Happy Homemakers or Desperate Housewives?
Work, Parenthood and Women's Affective Well-Being

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Abstract

This paper analyzes how labor market status and motherhood relate to the affective well-being of women using Day Reconstruction Method data from the United Kingdom Time Use Survey 2014-15. Results indicate that women working full-time do not experience higher affective well-being throughout the day, as measured by the duration-weighted mean of self-reported enjoyment, than women in other labor market statuses. Indeed, women working part-time, self-employed women, homemakers and women on maternity leave are shown to have higher enjoyment scores than full-time employees. There is also a positive and significant correlation between motherhood and affective well-being. However, this relationship decreases in magnitude and becomes insignificant in some cases once the labor market status is controlled for, which could indicate that a shift towards labor market statuses that are more conducive to affective well-being mediates the relationship.

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1 Introduction

In the light of the burden imposed by demographic ageing, increasing labor force participation is a key policy goal for many developed countries (see, e.g., the Europe 2020 strategy published by the European Commission, 2010). Given the traditionally lower participation rates among women, encouraging female labor force participation is central to achieving these objectives. Simultaneously, the fertility rate is to be maintained or even increased. For families, this necessitates finding ways to combine working (full-time) with family life. While the strain on the social security systems might be decreased or lifted, it is not clear whether women themselves would benefit, in terms of subjective well-being, from higher (full-time) employment and birth rates. If women, and particularly those with childcare responsibilities, experience a reduction in subjective well-being due to (full-time) employment, then policies designed to increase female labor market participation might have a hidden cost in addition to or instead of a potential benefit in the form of female empowerment. To analyze these kinds of issues empirically and to further our understanding about the determinants of subjective well-being in general, the happiness literature typically utilizes responses to life satisfaction questions in large-scale household surveys. Since responding to these questions requires a cognitive process such as constructing a relevant reference point and comparing the own situation to it, these questions provide a (global) measure of the *cognitive* component of subjective well-being (Diener et al., 1985). The life satisfaction literature has largely come to the consensus that unemployment is detrimental to *cognitive well-being,* particularly for men (Winkelmann and Winkelmann, 1998, Kassenboehmer and Haisken-DeNew, 2009, Baetschmann et al., 2015). However, the evidence on whether (full-time) employment is beneficial for women when compared not only to unemployment but also to a variety of other labor market statuses, such as homemaking and part-time employment, is mixed (Stutzer and Frey, 2006, Haller and Hadler, 2006, Booth and van Ours, 2008/2009, Treas et al. 2011, Berger, 2013, Álvarez and Miles-Touya, 2016, Hamplová, 2018). Similarly, the empirical evidence on the relationship between parenthood and subjective well-being is inconclusive (Stanca, 2012, Umberson et al., 2013, Nelson et al., 2013, Myrskylä and Margolis, 2014, Baetschmann et al., 2016). In addition, when considering measures of the *affective* component of subjective well-being based on emotions experienced throughout the day, results also differ. For example, Knabe et al. (2010) show that unemployment is not associated with a reduction in *affective well-being* because working is typically among the lowest ranked activities in terms of emotional experience (see also Kahnemann et al., 2004, Bryson and MacKerron, 2016). These diverging

results warrant a further investigation into how motherhood and labor market status are related to the subjective well-being of women and in particular the affective component, where previous evidence in the economic literature is scarce.

The data necessary to analyze affective well-being can be collected using a variety of methods. Large-scale household surveys can include, in addition to the typical life satisfaction items, questions aimed at affective well-being[1]. However, other data collection methods such as the experience sampling method (ESM) and day reconstruction method (DRM) allow for a more detailed and immediate reading of affective well-being throughout the day[2]. Both methods match the experienced well-being to specific activities respondents are engaged in. In the DRM, which is used in this study, respondents are asked to complete a diary in which they record all activities they have been engaged in as well as the emotions they experienced during these activities (Kahneman et al., 2004). Even though the data is not necessarily recorded in the moment the emotions are experienced in, as ESM studies aim to do, it is collected shortly after, e.g., at the end of the day or on the next day, to minimize recall bias. Furthermore, unlike ESM, the DRM can provide a full reconstruction of the entire day. Kahneman et al. (2004) discuss the reliability of DRM data and provide a comparison to ESM and other measures of well-being.

This study investigates how motherhood and a woman's labor market status are related to her affective well-being using data from the United Kingdom Time Use Survey 2014-15 (UKTUS), which includes DRM diaries. The data on enjoyment experienced in activities throughout the day is used to construct a duration weighted mean enjoyment score for each individual on each diary day, which serves as the key measure of affective well-being in the analysis. Results suggest that mothers' affective well-being is higher compared to women without children. However, this positive relationship is reduced and is no longer statistically significant in several specifications once the labor market status is controlled for. This could indicate that a shift towards labor market statuses that are more conducive to affective well-being mediates the relationship. Contrary to most studies based on life satisfaction data, the results from the present analysis suggest that unemployed women are just as happy as those working full-time, confirming previous results based on DRM data by Knabe et al. (2010).

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[1] For example, the German Socioeconomic Panel (SOEP) contains the question: "How often [in the last four weeks] have you felt angry/worried/happy/sad?" to be evaluated on a five point scale from "very rarely" to "very often" (TNS Infratest Sozialforschung, 2016).
[2] For a discussion of the ESM see Larson and Csikszentmihalyi (2014) and for a discussion of the DSM see Kahneman et al. (2004)

Furthermore, women working part-time, self-employed women, homemakers and those on maternity leave are shown to have higher affective well-being than women working full-time, particularly when considering weekdays only. Lastly, there appears to be no significant change in affective well-being associated with being in each of these labor market statuses and simultaneously being a parent beyond the individual influences of these two factors, as the coefficients on interaction terms between labor market status and parenthood are insignificant in most cases.

The study contributes to the happiness literature in two ways. Firstly, by providing new affective well-being based evidence it complements earlier studies, which have focused primarily on cognitive well-being. This is interesting because the determinants of affective well-being are currently not as well understood in the economic literature as, e.g., the determinants of life-satisfaction. However, subjective well-being is multifaceted and results, which hold for one aspect of subjective well-being, might not hold for another. Considering only one measure in the literature, could potentially lead to precipitate conclusions. The present study contributes to our understanding of how the well-being measure used in the analysis influences the results. Secondly, by focusing specifically on the well-being of women and its relationship to motherhood *and* labor market status it considers an area of research where evidence is comparatively scarce and previous results are conflicting. Considering the increasing movement towards using subjective well-being data to inform policy (see, e.g., Diener and Seligman, 2004) gaining new insights is important in both regards. In this context, it should also be noted that an individual's (affective) well-being is not only of interest because it is relevant for that person's quality of life, but also for the quality of life of others. For example, children of mothers who have an affective illness face worse outcomes later in life (see Beardslee et al., 1998, for a review).

The remainder of the paper is structured as follows. Section 2 provides some theoretic background and reviews the existing literature on the influence of employment status and parenthood on well-being. The data set and methodology are outlined in Section 3, which also provides some descriptive statistics. The baseline estimation results are presented in Section 4. Section 5 covers extensions and robustness checks. Section 6 concludes.

2 Background and Literature Review

Employment and motherhood might increase or decrease women's subjective well-being. On the one hand, employment increases both household income, which should increase

subjective well-being, e.g., because it provides the financial resources to buffer adverse conditions (Cummins, 2000), and personal income, which might increase the woman's living situation further by strengthening her bargaining position within the household (Bittman et al., 2003). On the other hand, standard labor economics assumes a disutility of labor resulting in a leisure and consumption trade-off, which would imply that employment reduces well-being as long as income is held constant. However, employment may have other positive intangible effects related to norm fulfillment, self-esteem, social contacts and/or being engaged in meaningful activities, which would make employment a good in itself (Darity and Goldsmith, 1996). Similarly, the influence of motherhood is a priori ambiguous. While parents might enjoy spending time with their children (Musick et al., 2016), the household's financial needs and the household chores to be done increase. As a result, couples need to find ways to reconcile market work and household/family responsibilities. Despite changing gender norms, household duties fall disproportionately into the hands of women or are seized by them voluntarily, particularly when considering childcare (Lachance-Grzela and Bouchard, 2010, Craig and Mullan, 2011). Thus, working women and particularly working mothers have to fulfill several roles. On the one hand, the "role stress hypothesis" suggests that the demands imposed by combining work and family life become overwhelming, inducing stress and other negative emotions such as guilt if each role cannot be given adequate attention (Williams et al., 1991, Kinnunen and Mauno, 1998). Considering norms prescribing intensive childcare, mothers could be affected particularly strongly by these feelings (Guendouzi, 2006). On the other hand, considering the role "expansion hypothesis", working women/mothers could potentially derive happiness from both a fulfilling career and their role as a homemaker, which could outweigh any adverse effects (Nordenmark, 2002/2004). It is likely that cognitive and affective well-being measures are affected differently by these channels. For example, a working mother might be very satisfied about her life when thinking about how she contributes to household income, stands her ground at work and simultaneously manages to care of her family even though she experiences many episodes of stress, exhaustion and unhappiness during the day.

A multitude of studies using life satisfaction or global happiness questions have found a negative relationship between unemployment and life satisfaction, even after controlling for income (Winkelmann and Winkelmann, 1998, Blanchflower and Oswald, 2004, Haller and Hadler, 2006, Kassenboehmer and Haisken-DeNew, 2009, Knabe and Rätzel, 2011, Baetschmann et al., 2015). However, several studies have indicated gender differences, with unemployment affecting women less severely (see, e.g., Gerlach and Stephan, 1996), though results by Kassenboehmer and Haisken-DeNew (2009) point towards women responding more

strongly to involuntary entry into unemployment. Clark et al. (2008) investigate whether complete adaptation to a variety of life and labor market events occurs and find that women do not show any significant difference in life satisfaction due to unemployment after four years, while a permanent effect exists for men. Furthermore, the evidence on other labor market statuses, such as homemaking and part-time employment, which are particularly relevant when considering women, is varied. Several studies analyze data from the German Socio-Economic Panel (SOEP), but arrive at different conclusions due to changes in the subsamples and estimation methods used. Gerlach and Stephan (1996), Winkelmann and Winkelmann (1998) and Baetschmann et al. (2015) find that, like unemployment, non-participation reduces well-being. Gerlach and Stephan (1996) also show that the satisfaction of individuals in part-time employment falls between that of the unemployed and those in full-time employment, though there are gender differences. Kassenboehmer and Haisken-DeNew (2009) find no significant effect of entry into non-participation or being out of the labor force for women in West Germany, but a negative association between non-participation and satisfaction is present for men and for women in East Germany. When analyzing whether marriage increases well-being, Stutzer and Frey (2006) show that women benefit more from marriage if the traditional division of labor is implemented, indicating that homemaking is associated with a gain in life satisfaction.

Evidence based on other datasets is similarly mixed. Using the World Values Survey Haller and Hadler (2006) find homemakers to be happier, but not more satisfied, than employed individuals, highlighting that results depend on the well-being measure. Treas et al. (2011) provide cross-sectional evidence based on data from the International Social Survey Program indicating that homemaking and part-time employed wives are happier than full-time employees. However, the negative influence of full-time work is reduced by childcare availability and norms favoring working women. Considering Spanish data Álvarez and Miles-Touya (2016) find that, in dual-earner couples, women working part-time are more satisfied than those working full-time. Interestingly their results also suggest that downwards deviations from desired housework time appear to be particularly detrimental to women's subjective well-being. Booth and van Ours (2008) find using the British Household Panel Survey (BHPS) data that while life satisfaction is unaffected by the labor market status in childless couples both men and women are generally more satisfied when working if children are present. However, employed mothers are only more satisfied, if their job involves working 40 hours or less. In the companion study using the Household, Income and Labour Dynamics in Australia Survey (HILDA) Booth and van Ours (2009) find that women are more satisfied in non-employment

than working between 35 and 50 hours, while the opposite is true for men. Those working fewer hours are just as satisfied as those without employment.

Few studies focus specifically on mothers. Applying fixed effects estimation to SOEP data Berger (2013) finds that mothers in family-related non-participation and those employed part-time are less satisfied than full-time employees. While roughly half of this effect can be attributed to the associated reduction in household income, Berger attributes the remaining effect to deviations from desired labor supply due to institutional and social constraints. Contrary to these results, Hamplová (2018) finds, using a subsample of mothers with children under three in the European Social Survey (ESS), that homemakers have higher subjective well-being than full-time workers. However, there is no significant difference in subjective well-being between homemakers and part-time employees.

When considering affective well-being throughout the day, rather than life satisfaction or global happiness measures, the dominant view that (full-time) employment is necessarily beneficial for happiness is further challenged. Using DRM data Knabe et al. (2010) find the affective well-being of unemployed individuals to not differ significantly from that of the employed. Even though the unemployed tend to be less happy in the same activities ('saddening effect') this is counteracted by the unemployed spending more time in enjoyable activities ('time-composition effect'). However, when considering life satisfaction within the same sample, there is a negative relationship between unemployment and life satisfaction. In a related study, Hoang and Knabe (2019) find that average enjoyment of the unemployed is actually higher than of the employed in the UKTUS. Furthermore, Wolf et al. (2019) find that the employed report fewer pleasurable minutes in their day due to the presence of working episodes. However, they also show that meaning is a key determinant of how pleasant an episode of work is. Using data from a smartphone based ESM study Bryson and MacKerron (2016) also find that working is the second lowest ranked activity (after being sick in bed) and that working is associated with a reduction in currently experienced happiness, whether one takes individual fixed effects into account or not. Kahneman et al. (2004) find similar results. Contrary to these results, Krueger and Mueller (2012) find in their DRM study of initially unemployed workers in New Jersey that reemployment is associated with a decrease in sadness and stress as well as an increase in happiness, once fixed effects are controlled for. To ensure that these results are not driven by a "honeymoon phase" (as individuals were followed for 6 months or less), the authors also consider data from the American Time Use Survey (ATUS),

which is a representative cross section, and find a significant relationship only between employment and sadness (as well as the additional affects pain and tiredness).

The evidence on the relationship between parenthood and well-being is also mixed even though Umberson et al. (2013) conclude in their review article on the relationship between family status and mental health that "having minor children is detrimental to mental health" (p.423). Nomaguchi and Milkie (2003) highlight that there are both costs and benefits associated with parenthood, which also vary by gender and marital status. In a twin study, Kohler et al. (2005) find that women experience a gain in life-satisfaction due to a first-born child. Clark et al. (2008) also investigate childbirth in their study on life events and find that it is not associated with a significant long-term change in life satisfaction, though women experience higher satisfaction in the year of and one year prior to the birth. Using the World Values Survey Stanca (2012) finds a negative relationship between parenthood and life satisfaction in a pooled cross section, even after controlling for factors such as labor market status, income and marital status, which is explained via a large reduction in financial satisfaction associated with parenthood. However, non-financial satisfaction (the residual in a regression of life satisfaction on financial satisfaction) is higher for parents. In contrast, using fixed effects regressions on data from the SOEP and BHPS Myrskylä and Margolis (2014) find that the birth of a child is associated with an increase in happiness, including a positive anticipation effect. However, happiness typically reverts to before-child levels after one year. When investigating effect heterogeneity, they find that the increase in happiness is higher in older and, in the case of men, more educated parents. Cetre et al. (2016) use data from the Gallup World Poll, the European Social Survey and the SOEP and find that having children is associated with higher subjective well-being based on a Cantril ladder question only in developed countries. However, results vary when other (including affective well-being) measures are used. In addition, they find evidence of happier individuals selecting into parenthood, as individuals who will never have children are already less happy initially and remain less happy throughout their lives. Using both a life event specification as well as matching techniques, Baetschmann et al. (2016) find that motherhood affects satisfaction positively and that this effect, even though it does decrease as time passes, remains significant over several years. They also confirm the result that older mothers benefit more.

Using the World Values Survey and data from ESM and DRM surveys Nelson et al. (2013) find that parents' cognitive evaluations of their life are more positive than non-parents' and that parents experience higher affective well-being day-to-day. However, the difference in

well-being is more pronounced in the case of fathers and insignificant for some measures when considering only women. Additionally, Nelson et al. (2013) also find that caring for children is associated with more positive emotions than being engaged in other activities parents performed throughout the day. However, Bhargava et al. (2014) note that parents' higher (affective) well-being can be explained fully by omitted factors such as marital status, age and income. Kahnemann et al. (2004) find that taking care of own children is ranked lower than many other activities in terms of positive affect and displays the second highest negative affect score (after working). On the other hand, Musick et al. (2016) find in the ATUS that parents generally experience higher subjective well-being in activities with children.

3   Data and Methodology

To investigate the affective well-being of women, this study uses data from the United Kingdom Time Use Survey 2014-15 (Gershuny and Sullivan, 2017), which is a household survey focusing on how individuals in the United Kingdom spend their time. The data was collected between April 2014 and October 2015. The UKTUS consists of a household interview and an individual interview of each household member, which provide demographic and socioeconomic information, as well as time use diaries, in which the respondents (household members aged 8 and above) record their daily activities. Within the UKTUS, two types of time use diaries were handed out, only one of which prompted the respondents to state how much they enjoyed each episode. Given the focus on affective well-being, only individuals who received these DRM diaries are considered. The diaries cover one entire day (24 hours starting at 4am) in 10-minute intervals. For each 10-minute period respondents are requested to record their primary activity and the enjoyment they felt during the episode on a scale from 1 "didn't enjoy the period at all" to 7 "enjoyed it very much". In addition, they were asked about secondary activities, whether they used an ICT device (smartphone, tablet or computer), where they were and whether they were alone or whether other people were also present. Respondents were asked to complete two diaries, one on a weekday and one on a weekend. The dates were randomly allocated.

The primary measure of affective well-being used in this study is a summary measure given by the duration-weighted mean of self-reported enjoyment (dwh_i) given by

$$dwh_i = \sum_{e=1}^{E_i} f_{ei} H_{ei}$$

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where i denotes the diary (i.e., a person-day observation), $e \in \{1, \ldots, E_i\}$ denotes the episode, f_{ei} the fraction of the reported time spent in episode e in diary i and H_{ei} the reported enjoyment level in episode e in diary i. Since episodes have different lengths, the total number of episodes E_i varies across person-day observations. Lastly, $f_{ei} = d_{ei} / \sum_{e=1}^{E_i} d_{ei}$ where d_{ei} is the duration of episode e in diary i. To avoid lengthy descriptions, the variable dwh_i will be referred to as *mean enjoyment or enjoyment score* throughout the remainder of the study.

A number of sample restrictions are applied to facilitate the analysis. This study focusses exclusively on women, thus, men are dropped from the sample. The sample is further restricted to only consider households consisting of a single or a married/cohabiting couple with or without children. Thus, individuals living in multigenerational households, apartment-sharing communities and institutional homes are omitted from the sample. Since a key area of interest of this study is the labor market status of individuals that could be working and could have a child living with them, two additional sample restrictions are applied. Firstly, the sample is restricted to individuals between (and including) the age of 18 and 55. Secondly, the sample considers only individuals that are working (full-time or part-time), unemployed, self-employed, looking after the home/family or on maternity leave. Individuals who are retired, in full-time education, long-term disabled or sick or not working for other reasons are excluded from the sample as well as those whose labor market status is unknown. Lastly, women who state that some person in the household is their parent are also dropped from the sample, to ensure that no adult children living within their parents' home are included in the sample. After applying these sample restrictions, the sample consists of 2,365 person-day observations, for which diary data including enjoyment levels are available.

All variables identifying parents or the presence of children are derived directly from the information given in the household questionnaire. In particular, the variable "parent" is a dummy variable equal to one if the respective respondent is recorded to be the parent/ guardian, step-parent or foster parent of any other household member and zero otherwise[3]. Grandparents living in the same household are not picked up by the parent variable, as all multigenerational households were previously dropped from the sample, as noted above. The dummy variables capturing the presence of children in a certain age group *only consider the age of the youngest child* and are coded to be mutually exclusive. Thus, no distinction is made depending on the

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[3] Individuals who are not a mother according to this definition are referred to as 'childless women' or 'childless individuals' throughout this study. These brief terms are used for ease of exposition, but it should be noted that these women could still have (adult) children living outside of the household.

age of older children. A family with two children, one aged 2 and the other aged 10, would thus be picked up only by the dummy variable "Kids 1-3", but not by "Kids 4-15". The labor market status dummies are largely based on the derived economic activity variable provided in the UKTUS, which in turn is based on a number of individual questions. In this variable, an individual is defined as working if they did "any paid work in the previous 7 days ending last Sunday" or if they reported having a job they were away from. The distinction between full-time employees, part-time employees and self-employed individual is then based on self-reports. Unemployment is defined according to the ILO definition. If an individual is in neither of these categories and states that they consider themselves as mainly doing domestic work (housekeeping, taking care of children, etc.) they are defined as "looking after family/home" or, in the present study, as a homemaker. Other labor market statuses recorded in this derived variable are not considered in this study. However, due to the nature of the investigation every woman reporting being on maternity leave is assigned to this specific group, irrespective of whether she would be in another category based on the previous definitions.

Even though the dataset containing the DRM data is technically a panel dataset, as it covers one weekday and one weekend day for each respondent, it is treated as a cross-sectional dataset throughout this study because all variables of interest are constant across the two observation days except the one capturing the type of day. As a result, the analysis applies standard OLS estimation of the enjoyment score variable on the respective set of explanatory variables, most importantly the variables capturing parenthood and the labor market status. Since the primary sampling unit of the study are postcode sectors, standard errors are clustered at the postcode level[4].

Table 1 reports estimated means of the enjoyment score variable, applying the diary weights supplied by the UKTUS, and their standard errors for various sub-groups. Pooling all observations, the estimated enjoyment score is 5.68 on a scale between 1 and 7. Column (7) reports the difference in means between mothers and childless women. Overall, mothers are happier throughout the day than childless women. Even though the difference in the point estimates is only 0.14, the difference in means is statistically significant at the 1% level. However, this is not the case across all employment statuses. For example, the point estimates suggest that self-employed and homemaking parents are unhappier than their childless counterparts, though the differences are not statistically significant. Considering the relationship between happiness and labor market status without distinguishing by the presence

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[4] There are around 480 clusters, with small changes depending on the specification.

of (potentially adult) children those employed full-time have the lowest estimated mean enjoyment score. Furthermore, when conducting pairwise tests for equality of means between full-time employees and individuals in other employment statuses in column (8), the difference in means is statistically significant at the 5% level in all cases except for unemployment where the p-value is equal to roughly 0.3. Homemakers and those on maternity leave are the happiest. However, the difference in means between these labor market statuses and part-time employment, self-employment and unemployment is not statistically significant. For reference, the sample means and standard deviations of mean enjoyment as well as the sample size in the UKTUS for each of these sub-groups are reported in Table A.1. in Appendix 1. To gain a better understanding of the relationship between a woman's affective well-being and her labor market status as well as motherhood a number of multiple regression analyses will be conducted in the next section.

Table 1: Estimated Mean Affective Well-Being and Difference in Means Tests

	(1) Kids u. 1	(2) Kids 1-3	(3) Kids 4-15	(4) No Parent	(5) Parent	(6) All	(7) Diff. (Parent)	(8) Diff (Lab. Sta.)
Full-time	5.786	5.752	5.577	5.499	5.636	5.553	0.137*	-
	(0.238)	(0.105)	(0.068)	(0.050)	(0.054)	(0.036)	(0.075)	-
Part-time	5.692	5.626	5.808	5.732	5.747	5.743	0.015	0.189***
	(0.222)	(0.096)	(0.065)	(0.082)	(0.055)	(0.045)	(0.099)	(0.058)
Self-employed	5.645	5.485	5.804	5.829	5.701	5.757	-0.128	0.203***
	(0.492)	(0.129)	(0.097)	(0.127)	(0.079)	(0.073)	(0.148)	(0.078)
Unemployed	6.296	5.764	5.686	5.658	5.738	5.704	0.079	0.151
	(0.402)	(0.377)	(0.286)	(0.184)	(0.207)	(0.144)	(0.275)	(0.144)
Homemaker	5.863	5.917	5.746	6.023	5.824	5.838	-0.200	0.285***
	(0.125)	(0.115)	(0.082)	(0.160)	(0.065)	(0.061)	(0.178)	(0.072)
Maternity Leave	5.867	5.658	-	-	5.858	5.858	-	0.304***
	(0.099)	(0.519)	-	-	(0.098)	(0.098)	-	(0.103)
All	5.842	5.729	5.710	5.590	5.733	5.675	0.143***	-
	(0.073)	(0.056)	(0.038)	(0.041)	(0.030)	(0.025)	(0.050)	-

Standard errors in parentheses (clustered at postcode level)
For difference in means test: *** p<0.01, ** p<0.05, * p<0.1
Source: UKTUS 14/15, own calculations, sampling weights were applied

However, in interpreting the descriptive evidence above, as well as the regression results below, it should be kept in mind that any overall change in the duration weighted mean enjoyment can, in broad terms, be explained via two distinct underlying changes, which are directly related to how the measure was constructed. As noted by Knabe et al. (2010) in their analysis of the influence of unemployment on affective well-being, either the enjoyment associated with each activity changes ('saddening/cheering effect') or how much time an individual spends in enjoyable/unenjoyable activities changes ('time-composition effect') or both. To illustrate this point in the context of the present study, this decomposition is applied

to explain the difference in duration weighted mean enjoyment between mothers and women without children. The analysis suggests that there is both a cheering as well as a time-composition effect, with the former generally being larger than the latter, though the relative magnitude depends on the decomposition applied. Full results and a detailed outline of the decomposition can be found in Appendix 2. In addition, the mean time spent on and enjoyment experienced in the various activities by different subgroups can be found in Appendix 3.

4   Regression Results

Table 2 reports regression results using different sets of explanatory variables in the full sample, all of which control for age and age squared to account for a U-shaped relationship between age and happiness (Blanchflower and Oswald, 2008, Knabe et al., 2010). Motherhood is always positively associated with affective well-being; however, the respective coefficient is only significant in column (1), which only controls for age. Compared to full-time employees, which always serves as the default group, there is also a positive and significant association between the enjoyment score and all other included employment statuses, with the exception of unemployment. In particular, conditional on age, homemakers' enjoyment scores are 0.25 points higher than that of full-time employees. Particularly for women, parenthood and labor market status are correlated. On the one hand, some labor market statuses, such as maternity leave, might simply capture the joy of being a parent in column (2). On the other hand, motherhood could influence the labor market status and, in turn, affective well-being through a labor market status channel. For example, mothers are more likely to be homemakers (see table A.1 in Appendix 1), which have higher enjoyment scores. While the coefficients on the labor market status dummies are reduced when controlling for motherhood in column (3) and additional control variables in column (4), all previously significant coefficients remain significant. Thus, there is a positive association beyond what can be explained via the joys of motherhood. Contrariwise, the coefficient on the parent dummy decreases considerably in magnitude and statistical significance. These results are in line with the suspicion that changes in labor market status mediate the increase in affective well-being associated with motherhood. If motherhood indeed induces changes in labor market status, which in turn increases affective well-being, then the effect of motherhood might be (partially) masked in regressions controlling for labor market status. It is a matter of normative judgement whether this hypothesized labor market status channel should be filtered out or not. Finally, it should be acknowledged that, particularly when considering maternity leave and homemaking, the labor market status

variables could still capture having young children rather than teenagers. The influence of the age of children is analyzed in an extension in Section 5.

Table 2: OLS Regression Results

	(1)	(2)	(3)	(4)	(5)
		Dependent Variable: Duration Weighted Mean Enjoyment			
Parent	0.160***		0.080	0.060	0.089
	(0.048)		(0.052)	(0.052)	(0.065)
Part-time		0.194***	0.170***	0.146***	0.178*
		(0.051)	(0.054)	(0.053)	(0.094)
Self-employed		0.161**	0.148*	0.156*	0.238*
		(0.076)	(0.077)	(0.081)	(0.125)
Unemployed		0.136	0.122	0.078	0.006
		(0.134)	(0.134)	(0.139)	(0.227)
Homemaker		0.249***	0.211***	0.171**	0.292
		(0.067)	(0.071)	(0.075)	(0.204)
Maternity Leave		0.240**	0.198*	0.200*	0.181
		(0.104)	(0.109)	(0.120)	(0.124)
Parent*Part-time					-0.056
					(0.116)
Parent*Self-employed					-0.146
					(0.156)
Parent*unemployed					0.112
					(0.275)
Parent*homemaker					-0.145
					(0.218)
Constant	6.534***	6.148***	6.329***	6.284***	6.267***
	(0.364)	(0.353)	(0.368)	(0.403)	(0.408)
Day of the week dummies	no	no	no	yes	yes
Region dummies	no	no	no	yes	yes
Marital status dummies	no	no	no	yes	yes
Education dummies	no	no	no	yes	yes
Migration dummy	no	no	no	yes	yes
Age and age squared	yes	yes	yes	yes	yes
Observations	2,365	2,365	2,365	2,347	2,347
R-squared	0.010	0.018	0.020	0.090	0.091

Standard errors in parentheses (clustered at postcode level), *** $p<0.01$, ** $p<0.05$, * $p<0.1$
Source: UKTUS 14/15, own calculations

Column (5) adds interaction terms between motherhood and all labor market statuses, with the exception of maternity leave, which always coincides with parenthood[5]. None of these interaction terms are significant, suggesting no change in mean enjoyment associated with being both a parent and in the respective labor market status beyond the sum of the two individual contributions. However, the point estimates themselves are comparatively large and some coefficients of interest change quite substantially compared to column (4). The labor

[5] Stillbirths and infant mortality could technically cause a childless woman to be on maternity leave, but no such case is included in the study.

market status coefficients now capture changes in enjoyment associated with being in the respective status and childless rather than a childless full-time employee and remain positive and significant only for part-time and self-employment. To investigate whether being in another labor market status rather than full-time employment is also associated with an increase in the enjoyment score for parents, post estimation testing is required. The null hypothesis $\beta_{lms} + \beta_{lms*parent} = 0$, where *lms* refers to the respective labor market status, can be rejected at the 10% level for part-time employment and homemaking, implying that mothers in these labor market statuses have significantly higher enjoyment scores than mothers who work full-time. When considering the affective well-being of parents in a particular labor market status compared to childless full-time employees, by testing the null hypothesis $\beta_{parent} + \beta_{lms} + \beta_{lms*parent} = 0$, the point estimate is always positive and only insignificant at the 10% level in the case of unemployment. Detailed results are available in Appendix 4.

Since for employed/self-employed individuals the structure of the day changes significantly depending on whether it is a working day, the enjoyment score and how it relates to the employment status is likely affected by the type of day. For employed individuals the diary data allows the identification of working days. However, for those without a job, it is impossible to separate the diaries into counterfactual "working days" and "non-working days". Thus, a distinction between weekday and weekend is applied as a proxy. In this study the mean enjoyment score on a weekday is equal to 5.601 while it increases to 5.835 on the weekend. The difference is statistically significant at the 1% level.

Table 3 re-estimates the results from Table 2 after separating the sample by weekday and weekend. The difference in coefficient estimates between weekdays and weekends is striking. On weekends, all key coefficients are smaller in magnitude and almost all of them are insignificant. Consequently, the coefficient estimates for weekdays are generally larger than in the pooled sample, including the one on the parent dummy, which now remains significant even after controlling for employment status. The positive and significant coefficient on the parent dummy in column (5), which includes interaction terms, implies that (at least on weekdays) women working full-time are happier if they are mothers. This might suggest that instead of experiencing role conflict, full-time working mothers actually benefit from motherhood. For women in other labor market statuses, with the exception of unemployment, the positive relationship between parenthood and affective well-being is reduced, as the interaction terms are negative, and even becomes negative for example in the case of self-employment.

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Table 3: OLS-Regression Results Differentiated by the Kind of Day

	(1) weekday	(2) weekend	(3) weekday	(4) weekend	Dependent Variable: Duration Weighted Mean Enjoyment (5) weekday	(6) weekend	(7) weekday	(8) weekend	(9) weekday	(10) weekend
Parent	0.233***	0.087*			0.118**	0.042	0.102*	0.019	0.182**	-0.005
	(0.054)	(0.050)			(0.058)	(0.056)	(0.059)	(0.057)	(0.074)	(0.070)
Part-time			0.242***	0.146***	0.206***	0.133**	0.180***	0.111*	0.297***	0.061
			(0.059)	(0.055)	(0.061)	(0.060)	(0.061)	(0.058)	(0.104)	(0.110)
Self-employed			0.223**	0.098	0.204**	0.091	0.213**	0.099	0.392***	0.085
			(0.092)	(0.083)	(0.093)	(0.084)	(0.098)	(0.087)	(0.141)	(0.137)
Unemployed			0.237	0.036	0.216	0.028	0.161	-0.006	0.076	-0.066
			(0.147)	(0.142)	(0.147)	(0.143)	(0.152)	(0.149)	(0.258)	(0.239)
Homemaker			0.381***	0.118*	0.324***	0.097	0.276***	0.066	0.409*	0.172
			(0.072)	(0.070)	(0.076)	(0.076)	(0.083)	(0.079)	(0.216)	(0.223)
Maternity Leave			0.370***	0.112	0.308***	0.090	0.323**	0.077	0.270**	0.090
			(0.111)	(0.117)	(0.115)	(0.122)	(0.130)	(0.131)	(0.135)	(0.134)
Parent*Part-time									-0.190	0.079
									(0.128)	(0.131)
Parent*Self-employed									-0.321*	0.030
									(0.192)	(0.170)
Parent*Unemployed									0.118	0.108
									(0.308)	(0.291)
Parent*Homemaker									-0.185	-0.103
									(0.233)	(0.236)
Constant	6.670***	6.383***	6.098***	6.186***	6.366***	6.281***	6.277***	6.036***	6.217***	6.062***
	(0.433)	(0.372)	(0.419)	(0.364)	(0.429)	(0.386)	(0.471)	(0.426)	(0.476)	(0.437)
Day of the week dummies	no	no	no	no	no	no	yes	yes	yes	yes
Education dummies	no	no	no	no	no	no	yes	yes	yes	yes
Marital status dummies	no	no	no	no	no	no	yes	yes	yes	yes
Region dummies	no	no	no	no	no	no	yes	yes	yes	yes
Migration dummy	no	no	no	no	no	no	yes	yes	yes	yes
Age and age squared	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	1,184	1,181	1,184	1,181	1,184	1,181	1,175	1,172	1,175	1,172
R-squared	0.018	0.005	0.034	0.009	0.037	0.009	0.095	0.057	0.099	0.057

Standard errors in parentheses (clustered at postcode level), *** p<0.01, ** p<0.05, * p<0.1
Source: UKTUS 14/15, own calculations

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These negative point estimates also raise the question whether the estimated positive relationship between these labor market statuses (compared to full-time employment) remains significant for parents ($H_0: \beta_{lms} + \beta_{lms*parent} = 0$). The null hypothesis can only be rejected in the case of homemaking (5%-level), suggesting that stay-at-home mothers have higher affective well-being than mothers working full-time. The same is true for maternity leave, however here the coefficient can be interpreted directly. Furthermore, there is a significant increase in affective well-being associated with being a parent *and* in the respective labor market position ($H_0: \beta_{lms} + \beta_{parent} + \beta_{lms*parent} = 0$) in all cases. Lastly, being a parent is not associated with a significant change in affective well-being in other labor market statuses than full-time employment, as the null hypothesis $H_0: \beta_{parent} + \beta_{lms*parent} = 0$ cannot be rejected in any of the cases. Full results can be found in Appendix 4. Results from Table 2 and Table 3 are also re-estimated using the sampling weights provided by the UKTUS in Appendix 5. The estimates in the pooled sample are affected more than those distinguishing between weekdays and weekends. This is because weekends are oversampled compared to weekdays and, thus, information from weekends is given less weight in the pooled sample when using weights.

Collectively these results indicate that women either benefit or are at least not worse off, in terms of affective well-being, if they are not working full-time. However, this appears to be primarily true for women without children. This could be explained by mothers substituting market work for household work, while women without children use gains in time available outside of market work for more enjoyable activities. While homemakers generally have higher affective well-being, mothers working full-time do not appear to be affected particularly negatively by having to balance a career and childcare, as they are happier than or equally happy as childless women working full-time. Within the group of full-time employees mothers experience significantly higher enjoyment while working, but also spend significantly fewer minutes on an average weekday on this still comparatively low enjoyment activity (see table A.5 in the Appendix). This could (at least partially) explain the positive relationship between motherhood and affective well-being. In addition to the insignificant coefficients on weekends, this could be another indication that the time spent at work and the associated enjoyment level drive many results presented so far. As a further tentative investigation into this issue, some regressions were re-estimated after dropping all time spent on employment, breaks at work and commuting from the analysis. This results in the parent dummy and labor market status dummies becoming insignificant in all cases, further supporting the hypothesis that the time

actually spent on employment related activities is a key determinant of affective well-being and drives many results in this study (see Appendix 6 for detailed results).

Three additional points should be considered when interpreting the previous results. Firstly, as noted in Section 2 and illustrated in Appendix 2, changes in the enjoyment score can be brought about by a change in the enjoyment experienced in certain activities but also by individuals having/choosing to change on what activates they spend their time. Secondly, it must be acknowledged that the analysis cannot establish a causal relationship. Some controls are added in the regression to explicitly model certain characteristics of an individual, such as education and marital status, which might be correlated with both parenthood/employment status and affective well-being. However, there is no way of ensuring that the estimated conditional correlations are not driven by unobserved heterogeneity. Particularly selection of happier individuals into certain labor market statuses or parenthood is a concern (Stutzer and Frey, 2006, Cetre et al., 2016). Thirdly, there could be substantial differences in results depending on the specific well-being measure used. Some tasks, such as working, might score low in terms of enjoyment but might have a positive impact on life satisfaction, an overall feeling of worthwhileness or even other positive or negative emotions experienced during these activities.

To address this last point Table 4 reports results using a measure of life satisfaction[6] as the dependent variable instead of the affective well-being measure used throughout this study. The differences in the estimation results are striking. There is no significant relationship between parenthood and life satisfaction, even without labor market status controls. Furthermore, the coefficients on those labor market statuses that are positively related to affective well-being are no longer significant when using life satisfaction, with the exception of maternity leave. In addition, the well-known negative relationship between unemployment and life satisfaction is also found in all specifications. These results show clearly that, even within the same sample of individuals, results on affective well-being differ substantially from results based on life satisfaction. Thus, it is unlikely that any differences between the results in this study compared to life satisfaction based studies is only due to the smaller sample size and cross-sectional estimation method.

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[6] During the survey period the satisfaction question was changed from a 7-point scale (April 2014 - September 2014) to an 11-point scale (October 2014 - October 2015). If data on the 7-point scale is available, the responses are rescaled such that the lowest and the highest possible values coincide with the 11-point scale and the intermediate values are equally spaced between the extremes.

Table 4: OLS Results, Combined Life Satisfaction

	Dependent Variable: Life-Satisfaction				
	(1)	(2)	(3)	(4)	(5)
Parent	0.081		-0.056	-0.059	-0.024
	(0.118)		(0.135)	(0.135)	(0.188)
Part-time		0.117	0.134	0.083	0.230
		(0.127)	(0.140)	(0.145)	(0.228)
Self-employed		0.048	0.056	-0.046	-0.131
		(0.215)	(0.218)	(0.221)	(0.389)
Unemployed		-1.285***	-1.276***	-1.227***	-1.041*
		(0.387)	(0.389)	(0.371)	(0.571)
Homemaker		0.213	0.240	0.152	-0.287
		(0.160)	(0.174)	(0.187)	(0.547)
Maternity Leave		1.023***	1.051***	0.854***	0.837***
		(0.204)	(0.222)	(0.215)	(0.231)
Parent*Part-time					-0.212
					(0.298)
Parent*Self-employed					0.130
					(0.466)
Parent*Unemployed					-0.325
					(0.764)
Parent*Homemaker					0.453
					(0.585)
Constant	9.264***	9.268***	9.147***	8.882***	8.784***
	(0.930)	(0.880)	(0.945)	(1.025)	(1.050)
Education dummies	no	no	no	yes	yes
Marital status dummies	no	no	no	yes	yes
Region dummies	no	no	no	yes	yes
Migration dummy	no	no	no	yes	yes
Age and age squared	yes	yes	yes	yes	yes
Observations	1,096	1,096	1,096	1,089	1,089
R-squared	0.011	0.043	0.043	0.094	0.095

Robust standard errors in parentheses (clustered at postcode level), *** $p<0.01$, ** $p<0.05$, * $p<0.1$
The life-satisfaction variable is harmonized
Source: UKTUS 14/15, own calculations

5   Robustness and Extensions

Age of Children

So far, the analysis was only concerned with *whether* a respondent is the mother of any other household member. Table 5 reports the results for a series of regressions aimed at investigating the role of the child(ren)'s age by including a number of interaction terms between the parent dummy and various dummies capturing the age of the youngest child. The coefficients on the labor market status dummies are largely unaffected by the inclusion of these variables instead of the simple parent dummy, indicating that they cannot be explained by the enjoyment associated with having young children.

Having only children aged 16 and above is not associated with an increase in affective well-being compared to not having any children in the household, as the point estimate is consistently negative and highly insignificant. There do not appear to be substantial systematic differences in affective well-being depending on the specific age bracket the youngest child below 16 falls into. However, without controlling for labor market status having a baby is associated with a somewhat lager increase in affective well-being compared to other age groups.

Table 5 Regression Results Controlling for Age of Children

	Dependent Variable: Duration Weighted Mean Enjoyment					
	(1)	(2)	(3)	(4)	(5)	(6)
	any day	weekday	any day	weekday	any day	weekday
Parent (kids u.16)	0.073	0.116*				
	(0.053)	(0.060)				
Parent (kids u.1)			0.073	0.114	0.184**	0.300***
			(0.120)	(0.130)	(0.090)	(0.099)
Parent (kids 1 to 3)			0.084	0.102	0.154**	0.207***
			(0.070)	(0.082)	(0.067)	(0.078)
Parent (kids 4 to 15)			0.068	0.122*	0.119**	0.197***
			(0.056)	(0.062)	(0.053)	(0.060)
Parent (kids o. incl. 16)	-0.079	-0.056	-0.080	-0.054	-0.056	-0.019
	(0.152)	(0.161)	(0.152)	(0.161)	(0.153)	(0.162)
Part-time	0.143***	0.177***	0.142***	0.179***		
	(0.053)	(0.061)	(0.053)	(0.061)		
Self-employed	0.154*	0.211**	0.154*	0.211**		
	(0.081)	(0.098)	(0.081)	(0.098)		
Unemployed	0.074	0.158	0.075	0.157		
	(0.139)	(0.151)	(0.139)	(0.151)		
Homemaker	0.165**	0.269***	0.163**	0.272***		
	(0.075)	(0.083)	(0.077)	(0.085)		
Maternity Leave	0.196	0.319**	0.198	0.320*		
	(0.121)	(0.131)	(0.155)	(0.172)		
Constant	6.330***	6.325***	6.321***	6.338***	6.384***	6.433***
	(0.405)	(0.474)	(0.411)	(0.483)	(0.412)	(0.495)
Day of the week dummies	yes	yes	yes	yes	yes	yes
Region dummies	yes	yes	yes	yes	yes	yes
Marital status dummies	yes	yes	yes	yes	yes	yes
Education dummies	yes	yes	yes	yes	yes	yes
Migration dummy	yes	yes	yes	yes	yes	yes
Age and age squared	yes	yes	yes	yes	yes	yes
Observations	2,347	1,175	2,347	1,175	2,347	1,175
R-squared	0.091	0.096	0.091	0.096	0.084	0.083

Robust standard errors in parentheses (clustered at postcode level), *** $p<0.01$, ** $p<0.05$, * $p<0.1$
Source: UKTUS 14/15, own calculations

Age of Mother at Last Birth

All regressions reported above control for age (and age squared). In order to provide a cursory investigation into whether the relationship between parenthood and affective well-being also varies with the age of the parent, two dummy variables are constructed based on the parent dummy and the age at last (observed) birth, which is approximated by:

$$age\ at\ last\ birth = \ current\ age - age\ of\ youngest\ child.$$

A parent is defined as an "old parent", if the age at last birth was strictly above 35 and a "young parent" otherwise. Results reported in Table 6 column (1) and (2) indicate that there is a positive relationship between motherhood and affective well-being only for young mothers when controlling for labor market status. Furthermore, the young parent dummy is significant even in the full sample, while the pooled parent dummy is not in Table 2 column (4).

Alternative Definition of Motherhood

As described in Section 3 the construction of the parent dummy only considers whether the respondent is the mother of another household member. This is because this study is mainly about the influence of living with children, but also because in the data it is impossible to identify whether an individual ever had a child. However, it is possible to extend the parent dummy by the additional 19 women, without children living in the household, who report an episode of childcare or playing with their own child as well as those who report having a minor child living outside of the household they are still in contact with. The results are virtually unchanged when using this extended instead of the original parent dummy, as can be seen in Table 6 column (3) and (4).

Defining Part-Time and Full-Time by Number of Hours

The distinction between part-time and full-time employment used throughout this study is based exclusively on the respondent's unguided self-report. This might be unsatisfactory because some individuals might perceive their job as "part-time" while others would define the same job as "full-time" and vice versa. For this reason, an alternative part-time dummy variable is constructed based on the response to the questions "How many hours per week do you usually work in your main/ all other job(s)/business? Please exclude meal breaks." Those usually working in total 30 hours or less are defined as working part-time. Applying this new definition results in a substantial change in who is defined as part-time employed. Of the 622 individuals who were previously defined as part-time employed 40 no longer fall into this category under the new definition, while 104 newly join this group, leading to 684 part-time employees under

the new definition[7]. In Table 6 column (5) and (6) the coefficient estimates on all included labor market status dummies is larger compared to Table 2 column (4) and Table 3 column (7). Furthermore, the coefficient on the parent dummy reduces in size and is no longer significant on weekdays. Even though these changes are fairly small in magnitude, they may provide another indication that the time actually spent at work is a key driver of affective well-being and might explain the positive influence of parenthood.

Table 6 OLS Results Differentiating by Age at Last Birth and Alternative Variable Generation

	Dependent Variable: Duration Weighted Mean Enjoyment					
	(1) any day	(2) weekday	(3) any day	(4) weekday	(5) any day	(6) weekday
Young parent	0.100*	0.133**				
	(0.057)	(0.065)				
Old parent	-0.037	0.028				
	(0.073)	(0.079)				
Extended parent			0.056	0.101*		
			(0.052)	(0.058)		
Parent					0.047	0.083
					(0.052)	(0.058)
Part-time (hours)					0.179***	0.233***
					(0.052)	(0.061)
Part-time (self-reported)	0.146***	0.180***	0.147***	0.181***		
	(0.052)	(0.061)	(0.052)	(0.061)		
Self-employed	0.164**	0.220**	0.157*	0.214**	0.177**	0.244**
	(0.081)	(0.098)	(0.080)	(0.097)	(0.080)	(0.097)
Unemployed	0.090	0.170	0.076	0.156	0.096	0.188
	(0.138)	(0.150)	(0.140)	(0.152)	(0.140)	(0.152)
Homemaker	0.176**	0.280***	0.174**	0.279***	0.197***	0.313***
	(0.074)	(0.082)	(0.074)	(0.082)	(0.076)	(0.086)
Maternity Leave	0.199	0.322**	0.203*	0.325**	0.226*	0.360***
	(0.121)	(0.131)	(0.120)	(0.130)	(0.119)	(0.130)
Constant	6.240***	6.245***	6.293***	6.284***	6.307***	6.290***
	(0.404)	(0.473)	(0.400)	(0.470)	(0.403)	(0.470)
Day of the week dummies	yes	yes	yes	yes	yes	yes
Education dummies	yes	yes	yes	yes	yes	yes
Marital status dummies	yes	yes	yes	yes	yes	yes
Region dummies	yes	yes	yes	yes	yes	yes
Migration dummy	yes	yes	yes	yes	yes	yes
Age and age squared	yes	yes	yes	yes	yes	yes
Observations	2,347	1,175	2,347	1,175	2,343	1,173
R-squared	0.093	0.096	0.090	0.095	0.093	0.100

Robust standard errors in parentheses (clustered at postcode level), *** $p<0.01$, ** $p<0.05$, * $p<0.1$
Source: UKTUS 14/15, own calculations

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[7] Four new missing values for the employment status variables are also generated.

Excluding Sleep

Given each diary covers 24 hours, they (usually) include episodes of sleeping and many respondents supply an enjoyment level for these episodes. This is the case for 2298 of the 2365 person day observations. In the preceding analysis, these episodes have been treated like any other recorded activity. However, due to the unconscious state it is questionable whether enjoyment is actually experienced during these periods. Individuals might simply report how they believe they should feel when sleeping or how well they slept in general. In addition, even if enjoyment can be evaluated during sleep, it is unclear whether the episode should be given the full duration weight. For these reasons, all specifications underlying the results in Table 2 were re-estimated after excluding episodes of sleep from the analysis. Table 7 reports the results both for the full sample as well as for the weekday subsample. The key results regarding the labor market status are robust to this change, as the ranking is largely unaffected. If anything, the positive relationship between duration weighted mean enjoyment and not being full-time employed has become larger in magnitude. Indeed, the positive association between unemployment and affective well-being even becomes significant on weekdays. Changes in the estimated coefficients on the parent dummy are small, though the coefficient becomes insignificant in some cases in which it was previously significant on weekdays. Thus, while the key conclusions are robust to this change, it must be acknowledged that the parent dummy is often either insignificant or close to insignificance, once the labor market status is controlled for (unless interaction terms are also included).

Table 7 OLS Results Excluding Sleep

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	any day	weekday	any day	weekday	any day	weekday	any day	weekday	any day	weekday
Parent	0.149***	0.249***			0.045	0.097	0.034	0.087	0.097	0.208**
	(0.053)	(0.062)			(0.057)	(0.066)	(0.057)	(0.068)	(0.071)	(0.086)
Part-time			0.176***	0.262***	0.162***	0.232***	0.143**	0.213***	0.213**	0.386***
			(0.057)	(0.068)	(0.060)	(0.070)	(0.060)	(0.071)	(0.105)	(0.117)
Self-employed			0.185**	0.287***	0.178**	0.272***	0.201**	0.296***	0.303**	0.495***
			(0.081)	(0.101)	(0.082)	(0.103)	(0.084)	(0.106)	(0.141)	(0.165)
Unemployed			0.172	0.356**	0.164	0.339**	0.118	0.279*	0.112	0.277
			(0.141)	(0.155)	(0.143)	(0.156)	(0.144)	(0.158)	(0.227)	(0.266)
Homemaker			0.338***	0.507***	0.317***	0.461***	0.281***	0.422***	0.604***	0.691***
			(0.073)	(0.082)	(0.077)	(0.086)	(0.079)	(0.093)	(0.203)	(0.266)
Maternity Leave			0.304***	0.471***	0.281**	0.421***	0.307**	0.465***	0.265*	0.387**
			(0.117)	(0.128)	(0.123)	(0.135)	(0.135)	(0.148)	(0.138)	(0.153)
Parent*Part-time									-0.119	-0.283**
									(0.126)	(0.142)
Parent*Self-employed									-0.187	-0.366*
									(0.175)	(0.221)
Parent*Unemployed									-0.008	-0.035
									(0.273)	(0.322)
Parent*Homemaker									-0.380*	-0.353
									(0.221)	(0.286)
Constant	6.135***	6.371***	5.754***	5.729***	5.855***	5.948***	5.985***	6.016***	5.929***	5.911***
	(0.412)	(0.504)	(0.401)	(0.486)	(0.421)	(0.503)	(0.463)	(0.549)	(0.465)	(0.548)
Day of the week dummies	no	no	no	no	no	no	yes	yes	yes	yes
Education dummies	no	no	no	no	no	no	yes	yes	yes	yes
Marital status dummies	no	no	no	no	no	no	yes	yes	yes	yes
Region dummies	no	no	no	no	no	no	yes	yes	yes	yes
Migration dummy	no	no	no	no	no	no	yes	yes	yes	yes
Age and age squared	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	2,362	1,183	2,362	1,183	2,362	1,183	2,344	1,174	2,344	1,174
R-squared	0.006	0.015	0.019	0.041	0.019	0.043	0.058	0.086	0.060	0.091

Dependent Variable: Duration Weighted Mean Enjoyment

Robust standard errors in parentheses (clustered at the postcode level), *** p<0.01, ** p<0.05, * p<0.1
Source: UKTUS 14/15, own calculations

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6 Conclusion

Women working full-time do not have higher affective well-being than women in other labor market statuses. Indeed, a consistent result found across several specifications is that self-employed women, women working part-time, women on maternity leave and homemakers actually experience higher enjoyment throughout the day than women working full-time, at least on weekdays. Thus, as long as non-employment is voluntary, it appears to be beneficial for affective well-being. There is no significant association between unemployment (rather than full-time employment) and affective well-being. These results contrast with many life satisfaction based studies. For example, Winkelmann and Winkelmann (1998) conclude that "a persistent satisfaction gap for the unemployed exists […] and it is 'joblessness' that matters, not just unemployment, however, the adverse effect of unemployment is much stronger than the effect of non-participation" (p.6). In the case of the Winkelmann and Winkelmann (1998) study, diverging results could be explained by differences in gender norms, particularly when it comes to views on homemaking, as their study only considers men, while the present study focuses exclusively on women. Since gender differences in the response to certain labor market statuses and mixed results for labor market statuses other than employment and unemployment have also been found in the life satisfaction literature (Stutzer and Frey, 2006, Haller and Hadler, 2006, Booth and van Ours, 2008/2009, Berger, 2013, Treas et al. 2011, Álvarez and Miles-Touya, 2016, Hamplová, 2018,), some of the diverging results could be explained in this way. However, it appears likely that differences in how well-being is measured, in this case the consideration of affective well-being rather than cognitive well-being, is a major contributing factor. This is supported by the evidence presented in Table 4, which shows that results change substantially when life satisfaction is used instead of affective well-being. In their DRM study, Knabe et al. (2010) already showed that the unemployed do not experience lower affective well-being in their day-to-day life than working individuals. This result is confirmed in the present study, though given the focus on women and the inclusion of a larger set of different potential labor market statuses, in particular the distinction between part-time and full-time employment (which results in a different default category), make the results not directly comparable.

If the estimated conditional correlation is due to a causal relationship, these results would imply that while pushing more women towards employment, and in particular full-time employment, may have several benefits, including alleviating the pressure on social security systems and perhaps even increases in life satisfaction (at least compared to unemployment), it also has a cost in terms of affective well-being throughout the day. The amount of time spent on and

enjoyment experienced during episodes of employment and related activities appears to be a key driver of the results in this study, further highlighting the importance of this aspect for each individual's well-being and life in general. With more advanced evidence, we might be able to find ways to combine the positive aspects associated with having a job, such as social contacts and engagement in meaningful activities, and minimize the negative aspects as much as possible, given the necessity to earn a living. For example, in some professions/positions it should be possible to eliminate some working time that is wasteful in the sense that employees only stay at work to satisfy the required weekly hours without actually engaging in productive tasks. This could also increase perceived meaningfulness of the job, thereby increasing affective well-being during episodes of work (Wolf et al., 2019). Furthermore, increasing subjective well-being may in turn lead to increases in productivity (Oswald et al., 2015).

A second major focus of this study is the relationship between motherhood and affective well-being. While a simple correlation always suggests a positive relationship, this result is weakened and becomes statistically insignificant in many cases, once the labor market status is controlled for. This might suggest that while parenthood is associated with higher affective well-being, this is largely due to the change in labor market status associated with becoming a mother. On the other hand, mothers also appear to benefit less from not working full-time than childless women, though the coefficients on the interaction terms are typically not significant themselves. On weekdays the relationship between having a child and affective well-being remains significant (even after controlling for labor market status) in some specifications, in particular when interaction terms are included. Full-time working mothers have higher affective well-being than childless women working full-time. Thus, mothers do not seem to pay a price in terms of affective well-being for having both a family life and career. While these mothers seem to enjoy time spent on employment more than their childless counterparts, they also spend significantly less time actually working. Making workhours more flexible and increasing childcare availability to increase the options available could potentially lead to even more welfare gains. However, considering that working is still among the lowest rated activates, while playing with own children is among the highest, it is questionable whether outsourcing childcare further to increase working hours is beneficial for working mothers. This is also reflected in mothers in other labor market statuses experiencing no lower affective well-being than full-time working mothers. Overall, the results on motherhood and affective well-being are less robust than the results on the labor market status alone. However, the negative relationship between parenthood and well-being suggested by some studies (see the review by

Umberson et al., 2013) is not supported by the present analysis based on affective well-being, given the point estimate on parenthood is virtually always positive.

While these results, to some degree, challenge the dominant view that (full-time) employment is beneficial for an individual's happiness and provide some additional evidence on how parenthood and well-being are related, it must be acknowledged that these results could also be driven by other factors such as unobserved heterogeneity, which cannot be addressed with the currently available DRM data. The results should, thus, not be taken as indicating a causal relationship but rather be seen as an initial tentative investigation into how some of the investigated factors are related to affective well-being of women. Self-selection of happier individuals into, e.g., parenthood or homemaking remains a major concern (Stutzer and Frey, 2006, Cetre et al., 2016). Since life satisfaction questions have been included in several large-scale household surveys for many years, this branch of research has increasingly moved towards establishing causal relationships such as via the use of fixed effects regression. While the data on affective well-being in DRM studies does not yet provide these same opportunities, the current study does contribute additional evidence that the choice of well-being measure used could fundamentally alter the results. This is perhaps not surprising, given that life satisfaction questions in representative household surveys and enjoyment questions in DRM studies aim at different well-being concepts. In some regards, the two measures might go hand in hand. For example an individual who is genuinely content with his or her life, might also experience higher affective well-being in the same activities or a blissful state of flow during work, which in turn contributes to life satisfaction. On the other hand, some activities which are stressful or painful while the individual is going through the experience, implying low affective well-being at that point in time, might induce a surge of satisfaction at the end of the day. Similarly, some activities, which were highly enjoyable in the moment, might result in a hollow feeling and a drop in life satisfaction in retrospect. A priori, it is not clear whether more weight should be given to people's life satisfaction or to their affective well-being. Depending on the research question, all or only some of the various measures available might be applicable. More research on well-being measures going beyond the now well-established life satisfaction could enrich our understanding of the relationship between the various aspects of people's lives and happiness.

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Appendix

A.1 Summary statistics
Table A.1 reports the mean (Ø) and standard deviation (in parentheses) of the duration-weighted mean enjoyment for various (sub-) samples as well as the size of each (sub-)sample, denoted by N.

The weighting applied in Table 1 does affect the estimated means quite substantially. This is primarily because in the sample each individual provides information on one weekend day and one weekday. As a result, weekends are significantly oversampled. As the enjoyment score tends to be higher on the weekend, this typically results in higher mean enjoyment scores, if no weights are applied.

Table A.1: Summary Statistics of the Enjoyment Score in Various (Sub-)Samples

	(1) Kids u. 1	(2) Kids 1-3	(3) Kids 4-15	(4) No Parent	(5) Parent	(6) All
Full-time	Ø=5.826 (0.878) N=26	Ø=5.775 (0.802) N=106	Ø=5.609 (0.782) N=266	Ø=5.565 (0.819) N=594	Ø=5.659 (0.801) N=431	Ø=5.604 (0.813) N=1,025
Part-time	Ø=5.598 (0.849) N=18	Ø=5.713 (0.828) N=152	Ø=5.835 (0.718) N=265	Ø=5.784 (0.815) N=165	Ø=5.797 (0.758) N=457	Ø=5.793 (0.773) N=622
Self-employed	Ø=5.747 (0.966) N=8	Ø=5.560 (0.550) N=22	Ø=5.763 (0.864) N=80	Ø=5.803 (0.886) N=78	Ø=5.716 (0.808) N=115	Ø=5.751 (0.839) N=193
Unemployed	Ø=6.056 (0.919) N=4	Ø=5.791 (1.094) N=14	Ø=5.878 (0.806) N=34	Ø=5.651 (0.975) N=40	Ø=5.826 (0.904) N=56	Ø=5.753 (0.934) N=96
Homemaker	Ø=5.866 (0.816) N=77	Ø=6.000 (0.884) N=115	Ø=5.728 (0.760) N=132	Ø=5.910 (0.759) N=24	Ø=5.852 (0.840) N=328	Ø=5.856 (0.834) N=352
Maternity Leave	Ø=5.879 (0.667) N=73	Ø=5.596 (0.831) N=4	- - -	- - -	Ø=5.864 (0.673) N=77	Ø=5.864 (0.673) N=77
All	Ø=5.841 (0.780) N=206	Ø=5.802 (0.841) N=413	Ø=5.734 (0.772) N=777	Ø=5.638 (0.835) N=901	Ø=5.767 (0.798) N=1,464	Ø=5.718 (0.815) N=2,365

Source: UKTUS 14/15, own calculations

A.2 Decomposition

As noted in Section 3 the overall change in affective well-being can be considered as the sum of a 'time composition' and a 'saddening/cheering effect'. This is illustrated in this section using the example of the relationship between parenthood and affective well-being.

While parenthood is associated with an increase in affective well-being, as Table 1 shows, the direction of each of the two channels is not clear a priori. Mothers could, on average, experience higher enjoyment in the same activities, e.g., because they fulfill the societal norm of being a mother, the co-presence of children is experienced as enjoyable or because their outlook on life has changed in a positive way for other reasons, i.e., there could be a 'cheering effect'. On the other hand, the increased responsibilities and associated time constraints could cause higher levels of stress and, thus, decrease the enjoyment experienced in each activity, resulting in a 'saddening effect'. Similarly, the 'time-composition effect' could be positive or negative. The presence of a child could result in a reduction of the time spent in market work related activities, which generally have low enjoyment scores. However, the amount of time spent on household chores likely increases, while the time spent in some of the most enjoyable leisure activities could decline. Table A.5 shows both the mean time spent in each activity and associated enjoyment score for mothers and women without children. However, when the data is disaggregated in this way it is difficult to identify overall trends.

The decomposition follows the methodology suggested by Knabe et al. (2010). First, a measure of the mean enjoyment experienced in each activity is calculated for the two sub-groups, in this case parents and childless women. In the calculation of these means diary weights were applied to correct for different probabilities of being in the sample due to the survey design. In addition, the calculation of means was also duration weighted[8]. Then the duration weighted mean enjoyment of childless women is re-calculated using their actual time use but the mean enjoyment within each activity of parents. Thus, for each childless woman we obtain a measure of affective well-being capturing the hypothetical situation where her time use is not changed but the enjoyment experienced in each activity is that of a mother. Using the appropriate diary weights, the mean affective well-being of this hypothetical group of

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[8] This is done for two reasons. Firstly, one individual can report various enjoyment scores in the same activity type throughout the day. In this case, it appears reasonable to use duration-weighting to calculate the mean enjoyment within each individual. Thus, for consistency the same method was used for the sample as a whole. Secondly, if duration weights were not applied in the calculation of the mean enjoyment in each activity then ,e.g., the duration weighted mean affect of parents based on their actual time use and the simple mean enjoyment of parents in each activity is not the same as the duration weighted mean enjoyment of parents in the whole sample based on their actual time use and reported enjoyment.

individuals is then calculated. The difference between this hypothetical mean affective well-being and the actual affective well-being of childless women is the 'saddening/cheering effect', as only the enjoyment scores were changed, while the time use remained that of childless women. The remaining difference in mean affective well-being between mothers and childless women is the 'time-composition effect'. This decomposition is denoted with (a) in Table A.2. The process can also be conducted in the other direction, i.e., taking the time use of mothers and combining it with the mean enjoyment of childless women in each activity to calculate the mean affective well-being. This decomposition is reported in Table A.2 in all columns denoted with (b). Since childless women should not report any childcare of and playing with own children the relevant hypothetical enjoyment of childless women in childcare cannot be calculated[9]. Thus, in decomposition (b) parents were assigned the "hypothetical" enjoyment of a parent for these specific activities.

On average mothers experience higher affective well-being within given activities (though their affective well-being in some activities could be lower) and they also spend more time in more enjoyable activities. The 'cheering effect' is generally larger than the 'time-composition' effect, particularly in decomposition type (a). Table A.2 also reports the results separately for weekdays (Monday to Friday) and weekends (Saturday and Sunday). The difference in affective well-being between parents and childless individuals is larger during the week and actually no longer statistically significantly different from zero on the weekend.

Table A.2 Decomposition

	Any day		weekday		weekend	
Enjoyment childless women	5.590		5.508		5.796	
	(0.040)		(0.044)		(0.039)	
	(a)	(b)	(a)	(b)	(a)	(b)
'Cheering effect'	0.109	0.077	0.131	0.099	0.056	0.032
'Time-composition effect'	0.034	0.066	0.046	0.077	0.003	0.027
Enjoyment mothers	5.733		5.684		5.855	
	(0.029)		(0.031)		(0.031)	
difference	0.143		0.176		0.059	
p-value[a]	0.004		0.001		0.239	

Robust standard errors in parentheses (clustered at postcode level).
Source: UKTUS 14/15, own calculations, sampling weights were applied
[a] P-value for the null-hypothesis of no difference in means

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[9] There are a small number of individuals who report childcare of own children (who presumably live outside the household) besides not being a "parent", as previously defined. However, since calculations based on these would not be representative of either group, these were not used in the analysis.

It must be noted that, besides the terms 'cheering/ saddening effect' and 'time-composition effect', no causal relationship between parenthood and affective well-being is established in Table A.2. For example, the 'cheering effect' that is found could be entirely driven by individuals who are generally happier in any given activity selecting into parenthood, though the absence of any significant change on the weekend might be seen as evidence against this point. Instead, the focus rests exclusively on how the underlying changes in reported enjoyment in given activities and changes in time use affect the overall measure. All the changes in affective well-being discussed in this paper could, in principle, also be decomposed into a 'cheering/ saddening effect' and 'time-composition effect' in an analogous way and it should be kept in mind that any ultimate change in affective well-being is caused by these two underlying changes.

A.3 Time Spent and Enjoyment in Certain Activities

Table A.3: Enjoyment and Time Spent in Individual Activities by Parenthood Status

	Enjoyment				Time Use			
	Parent	No Parent	Diff	P-val	Parent	No Parent	Diff	P-val
Sleeping	6.373	6.240	**0.133**	**0.024**	416.751	431.864	-15.113	0.186
Playing w. child	6.237	-	-	-	26.769	-	-	-
Entertainment and culture	6.195	6.228	-0.033	0.885	10.281	8.101	2.180	0.235
Physical exercise	6.079	5.922	0.157	0.227	11.890	18.677	**-6.786**	**0.001**
Religion and meetings	6.078	6.126	-0.048	0.886	4.007	2.378	1.630	0.134
Games	6.073	5.481	**0.593**	**0.018**	3.384	5.075	-1.691	0.141
Socialising	6.034	6.080	-0.046	0.542	40.908	48.160	**-7.252**	**0.099**
Mass media	5.996	5.869	**0.127**	**0.035**	99.164	116.095	**-16.932**	**0.003**
Hobby	5.888	5.845	0.043	0.847	2.448	2.679	-0.232	0.770
Eating	5.885	5.837	0.048	0.441	66.335	69.302	-2.967	0.371
Resting	5.881	5.863	0.018	0.895	14.690	14.115	0.575	0.807
Online shopping	5.615	4.994	0.620	0.111	1.209	1.098	0.111	0.765
Pet care	5.576	5.692	-0.116	0.393	7.399	14.703	**-7.304**	**0.000**
Break at work	5.498	5.471	0.027	0.880	2.986	7.125	**-4.139**	**0.000**
Studying	5.494	5.063	0.430	0.198	3.468	13.390	**-9.922**	**0.029**
Gardening	5.491	5.710	-0.219	0.567	2.037	2.884	-0.847	0.325
Childcare	5.465	-	-	-	74.679	-	-	-
Personal care	5.401	5.201	**0.200**	**0.004**	51.315	59.175	**-7.860**	**0.000**
Other	5.393	5.338	0.054	0.702	13.019	10.735	2.284	0.185
Computing	5.384	5.296	0.088	0.466	13.685	16.473	-2.789	0.328
Help to other household	5.337	5.715	-0.378	0.147	3.415	6.157	**-2.742**	**0.058**
Travelling	5.208	5.140	0.067	0.423	57.178	48.159	**9.019**	**0.014**
Volunteer work/meeting	5.058	5.732	-0.674	0.124	1.544	2.476	-0.932	0.396
Food management	4.993	5.174	**-0.181**	**0.030**	66.386	42.498	**23.888**	**0.000**
Shopping	4.993	5.045	-0.052	0.619	28.901	29.456	-0.555	0.830
Construction and repairs	4.861	4.776	0.085	0.824	2.952	3.139	-0.187	0.892
Job search	4.801	3.693	1.109	-	0.691	3.203	**-2.512**	**0.035**
Employment	4.737	4.565	0.173	0.128	124.637	228.197	**-103.560**	**0.000**
Commuting	4.690	4.593	0.098	0.396	17.532	29.914	**-12.381**	**0.000**
Household upkeep	4.665	4.767	-0.103	0.307	39.560	27.188	**12.372**	**0.000**
Help adult HHmember	4.541	5.311	-0.770	0.254	1.025	0.222	**0.803**	**0.082**
Household management	4.365	4.663	-0.298	0.112	10.718	6.210	**4.507**	**0.002**
Textile care	4.270	4.384	-0.115	0.416	17.152	8.745	**8.407**	**0.000**

Robust standard errors (clustered at postcode level) were used in the calculation of the p-value, bold font: significance at the 10% level

P-value not reported for enjoyment score, if one of the groups contains less than 10 observations.

Motherhood is defined in the extended way described in Section 0

Source: UKTUS 14/15, own calculations, sampling weights were applied in the analysis, only episodes with reported enjoyment are considered

Table A.4: Enjoyment and Time Spent in Individual Activities by Labor Market Status

	Enjoyment				Time Use			
	Full-time	Homemaker	Diff	P-val	Full-time	Homemaker	Diff	P-val
Playing w. child	6.409	6.169	**0.240**	**0.049**	6.296	32.359	**-26.063**	**0.000**
Sleeping	6.256	6.394	**-0.138**	**0.085**	430.150	392.786	**37.364**	**0.030**
Entertainment and culture	6.187	6.048	0.140	0.600	8.765	12.422	-3.657	0.223
Hobby	6.101	6.223	-0.122	0.660	1.635	3.580	-1.945	0.197
Socialising	6.079	5.991	0.088	0.421	43.389	41.266	2.122	0.718
Resting	5.943	5.840	0.103	0.591	11.085	27.788	**-16.703**	**0.003**
Religion and meetings	5.936	6.424	-0.488	0.221	1.646	7.563	**-5.918**	**0.023**
Mass media	5.891	6.034	-0.143	0.111	102.027	115.033	-13.005	0.121
Physical exercise	5.863	6.069	-0.206	0.245	14.729	11.650	3.079	0.189
Eating	5.815	5.862	-0.048	0.546	64.137	70.676	**-6.539**	**0.099**
Help to other household	5.658	4.692	**0.966**	**0.081**	3.494	2.879	0.616	0.565
Pet care	5.619	5.837	-0.218	0.341	11.457	8.044	3.413	0.146
Games	5.608	6.065	-0.457	0.118	3.734	3.818	-0.084	0.949
Childcare	5.515	5.489	0.026	0.834	20.808	99.186	**-78.378**	**0.000**
Online shopping	5.499	5.581	-0.082	0.857	0.951	1.036	-0.085	0.841
Break at work	5.487	-	-	**-**	7.697	-	**-**	**-**
Gardening	5.457	5.308	0.149	0.768	2.076	2.324	-0.248	0.805
Volunteer work/meeting	5.370	3.886	**1.485**	**0.050**	1.803	0.654	1.149	0.188
Computing	5.351	5.467	-0.116	0.437	12.888	15.067	-2.179	0.471
Other	5.264	5.331	-0.067	0.688	8.699	18.919	**-10.220**	**0.001**
Help adult HHmember	5.246	4.727	0.519	-	0.160	3.214	-3.054	0.102
Personal care	5.210	5.572	**-0.362**	**0.000**	57.557	49.458	**8.099**	**0.019**
Travelling	5.086	5.227	-0.141	0.229	50.270	59.563	**-9.293**	**0.042**
Food management	5.024	5.105	-0.081	0.421	42.638	94.108	**-51.470**	**0.000**
Shopping	4.997	5.080	-0.083	0.558	26.420	33.304	**-6.883**	**0.073**
Studying	4.994	5.030	-0.036	0.951	5.746	1.692	4.054	0.132
Construction and repairs	4.788	4.559	0.229	0.661	3.198	2.413	0.785	0.569
Household upkeep	4.692	4.805	-0.113	0.399	25.109	57.792	**-32.683**	**0.000**
Employment	4.540	5.128	-0.588	-	249.877	3.439	246.437	**0.000**
Commuting	4.517	7.000	-2.483	-	35.394	0.061	35.332	**0.000**
Household management	4.462	4.557	-0.096	0.700	7.795	14.806	**-7.011**	**0.029**
Textile care	4.136	4.679	**-0.543**	**0.002**	10.510	21.415	**-10.905**	**0.000**
Job search	4.074	6.000	-1.926	-	0.492	0.441	0.052	0.917

Robust standard errors (clustered at postcode level) were used in the calculation of the p-value, bold font: significance at the 10% level

P-value not reported for enjoyment score, if one of the groups contains less than 10 observations.

Source: UKTUS 14/15, own calculations, sampling weights were applied in the analysis, only episodes with reported enjoyment are considered

Table A.5: Enjoyment and Time Spent in Individual Activities by Parenthood Status (Full-Time and Weekdays Only)

	Enjoyment				Time Use			
	Parent	No Parent	Diff	P-val	Parent	No Parent	Diff	P-val
Hobby	6.811	5.635	1.176	-	1.088	0.584	0.504	0.449
Religion and meetings	6.756	5.336	1.421	-	0.200	1.186	**-0.987**	**0.085**
Games	6.506	4.936	**1.569**	**0.006**	1.741	3.077	-1.337	0.362
Playing w. child	6.423	-	-	-	12.495	-	-	-
Sleeping	6.309	6.198	0.111	0.267	402.460	424.297	-21.837	0.198
Resting	6.128	5.900	0.227	0.320	6.559	12.085	**-5.526**	**0.016**
Socialising	6.118	5.974	0.145	0.308	32.436	38.171	-5.734	0.403
Gardening	6.094	5.247	0.846	-	0.896	2.426	-1.530	0.136
Entertainment and culture	6.090	5.970	0.120	-	4.535	5.225	-0.691	0.830
Mass media	5.974	5.830	0.143	0.136	78.954	94.616	**-15.662**	**0.037**
Physical exercise	5.869	5.779	0.091	0.719	8.089	16.514	**-8.425**	**0.003**
Eating	5.776	5.687	0.090	0.398	53.350	61.973	-8.623	0.102
Help to other household	5.639	5.956	-0.317	-	1.637	3.184	-1.547	0.301
Online shopping	5.586	5.311	0.275	-	1.197	0.378	0.820	0.114
Other	5.584	4.996	**0.588**	**0.023**	8.862	8.083	0.779	0.663
Construction and repairs	5.492	5.007	0.485	-	0.934	2.609	-1.675	0.239
Break at work	5.463	5.427	0.036	0.877	7.830	11.329	**-3.499**	**0.100**
Childcare	5.455	-	-	-	51.032	-	-	-
Computing	5.437	5.278	0.159	0.464	8.734	13.138	-4.404	0.245
Personal care	5.314	5.015	**0.300**	**0.007**	51.870	61.416	**-9.546**	**0.007**
Pet care	5.139	5.731	**-0.592**	**0.029**	6.205	12.900	**-6.695**	**0.021**
Travelling	5.134	4.966	0.168	0.257	46.826	40.608	6.218	0.291
Studying	5.121	5.063	0.058	-	2.648	8.159	-5.511	0.235
Volunteer work/meeting	4.982	5.653	-0.671	-	2.413	1.442	0.971	0.634
Food management	4.970	5.003	-0.032	0.813	47.531	34.545	**12.986**	**0.002**
Shopping	4.949	4.879	0.070	0.758	18.164	22.628	-4.464	0.266
Household upkeep	4.827	4.707	0.120	0.520	19.956	20.700	-0.743	0.789
Employment	4.746	4.426	**0.320**	**0.023**	294.384	333.285	**-38.902**	**0.093**
Household management	4.649	4.304	0.345	0.438	10.955	4.166	**6.789**	**0.049**
Commuting	4.546	4.472	0.074	0.621	44.482	45.714	-1.233	0.852
Textile care	3.957	4.334	-0.377	0.137	10.859	5.895	**4.964**	**0.012**
Help adult HHmember	3.337	6.294	-2.957	-	0.062	0.216	-0.154	0.298
Job search	3.000	4.532	-1.532	-	0.599	0.506	0.092	0.890

Robust standard errors (clustered at postcode level) were used in the calculation of the p-value, bold font: significance at the 10% level

P-value not reported for enjoyment score, if one of the groups contains less than 10 observations.

Motherhood is defined in the extended way described in Section 0

Source: UKTUS 14/15, own calculations, sampling weights were applied in the analysis, only episodes with reported enjoyment are considered

A.4 Specifications with Interactions: Post-Estimation Testing

Table A.6: Hypothesis Test for Specifications Including Dummy Interactions

Null-Hypothesis	$\beta_{lms} + \beta_{parent} + \beta_{lms*parent} = 0$			$\beta_{lms} + \beta_{lms*parent} = 0$			$\beta_{parent} + \beta_{lms*parent} = 0$		
	Point Estimate	Std. Err.	P-value	Point Estimate	Std. Err.	P-value	Point Estimate	Std. Err.	P-value
Any Day									
Part-time	0.211***	0.061	0.001	0.123*	0.065	0.059	0.033	0.099	0.738
Self-employed	0.181*	0.100	0.071	0.092	0.101	0.360	-0.057	0.146	0.697
Unemployed	0.206	0.165	0.210	0.118	0.167	0.480	0.200	0.272	0.462
Homemaker	0.236***	0.080	0.003	0.146*	0.081	0.070	-0.056	0.210	0.789
Maternity Leave	0.269**	0.119	0.024						
Weekday									
Part-time	0.289***	0.073	0.000	0.107	0.075	0.158	-0.008	0.109	0.942
Self-employed	0.253**	0.128	0.050	0.070	0.133	0.595	-0.139	0.179	0.438
Unemployed	0.376**	0.174	0.031	0.194	0.176	0.272	0.300	0.303	0.324
Homemaker	0.407***	0.090	0.000	0.224**	0.090	0.013	-0.002	0.221	0.991
Maternity Leave	0.453***	0.130	0.001						

Hypothesis tests for "any day" based on estimation results presented in Table 2 column (5), hypothesis tests for "weekday" based on estimation results presented in Table 3 column (9)

A.5 Robustness Sampling Weights

Table A.7: OLS Results, Sampling Weights

	(1)	(2)	(3)	(4)	(5)
	Dependent Variable: Duration Weighted Mean Enjoyment				
Parent	0.189***		0.106*	0.086	0.141*
	(0.053)		(0.057)	(0.058)	(0.075)
Part-time		0.196***	0.164***	0.130**	0.173*
		(0.057)	(0.058)	(0.056)	(0.101)
Self-employed		0.223***	0.208***	0.186**	0.306**
		(0.078)	(0.079)	(0.086)	(0.127)
Unemployed		0.140	0.118	0.059	0.049
		(0.144)	(0.145)	(0.147)	(0.216)
Homemaker		0.287***	0.234***	0.186**	0.424***
		(0.071)	(0.077)	(0.081)	(0.144)
Maternity Leave		0.291***	0.232**	0.261**	0.223*
		(0.106)	(0.113)	(0.127)	(0.132)
Parent*Part-time					-0.083
					(0.130)
Parent*Self-employed					-0.226
					(0.153)
Parent*unemployed					0.001
					(0.290)
Parent*homemaker					-0.287*
					(0.169)
Constant	6.815***	6.396***	6.635***	6.547***	6.523***
	(0.398)	(0.387)	(0.406)	(0.450)	(0.457)
Day of the week dummies	no	no	no	yes	yes
Region dummies	no	no	no	yes	yes
Marital status dummies	no	no	no	yes	yes
Education dummies	no	no	no	yes	yes
Migration dummy	no	no	no	yes	yes
Age and age squared	yes	yes	yes	yes	yes
Observations	2,365	2,365	2,365	2,347	2,347
R-squared	0.015	0.024	0.027	0.093	0.095

Robust standard errors in parentheses, (clustered at postcode level), *** p<0.01, ** p<0.05, * p<0.1
Source: UKTUS 14/15, own calculations

Table A.8: OLS-Regression Results Differentiated by the Kind of Day, Sampling Weights

	(1) weekday	(2) weekend	(3) weekday	(4) weekend	(5) weekday	(6) weekend	(7) weekday	(8) weekend	(9) weekday	(10) weekend
					Dependent Variable: Duration Weighted Mean Enjoyment					
Parent	0.232***	0.081			0.127**	0.051	0.111*	0.024	0.189**	0.022
	(0.058)	(0.053)			(0.062)	(0.060)	(0.063)	(0.059)	(0.082)	(0.075)
Part-time			0.229***	0.113*	0.190***	0.097	0.153**	0.070	0.232**	0.025
			(0.064)	(0.059)	(0.065)	(0.062)	(0.063)	(0.059)	(0.110)	(0.114)
Self-employed			0.272***	0.097	0.255***	0.090	0.232**	0.072	0.388***	0.098
			(0.085)	(0.087)	(0.087)	(0.088)	(0.095)	(0.092)	(0.140)	(0.138)
Unemployed			0.206	-0.029	0.179	-0.039	0.115	-0.081	0.103	-0.087
			(0.151)	(0.155)	(0.153)	(0.157)	(0.154)	(0.158)	(0.237)	(0.224)
Homemaker			0.365***	0.092	0.302***	0.066	0.246***	0.034	0.484***	0.271*
			(0.075)	(0.075)	(0.081)	(0.081)	(0.087)	(0.081)	(0.157)	(0.162)
Maternity Leave			0.372***	0.087	0.301**	0.059	0.337**	0.069	0.285**	0.069
			(0.110)	(0.128)	(0.117)	(0.134)	(0.134)	(0.140)	(0.140)	(0.142)
Parent*Part-time									-0.142	0.064
									(0.140)	(0.144)
Parent*Self-employed									-0.297*	-0.044
									(0.169)	(0.171)
Parent*Unemployed									-0.002	0.012
									(0.308)	(0.305)
Parent*Homemaker									-0.299	-0.254
									(0.184)	(0.185)
Constant	6.933***	6.506***	6.415***	6.343***	6.705***	6.457***	6.500***	6.119***	6.456***	6.147***
	(0.448)	(0.383)	(0.434)	(0.387)	(0.453)	(0.402)	(0.504)	(0.452)	(0.510)	(0.473)
Day of the week dummies	no	no	no	no	no	no	yes	yes	yes	yes
Education dummies	no	no	no	no	no	no	yes	yes	yes	yes
Marital status dummies	no	no	no	no	no	no	yes	yes	yes	yes
Region dummies	no	no	no	no	no	no	yes	yes	yes	yes
Migration dummy	no	no	no	no	no	no	yes	yes	yes	yes
Age and age squared	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	2,362	1,183	2,362	1,183	2,362	1,183	2,344	1,174	2,344	1,174
R-squared	0.020	0.005	0.035	0.007	0.039	0.008	0.095	0.056	0.099	0.057

Robust standard errors in parentheses (clustered at postcode level), *** p<0.01, ** p<0.05, * p<0.1

Source: UKTUS 14/15, own calculations

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A.6 Excluding Time Spent on Employment and Commuting

Table A.9: OLS Results, Excluding Time Spent on Employment, Breaks at Work and Commuting

	(1) any day	(2) weekday	(3) any day	(4) weekday	(5) any day	(6) weekday	(7) any day	(8) weekday	(9) any day	(10) weekday
					Dependent Variable: Duration Weighted Mean Enjoyment					
Parent	0.044	0.062			0.037	0.069	0.018	0.055	0.034	0.107
	(0.047)	(0.053)			(0.051)	(0.057)	(0.051)	(0.058)	(0.064)	(0.072)
Part-time			0.083	0.044	0.072	0.023	0.039	-0.012	0.035	0.045
			(0.051)	(0.058)	(0.053)	(0.060)	(0.052)	(0.060)	(0.093)	(0.104)
Self-employed			0.036	-0.022	0.030	-0.033	0.036	-0.027	0.137	0.156
			(0.079)	(0.095)	(0.080)	(0.096)	(0.085)	(0.103)	(0.129)	(0.148)
Unemployed			-0.089	-0.149	-0.096	-0.162	-0.160	-0.244	-0.240	-0.375
			(0.133)	(0.146)	(0.133)	(0.146)	(0.137)	(0.150)	(0.223)	(0.255)
Homemaker			0.006	-0.006	-0.012	-0.040	-0.076	-0.116	0.007	-0.031
			(0.066)	(0.071)	(0.070)	(0.074)	(0.074)	(0.082)	(0.201)	(0.208)
Maternity Leave			-0.014	-0.025	-0.033	-0.061	-0.031	-0.049	-0.042	-0.083
			(0.105)	(0.111)	(0.109)	(0.115)	(0.121)	(0.130)	(0.125)	(0.134)
Parent*Part-time									-0.001	-0.098
									(0.114)	(0.127)
Parent*Self-employed									-0.173	-0.322
									(0.158)	(0.195)
Parent*Unemployed									0.132	0.206
									(0.273)	(0.306)
Parent*Homemaker									-0.099	-0.118
									(0.214)	(0.225)
Constant	6.833***	6.782***	6.770***	6.683***	6.853***	6.839***	6.695***	6.695***	6.712***	6.682***
	(0.371)	(0.437)	(0.357)	(0.421)	(0.374)	(0.435)	(0.405)	(0.465)	(0.411)	(0.471)
Day of the week dummies	no	no	no	no	no	no	yes	yes	yes	yes
Education dummies	no	no	no	no	no	no	yes	yes	yes	yes
Marital status dummies	no	no	no	no	no	no	yes	yes	yes	yes
Region dummies	no	no	no	no	no	no	yes	yes	yes	yes
Migration dummy	no	no	no	no	no	no	yes	yes	yes	yes
Age and age squared	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Observations	2,364	1,183	2,364	1,183	2,364	1,183	2,346	1,174	2,346	1,174
R-squared	0.006	0.006	0.008	0.007	0.009	0.008	0.066	0.070	0.067	0.073

Robust standard errors in parentheses (clustered at postcode level), *** p<0.01, ** p<0.05, * p<0.1
Source: UKTUS 14/15, own calculations