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# **The Influence of Changing Hours of Work on Women's Life-Satisfaction**

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## **Abstract:**

This paper asks whether moving to part-time work makes women happy. Previous research on labour supply has assumed that as workers freely choose their optimal working hours on the basis of their innate preferences and the hourly wage rate, outcome reflects preference. This paper tests this assumption by measuring the impact of changes in working-hours on life satisfaction in two countries (the UK and Germany using the German Socio-Economic Panel and the British Household Panel Survey). We find decreases in working-hours bring about positive and significant improvement on well-being for women.

**Key words: Part-time employment, happiness, job switches**

**JEL: J16, J22, J62, I31.**

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## 1. Introduction

This paper asks whether moving to part-time work makes women happy. While conventional economic models of labour supply assume that workers choose their optimal working hours on the basis of their opportunity structures as well as their innate preferences, this paper tests that assumption. Previous work has examined a broad range of factors influencing individual supply decisions including life cycle stages, spouses' income, commuting costs and institutional context (Killingsworth and Heckman 1987; Blundell and Macurdy 1999). Comparatively few, however, have tried to measure preferences directly, (e.g. Böheim and Taylor 2004), most probably because preferences are notoriously difficult to capture in standard micro-level data (Gash 2008). Rather than looking at working preferences, this paper examines the relationship between actual working hours (focusing on differences between part-time versus full-time hours) and individual well-being. Such a strategy avoids the assumptions of outcome reflecting preference, but does rest on the assumption that preferred outcomes will bring positive gains to well-being.

The assessment of workers' well-being in employment is not only a powerful way of determining whether workers appear able to pursue their preferred working strategy, it is also an important research question. In fact, if part-time work positively affects individuals' well-being, this suggests recent developments to support workers' right to request reduced working-hours will be both welfare enhancing and will address a key need in the workforce. This is particularly pertinent as both Germany (in 2000) and the UK (in 2003) have brought in legislation that supports workers in their requests for reduced-hour employment if the worker has care responsibilities.<sup>1</sup>

Alternatively, part-time work could be expected to decrease workers' well-being. Part-time work is often concentrated in the low pay sector, and even when it is not part-time, workers tend to be

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<sup>1</sup> These policies have also come under attack for different reasons, for example in the UK where they were accused of being too costly at a time of economic recession (<http://www.guardian.co.uk/politics/2008/oct/21/mandelson-economy>).

paid less per hour than full-time workers in similar occupations (see e.g. Paul Robson 1999, Jill Rubery, Damian Grimshaw and Hugo Figueiredo 2003 and Bardasi and Gornick 2008 for cross-national comparisons). Furthermore, part-time work is also associated with inferior working conditions and the distinction between the full-time and part-time female workforce is thought to produce a dualized and polarized female workforce (Catherine Hakim 1996). Combined, these points suggest that moving to part-time jobs could be associated with a decrease in well-being. In this case, facilitating full-time employment should be at the core of policy makers' agenda.

The paper uses panel data that allow us to trace the employment dynamics of workers together with their history of life-satisfaction. We investigate *changes* in happiness and compare the UK and Germany, two countries with relatively high part-time rates, which solves the problem of unobserved heterogeneity innate in happiness studies by comparing happiness for the one person at two points in time.

Section 2 summarizes the most important facts about part-time employment and happiness in both countries. Our data sets used (the German Socio-Economic Panel (SOEP) and the British Household Panel (BHPS)), selection issues and methods will be introduced in Section 3. This is followed by our detailed empirical study in Section 4 and our conclusions in Section 5.

## **2. Part-Time Work and Well-Being**

### **2.1. What we know (and don't know) about women working part-time**

The share of part-time workers has increased across OECD countries since the 1980s (see Figure 1). In Germany the increase has been more pronounced than in the UK but from a lower level so that today part-time rates are roughly equal in both countries. The bulk of part-time work is done by women, even though male shares have increased since the early 1980s when roughly 10% of all part-time jobs were occupied by men in both countries. According to OECD data, the male

share in 2007 was around 20% in Germany and only slightly higher in the UK at 22.6% (OECD 2010).<sup>2</sup>

< Figure 1 about here >

The fate of women in part-time work – especially of those in the UK – is very well documented in a special issue of the *Economic Journal* (see Gregory and Connolly 2008a). Relative to women who work full-time, those employed part-time give up more than income due to their reduced hours. Part-time workers' hourly pay is less than both men's pay and women full-time workers' pay (for Germany and the UK compare e.g. Wolf 2002; Bardasi and Gornick 2008; Manning and Petrongolo 2008). This earnings gap has been widening in the UK over the years; and a significant share of it is explained by occupational segregation. In fact, research on the UK by Olsen and Walby (1999) has established that the longer women remain in part-time work (as opposed to full-time) the greater their pay penalty.

Part-time employment tends to be concentrated in low-paid occupations; this means women who switch to part-time jobs can often only do so if they accept a job of inferior occupational worth: in the UK 25% of women who switch to part-time from full-time experience occupational downgrading (Gregory and Connolly 2008b). This problem is aggravated by the fact that women in part-time jobs tend to get less training with employers often reluctant to invest in a workforce regarded as peripheral (OECD 1999). So even if women appear to seek part-time jobs these findings would lead us to expect a decrease in life satisfaction for women if their post is inferior to their previous full-time position.

So why do such high percentages of women work part-time? Theoretically this could simply be work sharing as implied by Becker (1965). However, there are strong cultural prescriptions

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<sup>2</sup> For more detailed information on trends and determinants of part-time work in OECD countries compare OECD 2002 and Jaumotte 2003.

concerning women's engagement in paid work as well as the number of hours deemed appropriate (Akerlof and Kranton 2000). These prescriptions vary by country (for instance few women work part-time in Nordic countries today) and by life-stage; with childless women tending to work full-time and women with children tending to work no or part-time hours in the UK and in Germany (e.g. Eiko Kenjoh 2005). This suggests that if a woman's role in a society is to work part-time and care for children she might feel most content if she follows this model; and conversely may also suffer in her attempts to deviate from this norm. This does not mean that mothers cannot work full-time; many do, but that behaviour at the mean is likely to receive greater social support and re-enforcement than other behaviour. From this perspective we could expect women with children to be the happiest in their transitions to part-time work.

Second, though highly correlated with the first point, different institutional settings structure the forms of employment that women with children can engage in. Countries with little support for maternal employment like the UK and Germany are likely to make full-time employment very difficult for workers with children. In both these countries, reduced access to affordable long-hours childcare prevents many mothers from working full-time hours (see Gash (2009) for a review of policies likely to impede working motherhood).

Third, many women are not able to chose their hours of work. Data on preferred hours of work have shown this (for the UK compare Böheim and Taylor 2004; for Germany Wolf 1998 and Holst 2009). For instance using the SOEP and the BHPS data for 2006 we know that 55% of women in Germany and 33% of women in the UK have a preference for fewer hours, meanwhile 17% of women in Germany and 5% of women in the UK would prefer to work more hours. It is important not to compare these figures directly, however, as the question wording is quite different in both countries.<sup>3</sup> However, we have no way of establishing whether these stated

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<sup>3</sup> In the UK workers are asked: Thinking about the hours you work, assuming that you would be paid the same amount per hour, would you prefer to (1) work fewer hours (2) work more hours (3) continue the same hours. While in Germany they are asked: If you could choose your own number of working hours,

preferences are accommodated or not. That is whether the respondents' preferred hours are actually a function of what is possible, rather than what is desired (Gash 2008 and McRae 2003). A research strategy that examines whether actual working-hours are associated with well-being is therefore a powerful way of extrapolating preferred outcomes.

There are many objective factors associated with the decision to work part-time. Amongst the most important drivers are additional household income, the number of children in the home as well as the presence of small children in the home (Gustafsson, Kenjoh and Wetzels 2001; Pfeiffer 2007; Paull 2008). Francesconi and Gosling (2005) note that it is not necessarily the first child that makes women want to reduce hours of work but possibly the second child. As the number of children increases, time pressure increases as well making full-time work more and more difficult.

Given the findings on the quality of many part-time jobs we could conclude that many women pursue these jobs through constraint, and we could therefore expect a *decrease in life-satisfaction* to be associated with a *decrease in working-hours*. Nonetheless, if women work part-time through preference/or normative pressure we could expect an *increase in life-satisfaction* to be associated with a *decrease in working-hours*. Indeed we could expect this to be particularly true of maternal workers in countries like Germany and the UK where there is little policy support for maternal workers to work full-time hours.

We expect also *different effects on life satisfaction* depending on the characteristics of the part-time jobs. Women who remain in the same job but reduce working hours might derive more satisfaction than women who need to accept a worse position in order to be able to reduce their

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taking into account that your income would change according to the number of hours: How many hours would you want to work?

working hours. Since being the master of ones working life is not the only source of life satisfaction; in the next section we discuss other determinants of life satisfaction.

## **2.2. Life Satisfaction and Part-Time Work**

While the discipline of economics has traditionally shied away from empirical assessments of subjective indicators, there has been a dramatic change of heart in recent years. Today, a broad range of social scientists defend the analysis of subjective indicators as necessary for the evaluation and design of policy (Veenhoven 2002) and as a growing part of the economists profession (see e.g. Frey et al. 2008). In the following we provide an overview of the literature on life satisfaction and part-time work as well as the related studies that analyse the effect of income and relational goods on happiness.<sup>4</sup>

Like much of the research on life satisfaction, the evidence for the influence of part-time work is not unequivocal. The earliest study for Germany by Holst and Trzcinski (2000) focuses on mothers' life satisfaction after birth. They show that satisfaction levels are particularly high if mothers' return to part-time employment. In effect, after birth part-time employed women are happier than both non-employed women and those in full-time jobs (who are the ones who report the lowest levels of happiness). A recent study by Berger (2009), however, found negative effects in a cross section of women also using German SOEP data. Two other studies on the topic have used the Australian HILDA survey: Gray et al. (2004) focused on the effects of fathers' long working hours. Surprisingly, they find that although overall satisfaction with work hours decreases with the number of hours worked, long hours are not linked to a decrease in overall well-being. The second important Australian study asks whether part-time work makes the family happier (Alison Booth and Jan van Ours 2008a). The paper finds that women working part-time

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<sup>4</sup> The interested reader is also referred to two relatively recent collections by Bruni and Porta (2005 and 2007) for a broader view on the economics of happiness. Additionally, Rosalind Barnett (2004) provides a brief introduction to this literature in the field of psychology and occupational health.

are happier than women working full-time. It also shows that women are happier if their partners work full-time.

Booth and Van Ours (2008b) also used the BHPS for the UK and found similar results at least for job satisfaction, which is higher for women in part-time employment. Life satisfaction in contrast is unaffected by hours of work. Bardasi and Francesconi (2004) consider the effects of different types of atypical employment on the likelihood to report poor well-being for the BHPS 1991-2000. While part-time status is not found to be significant with respect to life satisfaction, men and women who work fewer hours are less likely to be unsatisfied with their job. Bardasi and Francesconi also ask whether the odds of moving from 'non-poor' to 'poor' life satisfaction are higher for those who enter different types of atypical employment. For women who move to part-time they show that two years after the move, the odds of moving to 'poor' life satisfaction increase.

Another important component of the life satisfaction literature concerns the effects of income. We know that part-time workers tend to be in relatively low paid occupations and tend to get lower hourly wages than full-time workers on average (see section 2.1). So while part-time workers obviously have more time for other activities, like meeting friends and spending time with family, reduced income could counterbalance the positive effects of having more time for non-market activities. The literature surrounding the influence of income and relational goods casts some light on how important both aspects are for life satisfaction. In fact, ever since Easterlin's (1974) seminal article, discussions have been on-going about how important income is for life satisfaction, but the evidence is not as clear as might be expected. While in cross sections income and happiness tend to be positively correlated, an increase in income over time does not always raise happiness.<sup>5</sup> On the individual level, though, there is some evidence that income increases happiness. Although roughly 30% of all individuals report increases in income alongside

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<sup>5</sup> See e.g. Blanchflower and Oswald 2004; Clark and Oswald 1994; Frey and Stutzer 2000; Hamermesh 2001; Easterlin 2001; Kahneman et al. 2006.

a reduction in life satisfaction in the GSOEP (Becchetti and Rossetti 2007), both Gerlach and Stephan (1996) and Winkelmann and Winkelmann (1998) find a significant but small influence of income on happiness in Germany. Likewise Frijters et al. (2004a and 2004b) report that household income has a positive influence on happiness but that at least in western Germany there is no time trend in the happiness variable. These findings suggest that the opportunity cost of part-time work – i.e. the reduction in income – will tend to reduce self-reported life satisfaction. The time gained when working part-time, however, could work in the other direction. Some authors have argued that an increase in income does not lead to an increase in life satisfaction, when increasing income goes hand in hand with a lower quantity and/or quality of interpersonal relationships (Antoci et al. 2005, Bartolini 2006). This is sometimes called the *relational treadmill* and there is an increasingly large literature that supports this view. Recently, Becchetti et al. (2008, 2009) found that relational goods have a positive and significant effect on life satisfaction in fixed effects regressions using the German SOEP data. Also for the UK, there is evidence that the consumption of relational goods is positively associated with well-being. Powdthavee (2008) uses the BHPS and estimates shadow prices for the life satisfaction gained by an increase in the frequency of interaction with friends, relatives, and neighbours. Like the studies using German data, he finds that an increase in the level of social involvement increases life satisfaction while actual changes in income buy very little happiness. Also Bartolini et al. (2008), like Helliwell and Putnam (2004), argue that in more general terms social capital has a positive effect on well-being.

Summarizing, research has shown that time spent with friends and family is valuable in terms of self reported life satisfaction. However, there is mixed evidence concerning the relationship between part-time (which leaves individuals with more time for social interactions) and life satisfaction. We therefore reinvestigate this relationship in the following, controlling for income changes and focusing on transitions between full-time, part-time and non-employment. The next section describes in detail our data sources, selections and estimation strategies.

### **3. Estimation methods**

#### **3.1. Data**

For the present study we use data from the German Socio-Economic Panel (SOEP) and the British Household Panel (BHPS) from the mid 1990s to 2006. The SOEP is a representative, interdisciplinary and longitudinal survey of the German population (Wagner et al., 2007). The panel was started in 1984, and has been repeated yearly since then. The information is collected from three different questionnaires: the household questionnaire, in which the head of the household provides information about the household as a whole, such as the housing situation, household formation and information about children under 16; the personal questionnaire, in which each individual in the household aged 16 or older is surveyed; and the biography questionnaire, which is completed by first-time respondents and includes questions about employment history, marital history, social origin and immigration history among other things. For the present study we combine information from the three questionnaires. In 2006 the survey covered a total of some 22,000 individuals belonging to about 12,500 households. The BHPS has a similar structure and logic to the SOEP; it began in 1991 and has been repeated yearly since then. In 1991, the first wave of the panel consisted of 5,500 households and 10,300 individuals; however extension samples have now resulted in a sample of 10,000 households by 2001. The dataset is nonetheless a little smaller than the SOEP. We select the SOEP waves from 1996 to 2006 which offer comparable information to the BHPS on life satisfaction. We select women aged between 20 and 59. Self-employed women are excluded and all women in our sample are married or living with a partner both at  $t=0$  and  $t=1$ . This avoids an overly heterogeneous sample, as single mothers have completely different opportunity structures. We would have liked to provide a similar assessment for men however men's under-representation in part-time jobs made such an assessment unfeasible. We also exclude respondents who are not born in the UK in the analysis of the BHPS, and respondents with no German nationality in the analysis of the

SOEP.<sup>6</sup> The panel component of both datasets allows us to analyze the impact of labour market transitions on changes in life satisfaction.

For the time period analysed policy provision for working motherhood in both countries was rather limited. While statutory provision of maternity leave in both countries was similar, entitlement to parental leave varied. In Germany parental leave was long (3 years) but the rates were quite low, while in the UK leave was both short (13 weeks) and unpaid (Neyer 2003, Merz 2004). Crucially, neither German nor UK women who wanted/needed to return to work when their children were young, could avail of low cost generally available childcare arrangements in either country, although regions in Eastern Germany are better off than others (Büchel and Spieß 2002).<sup>7</sup> The existence of short school hours in both countries further compounds the incompatibility between full-time paid employment and motherhood.

### **3.2. Models**

Our principal aim is to establish if part-time work makes women happy. We test this through the following estimations.

#### *Within-work transitions.*

In this specification we select all women employees working full-time in period  $t=0$  and compare women who remain full-time at  $t=1$  with those who made a transition to a part-time job in period  $t=1$ . This allows us to identify whether women switching to a part-time job are more satisfied with their life than women remaining in full-time employment and is our main test. One of the strengths of this perspective is that potential heterogeneity in the part-time work-force relative to the full-time workforce is controlled for by focusing on a sub-group of workers that share the

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<sup>6</sup> To be precise, Samples B: "Foreigners in the FRG"; D: "Immigrants"; and additionally G: "Oversampling of High Income".

<sup>7</sup> Roughly one-third of all children under the age of three are in public childcare in Eastern Germany, but only approximately 3% in Western Germany.

same labor force category in  $t=0$ .<sup>8</sup> We repeat this test in the 'other direction', by focusing on part-time workers at  $t=0$  and assessing shifts in life satisfaction between part-time workers who remained in part-time jobs at  $t=1$  and those who left part-time work to obtain full-time jobs at  $t=1$ . Our analysis therefore assesses pooled two-year transitions across labour force categories.

Table 1 shows the number of switches taking place as well as the mean number of children for each sub-group. In our analysis of transitions between employment statuses we further reduce the problem of unobservables by excluding women that leave the labor market, as this group is too heterogeneous (those who are in education, on maternity leave, or unemployed).

< Table 1 about here >

Still, heterogeneity poses a potential problem as answers to life satisfaction questions may be influenced by unobserved personality characteristics. These unobservables are potentially correlated with the probability to report happiness and other covariates. In order to deal with this problem, we (i) apply a change model assessing the effect of a change in working hours on the *changes* in life satisfaction using an OLS specification:

$$\Delta \text{LIFESAT}_{it} = \beta_0 + \beta_1 \text{PT}_{it} + \beta_2 \text{X}_{it} + v_{it} \quad (1)$$

and (ii) we run tests (not shown) of whether our results are consistent under a random effects specification:

$$\Delta \text{LIFESAT}_{it} = \beta_0 + \beta_1 \text{PT}_{it} + \beta_2 \text{X}_{it} + \varepsilon_i + \varepsilon_{it} \quad (2)$$

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<sup>8</sup> In order to test the consistency of our results we also run a model where all women are included (independently from their labor force category) and all possible transitions are considered by the corresponding dummy definitions. The results of this model are reported in section 4.

The dependent variable is measured using self-reported changes in life satisfaction for individual  $i$  between two time points  $t$  and  $t+1$ . Where  $v_{it}$  is the composite error term  $\varepsilon_i + \varepsilon_{it}$ . The random effects specification controls for unobserved individual heterogeneity  $\varepsilon_i$ .

As described above, we compressed the German coding of the satisfaction variable to match the BHPS seven-item scale. So the change in life satisfaction has thirteen different possible values from -6 to +6, allowing us to use OLS and random effects estimation. Tests show that we have enough variation on the dependent variable to follow this strategy.<sup>9</sup> This change is regressed on a constant, a set of control variables collected in matrix  $X$  and a dummy variable indicating whether the person has switched to a part-time position (PT) with women who have remained in full-time employment in the reference category. In  $X$  we include typical socioeconomic control variables, like age, education, important life events like an increase in the number of children or marriage, changes in health, and an indicator for occupational upgrading or downgrading<sup>10</sup> (see Appendix Table A.1). The following section presents our results which control for clustering on id. Random effects specifications yielded similar results but are not shown.

The model is tested for differences between workers who appear to change their working-hours and remain in the same job, with those who appear to change jobs to obtain a change in their working-time. As the BHPS does not reveal within years whether a job change is to a different employer or to a different job with the same employer, we are only able to identify if a change in working-time is to a different job rather than to a different firm. These two models are also run on part-time workers' transitions to full-time employment.

#### *Non employment to part-time and full-time employment*

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<sup>9</sup> In the BHPS, 48% of the sample displayed changes in their life satisfaction with the proportion exhibiting increases similar in size to those exhibiting decreases. In the SOEP 60% displayed changes and in this case the proportion exhibiting increases is also similar to the proportion exhibiting decreases.

<sup>10</sup> Occupational changes are defined as follows. We rank the occupational groupings (using the ISCO 88 international classification) according to the mean hourly wages of each occupation. Then any occupational change which implies a decrease in rank is classified as a downward occupational shift and vice versa.

Our final test focuses on non-employed women and asks whether their life satisfaction changes when they enter the labour market and whether there are significant differences between women entering full-time or part-time jobs. In this analysis we select on women out of the labour market (those who are unemployed or inactive) and run the following regression:

$$\Delta \text{LIFESAT}_{it} = \beta_0 + \beta_1 \text{PT}_{it} + \beta_2 \text{FT}_{it} + \beta_3 \mathbf{X}_{it} + \varepsilon_{it} \quad (3)$$

Just like in our first model the change is regressed on a constant, a set of control variables collected in matrix  $\mathbf{X}$ , a dummy variable indicating whether the person has switched to a part-time position ( $\text{PT}$ ) and additionally a dummy indicating whether the person has switched to a full-time position ( $\text{FT}$ ). Women who are still out of work in family care make up the reference category. In this specification, we are unable to include job related change controls, such as occupational or firm size change, as all respondents were inactive at  $t=0$ .

#### 4. Empirical analysis

##### 4.1. Moving from full-time to part-time – Does it make women happier?

We know by now that part-time jobs are on average less well-paid, offer less promotion possibilities and tend to be in less skilled occupations. At the same time many women working long hours may like to work less, especially if they have young children (and can depend on a partners' wage to off-set their decrease in earnings). From Table 2 we can see that moving from full-time to part-time does indeed make women happier.<sup>11</sup> In both countries the coefficient on the part-time dummy is positive and significant. Note, that we also control for life satisfaction in the base period, as individuals with already high (or low) life satisfaction cannot experience strong increases (or decreases).

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<sup>11</sup> Note, that average self-reported life-satisfaction in the base period of women staying in FT is 5.32 in the UK and 4.97 in Germany. Women switching from FT to PT report averages of 5.38 in the UK and 4.95 in Germany.

< Table 2 about here >

This result is different to what Booth and Van Ours (2008a) find in cross sectional studies on life satisfaction, where part-time work was only found to have significant effects on job-satisfaction but not life-satisfaction. This could be the result of different selections. While Booth and Van Ours compare all workers at a certain point in time we are just looking at switchers and while we can only speculate, it is likely that a high percentage of those switches are voluntary, which might explain the positive result.

Before discussing our further covariates, let's turn to Table 3 where we have separated the group of switchers into those actually switching to another job (within or between firms) and those staying in the same job and reduced their hours of work. The results are indeed noteworthy: only those who stay in the same job were found to feel happier by reducing hours of work.

< Table 3 about here >

This finding supports our expectation that workers who can decrease their working-hours whilst remaining in their previous positions will display the greatest gains. While workers who were unable to decrease their working-hours in their previous post and (we assume) had to leave their workplaces involuntarily to find a part-time job will show considerably lower gains. It is worth underlining the fact that this effect remains significant in a model where we tried to control for potential occupational downgrading in part-time jobs (see footnote 11 above). We would have expected a negative effect on life-satisfaction for women who appear to have occupationally downgraded, though the variable is clearly not significant. Most probably our measures are too broad to adequately capture such a dynamic. We also tested whether changes in the firm size have any influence and find that moving to a larger or smaller firm has no significant effect in either Germany or for the UK.

We also controlled for the effect of personal characteristics and life events on life satisfaction. As we are looking at changes in life satisfaction, most of our variables concern differences in our covariates over time. Still, we decided to control for age and education levels using dummy variables. As previous research has shown that life-satisfaction and age are correlated, different age groups could exhibit distinct patterns of change. While age is not significant in the UK, Germans above 35 are less likely to experience improvements in life satisfaction. This is less in line with the relatively recent literature on a U-shaped age-life-satisfaction relationship (Blanchflower and Oswald 2008) and corresponds to findings by Winkelmann and Winkelmann (1998) who also used the GSOEP. We also tried interacting age with a part-time dummy, but results were not significant and are therefore not reported. Our controls for education levels are rarely significant in the analyses, but results of tables 1 to 4 show that in the UK there is a tendency for women with higher levels of education to be less likely to experience improvements in life satisfaction. We believe that this could be the result of on average higher work orientation of educated women and the relatively low quality of part-time jobs in the UK.

Amongst life events the variable that identifies if the respondent got married between both time periods has a noticeably strong and positive effect in most equations for both countries. This is also in line with the literature that shows that life events are often more important than income at predicting life satisfaction (compare e.g. Blanchflower and Oswald 2004). Nonetheless, our results find very strong effects in Germany for household income. Household income is included in our model in its change form: reflecting the difference in logged household income between  $t=0$  and  $t=1$ . We decided to use household income rather than personal income as this is the variable determining the household's level of consumption and most probably women's willingness to accept reduced hour employment.<sup>12</sup> Results on this variable are mixed. In all

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<sup>12</sup> We also tested the impact of personal income on changes in life-satisfaction, though the coefficient for logged gross hourly wages was insignificant for both the BHPS and the GSOEP and had no impact on the

specifications we estimated, we find change in household income to be positively correlated with life satisfaction in Germany but not in the UK. Note that by controlling for occupational mobility we are also, indirectly, controlling for changes in income level. Upward occupational mobility tends to be associated with an increase in earnings while downward mobility tends to be associated with a decrease.

Finally, there are strong differences in the impact of both levels of children in the home as well as recent birth of children in the home. We again include as base effect (number of children) and changes in the number of children in the household. In the UK, the number of children in the home has a negative effect on changes in life-satisfaction. This corresponds to recent evidence from Stanca (2009) who shows that having children has a negative effect on well-being worldwide. This can be explained by the relatively large adverse effect on financial satisfaction which seems to dominate the positive impact on non-financial satisfaction. In Germany, however, there is no similar effect and women who have recently given birth show a strong positive change in their life satisfaction levels. We also tested the strong relationship between the presence of young children in the home and a reduction in working-hours by interacting the birth of a child with making a transition to part-time employment, yet this interaction term was insignificant in both Germany and the UK (with a significance level of .10 for the UK). As the results with respect to children differ for both countries, we experimented with different interaction terms and found that the link between part-time work and children is less clear than we would have thought (results in appendix table A3). In Germany, there was no relationship between making a transition to a part-time job and having a new child. However, mothers of newborns who remained in full-time posts showed positive gains to life satisfaction. In the UK, the negative effect of having children on life satisfaction seems to be a function of mothers of newborns who remain in full-time employment. These women displayed a strong decrease in life satisfaction of -0.32 (significant at the .001 level); an effect that operates in entirely the opposite

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pattern of our results. Previous research, however, tends to establish a relationship between both personal and household income levels and happiness (e.g. Clark et al. 2008).

direction for mothers of newborns in any other labour force category. This finding supports recent policy developments that give employees access to a broad range of flexible working arrangements in their jobs.

#### **4.2. Moving from part-time to full-time and from non-employment to work**

The next group of models performs the same tests for women in part-time jobs, assessing the difference in the satisfaction levels for those who remain in part-time work compared with those who leave to obtain a full-time job (see Table 4). We do not find a concomitant decrease in life satisfaction for part-time workers who obtain a full-time job; so it would appear that it is not possible to conclude that there is something problematic with full-time jobs per se (something that might be concluded from the previous models). We performed additional tests to see if there were differences between part-time workers who were able to increase their working-hours to full-time in their previous posts and those that left to find a full-time post elsewhere, but these were also not significant and so are not shown. We had expected that a transition to a full-time job would lead to an increase in life-satisfaction if the transition was voluntary particularly as an increase in working-time should lead to an increase in both hourly and monthly earnings and potentially even lead to jobs with greater skill levels and occupational fit. Either this is not the case or the increased stress from working full-time counteracts all the positive effects from moving to full-time employment. It is also worth noting, nonetheless, that the variables that measure children in the household vary for this sub-population of working women. We note a positive effect in the levels of children in Germany (where there previously was none) in model IV and also note that the birth of a child has positive rather than negative effects on life satisfaction in the UK in model III. We again tried interaction terms of a transition to full-time employment and the recent birth of a child, but the coefficient was insignificant so not included in the final model.

< Table 4 about here >

As a final test of our main finding, table 5 presents the effects of a transition to employment on happiness, with a distinction made between part-time and full-time hours. We find strong positive effects of transitions to employment for both countries. The impact of moving to a part-time job is not as great as that associated with obtaining a full-time job, however. Not only are the coefficients for part-time smaller, they are also insignificant for the UK model. These findings again provide an important context to our findings in tables 1 and 2. The positive effect of part-time employment on women's happiness underscore how it is not part-time employment per se, that makes (all) women happier, but rather the decrease in working-hours within a previously full-time post. While the model covariates generally behave in the expected manner in table 5, there are some differences. Notably, the variables measuring children again vary.

< Table 5 about here >

## **5. Conclusions**

Our analysis reveals that around 73% of married or cohabiting women in Germany and 38% of married or cohabiting women in the UK would prefer different working-hours than they currently have. From an economic point of view this is a cause for concern if individual welfare is significantly reduced by these discrepancies. Obviously we are not able to measure welfare associated with different hours of work directly, but self-reported life-satisfaction can be a good proxy for the utility derived from different jobs.

This paper therefore looked at working women in partnerships and tested whether changes in working hours influenced life-satisfaction significantly. We selected on women in partnerships as we wanted to test the impact of children on working-motherhood, and lone parents face unique constraints in their market attachment. Theoretically, the association between hours of work and life satisfaction could go in either of two opposing directions. On the one hand a reduction of working hours may help to balance life and work leading to an increase in well-being while on the other, part-time employment's association with lower earnings and inferior working conditions could lead to a decrease in life satisfaction. We found that in both countries under consideration, the UK and Germany, women who switch from full-time to part-time employment report increases in life satisfaction, indicating that part-time work makes life easier for those women. This is especially true of women who decrease their working-hours whilst remaining with their employer in the same job. Although our data set does not include detailed information on the reasons for reducing hours of work, we interpret this finding as evidence that a majority of working hour reductions within the same job are voluntary *given institutional settings*.

Indeed, institutions are important to consider as both countries have many policies in place that tend to reduce incentives for women in partnerships to work in paid employment, like limited child care facilities. We find effects of children on life satisfaction, though results differ between countries. In Germany, the birth of a child, in most models, increased working women's life satisfaction considerably, while it did not in the UK. This could be the result of different child care opportunities in both countries, which are better in Germany than in the UK (at least in some German regions, notably East Germany, see Büchel and Spieß 2002). While the presence of and birth of children in Germany always had positive effects, in the UK there were instances where the number of children had negative effects on changes in life satisfaction. In particular we found the impact of a new born on mother's well-being to be significantly negative if she remained in full-time employment in the UK. These diverging effects of children on working motherhood, illustrate the ongoing importance of the work-life balance agenda particularly in the UK.

Nonetheless, women's life satisfaction was not found to be purely driven by the presence or absence of children; nor are women's decisions to change their working hours driven purely by their childcare obligations. Other factors like limited time resources for out of work activities are also potentially driving the decision.

Further results show that switching to a new part-time job (potentially with a new employer) from a full-time position does not affect life-satisfaction in any way, rather it was workers who decreased their working-hours without exhibiting job change that showed the greatest increases in life-satisfaction. The potential positive effects on work-life balance seem to be cancelled out by either the problem of occupational downgrading or otherwise increased work stress when starting a new job. Similarly, women increasing their hours of work from part-time to full-time don't report any significant changes in life satisfaction. Finally, women leaving non-employment for work are happier if they find a full-time position. Taken together our results do not show that either option – full-time or part-time – is always superior under any circumstances. Our results indicate that social policies should not unilaterally favor one of the two work models but rather design policies that give women and men a real choice of whether they would like to work full-time or not.

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