173)	(0.262)	(0.306)	(0.476)	(0.0438)	(0.0575)	(0.077)	(0.121)
Age	0.00150	-0.103**	0.003	-0.102**	0.000990	0.0123	0.001	0.0117
	(0.0438)	(0.0463)	(0.043)	(0.046)	(0.00958)	(0.00996)	(0.009)	(0.010)
Age squared	-7.40e-05	0.148***	-0.002	0.147***	-0.00362	-0.0204*	-0.003	-0.019*
	(0.0514)	(0.0544)	(0.051)	(0.054)	(0.0112)	(0.0116)	(0.011)	(0.011)
Secondary ed.	0.564*	0.543	0.560*	0.537	-0.133**	-0.103	-0.133**	-0.099
	(0.292)	(0.458)	(0.292)	(0.460)	(0.0623)	(0.0794)	(0.061)	(0.079)
University ed.	0.126	0.251	0.140	0.244	-0.0345	-0.0294	-0.035	-0.027
	(0.282)	(0.455)	(0.282)	(0.456)	(0.0624)	(0.0823)	(0.061)	(0.082)
Being white	-0.343**	0.410*	-0.324*	0.412*	0.0683	-0.0615	0.065	-0.061
	(0.174)	(0.210)	(0.175)	(0.211)	(0.0417)	(0.0447)	(0.041)	(0.044)
Being American	-0.301	0.228	-0.300	0.230	0.0478	0.0378	0.047	0.035
	(0.199)	(0.244)	(0.198)	(0.244)	(0.0445)	(0.0510)	(0.044)	(0.051)
Live in couple	-0.110	-0.288	-0.112	-0.293	0.0240	0.0709	0.025	0.071
	(0.211)	(0.280)	(0.211)	(0.280)	(0.0502)	(0.0622)	(0.050)	(0.062)
Couple labor status	-0.0486	0.148	-0.061	0.149	-0.0331	-0.0154	-0.032	-0.015
	(0.180)	(0.274)	(0.180)	(0.273)	(0.0394)	(0.0608)	(0.039)	(0.060)
N. of children	0.0396	0.131	0.026	0.130	-0.00312	-0.0194	-0.001	-0.018
	(0.116)	(0.120)	(0.116)	(0.120)	(0.0259)	(0.0233)	(0.025)	(0.023)
Family size	-0.0665	0.0899	-0.054	0.089	0.00274	-0.0209	0.001	-0.019
	(0.0795)	(0.0844)	(0.079)	(0.084)	(0.0191)	(0.0170)	(0.019)	(0.017)
Full time worker	-0.0775	-0.0607	-0.091	-0.064	0.0318	-0.0248	0.032	-0.023
	(0.167)	(0.185)	(0.166)	(0.185)	(0.0396)	(0.0386)	(0.039)	(0.038)
Scheduled work hours	-0.000785	-0.0106*	-0.001	-0.010*	-0.000528	0.00233**	-0.001	0.002**
	(0.00431)	(0.00575)	(0.004)	(0.005)	(0.000966)	(0.00116)	(0.001)	(0.001)
Log-hourly earnings	-0.0140	0.0373	-0.013	0.038	-0.00330	-0.00929	-0.003	-0.009
	(0.0444)	(0.0595)	(0.044)	(0.059)	(0.0116)	(0.0126)	(0.011)	(0.012)
Metropolitan status	0.457**	0.0874	0.476***	0.093	-0.0769*	-0.0472	-0.080*	-0.048
	(0.183)	(0.213)	(0.184)	(0.213)	(0.0415)	(0.0500)	(0.041)	(0.049)
Period of day:								
Morning	0.0783	-0.0676	0.087	-0.030	-0.0842**	-0.0984**	-0.085**	-0.111**
	(0.170)	(0.202)	(0.184)	(0.213)	(0.0391)	(0.0441)	(0.041)	(0.046)
Afternoon	-0.196	-0.436**	-0.133	-0.415*	-0.0426	-0.0260	-0.051	-0.042
	(0.158)	(0.206)	(0.169)	(0.216)	(0.0394)	(0.0465)	(0.041)	(0.048)
Evening	-0.433*	-1.105***	-0.512*	-1.130***	0.0721	0.0594	0.098	0.064
	(0.252)	(0.361)	(0.273)	(0.408)	(0.0722)	(0.0774)	(0.077)	(0.088)
Evening-night	-0.408	-1.922**	-0.452	-1.960**	0.0488	0.142	0.031	0.128
	(0.354)	(0.757)	(0.402)	(0.826)	(0.0800)	(0.122)	(0.090)	(0.133)
Night	-0.283	-2.965*	-0.288	-3.74**	0.188	0.549*	0.132	0.855***
	(0.472)	(1.691)	(0.514)	(1.826)	(0.158)	(0.332)	(0.178)	(0.125)
Teleworker*Period:								
Morning	-	-	-0.064	-0.443	-	-	0.011	0.137
			(0.469)	(0.645)			(0.105)	(0.156)
Afternoon	-	-	-0.576	-0.248	-	-	0.085	0.205

			(0.397)	(0.667)			(0.114)	(0.152)
Evening	-	-	0.672	0.048	-	-	-0.222	0.033
			(0.561)	(0.778)			(0.147)	(0.170)
Evening-night	-	-	0.210	0.370	-	-	0.081	0.167
			(0.743)	(1.200)			(0.175)	(0.209)
Night	-	-	0.032	3.061	-	-	0.349	-1.180***
			(1.219)	(1.952)			(0.290)	(0.218)
With:								
Spouse or partner	0.0320	-0.961*	0.004	-0.967*	0.0984	0.164	0.112	0.175
	(0.477)	(0.565)	(0.475)	(0.571)	(0.108)	(0.153)	(0.109)	(0.154)
Children	-0.0464	-1.068*	-0.062	-1.110*	0.172	0.0723	0.173	0.074
	(0.352)	(0.584)	(0.350)	(0.621)	(0.196)	(0.137)	(0.194)	(0.148)
Other relatives	-0.690	0.0424	-0.637	0.084	0.0506	0.232	0.044	0.229
	(0.872)	(0.992)	(0.891)	(0.972)	(0.145)	(0.193)	(0.147)	(0.195)
Friends or mates	1.021**	0.551	1.029**	0.559	-0.410***	0.165	-0.405***	0.172
	(0.404)	(0.418)	(0.404)	(0.423)	(0.0901)	(0.218)	(0.091)	(0.221)
Coworkers	0.248	-0.0243	0.248	-0.023	-0.0723*	-0.0242	-0.073*	-0.023
	(0.156)	(0.192)	(0.156)	(0.194)	(0.0373)	(0.0477)	(0.037)	(0.047)
Other people	0.124	0.474	0.143	0.488	-0.0337	-0.0617	-0.039	-0.068
	(0.671)	(0.377)	(0.684)	(0.380)	(0.155)	(0.0846)	(0.156)	(0.084)
Duration of episode	-0.001***	-0.002***	-0.001***	-0.002***	0.000*	0.000***	0.000*	0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Life satisfaction ladder	0.442***	0.382***	0.443***	0.382***	-0.064***	-0.067***	-0.065***	-0.067***
	(0.036)	(0.043)	(0.036)	(0.043)	(0.008)	(0.009)	(0.008)	(0.009)
Constant	-0.917	-1.490	-1.055	-1.550	0.681**	1.210***	0.709**	1.233***
	(1.250)	(1.324)	(1.253)	(1.340)	(0.290)	(0.426)	(0.289)	(0.425)
State F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,621	1,284	1,621	1,284	1,621	1,284	1,621	1,284
R-squared	0.286	0.267	0.289	0.268	0.204	0.231	0.207	0.234

Note: Robust standard errors in parentheses. The sample (ATUS*Well-being Module*2012-2013 at diary level) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting) and to episodes of paid work (excluding commuting). The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work.Net affect takes any value from -6 to 6.The u-Index takes values 0 or 1. Life satisfaction ladder indicates how respondents personally feel about where they stand in the present with regard to the best/worst possible life for them, and takes values from 0 ("worst possible life") to 10 ("best possible life"). Work episodes are measured in minutes. Age is measured in years. Age squared is defined as age^2/100.Scheduled work hours is measured in hours per week. Hourly earnings are measured in real $ per hour of work. Reference category for education variables: Primary education. Periods of day are defined as follows: Morning (8am to Noon), Afternoon (Noon to 4pm), Evening (4pm to 8pm), Evening-night (8pm to Midnight), Night (Midnight to 4am). Reference for periods of day: 4am to 8am. Industry F.E. include the following categories: Mining; Construction; Manufacturing; Wholesale and retail trade; Transportation and utilities; Information; Financial activities; Professional and business services; Educational and health services; Leisure and hospitality; Other services; Public administration (ref: Agriculture, forestry, fishing, and hunting). Occupation F.E. include the following categories: Professional and related; Service; Sales and related; Office and administrative support; Farming, fishing, and forestry; Construction and extraction; Installation, maintenance, and repair; Production; Transportation and materials moving (ref: Management, business, and financial).
* Significance at the 90%. ** Significance at the 95%. *** Significance at the 99%.

Columns (1) and (2) of Table 4 show estimates on the net affect in the case of males and females, respectively. We find that male teleworkers report, on average, net effect values 0.50 points higher than similar commuter counterparts while at work. That is to say, work episodes are more satisfactory for male teleworkers than for male commuters, net of individual heterogeneity.[6]In the case of females, the differences are non-significant. In Columns (3) and (4), we analyze whether differences in instantaneous well-being depend on the preference for working at different times, given that teleworkers spend less time in market work activities in central hours of the day and

[6] Table A4 in the Appendix shows estimates of the individual scales of instant subjective well-being. Individual feeling estimates indicate that subjective well-being differences are mainly driven by lower levels of stress, tiredness, and pain among male teleworkers.

more in the fringe. To that, we include the interactions between being a teleworker and the five periods of the day. We find that results are robust to the inclusion of these interactions, which are not significantly related to workers' happiness. Thus, we can conclude that happiness differences between male commuters and teleworkers do not arise from working at different periods of the day. Rather, the general differences in the net affect of male commuters and teleworkers are not due to specific differences within concrete periods of the day, but to the general fact of being a teleworker, and also to unobserved factors.

Regarding the u-index (Columns (5) and (6) for males and females, respectively), we find a 11-percentage-point higher probability of being in an unpleasant state for male commuters, in comparison to their commuter counterparts. Results are consistent with those of the net affect. In the case of females, Column (6) again reveals non-significant differences between teleworkers and commuters. If we consider potential u-index differences between commuters and teleworkers according to differences within concrete periods of time (Columns (7) and (8)), we can conclude again that happiness differences between male commuters and teleworkers do not arise from working at different periods of the day.

It is important to note that, for both males and females, ages, education, race and family attributes have a non-significant effect with the net affect and the u-index, although the subjective well-being of workers is positively related with the instantaneous well-being experienced while at work, highlighting the importance of including this explanatory variable among our controls. The duration of the work episodes is negatively related to the well-being experienced, i.e., workers prefer to work shorter hours until taking a rest. Wage rates are not related to the happiness experienced while working, what indicates that the instantaneous well-being that individuals experience while at work does not depend on the monetary outcome of this activity. And more importantly, despite we find that teleworkers work less during the day, differences in instantaneous well-being are net of differences in full-/part-time status and scheduled weekly work hours, which indicates that differences in instantaneous well-being between male teleworkers and commuters are not due to differences in market work hours. This difference is neither explained by differences in the type of work, given that differences are net of industry and occupation fixed effects.

In summary, we find that male teleworkers are better off than commuters if terms of the instantaneous well-being they obtain while working. To the extent that happiness and productivity are related (Oswald, Proto and Sgroi, 2015), one could think that male teleworkers are more productive at work, offsetting part of the lower market work time in comparison to male commuters. Evidence on this hypothesis is needed.

5. Conclusions

In this paper, we first analyze how male and female teleworkers, defined as employees who do not spend any time commuting to/from work, spend their time in market work, non-market work, and leisure activities,in contrast to workers who commute to a workplace. Our results indicate that teleworkers work less, and do more non-market work time and have more leisure than commuters during their working days, and specifically during the central hours of the day. Scheduled work hours, full-time employment rates, job characteristics, and wages do not explain these differences neither for males, nor for females, which sheds light on the relationship between teleworking and a better work-life balance. Alternative explanations for these results, such as the loss control over teleworkers' work process are also possible (e.g., shirking), although we cannot elaborate more on this explanation. We hypothesize that telework helps workers to balance work and non-market work activities, in the same way that self-employment may help mothers to improve their work-life balance (Gimenez-Nadal, Molina and Ortega, 2012).Second, we analyze whether teleworkers are happier at work than their commuter counterparts, and we show this is the case of male teleworkers but not for female workers.

These results may have several implications. First, male teleworkers are happier than male commuters, despite the former work fewer hours, which may offset the observed difference in market work time. In the case of female teleworkers, they work less and have a different timing of market work than female commuters, but such differences cannot be offset by differences in productivity. Indeed, the fact that there are no differences between female teleworkers and commuters may indicate that despite the have a greater flexibility with market work hours and schedules, they still have problems to balance work and household responsibilities, which makes the differential in market work time not to be translated in more instantaneous well-being. Employers

should take into account the evidence presented here, and more research on all these issues is needed.

The analysis has certain limitations. First, the definition of teleworking is not standard in the literature. The ATUS does not directly characterize teleworkers but, given that this data is based on diaries, we can identify teleworkers as those individuals who report having worked the diary day, but do not report having commuted to a workplace. We also omit outliers in order to eliminate biases arising from strange or unusual working days, and thus mitigate the role of selection bias. Second, the ATUS constitutes a cross-sectional database, and so we cannot provide results in terms of causality, and results are based on conditional correlations. We also acknowledge the role of unobserved heterogeneity. For instance, even when controlling for intra-period differences and comparing teleworkers with similar commuters in terms of socio-demographical factors, it may be that male teleworkers are happier while working due to unobserved factors, and thus it is these unobserved factors that make them more productive.

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Appendix

Table A1. Estimates on the daily minutes of leisure, and non-paid work; Additional results

	Leisure time		Non-paid work time	
	(1)	(2)	(3)	(4)
VARIABLES	Male	Female	Male	Female
Being a teleworker	32.48***	34.97***	23.61***	37.96***
	(2.527)	(2.758)	(2.536)	(3.084)
Age	-2.701***	-1.665***	1.586***	2.180***
	(0.539)	(0.499)	(0.423)	(0.546)
Age squared	2.626***	1.840***	-1.957***	-2.270***
	(0.617)	(0.580)	(0.496)	(0.645)
Secondary ed.	1.632	2.467	11.05***	0.166
	(3.194)	(3.204)	(2.667)	(4.449)
University ed.	5.818*	0.802	18.22***	0.360
	(3.255)	(3.199)	(2.701)	(4.455)
Being white	-0.852	5.606***	4.310**	7.590***
	(2.541)	(1.785)	(1.863)	(2.206)
Being American	6.057***	3.609*	-2.346	-19.22***
	(2.172)	(2.121)	(1.876)	(2.648)
Live in couple	1.265	8.445***	10.74***	24.72***
	(2.429)	(2.698)	(2.208)	(3.256)
Couple labor status	-3.890**	-6.439**	5.313***	9.903***
	(1.697)	(2.528)	(1.814)	(3.102)
N. of children	-6.243***	-5.156***	16.51***	28.19***
	(1.598)	(1.270)	(1.093)	(1.470)
Family size	3.962***	1.537	-4.707***	-4.110***
	(1.366)	(1.003)	(0.829)	(1.164)
Full time worker	-4.677**	-3.862**	-0.102	-11.79***
	(2.223)	(1.618)	(1.932)	(1.938)
Scheduled work hours	-0.325***	-0.360***	-0.378***	-0.744***
	(0.0557)	(0.0621)	(0.0553)	(0.0750)
Log-hourly earnings	-1.057*	-0.130	-0.421	-1.246*
	(0.640)	(0.521)	(0.531)	(0.642)
Metropolitan status	-4.792**	-1.019	1.993	0.726
	(2.218)	(1.953)	(1.916)	(2.402)
Constant	168.8***	97.37***	104.6***	174.0***
	(16.21)	(15.58)	(12.37)	(20.31)
State F.E.	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes
Occupation F.E.	Yes	Yes	Yes	Yes
Observations	22,083	21,291	22,083	21,291
R-squared	0.040	0.036	0.076	0.150

Note: Robust standard errors in parentheses. The sample (ATUS 2003-2015) has been restricted to employees who devote at least 60 minutes to work activities during the diary day (excluding commuting).The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work. The dependent variable is the daily minutes devoted to leisure (Columns (1) and (2)), or to non-paid work (excluding commuting) (Columns (3) and (4)). Age is measured in years. Age squared is defined as $age^2/100$.Scheduled work hours are measured in hours per week. Hourly earnings are measured in real $ per hour of work. Reference category for education variables: Primary education. Industry F.E. include the following categories: Mining; Construction; Manufacturing; Wholesale and retail trade; Transportation and utilities; Information; Financial activities; Professional and business services; Educational and health services; Leisure and hospitality; Other services; Public administration (ref: Agriculture, forestry, fishing, and hunting). Occupation F.E. include the following categories: Professional and related; Service; Sales and related; Office and administrative support; Farming, fishing, and forestry; Construction and extraction; Installation, maintenance, and repair; Production; Transportation and materials moving (ref: Management, business, and financial).

* Significance at the 90%. ** Significance at the 95%. *** Significance at the 99%.

Table A2. Conditional correlations between being a teleworker and doing work activity among males, by time band

VARIABLES	**0-1 am (Midnight)**	**1-2 am**	**2-3 am**	**3-4 am**	**4-5 am**	**5-6 am**	**6-7 am (6am)**	**7-8 am**	**8-9 am**	**9-10 am**	**10-11 am**	**11-12 am**
Being a teleworker	0.0204***	0.0114*	0.00873	0.00768	0.0211***	-0.0148	-0.0696***	-0.148***	-0.190***	-0.200***	-0.208***	-0.205***
	(0.00708)	(0.00621)	(0.00601)	(0.00608)	(0.00793)	(0.00950)	(0.0116)	(0.0125)	(0.0120)	(0.0121)	(0.0120)	(0.0120)
Observations	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083

VARIABLES	**12-1 pm (Noon)**	**1-2 pm**	**2-3 pm**	**3-4 pm**	**4-5 pm**	**5-6 pm**	**6-7 pm (6pm)**	**7-8 pm**	**8-9 pm**	**9-10 pm**	**10-11 pm**	**11-12 pm**
Being a teleworker	-0.187***	-0.199***	-0.205***	-0.200***	-0.145***	-0.0619***	0.00139	0.0349***	0.0386***	0.0403***	0.0280***	0.0346***
	(0.0127)	(0.0124)	(0.0124)	(0.0129)	(0.0131)	(0.0125)	(0.0111)	(0.0107)	(0.00987)	(0.00970)	(0.00862)	(0.00900)
Observations	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083	22,083

Note: Robust standard errors in parentheses. The sample (ATUS 2003-2015) has been restricted to male employees who devote at least 60 minutes to work activities during the diary day (excluding commuting). The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work. We estimate the following Ordinary Least Squares: $W_{ij}=\alpha+\beta X_i+\varepsilon_{ij}$, where W_{ij} represents a dummy variable indicating whether the worker "i" is doing a market work activity (1) or not (0) in time band "j" (j = "Midnight", …, 11pm). The vector X_i includes socio-demographics characteristics of workers, which are the following: being a teleworker, being male, age, age squared, secondary ed., University ed., being white, being American, live in couple, couple labor status, n. of children, family size, full-time worker, scheduled work hours, log-hourly earnings, metropolitan, and State, industry and occupation F.E. Results for the variables X_i are available upon author request.* Significance at the 90%. ** Significance at the 95%. *** Significance at the 99%.

Table A3. Conditional correlations between being a teleworker and doing work activity among females, by time band

VARIABLES	**0-1 am (Midnight)**	**1-2 am**	**2-3 am**	**3-4 am**	**4-5 am**	**5-6 am**	**6-7 am (6am)**	**7-8 am**	**8-9 am**	**9-10 am**	**10-11 am**	**11-12 am**
Being a teleworker	0.00612	-0.00307	-0.00452	-0.00520	0.0306***	0.0160*	-0.00654	-0.113***	-0.217***	-0.231***	-0.230***	-0.241***
	(0.00549)	(0.00407)	(0.00387)	(0.00408)	(0.00727)	(0.00847)	(0.0107)	(0.0130)	(0.0132)	(0.0129)	(0.0130)	(0.0130)
Observations	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291

VARIABLES	**12-1 pm (Noon)**	**1-2 pm**	**2-3 pm**	**3-4 pm**	**4-5 pm**	**5-6 pm**	**6-7 pm (6pm)**	**7-8 pm**	**8-9 pm**	**9-10 pm**	**10-11 pm**	**11-12 pm**
Being a teleworker	-0.215***	-0.222***	-0.216***	-0.206***	-0.163***	-0.0716***	0.00780	0.0330***	0.0478***	0.0516***	0.0331***	0.0369***
	(0.0134)	(0.0133)	(0.0133)	(0.0134)	(0.0135)	(0.0125)	(0.0114)	(0.0106)	(0.00980)	(0.00992)	(0.00840)	(0.00879)
Observations	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291	21,291

Note: Robust standard errors in parentheses. The sample (ATUS 2003-2015) has been restricted to female employees who devote at least 60 minutes to work activities during the diary day (excluding commuting). The self-employed are not included in the sample. Teleworkers are defined as those workers who do not commute to/from work. We estimate the following Ordinary Least Squares: $W_{ij}=\alpha+\beta X_i+\varepsilon_{ij}$, where W_{ij} represents a dummy variable indicating whether the worker "i" is doing a market work activity (1) or not (0) in time band "j" (j = "Midnight", …, 11pm). The vector X_i includes socio-demographics characteristics of workers, which are the following: being a teleworker, being male, age, age squared, secondary ed., University ed., being white, being American, live in couple, couple labor status, n. of children, family size, full-time worker, scheduled work hours, log-hourly earnings, metropolitan, and State, industry and occupation F.E. Results for the variables X_i are available upon author request.* Significance at the 90%. ** Significance at the 95%. *** Significance at the 99%.

Table A4. Estimates on individual feelings

	Happiness		Pain		Sadness		Stress		Tiredness	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
VARIABLES	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Being a teleworker	0.204	-0.0365	-0.282**	0.0883	-0.157	-0.0310	-0.376**	0.375	-0.357**	0.288
	(0.140)	(0.187)	(0.114)	(0.200)	(0.180)	(0.134)	(0.151)	(0.238)	(0.165)	(0.248)
Age	0.0234	-0.0805**	0.0246	0.0736*	0.0184	0.0126	0.0284	-0.00495	0.0162	0.00757
	(0.0331)	(0.0320)	(0.0266)	(0.0385)	(0.0260)	(0.0286)	(0.0389)	(0.0452)	(0.0331)	(0.0436)
Age squared	-0.0206	0.119***	-0.0150	-0.0754	-0.0120	-0.0121	-0.0301	-0.00347	-0.0249	-0.0241
	(0.0389)	(0.0370)	(0.0312)	(0.0465)	(0.0311)	(0.0335)	(0.0449)	(0.0531)	(0.0386)	(0.0509)
Secondary ed.	0.1000	0.416	-0.359	-0.203	-0.300	-0.347	-0.449	-0.00123	-0.748***	0.0420
	(0.216)	(0.332)	(0.220)	(0.307)	(0.195)	(0.305)	(0.320)	(0.397)	(0.274)	(0.372)
University ed.	-0.201	0.178	-0.264	-0.405	-0.246	-0.358	-0.133	0.304	-0.668**	0.164
	(0.214)	(0.331)	(0.222)	(0.303)	(0.211)	(0.295)	(0.325)	(0.398)	(0.276)	(0.368)
Being white	-0.286**	0.183	-0.0494	-0.105	-0.0268	-0.320**	0.162	-0.154	0.144	-0.329*
	(0.130)	(0.136)	(0.123)	(0.153)	(0.121)	(0.142)	(0.158)	(0.190)	(0.167)	(0.186)
Being American	-0.324**	-0.0477	0.144	-0.295*	-0.119	-0.471***	0.106	-0.275	-0.220	-0.0626
	(0.144)	(0.151)	(0.134)	(0.174)	(0.118)	(0.180)	(0.185)	(0.221)	(0.178)	(0.203)
Live in couple	-0.0188	0.0331	0.243	0.353	-0.0310	0.297	0.329	0.228	-0.175	0.408
	(0.158)	(0.175)	(0.149)	(0.225)	(0.119)	(0.194)	(0.211)	(0.254)	(0.177)	(0.262)
Couple labor status	-0.0851	-0.0928	-0.145	-0.432**	-0.0435	-0.212	-0.128	0.0376	0.171	-0.358
	(0.133)	(0.177)	(0.119)	(0.212)	(0.105)	(0.183)	(0.159)	(0.233)	(0.143)	(0.247)
N. of children	-0.0546	0.143*	-0.0399	-0.0185	-0.131	0.0598	-0.121	0.0516	-0.0850	-0.0442
	(0.0835)	(0.0820)	(0.0816)	(0.0857)	(0.0829)	(0.0773)	(0.0993)	(0.118)	(0.100)	(0.110)
Family size	0.0125	0.0181	0.0228	-0.0906	0.113	-0.155***	0.0578	-0.0412	0.122*	-0.000924
	(0.0636)	(0.0572)	(0.0572)	(0.0556)	(0.0690)	(0.0544)	(0.0770)	(0.0957)	(0.0734)	(0.0821)
Full time worker	-0.163	-0.0247	-0.310**	-0.220*	-0.0404	-0.00484	0.226	0.455***	-0.220	-0.0865
	(0.131)	(0.126)	(0.146)	(0.133)	(0.126)	(0.111)	(0.159)	(0.167)	(0.182)	(0.161)
Scheduled work hours	-0.000432	-0.00815**	-0.00377	0.00136	-0.000240	0.00209	0.000545	0.00369	0.00488	0.00258
	(0.00299)	(0.00408)	(0.00289)	(0.00426)	(0.00281)	(0.00282)	(0.00413)	(0.00534)	(0.00401)	(0.00555)
Log-hourly earnings	-0.0493	0.0588	0.00282	0.00932	-0.0602*	0.0771**	-0.0585	-0.00585	-0.0254	0.00533
	(0.0354)	(0.0392)	(0.0338)	(0.0425)	(0.0308)	(0.0378)	(0.0420)	(0.0523)	(0.0452)	(0.0498)
Metropolitan status	0.355**	0.124	-0.0467	0.141	-0.106	0.0996	-0.0554	-0.0294	-0.203	-0.0633
	(0.139)	(0.150)	(0.134)	(0.171)	(0.109)	(0.142)	(0.166)	(0.200)	(0.165)	(0.193)
Period of day:										
Morning	0.143	-0.0202	-0.0901	0.178	0.0849	0.126	0.216	-0.1000	0.0497	-0.0145
	(0.126)	(0.134)	(0.124)	(0.144)	(0.104)	(0.126)	(0.161)	(0.180)	(0.166)	(0.181)
Afternoon	-0.0309	-0.261*	-0.0962	0.123	0.0869	0.119	0.403***	0.0941	0.265*	0.365**
	(0.120)	(0.143)	(0.112)	(0.146)	(0.108)	(0.126)	(0.154)	(0.180)	(0.140)	(0.183)
Evening	-0.284	-0.755***	-0.199	0.422	0.0393	0.140	0.440	0.0844	0.315	0.753**
	(0.183)	(0.235)	(0.211)	(0.290)	(0.154)	(0.264)	(0.291)	(0.375)	(0.255)	(0.294)
Evening-night	-0.0851	-1.480***	-0.106	0.724*	0.103	-0.352*	0.593	0.214	0.702**	1.180***
	(0.307)	(0.501)	(0.272)	(0.431)	(0.216)	(0.191)	(0.397)	(0.524)	(0.274)	(0.347)
Night	-0.236	-1.539	-0.592**	1.533**	-0.165	0.469	0.253	0.727	0.692	2.976***
	(0.372)	(1.151)	(0.255)	(0.747)	(0.230)	(0.817)	(0.479)	(0.670)	(0.968)	(0.664)
With who										
Spouse or partner	-0.0785	-0.445	-0.184	0.253	0.231	0.378	-0.470	0.560	-0.0194	0.875
	(0.334)	(0.405)	(0.252)	(0.463)	(0.263)	(0.371)	(0.412)	(0.406)	(0.523)	(0.610)
Children	0.0533	-0.161	-0.115	0.951	0.419	0.993***	0.140	0.723	-0.0452	0.962
	(0.360)	(0.249)	(0.639)	(0.627)	(0.255)	(0.351)	(0.962)	(0.746)	(0.529)	(0.831)
Other relatives	-0.169	-0.259	-0.0490	-0.746***	0.837	-0.161	0.633	0.618	0.666	-0.918
	(0.405)	(0.885)	(0.571)	(0.266)	(0.624)	(0.557)	(0.596)	(0.765)	(0.565)	(0.626)
Friends or mates	0.654*	0.388	-0.374	0.441	-0.264	0.0569	-0.515	-0.240	-0.317	-0.914

	(0.350)	(0.473)	(0.408)	(0.710)	(0.422)	(0.295)	(0.608)	(0.551)	(0.550)	(0.735)
Coworkers	0.229*	0.168	-0.137	0.240*	0.00600	0.167	0.0411	0.0520	0.0126	0.310*
	(0.118)	(0.138)	(0.113)	(0.140)	(0.103)	(0.107)	(0.143)	(0.189)	(0.139)	(0.171)
Other people	0.0505	0.511*	-0.322	0.394	-0.258	-0.180	0.00169	-0.110	0.283	0.0444
	(0.478)	(0.299)	(0.375)	(0.309)	(0.319)	(0.178)	(0.510)	(0.368)	(0.431)	(0.386)
Duration of period	-0.000585*	-0.00110***	0.000285	-4.18e-06	0.000375	-8.93e-05	0.00164***	0.00186***	0.000497	0.000807*
	(0.000343)	(0.000353)	(0.000309)	(0.000351)	(0.000286)	(0.000322)	(0.000405)	(0.000480)	(0.000364)	(0.000446)
Life satisfaction ladder	0.239***	0.221***	-0.183***	-0.0930***	-0.163***	-0.148***	-0.251***	-0.222***	-0.214***	-0.183***
	(0.0288)	(0.0284)	(0.0284)	(0.0346)	(0.0269)	(0.0275)	(0.0343)	(0.0410)	(0.0313)	(0.0408)
Constant	2.480**	2.403***	2.835***	1.127	2.203***	3.345***	3.746***	5.431***	4.805***	5.669***
	(0.969)	(0.874)	(0.834)	(0.982)	(0.708)	(0.886)	(1.135)	(1.373)	(0.981)	(1.340)
State F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Occupation F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry F.E.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,621	1,284	1,621	1,284	1,621	1,284	1,621	1,284	1,621	1,284

Note: Robust standard errors in parentheses. The sample (ATUS*Well-being Module*2012-2013 at diary level) has been restricted to episodes of paid work for employees who devote at least 60 minutes to work activities during the diary day (excluding commuting) and to episodes of paid work (excluding commuting).The self-employed are not included in the sample. Happiness, Sadness, Stress, Pain and Tiredness measure how much happiness/sadness/stress/pain/tiredness respondents felt during the correspondent activity, and take values from 0 ("not at all") to 6 ("very").Life satisfaction ladder indicates "how respondents personally feel about where they stand in the present with regard to the best/worst possible life for them", and takes values from 0 ("worst possible life") to 10 ("best possible life"). Work episodes are measured in minutes. Age is measured in years. Age squared is defined as $age^2/100$.Scheduled work hours are measured in hours per week. Hourly earnings are measured in real $ per hour of work. Reference category for education variables: Primary education. Industry F.E. include the following categories: Mining; Construction; Manufacturing; Wholesale and retail trade; Transportation and utilities; Information; Financial activities; Professional and business services; Educational and health services; Leisure and hospitality; Other services; Public administration (ref: Agriculture, forestry, fishing, and hunting). Occupation F.E. include the following categories: Professional and related; Service; Sales and related; Office and administrative support; Farming, fishing, and forestry; Construction and extraction; Installation, maintenance, and repair; Production; Transportation and materials moving (ref: Management, business, and financial).

* Significance at the 90%. ** Significance at the 95%. *** Significance at the 99%.