

# Appendix for “Trends in Effort at Work in the UK”

Jose Ignacio Gimenez-Nadal\*

Almudena Sevilla†

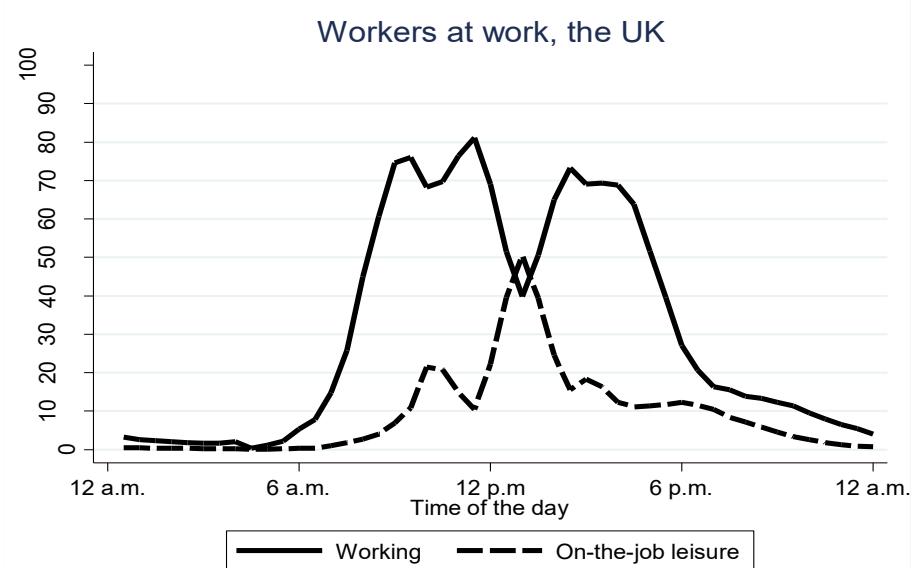
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\* University of Zaragoza (Spain): [ngimenez@unizar.es](mailto:ngimenez@unizar.es)

† The London School of Economics (The UK): [A.Sevilla@lse.ac.uk](mailto:A.Sevilla@lse.ac.uk)

## Appendix A: Data information and additional analyses

Figure 1. Frequency of on-the-job leisure



Notes: Data come from the 1983, 1987, 1995, 2000, 2005 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Time at work* measures the time from the moment a worker begins work until the time a worker stops working on a given diary day. *Time working* measures the time that the worker spends in market work activities while at work. *Consumption of on-the-job leisure* is the amount of time the respondent spends not working while at work. See Appendix Table A2 in Appendix A for a description of the activities included in the variables of on-the-job leisure. See Table A3 in Appendix A for the percentage of workers in each activity at every point in time that generates this figure.

**Table A1. Survey description**

<i>Study aims, target populations, and sample restrictions</i>			
<i>Survey years</i>	<i>Organizing Aims and Considerations</i>	<i>Target Population</i>	<i>Sampling Restrictions</i>
1983-87	Aimed to monitor time use by people aged 14+ living in randomly sampled households in the UK	People aged 14+ living in randomly sampled households in the UK.	None
1995	Aimed to facilitate future studies using time budgets which would not unduly burden respondents	Multi- purpose survey for the people in age 16 or over	None
2000	This study collects the UK contribution to the Harmonized European Time Use Studies (HETUS) data. The results of the main survey will be used by government departments, academics, and other policy makers to monitor how people use their time and help shape policies	Multi- purpose survey for the people in age 8+	The survey aimed to collect 24,000 diaries (2 diaries for each of the 12,000 individuals taking part). Each participant was asked to complete two diaries. Children aged 8 to 13 completed child diaries. Child diaries covered one day.
2005	This study builds on lessons for collecting national time use data from the UK HETUS study in 2000-2001	One person aged 16 or older was selected for the interview and the diary	None
2015	The survey follows the Harmonized European Time Use Survey (HETUS) guidelines, with a few alterations. While the HETUS guidelines recommend collecting diaries from all household members age 10 and older, this survey, like the 2000-01 first UK HETUS contribution, collects diaries from all household members aged 8 and older.	One household member will complete the household roster and questionnaire, then each individual member aged 8 and older will be asked to complete a separate personal interview, as well as two diaries (one week day, one weekend day) covering 24 hour periods from 4AM until 4AM the next day	None
<i>Relevant points in time from the sample designs</i>			
<i>Survey years</i>	<i>Fieldwork Period</i>	<i>Sampling of Days of the Week</i>	<i>When Activities Were Recorded</i>
1983-87	November-December 1983, January-February 1984; 6 March-29 June 1987	All household members aged 14+ asked to complete a 7-day diary, specifying main activity and secondary activities	On the day of observed activities
1995	May-95	All household members aged 16+ asked to complete 1 diary, specifying main activity and secondary activities	Respondents completed the diaries themselves with the assistance of interviewer. Recall
2000	June 2000 - August 2001	2 days, 1 weekend and 1 weekday	Self-completed in own words with pen and paper. Same day as activities
2005	21 March - 13 April 2005; 20 June - 16 July 2005; 19 September - 15 October 2005; 21 November - 17 December 2005	1 day	Previous day (with some diaries covering up to three days previously)
2015	April 2014-March 2015	2 diaries (one weekday, one weekend day) covering 24-hour periods from 4AM until 4AM the next day	Self-completed in own words with pen and paper. Same day as activities
<i>Sample designs and response rates</i>			
<i>Survey years</i>	<i>Sample Frame</i>	<i>How Sample Drawn</i>	<i>Response Rate</i>
1983-1987	Private households	Stratified national random sample of addresses; prior to diaries commencing, one household member interviewed with extensive household questionnaire	40%
1995	Private households	OPCS Omnibus sample frame: interview 2,000 households per month randomly selected from 100 post code sectors, stratified by region, proportion of households renting from local authorities and proportion of heads of households in	93%

		SEGs 1-5 (professionals, employers, and managers)	
2000	Private households	The sample of addresses is selected from the Postcode Address File (PAF). One household per address is randomly selected	45%
2005	Private households	An independent cross-sectional multi-stage stratified random sample of private households in Great Britain (England, Wales and Scotland) is drawn for each month of the Omnibus survey, and the diary served as the module accompanying the core of basic survey details collected with every Omnibus survey.	59% across the four waves
2015	Private households	The survey draws a random national sample of households across the United Kingdom	61% for households, 81% for individuals

*Source:* Authors' compilation.

**Table A2. Classification of on-the-job leisure activities**

<i>Commuting</i>	Travel to/from work
<i>Leisure-related activities</i>	
<i>Meals at work</i>	meals at work
<i>Meal Related activities</i>	meals or snacks in other places
<i>Social leisure</i>	voluntary, civic, organizational act; worship and religion; other public event, venue; restaurant, café, bar, pub; party, social event, gambling; receive or visit friends; voluntary/civic/religious travel
<i>Active leisure and exercise</i>	work breaks, leisure & other education or training; pet care (not walk dog); general out-of-home leisure; attend sporting event; cinema, theatre, opera, concert; general sport or exercise; walking; cycling; other outside recreation; gardening/pick mushrooms; walk dogs; general indoor leisure; art or music; knit, crafts or hobbies; no activity, imputed or recorded transport; other travel; no recorded activity
<i>Passive leisure</i>	conversation (in person, phone); games (social & solitary)/other in-home social; correspondence (not e-mail); relax, think, do nothing; read; listen to music or other audio content; listen to radio; watch TV, video, DVD; computer games; e-mail, surf internet, computing; travel to and from work
<i>Other non-work activities</i>	
<i>Personal Care</i>	imputed personal or household care; sleep and naps; imputed sleep; wash, dress, care for self; consume other services
<i>Housework</i>	regular schooling, education; homework; food preparation, cooking; set table, wash/put away dishes; cleaning; laundry, ironing, clothing repair; maintain home/vehicle, including collect fuel; other domestic work; purchase goods; consume personal care services; physical, medical child care; teach, help with homework; read to, talk or play with child; supervise, accompany, other child care; adult care; education travel; child/adult care travel; shop, person/hhld care travel

Notes: Data come from 1983, 1987, 1995, 2000, 2005 and 2015 UK time diary surveys

**Table A3. Methodology of surveys**

Survey	Time Interval in the diary	Mode of data collection	Time period
UK 1983	15-minutes	Interview/self completed diary	On the day of observed activities
UK 1995	15-minutes	Interview/self completed diary	Recall
UK 2000	10 minutes	Self-completed in own-words with pen and paper	Same day as activities
UK 2005	10 minutes	Interviewer completed during face-to-face interview	Previous day (with some diaries covering up to three days previously)
UK 2015	10 minutes	Self-completed in own-words with pen and paper	Same day as activities

Source: Authors' compilation.

**Table A4. Trends in on-the-job leisure, controlling for survey methodology**

	(1)	(2)	(3)
	Amount	Frequency	
	Consumption of on-the-job leisure	Number of breaks for on-the-job leisure	Working time until consuming on-the-job leisure
Decade's 1990	-0.19*** (0.02)	-0.52*** (0.03)	0.82*** (0.08)
Decade's 2000's	-0.28*** (0.02)	-0.54*** (0.02)	0.93*** (0.05)
Decade's 2010's	-0.18*** (0.03)	-0.27*** (0.02)	0.48*** (0.04)
Diary self-completed	-0.18*** (0.04)	-0.13*** (0.03)	0.25** (0.06)
Diary refers to same day	0.03 (0.02)	-0.07*** (0.01)	0.17*** (0.03)
Constant	-0.37 (0.29)	-0.26** (0.09)	2.13*** (0.06)
Number of observations	9,832	9,832	9,832
R-Squared	0.04	0.13	0.35

Notes: Robust standard errors in parenthesis. Data come from the 1983, 2000 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Consumption of on-the-job leisure* is the amount of time the respondent spends not working while at work. The *number of on-the-job leisure episodes* is constructed as the number of spells spent on non-work activities while at work. *Working time until consuming on-the-job leisure* is computed by dividing the total amount of time spent working by the number of work spells in a given diary day. We estimate the following OLS regression:  $E_i = \mu + \beta_1 X_i + \beta_2 D_{t,i} + \varepsilon_i$  where  $E_i$  represents our measures of the consumption and frequency of on-the-job leisure for respondent  $i$ . The vector  $X_i$  includes person-specific, socio-demographic characteristics: gender (ref.: male), age, dummy for living in couple (ref.: not in couple), the number of children under 18 in the household, hours worked during the diary day, the total number of activities reported by the individual in the diary day, whether the diarist self-reported the diary and whether the survey day refers to the same day than the interview day. \*Significant at the 10% level; \*\*significant at the 5% level; \*\*\*Significant at the 1% level.

**Table A5. Timing of market work episodes and on-the-job leisure consumption**

Time of the day	Working	On-the-job leisure
12:00 am-12:30 am	3.26%	0.49%
12:30 am-1:00 am	2.54%	0.43%
1:00 am-1:30 am	2.32%	0.33%
1:30 am-2:00 am	2.00%	0.30%
2:00 am-2:30 am	1.84%	0.32%
2:30 am-3:00 am	1.69%	0.27%
3:00 am-3:30 am	1.67%	0.16%
3:30 am-4:00 am	2.01%	0.14%
4:00 am-4:30 am	0.39%	0.02%
4:30 am-5:00 am	1.16%	0.08%
5:00 am-5:30 am	2.14%	0.15%
5:30 am-6:00 am	5.38%	0.30%
6:00 am-6:30 am	7.77%	0.36%
6:30 am-7:00 am	14.72%	0.93%
7:00 am-7:30 am	25.75%	1.78%
7:30 am-8:00 am	44.97%	2.72%
8:00 am-8:30 am	60.69%	4.05%
8:30 am-9:00 am	74.55%	6.86%
9:00 am-9:30 am	75.94%	10.88%
9:30 am-10:00 am	68.20%	21.40%
10:00 am-10:30 am	69.72%	20.86%
10:30 am-11:00 am	76.43%	14.90%
11:00 am-11:30 am	81.09%	10.44%
11:30 am-12:00 am	69.08%	22.28%
12:00 pm-12:30 pm	51.45%	39.52%
12:30 pm-1:00 pm	39.85%	50.46%
1:00 pm-1:30 pm	50.53%	39.46%
1:30 pm-2:00 pm	65.01%	24.57%
2:00 pm-2:30 pm	73.24%	15.53%
2:30 pm-3:00 pm	69.00%	18.25%
3:00 pm-3:30 pm	69.38%	16.29%
3:30 pm-4:00 pm	68.80%	12.32%
3:00 pm-4:30 pm	63.77%	11.14%
4:30 pm-5:00 pm	51.58%	11.35%
5:00 pm-5:30 pm	39.48%	11.73%
5:30 pm-6:00 pm	27.12%	12.33%
6:00 pm-6:30 pm	20.72%	11.55%
6:30 pm-7:00 pm	16.38%	10.48%
7:00 pm-7:30 pm	15.55%	8.42%
7:30 pm-8:00 pm	13.85%	7.14%
8:00 pm-8:30 pm	13.28%	5.84%
8:30 pm-9:00 pm	12.22%	4.51%
9:00 pm-9:30 pm	11.37%	3.39%
9:30 pm-10:00 pm	9.53%	2.53%
10:00 pm-10:30 pm	8.01%	1.83%
10:30 pm-11:00 pm	6.51%	1.27%
11:00 pm-11:30 pm	5.45%	0.82%
11:30 pm-12:00 pm	4.03%	0.69%

Notes: Data come from the 1983, 1987, 1995, 2000, 2005 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65, and in working days defined as those with at least 60 minutes of market work activities, excluding commuting. *Working* includes the proportion of the workers that report doing market work activities. *On-the-job leisure* includes the proportion of workers that report consuming of on-the-job leisure. See Table A2 xfor a description of the activities included in the variable of on-the-job leisure

**Table A6. Consumption of on-the-job leisure**

	(1)	(2)	(3)
	Mean (hours per day)	Standard Deviation	% of on-the- job consumption of leisure
Time at work	8.75	(2.94)	
Time working	7.62	(2.47)	
On-the-job consumption of leisure	1.13	(1.58)	
Leisure	0.32	(0.84)	29.09%
Social leisure	0.14	(0.37)	11.96%
Active leisure and exercise	0.03	(0.23)	3.53%
Passive leisure	0.15	(0.51)	13.31%
Meals at work and related	0.45	(0.55)	39.45%
Other non-work	0.24	(0.74)	20.88%
Housework	0.05	(0.38)	4.47%
Personal Care	0.19	(0.58)	16.41%
Commuting	0.11	(0.44)	10.58%
Number of observations	9,832		
Number of workers	6,631		

Notes: Data come from the 1983, 1987, 1995, 2000, 2005 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. Means and standard deviations are computed for the pool of data. *Time at work* measures the time from the moment a worker begins work until the time a worker stops working on a given diary day. *Time working* measures the time that the worker spends in market work activities while at work. *Consumption of on-the-job leisure* is the amount of time the respondent spends not working while at work. See Table A2 for a description of the activities included in the variables of on-the-job leisure.

**Table A7. Consumption and frequency of on-the-job leisure over time: RBTC and cofounding factors**

<b>Variables</b>	(1)	(2)	(3)
	<i>Amount</i>	<i>Number of breaks for on-the-job leisure</i>	<i>Frequency</i>
	<i>Consumption of on-the-job leisure</i>		<i>Working time until consuming on-the-job leisure</i>
RTI	0.04 (0.06)	0.16*** (0.05)	-0.26*** (0.09)
Offshoring (BK)	-0.02 (0.11)	0.07 (0.07)	0.05 (0.11)
Secondary education	-0.21 (0.16)	-0.10 (0.12)	0.15 (0.22)
University education	0.10 (0.19)	-0.17 (0.13)	0.26 (0.24)
Child <6 in household	0.12 (0.18)	-0.12 (0.13)	-0.11 (0.29)
<b>Year Dummies</b>			
Decade's 2000's	-0.49*** (0.15)	-0.62*** (0.09)	1.10*** (0.17)
Decade's 2010's	-0.44* (0.24)	-0.39** (0.17)	0.41 (0.31)
<b>Variables*Year Dummies</b>			
RTI *Decade 2000's	-0.09 (0.07)	-0.12** (0.05)	0.17* (0.10)
RTI*Decade 2010's	-0.10 (0.08)	-0.21*** (0.06)	0.27** (0.11)
Offshoring (BK)*Decade 2000's	0.02 (0.12)	-0.04 (0.07)	-0.13 (0.13)
Offshoring (BK)*Decade 2010's	0.08 (0.13)	0.06 (0.08)	-0.21 (0.14)
Secondary education*Decade 2000's	0.32* (0.17)	0.00 (0.13)	-0.04 (0.25)
Secondary education*Decade 2010's	0.33 (0.26)	-0.03 (0.20)	0.31 (0.36)
University education*Decade 2000's	0.15 (0.21)	0.08 (0.14)	-0.24 (0.27)
University education*Decade 2010's	0.36 (0.28)	0.23 (0.21)	-0.02 (0.37)
Child <6 in household*Decade 2000's	-0.36* (0.19)	-0.03 (0.14)	0.44 (0.32)
Child <6 in household*Decade 2010's	-0.42** (0.20)	0.01 (0.15)	0.11 (0.31)
Number of observations	4,926	4,926	4,926
Number of workers	3,817	3,817	3,817
R-Squared	0.03	0.11	0.20

Notes: Robust standard errors in parenthesis. Data come from the 1983, 2000 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Consumption of on-the-job leisure* is the amount of time the respondent spends not working while at work. The *number of on-the-job leisure episodes* is constructed as the number of spells spent on non-work activities while at work. *Working time until consuming on-the-job leisure* is computed by dividing the total amount of time spent working by the number of work spells in a given diary day. We estimate the following OLS regression:  $E_i = \mu + \beta_1 X_i + \beta_2 RTI_i + \beta_3 D_{t,i} + \beta_4 D_{t,i} * RTI_i + \beta_5 Cofounders_i + \beta_6 D_{t,i} * Cofounders_i + \varepsilon_i$  where  $E_i$  represents our measures of the consumption and frequency of on-the-job leisure for respondent  $i$ . The vector  $X_i$  includes person-specific, socio-demographic characteristics: gender (ref.: male), age, dummy for living in couple (ref.: not in couple), the number of children under 18 in the household, hours worked during the diary day, and the total number of activities reported by the individual in the diary day. We control for the RTI index of the worker's occupation ( $\beta_2$ ).  $\beta_3$  is a vector of dummy variables for the years 2000 and 2015, and  $\beta_4$  is the interaction between the vector of year dummies and the RTI index.  $\varepsilon_i$  is the error term.  $\beta_5$  is a vector of potential cofounders, which includes the BK index, dummy variables for secondary and university education (ref.: primary education) and a dummy variable to control for the presence of a child under 6 in the household (1) or not (0).  $\beta_6$  represents the interaction between these potential cofounders and the year dummy variable for 2000 and 2015.

\*Significant at the 10% level; \*\*significant at the 5% level; \*\*\*Significant at the 1% level.

**Table A8. Consumption and frequency of on-the-job leisure over time: the role of offshoring**

	(1) <i>Amount</i>	(2) <i>Frequency</i>	(3) <i>Working time until consuming on-the-job leisure</i>
	<i>Consumption of on-the-job leisure</i>	<i>Number of breaks for on-the-job leisure</i>	
Offshoring Index	-0.01 (0.11)	0.13** (0.06)	-0.11 (0.11)
Decade's 2000's	-0.36*** (0.07)	-0.57*** (0.06)	1.25*** (0.12)
Decade's 2010's	-0.22*** (0.08)	-0.26*** (0.07)	0.50*** (0.14)
Offshoring Index*Decade 2000's	-0.02 (0.11)	-0.09 (0.07)	-0.06 (0.13)
Offshoring Index*Decade 2010's	0.07 (0.12)	0.00 (0.08)	-0.08 (0.14)
Number of observations	4,926	4,926	4,926
Number of workers	3,817	3,817	3,817
R-Squared	0.03	0.11	0.20

Notes: Robust standard errors in parenthesis. Data come from the 1983, 2000 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Consumption of on-the-job leisure* is the amount of time the respondent spends not working while at work. The *number of on-the-job leisure episodes* is constructed as the number of spells spent on non-work activities while at work. *Working time until consuming on-the-job leisure* is computed by dividing the total amount of time spent working by the number of work spells in a given diary day. We estimate the following OLS regression:  $E_i = \mu + \beta_1 X_1 + \beta_2 BK_i + \beta_3 D_{t,i} + \beta_4 D_{t,i} * BK_i + \varepsilon_i$ , where  $E_i$  represents either the consumption or the frequency of on-the-job leisure (either the number of on-the-job leisure episodes or work time before consuming on-the-job leisure) for respondent  $i$  in period  $t$ . The vector  $X_i$  includes person-specific socio-demographic characteristics.  $BK_i$  is the offshorability index. \*Significant at the 10% level; \*\*significant at the 5% level; \*\*\*significant at the 1% level.

**Table A9. Trends in off-the-job leisure and eating, including part-time workers**

	(1)	(2)	(3)	(4)	(5)	(6)
	Decade 1980s	Decade 1990s	Decade 2000s	Decade 2010s	Diff 2010s- 1980s	P- value diff
Leisure in non-work time	4.07 (2.22)	3.81 (2.41)	3.77 (2.22)	3.64 (2.31)	-0.42	(<0.01)
Meals in non-work time	0.84 (0.72)	0.66 (0.58)	0.75 (0.62)	0.82 (0.80)	-0.03	(0.20)
Leisure + meals in non-work time	4.91 (2.33)	4.47 (2.57)	4.53 (2.35)	4.46 (2.51)	-0.45	(<0.01)
Number of diaries	4,493	632	6,107	2,070		
Number of workers	1036	632	5,283	1,713		

*Notes:* Data come from the 1983, 1987, 1995, 2000, 2005 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Leisure in non-work time* includes the time devoted to social leisure, active leisure, and passive leisure, but outside the job.

**Table A10. Consumption of off-the-job leisure over time, including part-time workers**

	(1)	(2)	(3)
	Leisure	Meals	Leisure+Meals
RTI	0.04 (0.05)	0.00 (0.02)	0.04 (0.05)
Decade's 2000's	-0.18*** (0.07)	-0.05** (0.02)	-0.24*** (0.07)
Decade's 2010's	-0.41*** (0.08)	-0.04 (0.03)	-0.46*** (0.09)
RTI *Decade 2000's	0.01 (0.06)	-0.02 (0.02)	-0.02 (0.06)
RTI*Decade 2010's	0.08 (0.08)	-0.01 (0.03)	0.07 (0.08)
Number of observations	6,607	6,607	6,607
Number of workers	4,870	4,870	4,870
R-Squared	0.308	0.115	0.364

*Notes:* Robust standard errors in parenthesis. Data come from the 1983, 2000 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Consumption of on-the-job leisure* is the amount of time the respondent spends not working while at work. See Table A3 in Appendix A for a description of the activities included in the consumption of off-the-job leisure. We estimate the following OLS regression:  $E_i = \mu + \beta_1 X_i + \beta_2 RTI_i + \beta_3 D_{t,i} + \beta_4 D_{t,i} * RTI_i + \varepsilon_i$ , where  $E_i$  represents either off-the-job leisure or off-the-job meals, or the sum of the two categories for respondent  $i$ . The vector  $X_i$  includes person-specific socio-demographic characteristics: gender (ref.: male), age, dummy for secondary and university education (ref.: primary education), dummy for living in couple (ref.: not in couple), the number of children under 18 in the household, hours at work during the diary day, and the total number of activities reported by the individual in the diary day.  $RTI_i$  is the Routine Task Index measure. \*Significant at the 10% level; \*\*significant at the 5% level; \*\*\*Significant at the 1% level.

**Table A11. Location while working**

	(1)	(2)	(3)	(4)	(5)	(6)
	Decade 1980s	Decade 1990s	Decade 2000s	Decade 2010s	Diff 2010s-1980s	P-value diff
Percentage work at workplace	89.67% (0.55)	91.86% (1.10)	82.90% (0.52)	79.32% (1.00)	-10.35	(<0.01)
Percentage work from home	7.59% (0.48)	5.45% (0.91)	11.62% (0.45)	16.00% (0.90)	8.41	(<0.01)
Percentage work while travelling	1.47% (0.19)	0.00% (0.00)	0.26% (0.05)	0.05% (0.04)	-1.42	(0.21)
Percentage work at other locations	1.26% (0.18)	2.69% (0.60)	5.22% (0.30)	4.63% (0.50)	3.37	(0.01)
Number of diaries	2,836	494	4,810	1,692		
Number of workers	618	494	4,138	1,381		

Notes: Data come from the 1983, 1987, 1995, 2000, 2005 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Time at work* measures the time from the moment a worker starts to work until the time a worker stops working in a given diary day. Location of work based on survey location and travelling codes. The variables are measured in percentage points.

**Table A12. Consumption and frequency of on-the-job leisure over time, excluding workers working from home**

	(1)	(2)	(3)	(4)	(5)	(6)
	Decade 1980s	Decade 1990s	Decade 2000s	Decade 2010s	Diff 2010s-1980s	P-value diff
Time at work	8.51 (0.05)	9.25 (0.13)	8.63 (0.04)	8.55 (0.07)	0.04 (0.01)	
Working Time	7.44 (0.04)	8.44 (0.11)	7.92 (0.04)	7.74 (0.07)	0.30 (<0.01)	
Consumption of on-the-job leisure	1.07 (0.02)	0.80 (0.06)	0.71 (0.02)	0.81 (0.04)	-0.26 (<0.01)	
Frequency of on-the-job-leisure						
Number of on-the-job leisure episodes	1.63 (0.02)	0.99 (0.05)	0.99 (0.02)	1.23 (0.04)	-0.40 (<0.01)	
Working time until consuming on-the-job leisure	3.44 (0.05)	5.28 (0.15)	4.93 (0.05)	4.39 (0.08)	0.95 (<0.01)	
Number of diaries	2,416	429	3,890	1,223		
Number of workers	594	429	3,498	1,059		

*Notes:* Data come from the 1983, 1987, 1995, 2000, 2005 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65 and do not report any work done from home. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Time at work* measures the time from the moment a worker begins work until the time a worker stops working on a given diary day. *Time working* measures the time that the worker spends in market work activities while at work. *Consumption of on-the-job leisure* is the amount of time the respondent spends not working while at work. See Table A2 in Appendix A for a description of the activities included in the consumption of on-the-job leisure. The *number of on-the-job leisure episodes* is constructed as the number of spells spent on non-work activities while at work. *Working time until consuming on-the-job leisure* is computed by dividing the total amount of time spent working by the number of work spells in a given diary day.

## APPENDIX B: ON-THE-JOB LEISURE AND RBTC

Original occupation codes for the UK TUS use the SOC80 and SOC90 codes, while we use the Camsis Project to do the cross-walk between the SOC codes and ISCO88 codes (<http://www.camsis.stir.ac.uk/>). The final samples are 186, 2,382 and 1,249 workers for the years 1983, 2000, and 2014 respectively, selected using the same criteria as in Section 1. In the conversion of the SOC codes to the ISCO88 codes, we lose 1,815 observations, representing 19.69% of the observations used in Table 2, because ISCO08 codes are not as detailed as SOC codes. The RTI covers 21 occupations out of the 26 occupations in the ISCO88. We thus additionally lose 532 observations belonging to these occupations, representing 5.77% of our main sample in Table 2. Table B1 shows detailed information on RTI values assigned to each occupation code.

Table B2 shows the values of the RTI index for each two-digit ISCO88 code, where occupations are sorted in ascending values of the RTI index. Following Acemoglu and Autor (2011) and the classification in Goos, Manning and Salomons (2014), the RTI index of workers in occupations such as managers, professionals, and services is low, suggesting that these are non-routine, task-intensive occupations. In contrast, workers in other occupations such as clerks, sales, and laborers in mining, construction and manufacturing have relatively high values of the RTI index, suggesting that workers in these occupations perform a majority of routine tasks.

To see the validity of the RTI index for our sample of UK workers, Table B3 uses the 1983, 2000, and 2015 UK sample to replicate Table 1 in Goos, Manning and Salomons (2014), who employ the 1993-2010 European Labor Force Survey to show that RBTC decreased the share of employment in middle-paying occupations, while increasing the share of employment in high-paying and low-paying occupations in the UK, also documented by Acemoglu and Autor (2011) using the May/ORG Current Population Survey for the years 1979-2009.

There is a strong resemblance between the figures shown in Table B3 and those obtained in Goos, Manning and Salomons (2014) for the UK. In particular, whereas at the beginning of the period the share of employment of workers in middle occupations was 17 percentage points higher than the share of employment of workers in high-paying occupations, by the end of the period, the share of employment for workers in middle occupations was 17 percentage points lower than the share of employment of workers in high-paying occupations. The reason for this reversal is that, while the percentage of workers in high- and low-paying occupations increased during this period, the percentage of workers in middle-paying occupations decreased. In particular, between 1983 and 2000 the percentage of workers in high-paying occupations increased from 34.95% to 44.71%, and to 49.08% in 2015. Similarly, the percentage of workers in low-paying occupations increased by 5.77% between 1983 and 2000, and by an additional 3.51% between 2000 and 2015. In contrast, the percentage of workers in middle-paying occupations decreased from 51.61% in 1983 to 39.59% in 2000, and to 31.71% in 2015.

Panel A of Table B4 compares the occupations in the lowest 10% and the highest 90% percentiles of the RTI index distribution, and Panel B compares occupations in the lowest 25% and the highest 75% percentiles of the RTI index distribution. It is evident that workers in non-routine, task-intensive occupations (i.e., higher RTI) spend more time in market-work time and work longer before consuming on-the-job leisure. Workers in the 25 (10) percentiles of the RTI index distribution devote 0.24 more hours per day to market work than those in the 75 (90) percentiles of the RTI index distribution, with this

difference being statistically significant. Additionally, workers in the 25(10) percentiles of the RTI index distribution work 4.54 (4.36) hours before consuming on-the-job leisure, whereas workers in the 75 (90) percentiles of the RTI index distribution work about 7% less before consuming on-the-job leisure (i.e. 4.23 (4.02) hours).

**Table B1. Classification of occupations according to the RTI index, UKTUS 1983, 2000 and 2015**

<i>UK SOC 1983 codes</i>	<i>RTI index</i>	<i>UK SOC 2000 codes</i>	<i>RTI index</i>
103 General administrators; national government (HEO to Seni	-0.732465	1112 Directors and chief executives of major organizations	-0.7469759
110 Production, works and maintenance managers	-0.7469759	1121 Production, works and maintenance managers	-0.7469759
113 Managers in mining and energy industries	-0.7469759	1122 Managers in construction	-0.7469759
120 Treasurers and company financial managers	-0.7469759	1131 Financial managers and chartered secretaries	-0.7469759
121 Marketing and sales managers	-0.7469759	1132 Marketing and sales managers	-0.7469759
122 Purchasing managers	-0.7469759	1133 Purchasing managers	-0.7469759
125 Organization and methods and work study managers	-0.7469759	1134 Advertising and public relations managers	-0.7469759
126 Computer systems and data processing managers	-0.7469759	1135 Personnel, training and industrial relations managers	-0.7469759
132 Civil service executive officers' government	-0.732465	1136 Information and communication technology managers	-0.7469759
140 Transport managers N.E.C.	-0.7469759	1137 Research and development managers	-0.7469759
141 Stores controllers	-0.7469759	1141 Quality assurance managers	-0.7469759
142 Managers in warehousing and other materials handling	-0.7469759	1142 Customer care managers	-0.7469759
169 Other managers in farming, forestry, and fishing N.E.C.	-1.522734	1151 Financial institution managers	-0.7469759
170 Property and estate managers	-0.4424283	1152 Office managers	-0.7469759
171 Garage managers and proprietors	-1.522734	1161 Transport and distribution managers	-0.7469759
174 Restaurant and catering managers	-1.522734	1162 Storage and warehouse managers	-0.7469759
176 Entertainment and sports managers	-1.522734	1163 Retail and wholesale managers	-0.7469759
179 Managers and proprietors in service industries N.E.C.	-1.522734	1172 Police officers (inspectors and above)	-0.4424283
201 Biological scientists and biochemists	-1.000168	1174 Security managers	-0.7469759
202 Physicists, geologists, and meteorologists	-0.8220372	1181 Hospital and health service managers	-0.7469759
210 Civil, structural, municipal, mining, and quarrying engine	-0.8220372	1183 Healthcare practice managers	-1.522734
213 Electronic engineers professional	-0.8220372	1184 Social services managers	-0.7469759
214 Software engineers professional	-0.8220372	1185 Residential and day care managers	-1.522734
216 Design and development engineers	-0.8220372	1211 Farm managers	-1.522734
217 Process and production engineers	-0.8220372	1219 Managers in animal husbandry, forestry, and fishing N.E.C.	-1.522734
219 Other engineers and technologists N.E.C.	-0.8220372	1221 Hotel and accommodation managers	-1.522734
220 Medical practitioners	-1.000168	1222 Conference and exhibition managers	-0.7469759
223 Dental practitioners	-1.000168	1223 Restaurant and catering managers	-1.522734
242 Solicitors public	-0.732465	1224 Publicans and managers of licensed premises	-1.522734
250 Chartered and certified accountants	-0.732465	1225 Leisure and sports managers	-1.522734
251 Management accountants	-0.732465	1226 Travel agency managers	-1.522734
253 Management consultants, business analysts	-0.732465	1231 Property, housing, and land managers	-1.522734
260 Architects landscape	-0.8220372	1232 Garage managers and proprietors	-1.522734
262 Building, land, mining and 'general practice' surveyors	-0.8220372	1233 Hairdressing and beauty salon managers and proprietors	-1.522734

290 Psychologists	-0.732465	1234 Shopkeepers and wholesale/retail dealers	-1.522734
293 Social workers, probation officers	-0.732465	1239 Managers and proprietors in other services N.E.C.	-1.522734
300 Laboratory technicians	-0.3973301	2111 Chemists	-0.8220372
301 Engineering technicians	-0.3973301	2112 Chemists	-1.000168
303 Architectural and town planning technicians	-0.3973301	2113 Physicists, geologists, and meteorologists	-0.8220372
310 Draughts persons	-0.3973301	2121 Civil engineers	-0.8220372
312 Quantity surveyors	-0.8220372	2122 Mechanical engineers	-0.8220372
342 Medical radiographers	-0.3973301	2123 Electrical engineers	-0.8220372
345 Dispensing opticians	-0.3327664	2124 Electronics engineers	-0.8220372
360 Estimators, valuers	-0.4424283	2126 Design and development engineers	-0.8220372
361 Underwriters, claims assessors, brokers, investment anal	-0.4424283	2128 Planning and quality control engineers	-0.8220372
380 Authors, writers, journalists	-0.732465	2129 Engineering professionals N.E.C.	-0.8220372
384 Actors, entertainers, stage managers, producers and dire	-0.732465	2131 IT strategy and planning professionals	-0.8220372
386 Photographers, camera, sound, and video equipment operator	-0.3973301	2132 Software professionals	-0.8220372
387 Professional athletes, sports officials	-0.4424283	2211 Medical practitioners	-1.000168
390 Information officers and technical librarians	-0.732465	2212 Medical practitioners	-0.732465
400 Civil administrative assistants taxation	2.240688	2213 Pharmacists/pharmacologists	-1.000168
421 Library assistants/clerks press	2.240688	2214 Ophthalmic opticians	-1.000168
440 Stores dispatch production control clerks warehouse	2.240688	2215 Dental practitioners	-1.000168
441 Storekeepers, warehousemen/women	2.240688	2321 Scientific researchers	-0.8220372
451 Legal secretaries	2.240688	2322 Social science researchers	-0.732465
452 Typists and word processor operators	2.240688	2411 Solicitors and lawyers, judges, and coroners	-0.732465
460 Receptionists general office dental	1.406782	2421 Chartered and certified accountants	-0.732465
461 Receptionists/telephonist	1.406782	2422 Management accountants	-0.732465
462 Telephone operators exchange	1.406782	2423 Management consultants, actuaries, economists and statiscians	-0.732465
463 Radio and telegraph operators, other office communication	-0.3973301	2431 Architects	-0.8220372
490 Computer operators, data processing operators, other off	2.240688	2433 Quantity surveyors	-0.8220372
500 Bricklayers, masons fixer	-0.1854081	2434 Chartered surveyors (not quantity surveyors)	-0.8220372
501 Roofers, slaters, tilers, sheeters, cladders	-0.1854081	2442 Social workers	-0.732465
504 Builders, building contractors	-0.1854081	2443 Probation officers	-0.732465
507 Painters and decorators	-0.1854081	2444 Clergy	-0.732465
509 Other construction trades N.E.C. building	-0.1854081	2451 Librarians	-0.732465
510 Centre, capstan, turret and other lathe setters and sett	0.4568464	3111 Laboratory technicians	-0.3973301
515 Tool makers tool fitters markers out metal foreman	0.4568464	3112 Electrical/electronics technicians	-0.3973301
516 Metal working production and maintenance fitters	0.4568464	3113 Engineering technicians	-0.3973301
517 Precision instrument makers and repairers	1.588948	3114 Building and civil engineering technicians	-0.3973301

519 Other tool setters operators shaper foreman auto	0.4568464	3119 Science and engineering technicians N.E.C..	-0.3973301
520 Production fitters (electrical/electronic)	0.4568464	3122 Draughts persons	-0.3973301
521 Electricians, electrical maintenance fitters	0.4568464	3131 IT operations technicians	-0.3973301
523 Telephone fitters	0.4568464	3211 Nurses	-0.3327664
526 Computer engineers, installation, and maintenance	0.4568464	3212 Midwives	-0.3327664
532 Plumbers, heating, and ventilating engineers and related	-0.1854081	3213 Paramedics	-0.3327664
534 Metal plate workers, shipwrights, riveters	0.4568464	3214 Medical radiographers	-0.3973301
535 Steel erectors	0.4568464	3218 Medical and dental technicians	-0.3327664
537 Welding trades	0.4568464	3221 Physiotherapists	-0.3327664
540 Motor mechanics, auto engineers (inc. road patrol engine	0.4568464	3222 Occupational therapists	-0.3327664
544 Tyre and exhaust fitters	0.4568464	3229 Therapistsn.e.c.	-0.3327664
552 Warp preparers, bleachers, dyers, and finishers	0.4925116	3231 Youth and community workers	-0.4424283
553 Sewing machinists, menders, darners, and embroiderers	1.237669	3232 Housing and welfare officers	-0.4424283
555 Shoe repairers, leather cutters and sewers, footwear las	1.237669	3312 Police officers (sergeant and below)	-0.5976907
557 Clothing cutters, milliners, furriers	1.237669	3313 Fire service officers (leading fire officer and below)	-0.5976907
560 Originators, compositors, and print preparers	1.588948	3314 Prison service officers (below principal officer)	-0.5976907
562 Book binders and print finishers specialized	1.588948	3319 Protective service associate professionals N.E.C.	-0.5976907
563 Screen printers	1.588948	3411 Artists	-0.732465
570 Carpenters and joiners	-0.1854081	3412 Authors, writers	-0.732465
610 Police officers (sergeant and below)	-0.5976907	3414 Dancers and choreographers	-0.4424283
620 Chefs, cooks hotel supervisor	-0.5976907	3415 Musicians	-0.4424283
621 Waiters, waitresses	-0.5976907	3421 Graphic designers	-0.4424283
622 Bar staff	-0.5976907	3422 Product, clothing, and related designers	-0.4424283
640 Assistant nurses, nursing auxiliaries	-0.3327664	3431 Journalists, newspaper, and periodical editors	-0.732465
641 Hospital ward assistants	-0.5976907	3432 Broadcasting associate professionals	-0.4424283
642 Ambulance staff	-0.5976907	3434 Photographers and audio-visual equipment operators	-0.3973301
651 Playgroup leaders	-0.5976907	3441 Sports players	-0.4424283
652 Educational assistants	-0.5976907	3442 Sports coaches, instructors, and officials	-0.4424283
660 Hairdressers, barbers coiffeur	-0.5976907	3513 Ship and hovercraft officers	-0.3973301
670 Domestic housekeepers and related occupations	-0.5976907	3520 Legal associate professionals	-0.4424283
672 Caretakers school	0.027381	3531 Estimators, valuers, and assessors	-0.4424283
691 Bookmakers manager	1.406782	3533 Insurance underwriters	-0.4424283
710 Technical and wholesale sales representatives	-0.4424283	3534 Finance and investment analysts/advisers	-0.4424283
719 Other sales representatives N.E.C.	-0.4424283	3536 Importers, exporters	-0.4424283
720 Sales assistants merchants car	0.0534066	3539 Business and related associate professionals N.E.C..	-0.4424283
722 Petrol pump forecourt attendants	0.0534066	3541 Buyers and purchasing officers	-0.4424283

731 Roundsmen/women and van salespersons	0.027381	3542 Sales representatives	-0.4424283
800 Bakery confectionery process hand foreman	0.4925116	3543 Marketing associate professionals	-0.4424283
809 Other food, drink, and tobacco process operatives N.E.C..	0.4925116	3544 Estate agents, auctioneers	-0.4424283
812 Spinners, doublers, twisters fly	0.4925116	3551 Conservation and environmental protection officers	-0.3327664
814 Other textiles processing operatives hydro	0.4925116	3552 Countryside and park rangers	-0.3327664
820 Chemical, gas and petroleum process plant operatives	0.3230704	3561 Public service associate professionals	-0.4424283
825 Plastic process operatives, moulders extruders goods	0.4925116	3562 Personnel and industrial relations officers	-0.732465
829 Other chemicals, paper, plastics, and related operatives	0.3230704	3564 Careers advisers and vocational guidance specialists	-0.732465
842 Metal polishers	0.4568464	3565 Inspectors of factories, utilities, and trading standards	-0.3973301
850 Assemblers/lineworkers (electrical/electronic goods)	0.4925116	3567 Occupational hygienists and safety officers (health and safety)	-0.3973301
851 Assemblers/lineworkers vehicles metal nutter	0.4925116	3568 Environmental health officers	-0.3973301
860 Inspectors, viewers testers examiners insulation	0.4925116	4111 Civil Service executive officers	2.240688
862 Packers, bottlers, canners, fillers	0.4486654	4112 Civil Service administrative officers and assistants	2.240688
864 Routine laboratory testers paint soil	0.4925116	4113 Local government clerical officers and assistants	2.240688
872 Drivers of road goods vehicles	-1.495965	4121 Credit controllers	2.240688
873 Bus and coach drivers	-1.495965	4122 Accounts and wages clerks, book-keepers, other financial clerks	2.240688
874 Taxi, cab drivers and chauffeurs	-1.495965	4123 Counter clerks	1.406782
885 Mechanical plant drivers and operatives (earth moving an	-1.495965	4131 Filing and other records assistants/clerks	2.240688
891 Printing machine minders and assistants	0.4925116	4132 Pensions and insurance clerks	2.240688
896 Construction and related operatives insulator foreman	-0.1854081	4133 Stock control clerks	2.240688
897 Woodworking machine operatives	0.4925116	4134 Transport and distribution clerks	2.240688
899 Other plant and machine operatives N.E.C.	0.4925116	4135 Library assistants/clerks	2.240688
910 Coal mine laborers	0.4486654	4136 Database assistants/clerks	2.240688
912 Laborers in engineering and allied trades	0.4486654	4141 Telephonists	1.406782
919 Other laborers in making and processing industries N.E.C.	0.4486654	4150 General office assistants/clerks	2.240688
923 Road construction and maintenance workers	0.4486654	4211 Medical secretaries	2.240688
929 Other building and civil engineering laborers N.E.C.	0.4486654	4212 Legal secretaries	2.240688
930 Stevedores, dockers	0.4486654	4213 School secretaries	2.240688
933 Refuse and salvage collectors	0.027381	4215 Personal assistants and other secretaries	2.240688
940 Postal workers, mail sorters	2.240688	4216 Receptionists	1.406782
952 Kitchen porters, hands	0.027381	4217 Typists	2.240688
953 Counterhands, catering assistants help	-0.5976907	5211 Smiths and forge workers	0.4568464
954 Shelf fillers	0.0534066	5213 Sheet metal workers	0.4568464
956 Window cleaners	0.027381	5214 Metal plate workers, shipwrights, riveters	0.4568464
959 Other occupations in sales and services N.E.C.	0.027381	5215 Welding trades	0.4568464
990 All other laborers and related workers	0.4486654	5216 Pipe fitters	-0.1854081

5221	Metal machining setters and setter-operators	0.4568464
5222	Tool makers, tool fitters and markers-out	0.4568464
5223	Metal working production and maintenance fitters	0.4568464
5224	Precision instrument makers and repairers	1.588948
5231	Motor mechanics, auto engineers	0.4568464
5232	Vehicle body builders and repairers	0.4568464
5234	Vehicle spray painters	-0.1854081
5241	Electricians, electrical fitters	-0.1854081
5242	Telecommunications engineers	0.4568464
5243	Lines repairers and cable jointers	0.4568464
5245	Computer engineers, installation, and maintenance	0.4568464
5249	Electrical/electronics engineers N.E.C.	0.4568464
5311	Steel erectors	0.4568464
5312	Bricklayers, masons	-0.1854081
5313	Roofers, roof tilers and slaters	-0.1854081
5314	Plumbers, heating, and ventilating engineers	-0.1854081
5315	Carpenters and joiners	-0.1854081
5316	Glaziers, window fabricators and fitters	-0.1854081
5319	Construction trades N.E.C.	-0.1854081
5321	Plasterers	-0.1854081
5322	Floorers and wall tillers	-0.1854081
5323	Painters and decorators	-0.1854081
5411	Weavers and knitters	1.237669
5412	Upholsterers	1.237669
5413	Leather and related trades	1.237669
5414	Tailors and dressmakers	1.237669
5419	Textiles, garments, and related trades N.E.C.	1.237669
5422	Printers	1.588948
5423	Bookbinders and print finishers	1.588948
5424	Screen printers	1.588948
5431	Butchers, meat cutters	1.237669
5432	Bakers, flour confectioners	1.237669
5433	Fishmongers, poultry dressers	1.237669
5434	Chefs, cooks	-0.5976907
5491	Glass and ceramics makers, decorators, and finishers	1.588948
5492	Furniture makers, other craft woodworkers	1.237669

5493	Pattern makers (moulds)	1.237669
5496	Floral arrangers, florists	-0.4424283
5499	Hand craft occupations N.E.C.	1.588948
6111	Nursing auxiliaries and assistants	-0.5976907
6113	Dental nurses	-0.5976907
6114	Houseparents' and residential wardens	-0.5976907
6115	Care assistants and home carers	-0.5976907
6121	Nursery nurses	-0.5976907
6122	Childminders and related occupations	-0.5976907
6123	Playgroup leaders/assistants	-0.5976907
6124	Educational assistants	-0.5976907
6131	Veterinary nurses and assistants	-0.3327664
6139	Animal care occupations N.E.C.	-0.3327664
6211	Sports and leisure assistants	-0.5976907
6212	Travel agents	1.406782
6213	Travel and tour guides	-0.5976907
6214	Air travel assistants	-0.5976907
6221	Hairdressers, barbers	-0.5976907
6222	Beauticians and related occupations	-0.5976907
6231	Housekeepers and related occupations	-0.5976907
6232	Caretakers	0.027381
6291	Undertakers and mortuary assistants	-0.5976907
6292	Pest control officers	-0.1854081
7111	Sales and retail assistants	0.0534066
7112	Retail cashiers and check-out operators	0.0534066
7113	Telephone salespersons	0.027381
7121	Collector salespersons and credit agents	0.027381
7122	Debt, rent and other cash collectors	0.027381
7123	Roundsmen/women and van salespersons	0.027381
7124	Market and street traders and assistants	0.0534066
7125	Merchandisers and window dressers	-0.4424283
7129	Sales related occupations N.E.C.	-0.4424283
7212	Customer care occupations	1.406782
8111	Food, drink, and tobacco process operatives	0.4925116
8112	Glass and ceramics process operatives	0.3230704
8113	Textile process operatives	0.4925116

8114	Chemical and related process operatives	0.3230704
8115	Rubber process operatives	0.4925116
8116	Plastics process operatives	0.4925116
8117	Metal making and treating process operatives	0.3230704
8118	Electroplaters	0.4925116
8119	Process operatives N.E.C.	0.3230704
8121	Paper and wood machine operatives	0.3230704
8124	Energy plant operatives	0.3230704
8125	Metal working machine operatives	0.4925116
8126	Water and sewerage plant operatives	0.3230704
8129	Plant and machine operatives N.E.C.	0.4925116
8131	Assemblers (electrical products)	0.4925116
8132	Assemblers (vehicles and metal goods)	0.4925116
8133	Routine inspectors and testers	0.4925116
8134	Weighers, graders, sorters	0.4925116
8135	Tyre, exhaust and windscreen fitters	0.4568464
8136	Clothing cutters	0.4925116
8137	Sewing machinists	0.4925116
8139	Assemblers and routine operatives N.E.C.	0.4925116
8141	Scaffolders, stagers, riggers	-0.1854081
8149	Construction operatives N.E.C.	0.4486654
8211	Heavy goods vehicle drivers	-1.495965
8212	Van drivers	-1.495965
8213	Bus and coach drivers	-1.495965
8214	Taxi, cab drivers and chauffeurs	-1.495965
8215	Driving instructors	-1.495965
8216	Rail transport operatives	-1.495965
8217	Seafarers (merchant navy); barge, lighter and boat operatives	-1.495965
8218	Air transport operatives	0.4486654
8221	Crane drivers	-1.495965
8222	Fork-lift truck drivers	-1.495965
8223	Agricultural machinery drivers	-1.495965
8229	Mobile machine drivers and operatives N.E.C.	-1.495965
9121	Laborers in building and woodworking trades	0.4486654
9132	Industrial cleaning process occupations	0.027381
9133	Printing machine minders and assistants	0.4486654

9134	Packers, bottlers, canners, fillers	0.4486654
9139	Laborers in process and plant operations N.E.C.	0.4486654
9149	Other goods handling and storage occupations N.E.C.	0.4486654
9211	Postal workers, mail sorters, messengers, couriers	0.027381
9221	Elementary office occupations N.E.C.	0.027381
9222	Hotel porters	0.027381
9223	Kitchen and catering assistants	0.027381
9224	Waiters, waitresses	-0.5976907
9225	Bar staff	-0.5976907
9226	Leisure and theme park attendants	0.027381
9229	Elementary personal services occupations N.E.C.	0.027381
9231	Window cleaners	0.027381
9233	Cleaners, domestics	0.027381
9234	Launderers, dry cleaners, pressers	0.027381
9235	Refuse and salvage occupations	0.027381
9241	Security guards and related occupations	0.027381
9244	School mid-day assistants	-0.5976907
9251	Shelf fillers	0.0534066
9259	Elementary sales occupations N.E.C.	0.027381

Source: Authors' compilation. See <http://www-2009.timeuse.org/information/studies/>

**Table B2. RTI and offshoring measures by occupation in the UK**

	(1) ISCO 88 2- digit code	(2) Number of workers	(3) RTI measure	(4) BK index
Managers of small enterprises	13	312	-1.52	-0.63
Drivers and mobile plant operators	83	190	-1.50	-1.00
Life science and health professionals	22	71	-1.00	-0.76
Physical, mathematical and engineering	21	204	-0.82	1.05
Corporate manager	12	429	-0.75	-0.32
Other professionals	24	296	-0.73	0.21
Personal and protective service workers	51	269	-0.60	-0.94
Other associate professionals	34	254	-0.44	0.10
Physical, mathematical and engineering	31	102	-0.40	-0.12
Life science and health associate professionals	32	75	-0.33	-0.75
Extraction and building trades workers	71	327	-0.19	-0.93
Sales and service elementary occupation	91	153	0.03	-0.81
Models, salespersons and demonstrators	52	112	0.05	-0.89
Stationary plant and related operators	81	33	0.32	1.59
Laborers in mining, construction, manufacturing	93	105	0.45	-0.66
Metal, machinery, and related trade work	72	191	0.46	-0.45
Machine operators and assemblers	82	141	0.49	2.35
Customer service clerks	42	122	1.24	-0.25
Other craft and related trade workers	74	36	1.24	1.15
Precision, handicraft, craft printing a	73	34	1.59	1.66
Office clerks	41	361	2.24	0.40
Number of diaries			4,926	
Number of workers			3,817	

Notes: Data come from the 1983, 2000 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65, and in working days defined as those with at least 60 minutes to market work activities, excluding commuting. The RTI index in column (3) is based on the five original DOT task measures in Autor, Levy and Murnane (2003). See footnotes 10 and 11 for a description of how the index is constructed using the UK TUS occupation classification. The offshoring index in column (4) is taken from Blinder and Krueger (2013) and is based on professional coders' assessment of the ease with which an occupation could potentially be offshored. Both indices are rescaled to mean 0 and standard deviation 1. A higher value means an occupation is more routine-intense (column (3)) or more offshorable (column (4)). Occupations are ranked from the lowest to the highest value of the RTI.

**Table B3. Changes in the share of employment by occupation category in the UK**

	(1)	(2)	(3)	(4)	(5)
	Share of employment			Change	
	1983	2000	2015	2000-1983	2015-2000
High-paying occupations	34.95%	44.71%	49.08%	14.13%	4.37%
Middle-paying occupations	51.61%	39.59%	31.71%	-19.91%	-7.88%
Low-paying occupations	13.44%	15.70%	19.22%	5.77%	3.51%
Number of diaries	540	2,865	1,521		

Notes: Data come from the 1983, 2000 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. Classification of occupations follows Table 1 in Goos, Manning and Salomons (2014). *High-paying occupations* include occupations with ISCO88 codes 12, 13, 21, 22, 24, 31, 32 and 34. *Middle-paying occupations* include occupations with ISCO88 codes 41, 42, 71, 72, 73, 74, 81, 82 and 83. *Low-paying occupations* include occupations with ISCO88 codes 51, 52, 91 and 93. See footnotes 6 and 7 in Section 4 for a description of how the RTI index is computed using the UK TUS occupation classification.

**Table B4. Sum Stats of work hours and on-the-job leisure occupations, by RTI**

	(1)	(2)	(3)	(4)
	Panel A: The UK 1985-2000-2015 (Low 10 % pct-High 90% pct)			
	Low 10% percentile	High 90% percentile	Diff low-high	p-value Diff
<i>Market work</i>	7.54	(2.94)	7.33	(1.93)
<i>Consumption of on-the-job leisure</i>	1.14	(1.81)	0.92	(1.07)
<i>Number of breaks for on-the-job leisure</i>	1.12	(1.11)	1.15	(0.90)
<i>Working time until consuming on-the-job leisure</i>	4.36	(2.87)	4.02	(2.23)
<i>Number of Observations</i>	415		486	
	Panel B: The UK 1985-2000-2015 (Low 25% pct-High 75% pct)			
	Low 25% percentile	High 25% percentile	Diff low-high	p-value Diff
<i>Market work</i>	7.82	(2.89)	7.58	(2.13)
<i>Consumption of on-the-job leisure</i>	1.13	(1.74)	0.86	(1.21)
<i>Number of breaks for on-the-job leisure</i>	1.15	(1.14)	1.22	(1.07)
<i>Working time until consuming on-the-job leisure</i>	4.54	(2.96)	4.23	(2.54)
<i>Number of Observations</i>	1,041		1,272	

Notes: Data come from the 1983, 1987, 1995, 2000, 2005 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. Consumption of on-the-job leisure is the amount of time the respondent spends not working while at work. See Table A2 in Appendix for a description of the activities included in the consumption of on-the-job leisure. The number of on-the-job leisure episodes is constructed as the number of spells spent on non-work activities while at work. Working time until consuming on-the-job leisure is computed by dividing the total amount of time spent working by the number of work spells in a given diary day.

**Table B5. Comparison of diaries with and without RTI information**

	With RTI Information		Without RTI Information	
	Mean	SD	Mean	SD
Time at work	8.642	(2.930)	8.796	(2.928)
Working time	7.633	(2.563)	7.513	(2.343)
Consumption of on-the-job leisure	1.008	(1.526)	1.283	(1.631)
Number of on-the-job leisure episodes	1.176	(1.130)	1.470	(1.167)
Working time until consuming on-the-job leisure	4.386	(2.786)	3.772	(2.383)
Number of total episodes in diary	26.300	(11.275)	22.566	(7.805)
Number of different activities in diary	11.678	(3.126)	11.164	(2.792)
Male worker	64.892	(47.736)	41.938	(49.351)
Secondary education	45.366	(49.790)	44.320	(49.682)
University education	42.233	(49.398)	64.315	(47.912)
in couple	74.175	(43.772)	73.015	(44.393)
At least one child in household	45.135	(49.768)	46.645	(49.893)
number of household children	0.821	(1.057)	0.833	(1.032)
Number of observations	4,952		4,386	

*Notes:* Standard deviations in parenthesis. Data come from the 1983, 2000 and 2015 UK time diary surveys. The sample are full-time workers aged 21-65. We select working days in which there are at least 60 minutes of market work activities, excluding commuting. *Consumption of on-the-job leisure* is the amount of time the respondent spends not working while at work. The *number of on-the-job leisure episodes* is constructed as the number of spells spent on non-work activities while at work. *Working time until consuming on-the-job leisure* is computed by dividing the total amount of time spent working by the number of work spells in a given diary day.