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## Hours of work and gender identity: does part-time work make the family happier?

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IZA DP No. 1884

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# Hours of Work and Gender Identity: Does Part-Time Work Make the Family Happier?

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## ABSTRACT

### **Hours of Work and Gender Identity: Does Part-Time Work Make the Family Happier?\***

Taking into account inter-dependence within the family, we investigate the relationship between part-time work and happiness. We use panel data from the new Household, Income and Labor Dynamics in Australia Survey. Our analysis indicates that part-time women are more satisfied with working hours than full-time women. Partnered women's life satisfaction is increased if their partners work full-time. Male partners' life satisfaction is unaffected by their partners' market hours but is increased if they themselves are working full-time. This finding is consistent with the gender identity hypothesis of Akerlof and Kranton (2000).

JEL Classification: J22, I31, J16

Keywords: part-time work, happiness, gender identity

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# 1 Introduction

In this paper we investigate the relationship between part-time work and working hours satisfaction; job satisfaction; and life satisfaction. We account for interdependence within the family and use new panel data for partnered men and women. The distribution of working hours within a household may be driven by partners specializing in either market work or house work, as argued by for example Becker (1965). However, social custom and conditioning – in particular gender identity as argued by Akerlof and Kranton (2000) – may influence the distribution of time spent on childcare and housework, and preferences for full-time and part-time jobs. To illuminate our findings about partnered life satisfaction, we therefore also exploit time use data to estimate the relationship between the male shares of housework and market work, and to investigate the degree to which the data are consistent with the gender identity hypothesis of Akerlof and Kranton (2000) and with Becker’s specialization hypothesis.

*Figure 1 about here*

Part-time work is of growing importance in OECD countries.<sup>1</sup> The OECD (2001), in its international overview of part-time work, concluded that hourly earnings in part-time jobs are lower than in full-time jobs, while employer-provided training is less frequent in part-time than full-time jobs. Nevertheless, many part-time workers – especially women – have no desire to work full-time.<sup>2</sup> Figure 1 gives a cross-country overview of the incidence of part-time work (the share of employed workers working part-time) for women and the share of women working part-time involuntarily. There is a clear negative relationship between the two. In Finland, where (in 1994) only

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<sup>1</sup>Across the OECD there are big differences in the share of the employed population that is working part-time. In 2004 the extent of part-time employment among women was highest in the Netherlands, with about 60% of employed women working part-time. Other countries in which the extent of part-time employment is substantially above the OECD average are Australia, Switzerland and the United Kingdom, with between 40 and 45% of employed women working part-time (OECD, 2004). Among employed men, the incidence of part-time work is highest in Australia (16%) and in the Netherlands (15%). These differences may be related to preferences but also to the quality of part-time jobs.

<sup>2</sup>Similarly, many full-time workers prefer to work part-time but have no opportunity to do so.

about 10% of women worked part-time, 40% of them preferred a full-time job. In the Netherlands, where 55% worked part-time, only about 5% preferred a full-time job. In Australia 41% of employed women worked part-time and about 9% of them preferred a full-time job. The United Kingdom is similar, while the United States has a much smaller proportion working part-time at around 20% and 8% of these were involuntarily in part-time work. It would seem that, in a situation where there are many part-time workers, part-time work is perceived as being more attractive. This may have to do with unions being more interested in representing part-time workers once their number is large enough. Or, it may be that part-time work can grow only if it is sufficiently attractive for workers. Nevertheless, there are concerns that part-time jobs marginalize women in the labor market. To the extent that part-time jobs are characterized by poor wages and benefits, low job tenure, and an absence of training, part-time women's promotion prospects will be lower and they will be at higher risk of dropping out of the labor force.

Although many women prefer to work part-time, it is not clear *a priori* that part-time work contributes to the happiness of the family. To explore this empirically, we use the first three waves of the Household, Income and Labor Dynamics in Australia (HILDA) Survey to investigate the relationship between part-time work and various indicators of satisfaction. We use three indicators: satisfaction with working hours, overall job satisfaction, and life satisfaction. Since we are especially interested in the effects of part-time work on family life, we take into account that, for married or cohabiting couples, the distribution of paid work may not be unrelated to the distribution of home work. By studying the cross-partner effects of working part-time, we can determine whether or not part-time work makes families happier.

The set-up of the paper is as follows. In Section 2 we give a brief overview of the literature on part-time work and job satisfaction. We relate this to the gender identity hypothesis of Akerlof and Kranton (2000) as well as to the specialization hypothesis of Becker (1965). Section 3 describes the data. Section 4 presents and discusses parameter estimates on hours of work, in order to describe partnered labor supply. We find that the birth of children and the presence of young children affects the labor market position of women (both in terms of job probability and the number of working hours) but not of men. We also find evidence of a positive association

between the probabilities of each partner having a job. In Section 5 we examine the degree to which workers are satisfied with their current hours of work, before using a fixed effects ordered logit model to estimate whether or not part-time work affects our three satisfaction indicators – hours, jobs and life. We find that part-time women are more satisfied with their hours of work than full-time women, while for men hours of work satisfaction is greatest for those working 35-40 hours per week. Overall job satisfaction seems to be independent of hours of work. Our main finding is that women’s life satisfaction is reduced by working full-time but is increased if their partners are working full-time. Men’s life satisfaction is unaffected by their partners’ working hours but is significantly higher if they themselves work full-time. In Section 6 we exploit time-use data to estimate the relationship between the male shares of housework and market work. We find that men doing a small share of market work are also doing a small share of house work. This finding is consistent with the gender identity hypothesis of Akerlof and Kranton (2000) but inconsistent with Becker’s specialization hypothesis. Section 7 concludes.

## 2 Background

While there is a large and growing economics literature on the determinants of various components of satisfaction and happiness, to our knowledge no studies have explicitly investigated the degree to which part-time work status might affect individual life satisfaction, and none have looked at how part-time work affects family life satisfaction.<sup>3</sup> In contrast numerous studies have focused on unemployment status and individual happiness.<sup>4</sup> These have typically found that it is the experience of unem-

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<sup>3</sup>Some studies examining individual life satisfaction do include part-time work status as a control but do not comment on the estimated coefficients. Frijters, Hasken-DeNew and Shields (2004a, 2004b) find, using the GSOEP data, that life satisfaction is higher for full-time and part-time women – and for non-participating women – relative to the base of unemployed women. In job satisfaction studies, hours of work are frequently included as controls, and typically have a negative effect on job satisfaction (see *inter alia* Clark, 1997; Clark and Oswald, 1994), apart from overtime hours (see Van Praag and Ferrer-i-Carbonell (2004: pp.56-7).

<sup>4</sup>For studies using panel data explicitly to investigate the relationship between happiness and unemployment, see Carroll (2005), Clark and Oswald, (1994), Clark (2003), Clark, Georgellis and Sanfey (2001) Gerlach and Stephan, (1996); Winkelmann and Winkelmann, (1998).

ployment itself, rather than the loss of income through unemployment, that reduces life satisfaction. This finding has been rationalized by appealing to work as a source of social and self esteem that is not found in unemployment. But these same arguments – that work brings with it social connection through work colleagues and prestige through employment – might also apply to individuals choosing to work part-time in the market sector rather than choosing home production or leisure. Moreover a large – and in many countries growing – proportion of the workforce is in part-time work, and it would therefore seem important to know whether or not this work pattern is welfare-enhancing to the individuals and couples concerned.

Although many young people may choose to work part-time because it allows them to finance educational investments or provide pocket money while at school, the majority of part-time workers are those with family responsibilities. And family responsibilities involve partners in difficult choices, such as whether to buy in from the market sector goods and services that might alternatively be produced by one partner at home. Part-time jobs provide a means of combining domestic and market production, whilst maintaining workforce skills or experience capital for the future. But neoclassical labor supply theory would suggest that it is preferences that dictate women’s decisions to work. *Ceteris paribus*, those who are in full-time work or part-time work should be as happy as those who are not in the labor force, since individuals have made their choices optimally.<sup>5</sup>

However, individuals operate within society’s constraints, and it might be expected that social custom and conditioning could play an important part in affecting happiness and the gender division of labor. It is possible that – controlling for income – part-time jobs could make partnered women happier than either full-time work or no work, because such jobs allow them to gain esteem through working, while obtaining social and self esteem from being with and caring for their families and their homes. Indeed, as argued by Akerlof and Kranton (2000), society’s prescriptions about appropriate modes of behavior for each gender might result in women and men

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<sup>5</sup>Frijters et al (2004a) found, using fixed effects ordered logits and GSOEP data, that the coefficients for non-participation and full-time work are very similar for West German women, but different for East German women, who are far less satisfied with their lives if not participating. These results – not commented on in their text – were for individuals aged 21-64.



experiencing a loss of identity should they deviate from the relevant code. If this is the case, men might be happier in full-time work and women in part-time work, since both are then adopting modes of behavior dictated by social custom.<sup>6</sup> An empirical prediction of this gender identity model is that the average male share of house work will always be smaller than the female share regardless of how the couple share their total hours of market work.

An alternative hypothesis predicting gender differences in working hours is that partners within a household specialize in either market work or house work, as argued for example by Becker (1965). An empirical prediction of the specialization model is that there will be a monotonically decreasing relationship between the share of house work done by one partner and that partner's share of market work. We will explore these issues empirically later in the paper, using the HILDA survey time use module.

How does the gender identity model affect life satisfaction? If women do feel a loss of identity by deviating from a particular prescription of responsibility for home production, we might expect part-time work to increase life satisfaction *ceteris paribus* since part-time work might be preferred simply because there is a finite amount of time in each day. If the responsibility for house work rests with the woman, then there are fewer hours available for market work and for this reason women might prefer part-time commitments. The question then is whether or not – once family responsibilities have been controlled for in happiness regressions – part-time work has an independent effect on satisfaction.<sup>7</sup>

In summary, if women prefer part-time work because it satisfies their hours preferences given their constraints, we should observe a positive correlation between part-

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<sup>6</sup>Of course these prescriptions are endogenous to a society, as noted by thinkers such as John Stuart Mill (1869). Prescriptions might arise and continue because it is in the dominant group's interest to maintain them. They can be weakened or removed when this group loses power. For example, the female suffragette movement can be viewed as a movement aiming to remove the prescription that women were not capable of voting responsibly. Akerlof and Kranton (2000) also note that the women's movement has reduced the gender associations of particular tasks and made it more acceptable for women to work in the market sector. Whether or not this applies to men engaging in house work is a topic to which we return later in this paper.

<sup>7</sup>Although some partnered couples no longer follow the conventional gendered division of labor, the bulk of the evidence suggests that in the average household it is women who work part-time and assume the main domestic care role while the men work full-time. See also Section 6 below.

time work and hours satisfaction. But although part-time work might increase hours satisfaction, it might not necessarily increase job satisfaction (part-timers may be doing more menial and less satisfying work than if they were full-time). So if part-time jobs are bad jobs, overall job satisfaction might be lower. The effect of part-time work on overall life satisfaction is unclear *a priori*. It is likely to provide flexible working hours while maintaining an individual's self esteem and social connection. On the other hand, part-time jobs work might be intrinsically unsatisfying and dead-end, and therefore might reduce life satisfaction through this avenue. Ultimately it is an empirical issue as to which effect dominates.

To our knowledge no studies have yet explored the nexus between the happiness of the partnered couple and their work status. And yet the observed patterns of higher female participation over the life cycle, and the combination of market and household production engaged in by couples, would suggest that the relationship between work status and happiness is an important issue to address.

While happiness research in the economics literature has been underway for over a decade, only relatively recently have panel data techniques been employed to control for unobserved individual heterogeneity. Cross-sectional equations facilitate the establishment of correlation rather than causation. This is because unobservables – such as an extrovert personality type – can be correlated both with the propensity to report happiness and with the explanatory variables of interest. Thus the coefficients to the latter are possibly biased in cross-sectional work.<sup>8</sup> The use of panel data can overcome this problem, to the extent that personality traits are fixed over time, and can be differenced out.

To our knowledge only two studies apart from our own look at interdependence within the family. Van Praag and Ferrer-i-Carbonell (2004: Chapter 6) investigate gender differences in happiness and explore covariances between satisfaction of the two partners in a household, using random effects from a cross-section of the BHPS. Winkelmann (2004) uses the GSOEP to examine inter-dependence across generations, using random effects estimation.

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<sup>8</sup>Studies using panel data techniques to examine the determinants of satisfaction include *inter alia* Carroll (2005), Clark (2003), Ferrer-i-Carbonell and Frijters (2004), Frijters, Hasken-DeNew and Shields (2004a and b), and Hamermesh (2001) .

In contrast to those two studies, we will use fixed effects *ordered logit* estimation on a panel of partnered men and women. This is in contrast to the bulk of the empirical literature on satisfaction analysis, in which the categorical satisfaction scale is typically reduced to a (0,1) scale, permitting fixed effects estimation of a binomial logit model using Chamberlain’s method. But unfortunately that method comes at a large cost, since only those individuals moving across the cut-off point can be used in the estimation.

Instead of adopting that procedure, we follow Ferrer-i-Carbonell and Frijters (2004) and use an ordered logit model. This introduces individual-specific fixed effects and individual-specific thresholds, a simple reformulation that allows Chamberlain’s method to be used, removing both individual-specific effects and thresholds from the likelihood specification. Moreover the number of observations used in this approach is significantly greater relative to the binomial logit method. This is because *all* changes in satisfaction are exploited, and not just those across some arbitrary cut point.

### 3 Data

The empirical analysis is based on the first three waves of the HILDA Survey, a nationally representative random-sample survey of private households in Australia spanning the period 2001-3.<sup>9</sup> We restrict our estimating sub-sample to married or cohabiting couples, because we are interested in the relationship between part-time work and family welfare. Since prime age women in particular are confronted with choices concerning family life and paid work, we further restrict our analysis to couples in which the female partner was aged 25 to 50 in the first year of the HILDA survey (2001).<sup>10</sup> We use an unbalanced panel, in which selected couples are present in at least two consecutive waves. These restrictions yield a sample of 4676 couples. For females in these couples 31% have no job, 36% have a part-time job, and 33% have a full-time job. For males in these couples 8% have no job, 8% have a part-time job

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<sup>9</sup>The survey is a longitudinal study of representative households in Australia. For details, see Appendix A. This appendix also gives an overview of the definitions of the variables used in the analysis; see Table A.1.

<sup>10</sup>In addition we dropped a few couples in which the male partner was older than 60 in 2001, because such males are much less likely to participate in the labor market.

and 84% have a full-time job.

In our analysis we focus on three satisfaction variables: hours of work satisfaction, overall job satisfaction and life satisfaction. The hours and overall job satisfaction variables were obtained from the following question about the individual's main job: "I now have some questions about how satisfied or dissatisfied you are with different aspects of your job... If not currently employed, these questions refer to the most recent job you were working in." Respondents were then prompted for hours of work, and then for jobs. The precise question was: "All things considered, how satisfied are you with your job?" The responses could run from 0 to 10, with higher numbers denoting higher levels of satisfaction. The life satisfaction variable was obtained from the following question: "All things considered, how satisfied are you with your life? Again pick a number between 0 and 10 to indicate how satisfied you are."

*Table 1 about here*

The distribution of each of the satisfaction variables across different groups is presented in Table 1. As shown, satisfaction ranges from 0 to 10, with most individuals being in the upper part of this scale. If we use the share of individuals in the two grades as an indicator of satisfaction, it is clear that both part-time working women and men are more satisfied with their *hours of work* than full-time working individuals. The same holds for *overall job satisfaction*, although here the difference between part-timers and full-timers is smaller than before. If we use mean satisfaction as an indicator (see bottom of Table 1), full-time working men have a slightly higher overall job satisfaction than part-time working men.

Concerning *life satisfaction*, we distinguish between part-timers, full-timers and non-working individuals. Table 1 shows that the highest mean life satisfaction for women is associated with part-time work while for men it is associated with full-time work. However, the differences are not large.

## 4 Labor market position

To get some idea about the determinants of employment, we estimate discrete choice models using pooled cross-section data as well as exploiting the panel character of

the data. To investigate the way in which the decisions of one partner affect the other, we also allow some individual characteristics to affect the partner’s employment position.<sup>11</sup> The probability of having a job is analyzed using a logit specification.<sup>12</sup> Thus  $\Pr(y_{it} = 1) = \Lambda(\beta x_{it})$  and  $\Pr(y_{it} = 0) = \Lambda(-\beta x_{it})$ , where  $\Lambda$  is an indicator of the logistic cumulative distribution function,  $y$  indicates whether or not an individual has a job,  $i$  refers to individual,  $t$  refers to the year (2001, 2002, 2003). Furthermore,  $x$  is a vector of explanatory variables, and  $\beta$  is a vector of parameters.

The principal explanatory variables used in the analysis are: age, health, whether or not a household had a new birth in the period since the previous interview (or in the last 12 months in the case of wave 1), whether the household had children in the age group from 0 to 4 or in the age group from 5 to 14, and the year of survey. Other variables included are education, country of birth, and degree of urbanization. However, since these variables are time-invariant, they drop out of the panel analysis. In the interests of space, we do not report the estimated coefficients to these variables in the pooled-cross-sectional models.

*Table 2 about here*

The first column of Table 2 reports the parameter estimates, where the upper panel gives the results for women and the lower panel for men. Age has a statistically significant effect for men only. Older men are less likely to have a job. For both women and men, being in good health has a positive effect on the probability of having a job. Having young children or teenage children only has a negative effect on the female probability of having a job. As shown, having a partner with a part-time or full-time job is positively related to an individual’s own job probability. This association is

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<sup>11</sup>Thus we ignore joint decision making and assume that the decision of the partner is exogenous to the decision of the individual.

<sup>12</sup>We use the logit specification since it is a natural starting point for the introduction of fixed effects. In a bivariate probit model (not reported), we investigated to what extent there is correlation in the behavior of partnered men and women conditional on their observed characteristics. We found that the estimated parameters are hardly affected by the introduction of possible correlation in the unobserved characteristics, whereas the correlation itself is positive and significantly different from zero. This indicates either joint decision making – or perhaps selective matching (individuals who are more likely to work match with similar individuals) – that is orthogonal to observed characteristics.

consistent with studies showing the presence of work-rich and work-poor households (see *inter alia* Dickens and Ellwood, 2001).

If we introduce fixed effects in a logit model, the specification becomes  $\Pr(y_{it} = 1) = \Lambda(\alpha_i + \beta x_{it})$  and  $\Pr(y_{it} = 0) = \Lambda(-\alpha_i - \beta x_{it})$ , where the  $\alpha_i$  represent individual fixed effects. The parameters of this fixed effects logit model are estimated using Chamberlain's conditional likelihood method. This means that the parameters are identified on the subset of observations where the dependent variable changes at least once over time.

As shown in the fourth column of Table 2, the number of observations reduces substantially if fixed effects are introduced. In total 334 women and 138 found a job or lost a job at least once. However, by and large the results are not much different from the estimates based on pooled cross-sections.<sup>13</sup> The results show first, that the birth of a child increases the female probability of moving out of work. This is unsurprising – especially in view of the fact that Australia is one of the few OECD countries without statutory maternity leave provision (OECD, 2001). Secondly, if a child moves from the age category 0-4 years to a higher age category the female probability of finding a job increases. However for men these changes in family situation do not affect their labor market position. Thirdly, an improvement in health significantly increases the probability of finding a job but only for male partners.

The second column of Table 2 shows the pooled cross-sectional estimates of the determinants of the individual probability of having a part-time job conditional on being in work. For both men and women this probability increases with age. Females are less likely to have a part-time job if there are preschool children. We also find this result in the fixed effects estimates reported in the fifth column. Furthermore, a woman is more likely to work part-time if her partner works, a result that we do not find if fixed effects are included. This suggests that the partner effect may be due to unobserved characteristics rather than being a causal effect. For males, apart from age only health has an effect on the probability of working part-time, but again from the fixed effects estimates it seems as if this is not a causal effect.

Finally, the third and sixth columns of Table 2 show the determinants of the

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<sup>13</sup>Note that, in a fixed effects setting, we cannot identify the effects of age, since there is perfect correlation between age and calendar years.

hours of work decision from the pooled cross-sections and the fixed effects estimation respectively. In both the presence of pre-school children significantly reduces female hours of work but not male.

## 5 Hours of work and satisfaction

### 5.1 Preliminary analysis

Table 3 reports the numbers of transitions in the data. The top panel of the table indicates changes in hours and the associated changes in hours satisfaction, job satisfaction and life satisfaction for women. Thus the first row shows that 568 women reduced their hours between two adjacent waves, and these women on average moved up 0.18 of a grade in the hours satisfaction ranking, but their satisfaction with the job and with life declined (though by a very small amount). The third row shows that 777 women increased their hours between two adjacent waves. This was associated with a decline of 0.34 of a grade in hours satisfaction but a negligible drop in job and life satisfaction.

*Table 3 about here*

Table 3 also shows the happiness changes associated with changes in employment status between waves. Notice the relatively large increases in hours satisfaction involving transitions from full-time (FT) to part-time (PT) work, representing an increase of 0.62 of a grade for women and 0.32 of a grade for men. There are 138 women in this group as compared with just 76 men. However the biggest increase in job satisfaction (of more than 0.6 of a grade) was found for the 105 men changing from PT to FT work. This panel also reveals that transitions are relatively rare for men: 93% do not change status between waves. For women 43% are in PT status across waves, compared to 41% who are in FT work across waves. Nonetheless, there are enough individuals who do change status to allow us to estimate fixed effects logit models.

## 5.2 Happy with current hours

Having completed the description of partnered labor supply and the transitions in the data, we next examine the degree to which workers are satisfied with their current hours of work before estimating whether or not part-time work increases family welfare. We first investigate what determines whether or not workers are “happy to work about the same hours”.<sup>14</sup>

The first column of Table 4 shows the pooled cross-sectional parameter estimates, again based on a logit specification. As shown, women in good health and women in part-time work are more likely to be happy about their hours of work than their counterparts. For men none of the parameter estimates presented differs significantly from zero.

Panel (a) of Table 5 presents parameter estimates from a fixed effects logit model. In the lower part of panel (a), a more detailed classification of working hours is used. As shown, women are more likely to be happy about their hours of work if they work between 21 and 34 hours, while they are less likely to be happy about their working hours if they work more than 40 hours per week. Men are more likely to be happy about their working hours if they work between 35 and 40 hours per week.

## 5.3 Pooled Cross-section Satisfaction Estimates

We start our analysis of the satisfaction indicators – hours of work satisfaction, overall job satisfaction, life satisfaction – using an ordered logit model estimated on pooled cross-section data. (In the following subsection we will present the panel estimates.) In the ordered logit model  $j$  represents the response category ( $j = 0, \dots, 10$  for the satisfaction variables) and  $Pr(y_{it} = j) = \Lambda(\mu_j - \beta'x_{it}) - \Lambda(\mu_{j-1} - \beta'x_{it})$ , with  $\mu_0 = -\infty$ ,

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<sup>14</sup>In preliminary regressions we investigated potential selectivity, i.e. whether workers who are either more or less happy with their working hours are more likely to have a job. We estimated a bivariate probit model, which allowed for selectivity in having a job. The parameter estimates were in line with estimates presented in Table 4. There was no correlation between the unobserved characteristics affecting the probability of being “happy about working hours” and the unobserved characteristics affecting the probability of having a job. In other words, there was no evidence of selectivity.



$$\mu_1=0, \mu_{10}=\infty.^{15}$$

*Table 4 about here*

The parameter estimates for hours satisfaction are shown in the second column of Table 4. Women are more satisfied about their hours of work if a child was born recently, if family income is higher, if they are in good health and if they work part-time. The health and working hours of their partner do not affect their own satisfaction about their working hours. For men, the only relevant variable is whether they work full-time. Part-time working men are happier about their working hours than full-time working men.

The third column of Table 4 shows the parameter estimates for job satisfaction. For women they are by and large similar to the parameter estimates for hours satisfaction, which indicates that hours of work are an important attribute of job satisfaction. Men are less happy about their job if their family recently expanded through the birth of a child. They are more satisfied about their job if the family income is higher and they are less satisfied about their job if their partner works full-time.

Finally, the last two columns of Table 4 present parameter estimates for life satisfaction – our indicator for the degree of happiness. The estimating sample now also includes women and men who do not have a job. Women are happier if a child is born. Furthermore their happiness increases with family income and their own health and their happiness decreases if they work part-time and decreases even more if they work full-time. Happiness in women is not affected by the health or labor market position of their partner. However, if we remove family income as explanatory variable, this result changes. Now, women are happier if their partner works full-time. Apparently it is the contribution of full-time working to the family income that makes females happy.

Men too are happier if a child is born, if they have a high family income, and if they themselves are healthier. The health and labor market position of their spouse as well as their own labor market position is irrelevant for their life satisfaction.

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<sup>15</sup>Note that the ancillary parameters, the  $\mu$ 's, are estimated but not reported. They are available on request.

## 5.4 Panel estimates for satisfaction

We next turn to panel estimates of the determinants of satisfaction. In the empirical literature on satisfaction analysis, a categorical scale is usually reduced to a (0,1) scale – choosing an arbitrary common cut-off point – so that instead of an ordered logit model a binomial logit model may be used. This allows the introduction of fixed effects and the estimation of the parameters using Chamberlain’s method. However this benefit comes at the cost of a large loss of observations, since only individuals that move across the cut-off point can be used in the analysis.<sup>16</sup>

Instead of following that procedure, we use an ordered logit model, in which we introduce individual fixed effects and individual specific thresholds:  $Pr(y_{it} = j) = \Lambda(\mu_{ij} - \alpha_i - \beta'x_{it}) - \Lambda(\mu_{i,j-1} - \alpha_i - \beta'x_{it})$ . Ferrer-i-Carbonell and Frijters (2004) show that, by choosing for every individual a specific barrier  $k_i$ , the fixed effects ordered logit specification can be reformulated as a fixed effects binomial logit. So instead of a common cut-off point, individual specific cut-off points are chosen. This reformulation allows Chamberlain’s method to be used and removes the individual specific effects  $\alpha_i$  as well as the individual specific thresholds  $\mu_{ij}$  from the likelihood specification.<sup>17</sup>

*Table 5 about here*

We start with the fixed effects ordered logit estimates of hours of work satisfaction, reported in Panel (b) of Table 5. The results are broadly consistent with those in Panel (a). The probability of being happy about working hours is highest for women working part-time, while the probability is lowest if they work more than 40 hours per week. Men are happiest about their working hours if they work between 35 and 40 hours per week.

We next turn to the fixed effects ordered logit estimates of overall job satisfaction, reported in Panel (c) of Table 5. It is striking that, for neither partnered women

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<sup>16</sup>This large loss of data may also mean that measurement errors become an important source of residual variation.

<sup>17</sup>In our estimates we use  $k_i = \sum_t y_{it} / n_i$ , where  $n$  is the total number of observations of individual  $i$ . All observations for which  $y_{it} > k_i$  are transformed into  $z_{it} = 1$ , all observations for which  $y_{it} \leq k_i$  are transformed into  $z_{it} = 0$ . Alternatively, we used  $z_{it} = 1$  if  $y_{it} \geq k_i$  and  $z_{it} = 0$  if  $y_{it} < k_i$ . This hardly affected the parameter estimates.

or men, do hours of work play any part in determining job satisfaction. Finally consider the estimates of life satisfaction reported in Panel (d) of Table 5. Female life satisfaction increases if the partner gets a full-time job but declines if they themselves move into full-time work. Male life satisfaction is also increased if they move into full-time work. However, whether or not the spouse gets a job is irrelevant for the life satisfaction of Australian males.

In Section 2, we noted that – if women prefer PT work because it satisfies their hours preferences given their constraints – we should observe a positive correlation between PT work and hours satisfaction. This is indeed what we observe. We also noted that, if PT jobs were actually bad jobs, job satisfaction might be lower. But instead we found no correlation between various hours of work patterns and job satisfaction for either men or women. Finally, in Section 2 we suggested that the impact of PT work on life satisfaction is unclear *a priori*. On the one hand, PT work provides a connection to the world of market work, allowing individuals to maintain human capital and some identity in that sphere. But on the other hand, the work might be dead end and hence reduce life satisfaction. We found that for men there was a negative effect of PT work on life satisfaction, while for women there was a positive effect. Men did not mind what their partners did with respect to market sector work hours, but their women’s life satisfaction was increased if the men worked FT. Such a gendered difference in responses is suggestive of households with traditional gender divides.

How do the fixed effects ordered logit estimates in Table 5 compare with the cross-sectional ordered logits in Table 4? We would expect unobserved heterogeneity could be important since – as we argued in Section 2 – unobservables such as personality type may be correlated both with the propensity to report happiness and with the explanatory variables of interest. By and large, controlling for unobserved individual heterogeneity through the fixed effects ordered logit has resulted in larger estimated effects of working hours on life satisfaction and a lower level of statistical significance. For example, Table 4 shows that the coefficient to *full-time work women* in the women’s life satisfaction equation in which family income is included is -0.74 with a t-statistic of 2.7. But Table 5 reveals that the coefficient to the same variable in the fixed effects ordered logit is -0.38 with a t-statistic of 2.3. Similarly, the co-

efficient to *part-time work women* also become larger (ie less negative) and its level of significance drops. In general, we see that the estimated coefficients to hours of work in the cross-sectional ordered logits are downward biased since, once we control for unobserved heterogeneity through fixed effects estimation, the coefficients become larger.<sup>18</sup> Moreover, the comparison of the results for life satisfaction between Tables 4 and 5 is striking in that, once the fixed effects are removed, the only variables that remain statistically significant are those for hours of work. Similarly we find that hours of work are all that affect hours satisfaction once unobserved heterogeneity is controlled for, a result that is perhaps not surprising.

To summarize, we found a gendered difference in the impact of part-time or full-time work on hours and life satisfaction even once account had been taken of unobserved heterogeneity using fixed effects ordered logit estimation. This is suggestive of households with traditional gender divides. We next try to extract more information from the data by exploiting the time use module.

## 6 What explains these findings?

What might explain these observed gender differences in partners' satisfaction with part-time work? Theories of household behavior, such as that put forward by Becker (1965), predict that partnered households will be characterized by specialization of labor, whereby one partner engages in home work and the other in market sector work. According to this specialization hypothesis, there will be a monotonically declining relationship between the share of house work done by one partner and that same partner's share of market work.<sup>19</sup>

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<sup>18</sup>This may arise, for example, because highly motivated people are more likely to work either full-time or part-time and less likely to be satisfied with their lives *ceteris paribus*. Of course without any data on personality type we can only speculate about reasons for the downward bias in the cross-sectional estimates.

<sup>19</sup>The partner capable of earning the most in market work should specialize in that, while the other partner specializes in home production. To the extent that technological progress and declining fertility have reduced the time required for home production, that partner might be able to convexify between home and market work. Nonetheless if it is the male partner who does the lion's share of market work, his partner's share of housework should be larger. But if he does the minority share of market work, according to the specialization hypothesis he should do the majority share of

Following the approach of Akerlof and Kranton (2000), we test this prediction using data on housework from the time use module in the HILDA Survey.<sup>20</sup> Akerlof and Kranton investigate the relationship between the male share of both partners' hours spent on house work (denoted by  $hrwk_{it}$ ) and the male share of both partners' hours spent in market work (denoted by  $h_{it}$ ).

*Figure 2 about here*

We have information for 4019 families. The number of cases is somewhat smaller than for the regression results presented above, because of the fact that we had to drop those observations with missing information on time use. Women spend on average 20 hours per week in house work as compared with 6 hours for men. Average hours of market work for women are 20.9 while for men they are 41.5. In our sample there are 567 households in which women do the majority of market work, which accounts for approximately 14% of the sub-sample. However, there are only 159 households (3.9%) in which men do less than 20% of market work. Akerlof and Kranton distinguished three types of families: families without children below age 14, families with the youngest child 0 to 4, and families with the youngest child 5 to 14. Figure 2 presents men's share of housework in each decile of  $h$  for the three groups of families. As shown, there are not many differences between the groups provided the men's share of working hours is above 0.3. Below this there are differences between the groups, but this is also because the number of observations is very small here.<sup>21</sup>

We performed tobit regressions with  $hrwk_{it}$  as the dependent variable and  $h_{it}$ , the age of each partner, the natural logarithm of household income and total hours of housework as explanatory variables. We experimented with a number of different specifications of  $h_i$ , including squared, cubic and quartic. The cubic specification is

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housework.

<sup>20</sup>The time use information was obtained from each partners' responses to the following question: "How much time would you spend on each of the following activities in a **typical** week? (Please do not count any activity twice):" There then followed a list of activities, including: "Housework, such as preparing meals, washing dishes, cleaning house, washing clothes, ironing and sewing." The information is given as hours per week, and the male share is calculated as the hours spent by men doing housework as a proportion of the combined hours of both partners.

<sup>21</sup>In fact in the second decile there are only 2 observations for families with children of which the youngest child was age 0 to 4.

our preferred model. The results of the tobit estimations for each of the three groups of household are graphically represented in Figure 3.

*Figure 3 about here*

The results show quite unambiguously that there is incomplete specialization in market and house work. Households in which the male partner does the majority of market work do provide some evidence of specialization, since in those households the male share of housework is monotonically declining as their share of market work grows (see all points on the curve to the right of 0.5 on the horizontal axis). However, in households where the female does the majority of market work, the male share of house work remains proportionately low. Thus the degree of specialization is partial and non-symmetric.<sup>22</sup>

*Figure 4 about here*

But perhaps men who do a low share of market work do a larger share of other household-related activities, such as outdoor tasks or childcare. To investigate this we use responses to the time use questions about these activities.<sup>23</sup> On average women spend 3.3 hours a week on outdoor activities while men spend 5.9 hours. Childcare activities absorb on average 17.3 hours of women's time and 8.3 hours of their men's time. Figure 4 shows a breakdown of the male share of various household activities across the distribution of the male share of market hours. Thus the figure gives average values per decile of men's share of market hours. The figure shows that outdoor tasks seem to be unrelated to market work. Men do a higher share of these tasks across

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<sup>22</sup>We also distinguished between those families in which the female partner had a high level of education (college and above) and those in which the female had lower levels of education. Although in all cases the male share of housework was higher in those households with more highly educated females, the differences were small and in no cases was the male share of housework as high as 50%.

<sup>23</sup>The outdoor activities and childcare responses were obtained from the listing following the question: "How much time would you spend on each of the following activities in a **typical** week? (Please do not count any activity twice):" The outdoor tasks question asked respondents to include time spent on "home maintenance (repairs, improvements, painting etc.), car maintenance or repairs and gardening." The child care question asked respondents to include time spent on "playing with your children, helping them with personal care, teaching, coaching or actively supervising them, or getting them to childcare, school and other activities".

the distribution. This suggests a gendered division of labor for outside work that is invariant to market hours shares. For childcare there is a tradeoff between the male share of childcare and the male share of market work but it is not large. Men who do 90-100% of market work do about 30% of childcare, while men doing 0-10% of market work do about 50% of childcare. This suggests incomplete specialization. The figure also confirms that the most striking finding is for housework.

In summary, we find a non-monotonic relationship between the share of house work done by men and their share of market work, and this is unaffected by the presence of dependent children. Men doing a small share of market work were also doing a small share of house work. This finding is inconsistent with the specialization hypothesis, but is consistent with the gender identity hypothesis about time use within the household.<sup>24</sup>

## 7 Conclusions

This paper investigated the relationship between part-time work and three indicators of satisfaction: satisfaction with working hours, overall job satisfaction and life satisfaction. The data used are from the first three waves of the Household, Income and Labor Dynamics in Australia Survey, spanning the period 2001 to 2003, and we focused on a sample of partnered men and women.

Our fixed effects ordered logit results indicate that, conditional on observed characteristics, part-time women are more satisfied with their *hours of work* than full-time women. For men, hours of work satisfaction is greatest for those working 35-40 hours a week. However, for *job satisfaction* there is no such relationship. Indeed, for both men and women, job satisfaction seems to be independent of hours of work.

Finally, we found that partnered women's *life satisfaction* is reduced by working full-time, especially so if their weekly hours are greater than 40. However, female life satisfaction is increasing if their partners are working full-time, and they are particularly happy if their partners are working 35-50 hours per week. In contrast, male partners' life satisfaction is unaffected by their partners' market hours but is significantly increased if they themselves are working full-time, especially so if they

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<sup>24</sup>This result was also found using U.S. data by Akerlof and Kranton (2000).

are working 35-50 hours. Thus it seems that full-time work for men in the region of 35-50 hours is the major contributor to both partners' life happiness, but that female part-time work has an asymmetric effect. Men do not mind what their partners do in terms of working hours but women are happiest with part-time work.

Does this suggest that Australian families are characterized by specialization, with one partner engaged predominately in domestic work and the other in market sector work? The answer is no. According to the specialization hypothesis, there will be a negative monotonic relationship between the share of house work done by one partner and that same partner's share of market work. This prediction was not supported by the data. In households where the female does the majority of market work, the male share of house work remains proportionately low. Thus the degree of specialization is partial and non-symmetric. Men doing a small share of market work were also doing a small share of house work. This finding is consistent with the gender identity hypothesis, and it may suggest a reason why women are happier with part-time work.



## References

- [1] Akerlof, GA and RE Kranton (2000) “Economics and Identity.” *The Quarterly Journal of Economics*, CXV (3), August, pp. 715-753.
- [2] Becker, GS (1965) “A Theory of the Allocation of Time.” *Economic Journal*, LXXV (September), pp. 493-517.
- [3] Carroll, N (2005) “Unemployment and Psychological Wellbeing in Australia.” RSSS CEPR Discussion Paper No. 492, Australian National University, July.
- [4] Clark, AE (1997) “Job satisfaction and Gender: Why are Women So Happy at Work?” *Labour Economics*, 4, pp. 341-372.
- [5] Clark, AE (2003) “Unemployment and Social Norms: Psychological Evidence from Panel Data.” *Journal of Labor Economics*, 21(2), pp. 323-351.
- [6] Clark AE, Y Georgellis and P Sanfey (2001) “Scarring: The Psychological Impact of Past Unemployment.” *Economica*, 68, pp. 221-241.
- [7] Clark AE and AJ Oswald (1994) “Unhappiness and Unemployment.” *Economic Journal*, 104, May, pp. 648-59.
- [8] Dickens R and D Ellwood (2001) “Whither Poverty in Great Britain and the United States? The Determinants of Changing Poverty and Whether Work Will Work.” CEP Discussion Paper No 0506.
- [9] Ferrer-i-Carbonell, A and P Frijters (2004) “How important is methodology for the estimates of the determinants of happiness?” *Economic Journal*, 114, July, pp. 641-659.
- [10] Frijters, P, JP Hasken-DeNew and MA Shields (2004a), “Money does matter! Evidence from increasing real incomes in East Germany following reunification.” *American Economic Review*, 94(3), June, pp. 730-741.
- [11] Frijters P, JP Hasken-DeNew and MA Shields (2004b) “Investigating the Patterns and Determinants of Life Satisfaction in Germany Following Reunification.” *Journal of Human Resources*, 34, pp. 649-674.

- [12] Gerlach K and G Stephan (1996) “A paper on unhappiness and unemployment in Germany.” *Economics Letters*, 52, pp. 325-330.
- [13] Hamermesh DS (2001). “The Changing Distribution of Job Satisfaction.” *Journal of Human Resources*, 34, pp. 1-30.
- [14] Mill, JS (1869) *The Subjection of Women*. Longmans, Green and Company.
- [15] OECD (2001) “Balancing work and family life: helping parents into paid employment.” in OECD *Employment Outlook*, OECD Paris, 129-166.
- [16] OECD (2004) *Employment Outlook*, OECD, Paris.
- [17] Van Praag, BMS and A Ferrer-i-Carbonell (2004) *Happiness Quantified*, Oxford University Press.
- [18] Winkelmann L and R Winkelmann (1998) “Why are unemployed so unhappy? Evidence from panel data.” *Economica*, 65, pp. 1-15.
- [19] Winkelmann, R (2004) “Subjective well-being and the family: results from an ordered probit model with multiple random effects.” IZA Discussion Paper No. 1016.

# Appendix

## A The HILDA data

The new Household, Income and Labor Dynamics in Australia (HILDA) Survey began in 2001. It is a nationally representative random-sample panel survey of private households in Australia. We use data from all three available waves, which span the period 2001-3.

All members of households providing at least one interview in the first wave form the basis of the panel. The sample has been gradually extended to include any new household members resulting from changes in the composition of the original households. The survey is a longitudinal study of representative households in Australia. For details, see <http://www.melbourneinstitute.com/hilda>. Wave 1 comprised 7682 households with 13,969 respondents aged 15 years and over. For Wave 2, interviews were conducted in 7245 households with 11,993 respondents continuing from Wave 1 and 1048 new respondents. The attrition rate between Waves 1 and 2 was 13.2 per cent and declined subsequently.

HILDA contains four survey instruments: the household form, a household questionnaire, a person questionnaire and a self-completion questionnaire. The information at the household level can be provided by any adult member of the household but preferably a person with knowledge of the household finances. The person-level questionnaires are for all persons aged 15 years and over in the household.

*Table A.1 about here*

Table A.1 provides an overview of the variables we used in the analysis. There are five types of variables: personal characteristics, hours of work, job characteristics, family characteristics, and the time use information that was obtained from the self-completion questionnaire. We restricted our estimating sub-sample, for reasons given in the text, to married or cohabiting couples in which the female partner was aged 25 to 50 in 2001. We use an unbalanced panel, in which selected couples are present in at least two consecutive waves. These restrictions yield a sample of 4676 couples.

Partnered women and men are very much alike in terms of personal characteristics,

as shown in Appendix Table A.1, but there are substantial differences in their hours of work. While women on average spend about 20 hours per week on housework and 17 hours per week on childcare, men spend about 6 hours per week on housework and 8 hours on childcare. Of the women in our sample 36% have a part-time job and 33% have a full-time job. Of the men 8% have a part-time job and 84% have a full-time job. These differences materialize in the usual hours per week in the main job, which is about 30 for women and 46 hours for men.

In terms of job characteristics the main difference between men and women concerns the share of workers with a casual contract which is 19% for women and 7% for men.

**Table 1 Satisfaction indicators by groups of individuals (percentages)**

|          | Hours of work satisfaction |      |      |      | Overall job satisfaction |      |      |      | Life satisfaction |      |      |      |      |      |
|----------|----------------------------|------|------|------|--------------------------|------|------|------|-------------------|------|------|------|------|------|
|          | Women                      |      | Men  |      | Women                    |      | Men  |      | Women             |      |      | Men  |      |      |
|          | PT                         | FT   | PT   | FT   | PT                       | FT   | PT   | FT   | 0                 | PT   | FT   | 0    | PT   | FT   |
| 0        | 0.7                        | 0.8  | 0.6  | 0.6  | 0.4                      | 0.1  | 0.8  | 0.4  | 0.4               | 0.1  | 0.1  | 0.2  | 0.0  | 0.1  |
| 1        | 0.8                        | 1.0  | 2.6  | 1.2  | 0.6                      | 0.5  | 1.1  | 0.7  | 0.1               | 0.1  | 0.0  | 0.2  | 0.0  | 0.1  |
| 2        | 1.2                        | 2.7  | 3.4  | 2.6  | 1.0                      | 0.9  | 2.3  | 1.3  | 0.4               | 0.1  | 0.3  | 1.7  | 0.6  | 0.2  |
| 3        | 2.6                        | 4.5  | 4.8  | 4.3  | 1.3                      | 1.8  | 1.1  | 1.7  | 0.7               | 0.2  | 0.2  | 3.0  | 0.0  | 0.3  |
| 4        | 3.9                        | 5.1  | 5.7  | 4.8  | 2.1                      | 1.3  | 3.9  | 1.8  | 1.1               | 0.6  | 0.7  | 2.5  | 2.5  | 1.2  |
| 5        | 8.0                        | 12.0 | 10.8 | 10.7 | 5.4                      | 6.3  | 8.2  | 6.2  | 5.0               | 3.2  | 3.4  | 7.2  | 5.1  | 3.0  |
| 6        | 5.8                        | 10.3 | 8.2  | 11.4 | 6.1                      | 8.2  | 9.0  | 7.5  | 5.1               | 3.8  | 6.8  | 9.6  | 7.3  | 4.9  |
| 7        | 11.4                       | 18.0 | 11.9 | 19.9 | 13.6                     | 19.3 | 15.8 | 21.6 | 15.4              | 18.2 | 20.6 | 19.5 | 20.0 | 20.6 |
| 8        | 19.4                       | 21.3 | 19.8 | 22.6 | 26.0                     | 28.9 | 24.0 | 29.1 | 28.6              | 34.6 | 34.6 | 23.7 | 33.5 | 38.2 |
| 9        | 18.2                       | 12.9 | 12.8 | 12.0 | 24.5                     | 21.5 | 18.4 | 19.5 | 24.9              | 26.8 | 23.0 | 17.0 | 18.6 | 21.4 |
| 10       | 28.1                       | 11.3 | 19.6 | 9.8  | 19.0                     | 11.3 | 15.3 | 10.2 | 18.4              | 12.4 | 10.3 | 15.3 | 12.4 | 10.1 |
| $\leq 8$ | 53.7                       | 76.7 | 67.7 | 78.1 | 56.5                     | 67.2 | 66.4 | 70.3 | 56.9              | 60.9 | 66.7 | 67.7 | 69.0 | 68.5 |
| $> 8$    | 46.3                       | 23.3 | 32.3 | 21.9 | 43.5                     | 32.8 | 33.6 | 29.7 | 43.1              | 39.1 | 33.3 | 32.3 | 31.0 | 31.5 |
| Mean     | 7.80                       | 6.88 | 7.02 | 6.87 | 7.92                     | 7.66 | 7.41 | 7.53 | 8.07              | 8.11 | 7.93 | 7.49 | 7.80 | 7.94 |
| N        | 1696                       | 1545 | 353  | 3916 | 1697                     | 1545 | 354  | 3915 | 1431              | 1699 | 1545 | 405  | 355  | 3914 |

**Table 2 Parameter estimates employment, part-time work and hours of work<sup>a)</sup>**

|                   | Pooled cross-section estimates |              |               | Panel estimates |             |              |
|-------------------|--------------------------------|--------------|---------------|-----------------|-------------|--------------|
|                   | Job                            | Part-time    | Hours         | Job             | Part-time   | Hours        |
| <i>Women</i>      |                                |              |               |                 |             |              |
| Age               | 0.00 (0.6)                     | 0.04 (4.6)*  | -0.16 (2.8)*  | -               | -           | -            |
| Health            | 0.92 (7.5)*                    | -0.23 (1.6)  | 1.10 (1.1)    | 0.41 (1.4)      | 0.42 (1.2)  | -0.99 (1.3)  |
| Child born        | -1.16 (7.3)*                   | 0.05 (0.2)   | -0.86 (0.6)   | -2.47 (6.5)*    | -0.53 (1.3) | 0.41 (0.4)   |
| Child 0-4         | -1.26 (10.4)*                  | 1.43 (9.3)*  | -9.36 (10.5)* | -1.24 (3.3)*    | 1.95 (3.8)* | -5.74 (5.9)* |
| Child 5-14        | -0.33 (3.4)*                   | 1.03 (9.8)*  | -6.37 (9.2)*  | -0.02 (0.1)     | 0.41 (1.0)  | -0.34 (0.4)  |
| Partner full-time | 1.33 (8.4)*                    | 0.55 (2.4)*  | -0.72 (0.5)   | 0.65 (1.8)      | -0.03 (0.1) | 1.96 (1.7)   |
| Partner part-time | 1.32 (6.3)*                    | 0.50 (1.9)   | 1.12 (0.7)    | 0.68 (1.5)      | 0.08 (0.1)  | 0.37 (0.3)   |
| Observations      | 4676                           | 3244         | 3173          | 935             | 703         | 3173         |
| Individuals       | -                              | -            | -             | 334             | 262         | 1364         |
| <i>Men</i>        |                                |              |               |                 |             |              |
| Age               | -0.04 (3.1)*                   | 0.02 (2.0)*  | 0.00 (0.0)    | -               | -           | -            |
| Health            | 1.95 (13.4)*                   | -0.65 (3.8)* | 1.97 (2.5)*   | 0.88 (2.1)*     | 0.04 (0.1)  | -0.33 (0.6)  |
| Child born        | 0.16 (0.5)                     | 0.04 (0.2)   | 0.06 (0.1)    | 0.32 (0.7)      | 0.11 (0.2)  | -0.05 (0.1)  |
| Child 0-4         | 0.31 (1.5)                     | -0.07 (0.3)  | 0.83 (1.3)    | -0.29 (0.5)     | 0.17 (0.4)  | -0.48 (0.6)  |
| Child 5-14        | 0.25 (1.6)                     | -0.18 (1.2)  | 0.86 (1.5)    | -0.57 (1.0)     | 0.36 (0.7)  | -0.57 (0.8)  |
| Partner full-time | 0.95 (4.9)*                    | -0.03 (0.2)  | 1.27 (1.7)    | 0.60 (1.2)      | 0.26 (0.6)  | -0.70 (1.0)  |
| Partner part-time | 1.53 (8.5)*                    | -0.10 (0.6)  | 0.56 (0.9)    | 0.57 (1.6)      | 0.09 (0.2)  | -0.36 (0.6)  |
| Observations      | 4676                           | 4271         | 4184          | 380             | 404         | 4184         |
| Individuals       | -                              | -            | -             | 138             | 152         | 1647         |

<sup>a)</sup> Note ‘Part-time’ and ‘hours’ concern choices conditional on having a job; ‘jobs’ and ‘part-time’ logit model specification, ‘hours’ linear specification; the pooled cross-section estimates also contain other personal characteristics and family characteristics (see Table A1 for details); the panel estimates include individual fixed effects; all estimates contain dummy variables for survey years; absolute t-values in parentheses (in the pooled cross-section estimates corrected for clustering of observations); a \* indicates a parameter estimate significant at the 95% level.

**Table 3 Effects of year-to-year changes in hours of work and part-time and fulltime status on satisfaction indicators**

|              | Hours<br>satisfaction | Job<br>satisfaction | Life<br>satisfaction | N    |
|--------------|-----------------------|---------------------|----------------------|------|
| <i>Women</i> |                       |                     |                      |      |
| Hours down   | 0.18                  | -0.08               | -0.05                | 568  |
| Hours same   | -0.29                 | -0.10               | -0.12                | 522  |
| Hours up     | -0.34                 | -0.07               | -0.08                | 777  |
| PT to PT     | -0.13                 | -0.07               | -0.08                | 799  |
| PT to FT     | -0.73                 | 0.01                | -0.20                | 173  |
| FT to PT     | 0.62                  | 0.02                | -0.06                | 138  |
| FT to FT     | -0.22                 | -0.13               | -0.06                | 757  |
| Total        | -0.17                 | -0.09               | -0.08                | 1867 |
| <i>Men</i>   |                       |                     |                      |      |
| Hours down   | 0.42                  | 0.08                | -0.01                | 864  |
| Hours same   | 0.02                  | 0.00                | -0.03                | 773  |
| Hours up     | -0.32                 | 0.03                | -0.06                | 976  |
| PT to PT     | 0.18                  | 0.08                | 0.08                 | 111  |
| PT to FT     | 0.42                  | 0.63                | 0.03                 | 105  |
| FT to PT     | 0.32                  | 0.38                | -0.25                | 76   |
| FT to FT     | -0.01                 | -0.00               | -0.04                | 2321 |
| Total        | 0.03                  | 0.04                | -0.04                | 2613 |

**Table 4 Parameter estimates pooled cross-section**

|                     | Hours of<br>work OK | Hours<br>Satisfaction | Job<br>Satisfaction | Life Satisfaction |              |
|---------------------|---------------------|-----------------------|---------------------|-------------------|--------------|
| <i>Women</i>        |                     |                       |                     |                   |              |
| Child born          | -0.05 (0.2)         | 0.59 (2.0)*           | 0.52 (2.7)*         | 0.28 (2.3)*       | 0.29 (2.5)*  |
| Family income       | 0.04 (0.5)          | 0.16 (2.0)*           | 0.15 (1.8)          | 0.30 (4.4)*       | –            |
| Health women        | 0.29 (2.2)*         | 0.28 (2.2)*           | 0.26 (2.0)*         | 0.57 (5.2)*       | 0.58 (5.3)*  |
| Part-time job women | 0.81 (8.3)*         | 0.88 (10.0)*          | 0.25 (2.3)*         | -0.47 (1.7)       | -0.41 (1.5)  |
| Full-time job women | –                   | –                     | –                   | -0.74 (2.7)*      | -0.67 (2.4)* |
| Health men          | 0.04 (0.3)          | -0.06 (0.6)           | 0.21 (1.8)          | 0.09 (1.0)        | 0.11 (1.2)   |
| Part-time job men   | 0.23 (1.0)          | 0.18 (0.8)            | -0.04 (0.2)         | 0.16 (1.0)        | 0.24 (1.4)   |
| Full-time job men   | 0.06 (0.3)          | -0.02 (0.1)           | -0.10 (0.5)         | 0.16 (1.1)        | 0.32 (2.3)*  |
| Observations        | 3231                | 3228                  | 3229                | 4657              | 4675         |
| <i>Men</i>          |                     |                       |                     |                   |              |
| Child born          | -0.18 (1.2)         | 0.01 (0.1)            | -0.28 (2.3)*        | 0.20 (1.7)        | 0.21 (1.8)   |
| Family income       | -0.06 (0.8)         | 0.04 (0.4)            | 0.20 (2.7)*         | 0.17 (2.5)*       | –            |
| Health women        | -0.10 (0.9)         | -0.01 (0.2)           | 0.03 (0.4)          | -0.05 (0.5)       | -0.04 (0.4)  |
| Part-time job women | 0.16 (1.7)          | 0.04 (0.5)            | 0.01 (0.1)          | 0.04 (0.4)        | 0.08 (0.9)   |
| Full-time job women | 0.16 (1.6)          | -0.09 (1.0)           | -0.19 (1.9)         | -0.09 (1.0)       | -0.04 (0.4)  |
| Health men          | 0.19 (1.8)          | 0.15 (1.6)            | 0.17 (1.7)          | 0.44 (4.3)*       | 0.44 (4.3)*  |
| Part-time job men   | 0.03 (0.2)          | 0.35 (2.4)*           | 0.03 (0.3)          | 0.15 (0.6)        | 0.25 (0.9)   |
| Full-time job men   | –                   | –                     | –                   | 0.26 (1.1)        | 0.38 (1.6)   |
| Observations        | 4253                | 4251                  | 4251                | 4656              | 4674         |

Note: Hours of work OK: logit specification; satisfaction variables: ordered logit specification; the life satisfaction estimates also include other personal and family characteristics; in addition to this the other estimates also include other job characteristics (see Table A1 for an overview); absolute t-values in parentheses (corrected for clustering of observations); \* indicates a parameter estimate significant at the 95% level.



**Table 5 Parameter estimates panel analyses**

|                     | 5a. Hours OK |              | 5b. Hours satisfaction |              |
|---------------------|--------------|--------------|------------------------|--------------|
|                     | Women        | Men          | Women                  | Men          |
| Child born          | 0.24 (0.7)   | -0.08 (0.4)  | 0.50 (1.9)             | 0.09 (0.5)   |
| Family income       | -0.28 (1.4)  | -0.07 (0.4)  | 0.19 (1.4)             | 0.01 (0.1)   |
| Health women        | 0.14 (0.5)   | -0.28 (1.4)  | -0.02 (0.1)            | -0.35 (2.3)* |
| Part-time job women | 0.70 (3.8)*  | 0.17 (0.9)   | 0.63 (4.5)*            | 0.03 (0.2)   |
| Full-time job women | –            | 0.07(0.3)    | –                      | -0.09 (0.5)  |
| Health men          | 0.15 (0.6)   | 0.17 (0.9)   | 0.07 (0.4)             | -0.12 (0.9)  |
| Part-time job men   | 0.50 (1.2)   | -0.47 (2.1)* | 0.64 (2.0)*            | 0.13 (0.7)   |
| Full-time job men   | 0.62 (1.7)   | –            | 0.55 (1.9)             | –            |
| -Loglikelihood      | 485.4        | 710.4        | 896.7                  | 1291.9       |
| Child born          | 0.20 (0.6)   | -0.11 (0.5)  | 0.50 (1.9)             | 0.07 (0.4)   |
| Family income       | -0.24 (1.2)  | -0.08 (0.5)  | 0.24 (1.7)             | 0.05 (0.4)   |
| Health women        | 0.12 (0.4)   | -0.24 (1.2)  | -0.01 (0.1)            | -0.33 (2.1)* |
| Women hours 1–10    | –            | -0.04 (0.2)  | –                      | 0.04 (0.2)   |
| Women hours 11–20   | 0.28 (1.1)   | 0.12 (0.6)   | 0.29 (1.5)             | -0.18 (1.1)  |
| Women hours 21–34   | 0.87 (3.1)*  | 0.20 (0.9)   | 0.27 (1.3)             | 0.03 (0.2)   |
| Women hours 35–40   | 0.07 (0.3)   | -0.02 (0.1)  | -0.31 (1.4)            | -0.18 (1.0)  |
| Women hours 41–50   | -0.65 (1.9)  | -0.04 (0.2)  | -0.87 (3.4)*           | -0.15 (0.7)  |
| Women hours 50+     | -1.06 (2.3)* | 0.16 (0.4)   | -1.18 (3.5)*           | 0.09 (0.3)   |
| Health men          | 0.11 (0.5)   | 0.18 (1.0)   | 0.07 (0.4)             | -0.14 (1.0)  |
| Men hours 1–10      | 0.98 (1.3)   | –            | 0.39 (0.8)             | –            |
| Men hours 11–20     | 0.60 (1.1)   | -0.49 (1.2)  | -0.07 (0.2)            | 0.20 (0.6)   |
| Men hours 21–34     | 0.21 (0.5)   | 0.28 (0.8)   | 0.36 (1.2)             | 0.88 (3.0)*  |
| Men hours 35–40     | 0.39 (1.2)   | 0.84 (2.5)*  | 0.05 (0.2)             | 1.02 (4.0)*  |
| Men hours 41–50     | 0.62 (1.8)   | 0.40 (1.2)   | 0.29 (1.2)             | 0.51 (2.1)*  |
| Men hours 50+       | 0.28 (0.8)   | -0.20 (0.6)  | -0.00 (0.0)            | -0.24 (0.9)  |
| -Loglikelihood      | 470.5        | 694.3        | 886.2                  | 1253.5       |
| LR test-statistic   | 29.8*        | 32.2*        | 21.0*                  | 76.8*        |
| Individuals         | 519          | 727          | 979                    | 1337         |
| Observations        | 1376         | 1976         | 2554                   | 3585         |

|                     | 5c. Job satisfaction |             | 5d. Life satisfaction |             |             |
|---------------------|----------------------|-------------|-----------------------|-------------|-------------|
|                     | Women                | Men         | Women                 | Men         | Sum         |
| Child born          | 0.10 (0.4)           | -0.08 (0.5) | 0.14 (0.8)            | 0.27 (1.7)  | 0.34 (2.2)* |
| Family income       | 0.11 (0.8)           | -0.07 (0.7) | 0.06 (0.6)            | 0.02 (0.2)  | -0.02 (0.2) |
| Health women        | 0.23 (1.1)           | 0.02 (0.2)  | 0.18 (1.2)            | -0.21 (1.5) | 0.00 (0.0)  |
| Part-time job women | 0.08 (0.5)           | -0.13 (0.9) | -0.09 (0.6)           | 0.09 (0.6)  | -0.01 (0.1) |
| Full-time job women | –                    | 0.00 (0.0)  | -0.38 (2.3)*          | 0.01 (0.0)  | -0.17 (1.1) |
| Health men          | -0.16 (0.9)          | -0.14 (1.0) | -0.06 (0.5)           | 0.19 (1.4)  | -0.02 (0.2) |
| Part-time job men   | 0.03 (0.1)           | -0.19 (1.0) | 0.11 (0.5)            | 0.26 (1.1)  | 0.34 (1.5)  |
| Full-time job men   | -0.13 (0.5)          | –           | 0.36 (1.7)            | 0.51 (2.4)* | 0.58 (2.9)* |
| -Loglikelihood      | 845.1                | 1204.9      | 1252.6                | 1229.5      | 1462.8      |
| Child born          | 0.10 (0.4)           | -0.07 (0.4) | 0.14 (0.9)            | 0.27 (1.7)  | 0.33 (2.2)* |
| Family income       | 0.13 (0.9)           | -0.07 (0.6) | 0.07(0.6)             | 0.03 (0.2)  | -0.01 (0.1) |
| Health women        | 0.24 (1.2)           | 0.04 (0.2)  | 0.18 (1.2)            | -0.21 (1.4) | 0.01 (0.0)  |
| Women hours 1–10    | –                    | -0.19 (1.0) | 0.02 (0.1)            | -0.04 (1.2) | -0.02 (0.1) |
| Women hours 11–20   | -0.18 (0.9)          | -0.06 (0.4) | -0.03 (0.2)           | 0.08 (0.5)  | -0.01 (0.1) |
| Women hours 21–34   | -0.38 (1.7)          | -0.15 (0.8) | -0.15 (0.9)           | 0.16 (0.9)  | -0.02 (0.1) |
| Women hours 35–40   | -0.23 (1.0)          | -0.02 (0.1) | -0.33 (1.8)           | -0.04 (0.2) | -0.19 (1.2) |
| Women hours 41–50   | -0.41 (1.6)          | 0.18 (0.9)  | -0.48 (2.2)*          | 0.25 (1.2)  | -0.08 (0.4) |
| Women hours 50+     | -0.58 (1.7)          | 0.18 (0.6)  | -0.76 (2.5)*          | 0.12 (0.4)  | -0.33 (1.2) |
| Health men          | -0.16 (0.9)          | -0.13 (0.9) | -0.06 (0.4)           | 0.19 (1.3)  | -0.02 (0.2) |
| Men hours 1–10      | 0.80 (1.6)           | –           | -0.03 (0.1)           | 0.19 (0.5)  | 0.20 (0.5)  |
| Men hours 11–20     | 0.05 (0.1)           | -0.27 (0.9) | -0.18 (0.6)           | 0.29 (0.9)  | 0.35 (1.2)  |
| Men hours 21–34     | 0.19 (0.6)           | -0.11 (0.4) | 0.10 (0.4)            | 0.21 (0.8)  | 0.21 (0.9)  |
| Men hours 35–40     | 0.05 (0.2)           | 0.14 (0.5)  | 0.29 (1.5)            | 0.57 (2.9)* | 0.58 (3.1)* |
| Men hours 41–50     | 0.20 (0.8)           | 0.22 (0.9)  | 0.28 (1.5)            | 0.58 (3.0)* | 0.53 (2.9)* |
| Men hours 50+       | 0.18 (0.7)           | 0.01 (0.1)  | 0.14 (0.7)            | 0.22 (1.0)  | 0.27 (1.4)  |
| -Loglikelihood      | 841.1                | 1201.3      | 1250.6                | 1223.1      | 1459.5      |
| LR test-statistic   | 10.0                 | 9.2         | 4.0                   | 12.8        | 6.6         |
| Individuals         | 910                  | 1246        | 1293                  | 1255        | 1508        |
| Observations        | 2373                 | 3339        | 3530                  | 3423        | 4098        |

Note: Hours of work OK: fixed effects logit specification; satisfaction variables: fixed effects ordered logit specification; all estimates included dummies for year of survey; absolute t-values in parentheses; a \* indicates a parameter estimate significant at the 95% level.

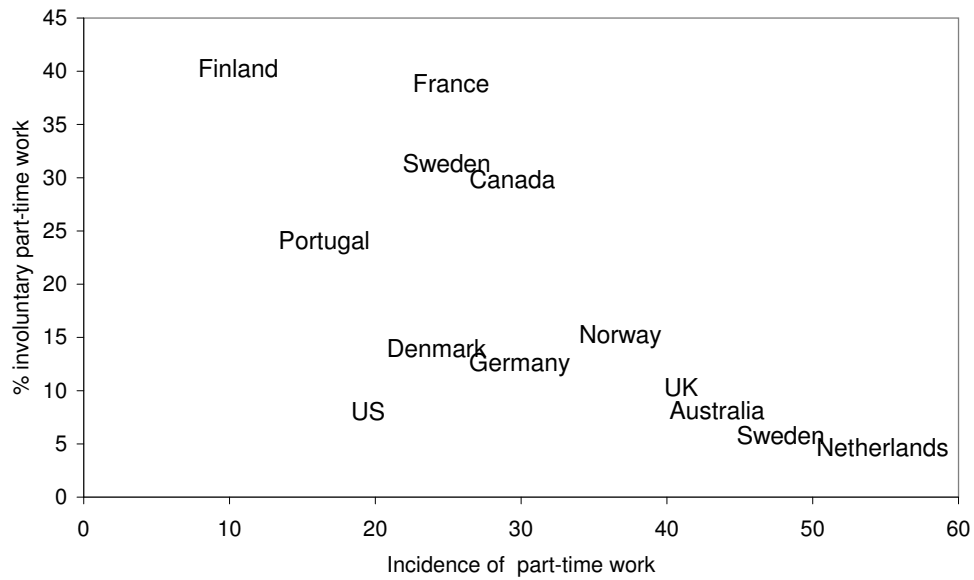
**Table A.1: Definitions of Variables and Means**

| Variable                        | Definition                                   | Women | Men  |
|---------------------------------|--|-------|------|
| <i>Personal characteristics</i> |  |       |      |
| Age                             | Respondent's age                             | 38.9  | 41.4 |
| Postgrad                        | Postgraduate degree (masters or doctorate)   | 0.03  | 0.05 |
| Graddip                         | Graduate diploma or certificate              | 0.07  | 0.06 |
| Bachelor                        | Bachelor degree                              | 0.17  | 0.15 |
| Advdip                          | Advanced diploma, diploma                    | 0.10  | 0.10 |
| Cert                            | Certificate                                  | 0.25  | 0.37 |
| Year 12                         | Year 12 (base is year 11)                    | 0.12  | 0.07 |
| Born-oz                         | Australian born                              | 0.77  | 0.77 |
| Born-engsp                      | Born in English speaking country (not Oz)    | 0.10  | 0.12 |
| Health                          | Dummy, in good health                        | 0.86  | 0.83 |
| Part-time job                   | Usual hours per week in main job <35         | 0.36  | 0.08 |
| Full-time job                   | Usual hours per week in main job $\geq 35$   | 0.33  | 0.84 |
| <i>Hours of work</i>            |  |       |      |
| Hwork                           | Hours spent on housework in typical week     | 20.4  | 5.9  |
| Chdcare                         | Hours spent on own childcare in typical week | 17.3  | 8.3  |
| Outdoor                         | Hours spent on outdoor activities            | 3.3   | 5.9  |
| Home production                 | Total hours spent on home activities         | 41.0  | 20.1 |
| Market work                     | Total hours spent in main job                | 20.9  | 41.5 |
| Total hours of work             |  | 61.9  | 61.6 |
| <i>Job characteristics</i>      |  |       |      |
| Hours                           | Usual hours per week in main job             | 30.2  | 45.6 |
| Casual                          | Casual contract                              | 0.19  | 0.07 |
| Contract                        | Fixed term contract                          | 0.08  | 0.07 |
| Permanent                       | On-going permanent employment                | 0.55  | 0.61 |
| Siz20-99                        | Firm has 20 to 99 employees                  | 0.26  | 0.24 |
| Siz100-499                      | Firm has 100 to 499 employees                | 0.16  | 0.17 |
| Siz500up                        | Firm has 500 or more employees               | 0.09  | 0.10 |
| Industry dummies                | One-digit industrial classification          | –     | –    |

| Variable                      | Definition                                       | Women     | Men |
|-------------------------------|--|-----------|-----|
| <i>Family characteristics</i> |  |           |     |
| Family income                 | Log(Total annual family gross income) – 1000 AUD | Log(84.6) |     |
| Child born                    | Dummy, whether or not household had a new birth  | 0.06      |     |
| Child 0-4                     | Dummy, kids between 0-4 years of age             | 0.29      |     |
| Child 5-14                    | Dummy, kids between 5 and 14 years of age        | 0.50      |     |
| Urban                         | Living in major city                             | 0.59      |     |
| Innreg                        | Inner regional                                   | 0.28      |     |
| Outreg                        | Outer regional (base is remote/very remote)      | 0.11      |     |

Note that hours of work refer to the main job; 10.5% of the females and 7.9% of the males has more than 1 job.

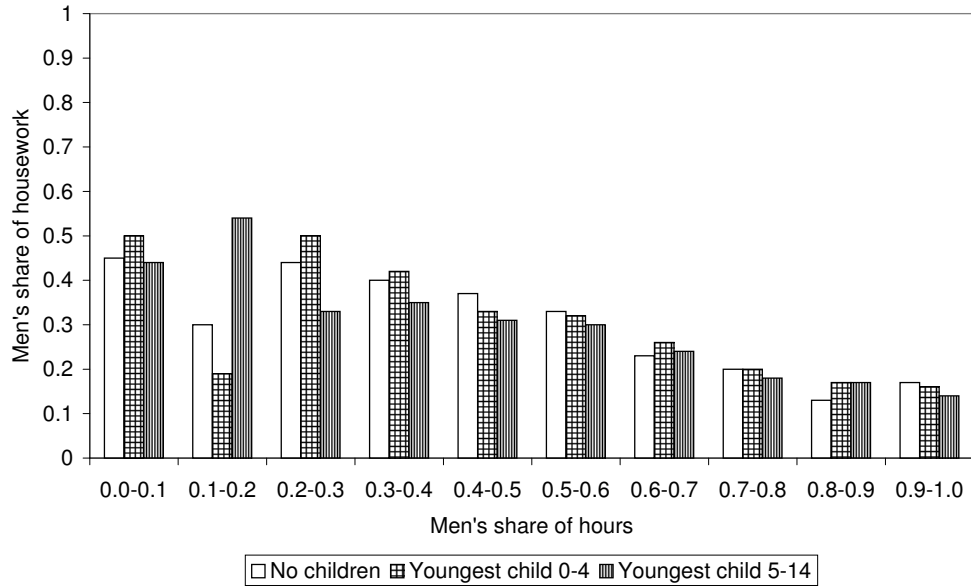
Figure 1: Cross-country differences in the incidence of part-time work and the share of involuntary part-time employment of women; 1997



Note: involuntary part-time work is defined as part-time workers who say they are working part-time because they could not find full-time work.

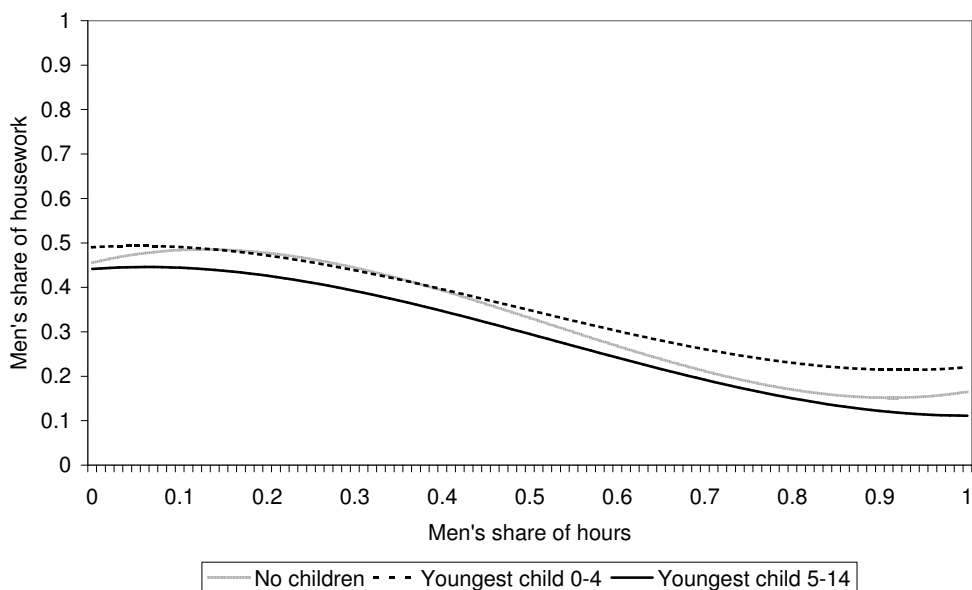
Source: OECD Employment Outlook 1999, Table 1.14, page 33.

Figure 2: Men's share of housework hours versus their share of market work hours



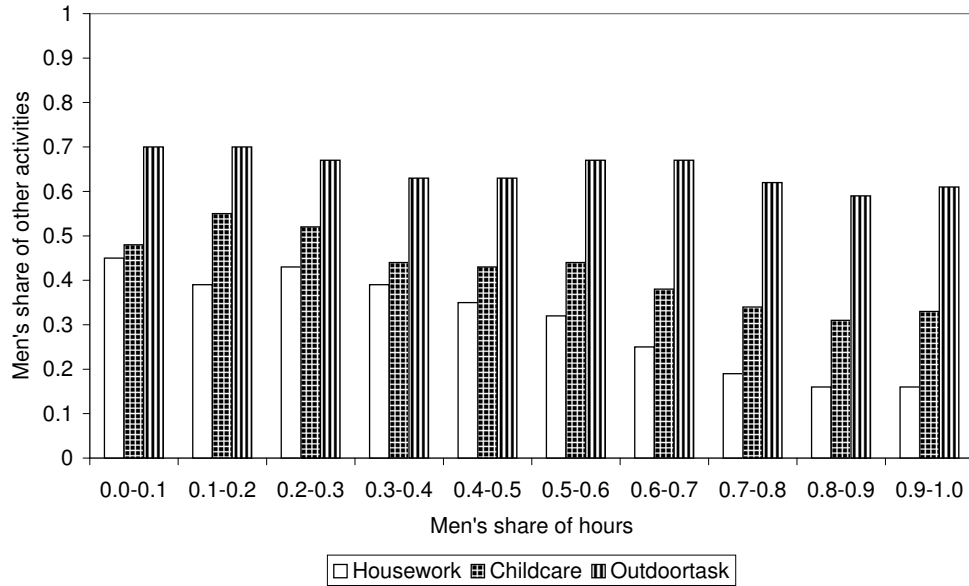
Note: Average values per decile in men's share of hours.

Figure 3: Men's share of housework hours versus their share of market work hours



Note: Predicted values from tobit estimation, cubic in men's share of hours. Sample size: 1351 couples without children, 1209 couples with the youngest child 0-4, 1459 couples with the youngest child 5-14.

Figure 4: Men's share of housework hours, childcare hours and outdoor task hours versus their share of market work hours



Note: Average values per decile in men's share of hours.