

Does Teleworking affect Housework Division and Improve the Well-Being of Couples?

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November 2015

Online at https://mpra.ub.uni-muenchen.de/68668/ MPRA Paper No. 68668, posted 05 Jan 2016 16:32 UTC

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Abstract

This study examines the relationship between teleworking, gender roles and happiness of couples using data from the British Household Panel Survey (BHPS) during the period 1991-2009. Various approaches are followed; Probit-adapted fixed effects, multinomial Logit and three stage least squares. The results support that both men and women who are teleworkers spend more time on housework, while teleworking increases the probability that the household chores examined in this study, such as cooking, cleaning ironing and childcare, will be shared relatively to those who are non-teleworkers. In addition, women are happier when they or their spouse is teleworker, as well as, both men and women are happier for the reason that they are able to face the family demands and share the household chores with their spouse, increasing their fairness belief about the household division allocation and improving their well-being, expressed by happiness.

Keywords: Gender Roles; Household Production; Teleworking; Well-Being **JEL codes:** D1, D13, J16, I31

1. Introduction

Teleworking is defined as the working environment where employees work at home instead at offices or employer's premises (Lim et al., 1997). Teleworking has long been studied, but has been extensively researched since the beginning of 1990s. However, the circumstances have been changed since then, as well as, the economic and technological developments of the last years that took place lead to necessity for further research on this employment type. One factor that explains the birth of teleworking is the global economy which was characterised by the exchange of goods, while now is heavily dominated by information. Another major factor is the fast and impressive boost in improvement of microchips, telecommunications systems and computing among other elements of these technologies. These factors made possible for a person to work at a distant location away from the employer's premises (Nilles, 1975; 1999).

Work family issues and gender roles have become increasingly important trends in the last 30 years. Socio-economic trends as the increasing participation of women in the labour force, greater number of working single-parents and the increasing care giving needs of an aging population provide new responsibilities and challenges to both women and men to work-family balance and commitments (Lerner, 1994; Marks, 1996).

An increasing number of women and men nowadays are involved in work and family arrangements, which were largely unknown for the parents' and the past generally generations (Barnett and Rivers, 1996; Hochschild, 1997). Along with these new challenges the traditional allocation of family and work is breaking down by gender (Willinger, 1993; Barnett and Rivers, 1996). So far the understanding of the work-family nexus remains limited, thus the research based on which policies and practises can be developed in order to help individuals through the new work family arrangements, remains also limited.

Based on previous researches specific domestic and household tasks are identified by masculinity and femininity (Coltrane, 1989; Warde and Hetherington, 1993). Thus, the introduction and allocation of production into home can have different consequences for male and female teleworkers. Nevertheless, very little is known how teleworking affects men and women and the ways that they reconcile the demands of work and household production and the effects on well-being. Another fundamental point is both gender divisions and the diversity of household types within which gender relationships are embedded are essential. (Anderson et al., 1994; Benjamin and Sullivan, 1996). Hence, it is necessary to identify these different forms of household relations type. Two processes are central to the ordering and living

experience of household life; the domestic or household division of labour and the management and control of the household's finance (Vogler and Pahl, 1993, 1994; Warde and Hetherington, 1993; Morris, 1993; Anderson et al., 1994).

Our research will contribute to this existing work with a UK case study using a comprehensive dataset which is the British Household Panel Survey (BHPS). The aim of this study is to examine the relationship between teleworking, gender roles and happiness is explored. Using panel data and fixed effects regressions allow us to capture the individual effect which summarises the influence of unobserved variables that may have persistent effect on the dependent variable.

In order to reduce the endogeneity coming from the "sorting" issue where people may selfselect to teleworking, panel analysis is followed since it is feasible up to some point to disentangle the effects of teleworking relatively to cross-sectional analysis. Moreover, the sample is limited to non-movers and those who never changed employer or job in the time span examined, the decision to move and being employed as teleworker can be correlated, reducing in this way the endogeneity, which may be coming from this "sorting" issue. Furthermore, the total sample including a time whether the individual has changed job at least one time or not and its interaction with teleworking as an additional term into analysis are considered.

The structure of the paper is the following: In section 2 short literature review is presented. In section 3 the methodology followed is discussed, while in section 4 the data sample used in the analysis is presented. In section 5 the empirical results are reported, while in the final section the concluding remarks are discussed.

2. Literature Review

In the literature review two main views have been analysed; the rational view and the gender role framework. Based on the rational view the more hours than a person spends on work and family the more conflict he/she will perceive (Keith and Schafer, 1984). Greenhaus et al. (1987) found that extensive time commitment to work is positively associated with work family conflict. Given that family work, house chores and children caring require many hours it is expected that the employed women have not enough time for family activities (Bryson et al., 1978). However, the question in this study is whether the employed women who are teleworkers spend more time on family work than the non-teleworking women. Previous research studies have found that women spend overall more hours than men on family and

household chores (Denmark et al., 1985). On the other hand the gender role framework departs from the rational view. Even though most men and women report that the family is more valuable than work and even there have been many changes in gender roles the last 50 years, the traditional gender roles still persist. These roles emphasise that work is for men and family and housework responsibility is for women.

Thus, the purpose of this study is to explore the effects of teleworking on gender roles and housework allocation and then the overall effects of teleworking and gender roles on happiness. In addition, using panel data analysis it is possible to include the history of each individual into a regression model, providing more accurate inference of the model parameters, greater capacity of capturing the complexity of human behaviour than cross-sectional data analysis does. Moreover, panel data contain information on inter-temporal dynamics and they allow for controlling the effects of missing or unobserved variables. In addition this is the first study examining the linkage among teleworking, household production allocation and happiness employing various quantitative techniques and robustness checks. A Heckman selection model is applied in order to test for selection bias.

Telework may increase the time spend also on house chores, since the person is located at home and there is more available time since commuting either does not exist for the teleworker homeworkers or it is much less for those who spend some days only in the employer's premises.

3. Methodology 3.1 Theoretical framework

The model presented in this section is a utility discrete choice model based on the models proposed by Gronau (1977), Van Soest (1995) and the collective model developed by Chiappori (1988, 1992).

However, the majority of these studies is based on cross-sectional analysis which present the issues discussed previously, as well as, this study investigates the effects of teleworking on gender roles and the link between gender roles and overall utility (happiness). Thus, the analysis is limited on the investigation of the above effects and linkages, and no effort examining the labour supply decisions and behaviour takes place. Based on that, the analysis is limited to households with two adult members-couples. In the classical Gronau household production model, it is assumed that the household members share one common utility function, where they derive utility from leisure t_m^l for man and t_f^l for woman, from market goods X_M and commodities produced at home H, such as cooking, washing, shopping, taking care of children. In the Gronau model it is assumed that market goods and goods produced in the household are perfect substitutes. The utility function will be:

$$U = U(X_M + H, t_m^l, t_f^l)$$
⁽¹⁾

U is assumed that it is twice continuously differentiable and strictly concave. The household production *H* is a function of the time spent or the share of the couple on housework defined as t^h_m for male and t^h_f for female and auxiliary inputs X_H . In that case two variables are used; the first is the time-hours per week- spent for housework, while the second variable examined refers on whether the couples share the household chores, such as cooking, shopping and taking caring care the children. The auxiliary inputs X_H refer on intermediate inputs as food for preparing meals, or using car or public transportation for shopping.

$$H = H(X_H, t_m^h, t_f^h) \tag{2}$$

The household budget constraint consists of the non-labour income *I* and the labour income expressed by the weekly wages w_m and w_f for male and female respectively, and market labour supply in hours per week defined as t^{w_m} for male and t^{w_f} for female. The household budget constraint will be:

$$I + w_m t_m^w + w_f t_f^w = X_M + X_H$$
(3)

Relation (3) entails the risk of selecting households that both spouses may have a relatively high productivity in the market and low productivity in household production and vice versa. However, this model is presented as introduction, where in the points followed teleworking will be included. The time constraint for each member will be:

$$T = t_i^w + t_i^h + t_i^l , \text{ for } i = m, f$$
(4)

Including teleworking it will be:

$$U = U(X_{M} + H, t_{m}^{l} + tel_{m}(t_{m}^{h}), t_{f}^{l} + tel_{f}(t_{f}^{h}))$$
(5)

The partial optimisation problem can be:

$$H_{\max 0 \le t_m^h, t_f^h \le T} = H(t_m^h, t_f^h, X_H) + w_m tel_m(t_m^h) + w_f tel_f(t_f^h) - w_m t_m^h - w_f t_f^h - X_H$$
(6)

Then the first order conditions will be:

$$\frac{\partial H}{\partial t_m^h} = w_m (1 - tel_m'(t_m^h)) \tag{7}$$

$$\frac{\partial H}{\partial t_f^h} = w_f (1 - tel_f'(t_f^h)) \tag{8}$$

In this case the inclusion of telework shows that the household members will choose the housework level where the marginal product of their housework equals their wage which is adjusted with this part of the housework activity through telework perceived as leisure or allocating time for housework (for instance the time spent for commuting at work can be invested for leisure and free time or the time earned can be invested on additional hours of household-domestic work). Otherwise the household may decide to purchase the household chores, which information is available as the data sample is described in more details in the next section. More specifically, according to the classical household production model the household production Z is an increasing function of the *i*'s member work in household production h_i and the marginal product h_i is decreasing with h_i . Then the member i will choose to increase the housework until a point for example $t_i^{h^*}$, where the marginal product in household production is equal to the wage and it is $\partial H/\partial t^h_i = w_i$. However, including the teleworking, where ranges between 0 (office-based workers) to 1 (teleworker homeworkers), the housework is more than the classical household production model would predict. For example in this case the hours of household production is $t_i^{h_i^{**}}$, and it is $t_i^{h_i^{**}} > t_i^{h_i^{*}}$, thus the difference between $t_i^{h^{**}}$ and $t_i^{h^{*}}$ can be interpreted as the effect of telework on housework production. Moreover, utility (5) can be written as:

$$U_{hh} = \pi U_f + (1 - \pi)(U_m)$$
⁽⁹⁾

 U_{hh} is the household utility and $\pi \in [0,1]$ is a continuously differentiable weighting factor. In this case the collective household model assumes that the household members are able to reach to an efficient resource allocation and the household family objective utility function U_{hh} as a weighted average of the individual utilities for men and women defined as U_m and U_f respectively. It is expected that the more the individuals spend their time of work at home the more the contribution to household production is expected to be. This follows the assumption by Chiappori (1988), Apps and Rees (1988) and Browning and Chiappori (1998), that the household decision making procedures result in Pareto efficiency and it is not focused on specific bargaining rule.

Next the individuals allocate their share of the full income to their consumption and leisure of preference in such a way that this allocation maximises their individual welfare or wellbeing, defined as the overall happiness. This is generally, an application of the second fundamental theorem of welfare economics. Concluding telework effects may depend on various circumstances. Firstly, it is assumed that men who are teleworkers, are more likely to share the housework with their partners, or at least to contribute more than men who are nonteleworkers and similarly for women. However, depending on the characteristics and the gender roles within family, women still may devote more time on housework and especially women teleworkers may spend even additional time on housework than women and in this case the gender roles are inversed.

The first order conditions of (9) with respect to the woman's and man's housework are:

$$\frac{\partial U_{hh}}{\partial t_f^h} = \pi \frac{\partial U_f}{\partial tel_f} \frac{\partial tel_f}{\partial t_f^h} + (1 - \pi) \frac{\partial U_m}{\partial tel_f} \frac{\partial tel_f}{\partial t_f^h}$$
(10)

$$\frac{\partial U_{hh}}{\partial t_m^h} = \pi \frac{\partial U_f}{tel_m} \frac{\partial tel_m}{\partial t_m^h} + (1 - \pi) \frac{\partial U_m}{\partial tel_m} \frac{\partial tel_m}{\partial t_m^h}$$
(11)

The first term in (10) and (11) represented the male part of the collective utility function, while the second term represents the female part. It follows that the housework choice of the woman influences the household utility through the utility of the man and the utility of the woman, and vice versa. In addition, being a teleworker or not has an influence on the household utility through the participation on household production and allocation.

It should be noticed that the hours of housework are included into the analysis. However, an additional analysis on whether the respondent or the partner is contributing more, less or equally on specific house chores, such as shopping, ironing, cleaning, cooking and childcare, takes place. The reason is that some house chores in our sample can be main responsibility of women, while others can be the main responsibility of men. It should be noticed that the

definition of the threshold *k* may not be realistic. More specifically, although women continue to be responsible for the majority of housework, few perceive it as unfair. Critics of exchange theory argue that instead of focusing on the relationship between the division of household labour and marital and life satisfaction, it is more fruitful to examine couples' perceptions of fairness (Thompson, 1991; Pina and Bengston, 1993). Pina and Bengston (1993) find that how wives perceive the amount of support and the help they receive from their husband is more important in determining the happiness than the actual division of labour expressed in hours of housework. Thus, it is expected that even in the case where the share of household tasks is not equal in terms of housework hours, this does not imply that the women perceive it as unfair, as the findings in the empirical section confirm too. Moreover, the belief of whether both man and woman should contribute can be incorporated into the framework discussed above. Nevertheless, the regression analysis controls for this belief where men and women are asked whether agree or not that both partners should contribute into the household and market.

3.2 Panel Regressions

In this section the panel regressions are described. Regarding the association of telework and gender roles the general model will be:

$$GR_{i,j,t} = a_0 + a_1 tel_{i,j,t} + a_2 \log(y_{i,j,t}) + \alpha' z_{i,j,t} + \mu_i + \theta_t + l_j + l_j T + \varepsilon_{i,j,t}$$
(13)

GR denotes the gender roles and the division of housework, and the possible answers are: whether the individual does mainly the housework, whether his/her partner does mainly the housework, both share the housework, somebody else does the housework and are discussed in more details in the data section for individual *i*, in household *h*, in location *j* and time *t*. *tel* indicates whether the individual *i* is teleworker or not, *z* is a vector of personal and household characteristics, discussed in the data section. Set μ_i denotes the individual-fixed effects, l_j is a location-residence fixed effects, θ_t is a time-specific vector of indicators for the day and month the interview took place and the survey wave, while l_jT is a set of area-specific linear time trend, which controls for unobservable, time-varying characteristics in the area, which can affect the propensity to telework, such as distance to employer's premises.

The mutinomial Logistic regression with fixed effects is applied, which is a classification method that generalizes logistic regression to multiclass problems, (eg. with more than two possible discrete outcomes as model (13). This will allows us to estimate

whether teleworking increases the probability that the couples share the housework as well as to examine the hypothesis that spouses who are teleworkers may spend more time in house chores and housework be more or less shared depending on whether the household is characterised by traditional gender roles or gender egalitarianism. Next the dependent variable "hours per work in housework" is used and the model will be estimated with Fixed Effects.

The main question is whether teleworking is an exogenous "shock" resulted from the fast progress of information technology and the necessity of the organisations to become "virtual" in order to remain completion, or teleworking is endogenous, coming from the sorting issue since people may prefer to telework is they are happier. Also people who were not teleworkers but are not happy they may choose teleworking as a tool to meet their family demands, leisure time and cope with their personal needs, as this flexible type of employment offers. Thus, this means that people may self-select in jobs providing teleworking which in the panel analysis, as in this study, should be more easily and reliable to investigate, rather than on cross-sectional analysis. For instance Mahler (2012) found that people who cannot telework although they would like to do if there was the opportunity for, they report lower job satisfaction than those who telework or they choose not to telework. Therefore, those who are not satisfied with their non-teleworking status might start looking for another job that includes teleworking and flexible working arrangement, causing them to report a higher job satisfaction. In other words, instead of an exogenous shock in telework, resulted by the fast development of information technology and the competition needs and challenges that organisations face, teleworking may be endogenous partially caused by a lower job satisfaction. On the other hand, those with a lower job satisfaction, during the job search process and experience, may realise that teleworking can be an attractive opportunity. Therefore, a within comparison of people who do not change job, as well as, residence location allows us to discern the effect of telework, whereas people who moved to different job, the effects of teleworking on gender roles and happiness cannot be readily disentangled from the effect of job switching, since its causal direction is unclear. Therefore, the sample is limited to those who never changed employer and have not moved residence during the time period examined. This will allows us to unravel the effects of teleworking than in the case where people move job. Restricting the sample to nonmovers and those who have not change job the location and job specific effects are absorbed by the individual specific fixed effects. Finally, the total sample is considered, interaction term of teleworking and a dummy variable taking value 1 whether the respondent has moved job and 0 otherwise is included into the analysis.

Moreover, regression (14) is estimated using the happiness as dependent variable. The model using happiness as dependent variable can be estimated by ordered Logit and Probit with random effects. However, a fixed effects framework is not feasible using these models into a panel data structure. One option is to use the Probit OLS introduced by van Praag and Ferrer-i-Carbonell (2004) by rescaling the categorical dependent variable and deriving *Z*-values of the standard normal distribution that correspond to cumulative frequencies of the original categories (see Cornelissen, 2006, for an example). The second option applied in this study is the "Blow-Up and Cluster" (BUC) estimator (see Baetschmann et al., 2014 for more technical details on BUC estimator). Finally, the Generalised Methods of Moments (GMM) system (Blundell and Bond, 1998) is applied.

In addition, relation (13) will be expanded into a system to examine also the relationship of teleworking with gender roles and well-being (Happiness). The structural equation system will then be:

$$GR_{i,j,t} = a_0 + a_1 tel_{i,j,t} + a_2 \log(y_{i,j,t}) + a_3 HP_{i,j,t} + \alpha' z_{i,j,t} + \mu_i + \theta_t + l_j + l_j T + \varepsilon_{i,j,t}$$
(14a)

$$HP_{i,j,t} = \beta_0 + \beta_1 tel_{i,j,t} + \beta_2 \log(y_{i,j,t}) + \beta_3 GR_{i,j,t} + \beta' z_{i,j,t} + \mu_i + \theta_t + l_j + l_j T + \varepsilon_{i,j,t}$$
(14b)

In that case the equations (14a)-(14b) a two equation system and the variables are defined as previously, while *HP* denotes the happiness. Three Stage Least Squares (3SLS) are applied in this case, where happiness and gender roles are considered as endogenous. Moreover, gender roles and family environment are converted into a binary variable taking 1 whether the house chores are shared or are done jointly and 0 otherwise. This set up may not be representative, as teleworking can increase the house work load in disdain for one of the partners. However, a categorical dependent variable, and not ordinal, is not feasible into a 3SLS framework. In addition, the main interest of the study is whether telework is more likely to increase the probability of sharing the housework or not r to contribute more to housework production.

4. Data

The dataset used in this study is the British Household Panel Survey (BHPS), which is a panel survey started since 1991 and completed in 2009 covering 18 waves. For the analysis followed in this study only the BHPS sample is of main interest as the individuals are followed for many years. BHPS is a classic example of household panel surveys designed to address and

examine a wide range of research topics, including income, poverty, labour, well-being, health, education, housing, household formation, fertility, social and political attitudes and values among others.

BHPS has the following statements on the housework division that are helpful to observe which gender is responsible at doing different house chores: *Who does the grocery, who does the cooking, who does the cleaning, who does the washing/ironing* and *who is responsible for the childcare*. The possible answers are *mainly myself, mainly the partner, shared/both* and *someone else,* which can be some other member from the household, a friend, a relative or someone by payment. Regarding the family "environment" the question is who contributes to the child care replying to the same answers as above. Finally, there is a quantitative variable *hours per work in housework,* which can be used as an additional dependent variable.

The survey includes a question about happiness, which is an ordinal variable measured on a 4-point scale and the specific phrasing of the question is the following "Have you recently been feeling reasonably happy, all things considered". In addition, life satisfaction could be considered, but it is measured only after the 6th wave, while happiness is available since the beginning of BHPS. The health status is an ordinal variable answering on whether the respondent's health is very poor/poor/fair/good/excellent.

The regressions control for both partners' characteristics. More specifically, partners' weekly working hours, age, education level, job status, and health status commuting time to work are included into the regressions, where for home-based teleworkers the commuting time is zero. Other individual characteristics include the personal labour income and happiness, while the household characteristics is the household size and house tenure. The personal income may be an important factor as it can capture the bargaining power of partners. For instance, women with higher income may have a higher bargaining power regarding the household allocation. The number or the age of children could be examined too but the number of children is highly correlated with the household size. Finally, as it has been mentioned the regressions control the day of the week, the month of the year and the wave of the survey, as well as, for residence location which is local authority district for BHPS. The latter can capture unobserved characteristics associated with the area, such as traffic affecting the time needed to attend at work etc. Moreover, the day of the week is important, especially for those who telework at both home and employer's premises, which captures the effects of teleworkers who stay at home or commute at work.

In table 1 the summary statistics for gender roles, housework, personal and household income, teleworking and happiness are reported. The sample of analysis refers only to married

and those who live as a couple. The percentage of teleworkers is 11.08, while the 3.71 is homebased only teleworkers. The teleworkers who work more than one place, meaning that they spend some days in employer's premises, is 7.37 per cent, where the 10.10 and 4.80 per cent consist by men and women respectively. It should be noticed that for gender roles paid help is applied, with the exception from the question of the childcare responsibility, where the answer is *someone else*, meaning that could be another member of the family, paid help or help from relatives.

In addition, as it can be seen in table 1, the gender roles are not homogenous. More specifically, while the 11.35 per cent of the total sample of men is mainly responsible for shopping and the 40.39 answers that shopping role is shared, the 9.78 per cent of the men teleworkers sample is responsible for shopping, while the shared percentage reduced at 37.75 per cent. This can be explained that shopping is an outdoor activity, thus it may be more likely that those who work in the employers premises will combine shopping with work, i.e. after completing the work the individual may go for shopping afterwards. Regarding women the situation is different. For the total sample the 52.29 per cent is mainly responsible for shopping, while this percentage is increased at 58.98 for women teleworkers, even if the percentage of men teleworkers is more than doubled. On the other hand, a different situation is presented for cooking. The 11.82 per cent of men in the total sample is responsible for the cooking, while the 59.78 per cent states that the partner is responsible and the 27.24 is shared. On the other hand, the 13.50 of the teleworkers men states that is mainly responsible for cooking reducing the responsibility of the partners at 55.66 and increasing the shared responsibility at 29.60 per cent. The results for women show that the 61.64 of the total sample of women is mainly responsible for cooking, while the respective percentage for women teleworkers is 64.84, while the shared housework proportion is decreased at 24.12 for women teleworkers, from 25.87 that is for both teleworking and non-teleworking women. This shows that based on the theoretical model teleworking for both men and women implies, additional housework for themselves. On the other hand, shared housework proportion is higher for men teleworkers, while is lower for women teleworkers.

Finally, childcare presents quite different results than the rest of the gender roles. More specifically, the proportion of men who are mainly responsible for childcare is significantly higher than the respective percentage of the remained gender roles, 30-35 per cent versus 5-15 per cent. The probability for women to be mainly responsible for the childcare is decreased from 34.51 per cent for men non- teleworkers to 30.81 per cent for men who are teleworkers. Moreover, the shared proportion is increased from 22.60 for non-teleworking men to 25.50 for

teleworking men. Also, the 1.06 of non-teleworking men are mainly responsible for the childcare, while the percentage is increase at 5.47 for teleworking men.

However, teleworking for women implies additional childcare responsibility, as the percentage for teleworking women who are mainly responsible for the child is 34.64, while the respective percentage for women non-teleworkers is 33.33. In addition, the shared housework is reduced from 20.74 for non-teleworking women to 19.06 for women who telework. Regarding the hours devoted in housework, in panel G of table 1, both men and women who are teleworkers on average spend two more hours for housework than non-teleworking men and women

In panel G the monthly average personal and household income, as well as, the average happiness in a scale 1-4 are reported. Men who telework have on average a higher personal (labour-wage) income by 110 than non-teleworking men, while women teleworkers have a higher personal income by around 60 per month than non-teleworking women. Similarly, the household income of teleworking members is higher. The *t-statistic* for the difference of the personal income between men teleworkers and non-teleworkers is 2.9587 (p-value 0.0031) while the respective *t-statistic* for women teleworkers and non-teleworkers is 3.2248 (p-value 0.0338) rejecting the null hypothesis that the income between teleworkers and non-teleworkers and non-teleworkers is equal. The average happiness of both men and women who telework is higher than those who are non-teleworkers.

(Insert table 1)

In table 2 the correlation matrix of gender roles, weekly housework hours, happiness and income is presented. It should be noticed the gender roles shopping, cooking, cleaning, ironing and childcare are binary variables taking value 1 whether the housework is shared and 0 otherwise. This is not the best representation as there is heterogeneity between teleworkers, as well as, between men and women. Nevertheless, the purpose is to see the association between the shared housework and the other variables. Moreover, a more detailed analysis takes place separately for men and women. In table 2 the association between teleworking and housework hours is negative. This may imply either that teleworkers share the housework with their partners or their partners are more responsible for the housework. This has been presented in table 1, where housework is more likely to be shared when one of the partners is teleworker. However, it has been seen also that teleworkers, especially women, are assigned with extra housework hours. The latter might be offset by the shared housework. The association of teleworking and whether shopping is shared is negative, as it has been presented in table 1,

which can be explained by the fact that shopping is an outdoor activity. This can be seen by the positive association between teleworking and whether sharing cooking, ironing and cleaning or not. The association between teleworking and whether childcare is shared or not is insignificant, while a positive correlation between teleworking and happiness and income is presented, as it has been reported also in table 1. However, it is not clear whether causality exists and in which direction. For instance does teleworking increase happiness and income, or happier people are more likely to be employed as teleworkers and earn more? Another causal path can be that teleworkers on average earn more and therefore are happier?

Regarding the housework hours, these are negatively associated with the probability that the housework is shared, as it is expected, with higher income leads to less housework hours. The latter association may be explained by the fact that people with higher income can work more hours and thus they contribute less in household production. However, this is not entirely clear, since the correlation of income and the probability that both partners share the housework on ironing, cooking and childcare is positive, while it becomes negative for shopping and cleaning. Moreover, these associations are not clear, as there is heterogeneity between men and women, which will become clearer in the empirical result section. In addition, happiness and shared household production are positively associated. This may indicate that people who share the household production are happier, or happier people are more likely to share the housework with their partners. Similarly, additional housework hours are negatively associated with happiness, which can be derived by the fact that share housework implies less housework hours.

(Insert table 2)

5. Empirical Results

In this section the regression results are presented. Regarding the Heckman selection model and in the selection equation the dependent variable is a dummy variable indicating whether the respondent is teleworker or not, while the in the observation equation the dependent variable is the number of housework. It should be noticed that since the data are panel, in the first stage-the selection equation- a fixed effects Logit model has been estimated. Heckman model is generally based on Probit estimates; however, Probit allows only for random effects on panel data framework. Then in the second stage a fixed effects model is estimated. Regarding the determinants of teleworking labour income and being employed are less likely to be teleworkers than self-employed. In addition, household size increases the propensity of teleworking employment, which can be explained by the fact that increases on household size is associated with extra needs and family demands. Thus, teleworking may be a solution to face and correspond to these family demands.

Regarding the observation equation the inverse Mills ratio (IMR) coefficient is insignificant, accepting the hypothesis that there is not selection bias in the sample examined. Labour income is significant and negative indicating that those who earn more are less likely to contribute to household chores and production. This is also related to the hours spend on market, as there is a positive correlation between hours worked and the labour income. Those who are employees spend less hours on housework chores than the self-employed, which can be explained by the fact that the latter are more likely to choose teleworking, as it has been seen by the selection equation.

Similarly, as before, increases in household size are associated with increases on housework hours, as well as, those who rent the house from employer or the local authority. Health status it is an important factor, where those who reported very bad levels of health are less likely to contribute to housework, which is expected as this variable included also people with mental problems, disabilities, various accidents and illnesses. Finally, education level is an important determinant of household production. More specifically, those with education level lower than university or higher education spend less time on housework than those with higher degree, while there is no difference between those who have completed a first degree and those with higher degree. It should be noticed that additional regressions took place separately for men and women presenting the same conclusions, but are not presented here.

(Insert table 3)

In table 4 the Heckman selection model results for the gender roles are presented. In this case the selection equation is the same, while in the second stage a multinomial fixed effects model has been estimated and the reference or base outcome is whether the respondent states that the specific household chore his/her main responsibility. In all cases IMR is insignificant while labour income is positive and significant.

(Insert table 4)

In table 5 the housework fixed effects estimates for three samples are reported. More specifically, in panel A the results are presented for any kind of job status (e.g. employed, retired, etc.), in panel B only the employed couples are considered and in panel C the non-movers sample is examined. Only the coefficients of teleworking are reported, as the remained

coefficients are very similar with those found in the second stage of the Heckman selection model in table 3. However, the remained factors and their estimates are reported for the gender roles in table 5 below, as they have not been presented yet and have not been discussed.

Regarding men and the three samples explored, being teleworkers is associated with additional housework hours than non-teleworkers. Regarding women sample both men and women teleworking coefficients are significant with a negative and positive sign respectively. This indicates that women whose spouse is teleworker spends less time on housework hours than the respective women whose spouse is non-teleworker. In panel B the same concluding remarks are presented, where the sample examines only those couples that are employed. Similarly, in panel C where the sample now is limited to employed couples, that they have not changed employer and are non-movers (same residence).

It should be noticed that the number of observations among the various regressions differ. The reason is that housework hours question is available in all waves, while gender roles the observations for gender roles and household chores are less because the questions are not available in all the waves of the BHPS, while the childcare gender role includes only the couples with children.

(Insert table 5)

In table 6 the results derived from the multinomial fixed effect Logit model are reported. The base outcome is *mostly partner*, while the *paid only* role is not presented as it is not the main point of interest. Moreover, the main coefficients of the analysis, which is teleworking is found to be insignificant in the most cases. Regarding the men sample when they or their partner are teleworkers are more likely to state that shopping is not shared. This can be explained by the fact when they or their partner are teleworkers they spend more time in indoor housework activities. Increases in the commuting time, labour income and number of market hours for men decreases the probability that men are mainly responsible for shopping. This can be explained by the additional hours spend on work and commuting leaving them with less available time for this gender role. On the other hand, increases on the income may be associated with additional bargaining power. However, a higher wage is usually associated with additional working hours. On the contrary increases on commuting time, number of hours spend in the market and wage of women increases the probability that men will be mainly responsible for shopping for the same reasons mentioned before. Similarly, increases on commuting time and labour income of men decreases the probability that men will share the

shopping with their partner. Inverse results are derived with woman's commuting time, labour income and number of market hours. Thus, the conclusion is that when the individual spends more time on market and earns more is less likely to share the housework or to be the main responsible, concluding that the partner has the main responsibility for shopping. The same findings holds for the other gender roles in table 7; however, these characteristics, as the remained factors are not presented as the conclusions remain the same.

Age has significant effects with similar interpretation that has been given before in Heckman selection model, while both men's and women's employment status coefficients are insignificant. Those who own the house with mortgage, those living in large households and those who believe that men and women should not contribute the same in the household, are less likely to state that shopping is shared for both men and women. Similarly, those with first degree or no education are less likely to state that shopping is shared for both men and women. Similarly, those with first degree or no education are less likely to state that shopping is shared, while for women with no degree women are more likely to believe that they are mainly responsible, while men do not. This can be explained by the fact that education, as labour income, is an important factor for bargaining into the household as it happens in society. More specifically, low educated women may believe that couples should not contribute the same, that men is the main breadwinner and that women should be involved more in housework it is observed in families with traditional gender roles.

For men and women being teleworker has no significant effects on cooking and being mainly responsible. Men are more likely to state that cooking is shared when either they or their partner is teleworker. On the other hand, the coefficients are insignificant for women and cooking, with the exception where when a woman is teleworker is less likely to believe that cooking is shared. When the woman is teleworker man is less likely to believe that he is mainly responsible for cleaning, indicating that women spend more time on cleaning, while when he is teleworker he believes that cleaning is shared. The same belief holds for women when man is teleworker, while when woman is teleworker is more likely to be main responsible for cleaning, the theoretical assumptions of the model that women who telework contribute more in the housework and specifically, cleaning.

The same holds for the woman sample and the gender roles of ironing and childcare. Regarding men when they are teleworkers are more likely to be mainly responsible for childcare and ironing, while the coefficient of teleworker women is not significant. A similar situation holds for the non-movers in table 8 with different coefficients. The exception is for childcare and men sample, where they are less likely to be main responsible for childcare when the woman is teleworker, implying that women teleworkers contribute to household more.

(Insert tables 6-8)

In table 9 the happiness regression for men and women separately are reported. In this study both men and women characteristics are included in the regressions. Regarding men the results show that for them being teleworkers or not is not significantly related to happiness. On the other hand, when their spouse is teleworker are more likely to report higher levels of happiness. As it was expected the household income is positive and significant. Regarding the number of market hours there is a negative association between men's happiness and both women's and men's number of market hours. The number of market hours for men may have a negative impact, as based on the utility function there will be less available leisure time. However, wages may increase utility, but wages are also associated with additional working hours; thus there is a trade-off and substitution effect, which is not explored here. Regarding the women sample the number of market hours for men is no significant, while an increase of women's market hours is associated with a decrease on happiness.

In table 10 the robustness checks for happiness regressions using GMM and BUC models are reported. The results confirm the findings presented in table 9. However, the estimated coefficient of the household income in both man's and woman's happiness are almost more than doubled than the ones found with adapted Probit in 9. This is the case where a possible degree of endogeneity between happiness and income may be present. In addition, the estimated coefficients with BUC are higher since the method employed is the conditional Logit fixed effects model. Furthermore, the observations in GMM are less, as it is a dynamic model and the dependent variable happiness is entered as a lagged variable, while in conditional Logit models, situations which remain stable for the whole period examined, such as 1 for happy and 0 for non-happy, are dropped. This is one of the main criticism of BUC estimator, where even it does not face the issues with the other estimators, still there may be a significant loss of observations and information. Nevertheless, this is not the case of this study. The other coefficients present the expected signs and are not further discussed in details. In table 11 the same happiness regressions are reported with the difference that the gender roles are included. In all cases the base outcome chosen is whether the respondent replies that he/she is mainly responsible for the specific household chore. In addition, the housework hours are included. It should be noticed that the gender roles may be correlated; however the results remain robust when each gender role is examined separately. Moreover, the regressions take place with and without the childcare; thus the couples that have children and those who do not. In table 11

only the couples with children are considered and based on the Likelihood-Ratio (LR) test which compares the difference between those with children and those with no, the null hypothesis of no difference between these two regressions is accepted.

In this case the relationship between teleworking, gender roles and happiness is explored. Moreover, teleworking may affect and cause gender roles and household production allocation, as it has been assumed in the methodological framework, and thus this allocation may affect the overall utility, expressed by happiness.

Based in the results 11 men is more likely to report that are happier when their spouse is teleworker, while there is no difference on happiness levels between men teleworkers and non-teleworkers. Regarding the gender roles the results are insignificant with the exception of shopping, ironing and childcare, where men who stated that the housework chores are shared are more likely to be happier. All the other outcomes are insignificant, with the exception of ironing, where men who answered that this role is main responsibility of their spouse are more likely to report higher levels of happiness.

On the other hand, women are happier when both they and their partner are teleworkers. In addition, housework hours are insignificant, but regarding cooking and ironing women are happier when the housework on these roles is mainly responsibility of their partners or housework is shared. Regarding shopping, cleaning and childcare, women who stated that housework is shared are more likely be happier. The other outcomes are insignificant.

Regarding the housework hours, increases on household production are associated with lower levels of happiness; however, is not clear whether these increases of fairness beliefs are tribute of sharing the housework with their spouse or not. The question in this case is whether teleworkers are more likely to share the household, especially men, while women teleworkers may contribute more into the household production affecting their utility. Nevertheless, women teleworkers, or even men, may choose to telework because they prefer to spend more time on household chores and activities, as well as, on leisure activities. Since telework allows for flexibility in working time schedule, people may spend time on their favourite activities, such as sharing the housework with their spouse, spending more time on childcare and other activities and leisure. It should be noticed, the results so far have been employed only for couples with children, but similar results are present for couples without children.

(Insert tables 9-11)

The results so far show that telework is associated positively with happiness and with the probability that the housework is shared, especially in the women sample whose spouse is teleworker. However, this may be the case where a sorting effects is taking place producing the observed positive effects as it has been discussed in the methodology part.

In table 12 the interaction terms of job stayer and teleworker as well as of job switchers and teleworkers for men and women are included into the regression. Regarding shopping the result for both men and women are similar with the previous results confirming that the effects are mainly captured by the job stayers and teleworkers. The exception is the woman sample and whether the shopping is shared where the probability of shopping being shared is less likely for job switchers and men, like as in the case of job stayers and both men and women. The findings for the rest of the gender roles are similar and confirm that the effects of teleworking are mainly explained by the job stayers. The only exceptions is the women sample for the gender roles of cooking and childcare where the effects of men teleworking on whether these household chores are shared or not are explained by both job stayers and switchers. Finally, the estimates including alternative functional forms, such as squared wages and age have taken place; however the teleworking effects, as well as, the likelihood function do not change. This indicates that the household production functions and the teleworking effects are not sensitive on alternative function forms. Nevertheless, this can be the case when the sharing rule on household expenditures is explored. In table 13 the happiness functions including the interaction of job stayers with teleworking and job movers with teleworking are reported. The results remain the same where men are happier when women is job stayer and teleworker, while the remained interaction terms are insignificant. Similarly for women.

(Insert tables 12-13)

In table 14 the results derived from 3SLS model are reported. Only the coefficients of main interest are reported, such as teleworking, housework hours, gender roles, while the remained coefficients present the same signs as before, including number of hours spend on market, labour income, commuting time to work, education level, marital status and employment status among others. Regarding the housework hours, when a man is teleworker he spends more time on housework than non-teleworkers. Similarly, for women when they are teleworkers are more likely to spend more time on housework, while they spend less time when their spouse is teleworker, relatively to women whose partner is not teleworker. Regarding shopping in all

cases the teleworking coefficient is negative indicating that when for example either man or his spouse is teleworker are less likely to state that they share shopping. This can be explained probably to the fact that shopping is an outdoor housework role, as it has been mentioned before. Thus, teleworkers are more likely to spend all the week or some days of the week at home, reducing the probability of spending time for this gender role.

Regarding cleaning teleworkers are more likely to state that they share it with their spouse while women teleworking coefficient is insignificant. On the other hand, women whose spouse is teleworker are more likely to state that the roles for cleaning, ironing, cooking and childcare is a sharing process.

Regarding teleworking when cooking, cleaning and childcare are shared increases the probability that men will telework, while when they state that ironing and childcare are mainly responsibility of their spouse are less likely to be teleworkers. The coefficients for the remained gender roles are insignificant. Similarly, for women when shopping, cooking and ironing is shared are less likely to be teleworkers, as well as, that mostly their partner is responsible. This indicates that for women who are teleworkers spend more time on housework than women who are non-teleworkers. For both women and men increase on housework time increases the probability that the individual will be teleworker.

Regarding happiness and the men sample when shopping, cooking and cleaning are mainly responsibility of their partner or when shopping, childcare, cleaning are shared are happier. Regarding women sample, in all cases when the household chore is shared are more likely to be happier, while increases on housework hours for both men and women leads to decrease of happiness. In both samples, men and women are happier when their spouse is teleworker. On the other hand, when women are teleworkers are happier, while there is no difference on men's happiness whether they are teleworkers or not. Thus, this may indicate that women are happier when their spouse is teleworker, because it is more likely that he will contribute to housework and sharing it with his spouse increasing the happiness for women as the remained coefficients show. In addition, when women are teleworkers are more likely to face the family demands, as flexibility of work is one of the characteristics of teleworking.

This can be a result that even if they spend more time on housework, than the nonteleworkers, they may be more able to face the family demands, share the housework with their partners and have more leisure time. However, the last cannot be claimed and is not examined in this study, but it could be explored whether teleworking allows for leisure activities, even if they are more likely to spend more time on housework. This can be a result that teleworking allows for flexibility on labour market timing, better time management, as well as, housework, such as cooking and childcare for example for men can be perceived as leisure.

(Insert table 14)

6. Conclusions

The results showed that teleworkers spend more time on household production, while women whose partner is teleworker are more likely to state that household chores are shared increasing their overall well-being. Teleworking can have various policy implications and benefits for couples, employees, employers and society. Teleworking can be a solution to problems of balancing work and family. Increasing work flexibility will facilitate the management of work and family together. Since one of the main aims of policy makers and society is the improvement of the well-being of the citizens, teleworking may be another option which leads to work-family life balance and thus in higher levels of happiness and life satisfaction with overall impact on other life events and conditions, including health improvement, increase in leisure time. Teleworking and housework allocation can have further benefits on job satisfaction and productivity for couples. Improvement on happiness and job satisfaction will have further benefits to firms and organizations because job satisfaction can lead to higher productivity and thus higher firm performance. However, the last two arguments have not been explored in this study; but it is suggested for future empirical research.

Finally, the effects of teleworking into a intra-household allocation collective model are suggested for future application. More specifically, its effects on labour supply of couples including the household domestic production and considering teleworking can be examined. The majority of the previous research has considered the non-market time as pure leisure (Chiappori, 1988, 1992); however, this may give misleading estimates of the labour supply and household allocation and thus the policies can be also inefficient. Considering teleworking as well as the time use on household domestic production a new theoretical framework can be developed suggesting new policies.

Acknowledgements

This work was based on data from the British Household Panel Survey (BHPS), Waves 1-18, 1991-2009 Local Authority Districts, produced by the Institute for Social and Economic Research (ISER) at the University of Essex, sponsored by the Economic and Social Research Council (ESRC), and supplied by the UK Data Archive. The data are the copyright of ISER. The use of the data in this work does not imply the endorsement of ISER, ESRC or the UK Data Archive in relation to the interpretation or analysis of the data.

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		. 1 4010 1, 941	nmary Statistics Panel A: Teleworker	8	
	Both teleworkers and non-	Total teleworkers	Home-based only teleworkers	Teleworkers (more than one place)	Non-teleworkers
T. (.)	teleworkers	11.00	2.71	7.27	80.02
Total sample	10 (1	11.08	3.71	7.37	89.92
Men	48.64	14.77	3.47	10.10	86.31
Women	51.36	8.06	3.94	4.80	92.95
		Panel B: Gen	der Roles for Men No	on-Teleworkers	
	Who does the	Who does the	Who does the	Who does the	Who is
	grocery	cooking?	cleaning?	ironing?	responsible for
	shopping?	11.07	5 5 A	5.24	childcare?
Mostly self	10.22	11.87	5.54	5.34	1.06
Mostly partner	47.19	59.64	64.89	71.82	34.51
Shared	41.42	27.24	25.41	20.62	22.60
Paid Help Only or someone else	1.17	1.25	4.16	2.21	41.84
01 001100110 0100			er Roles for Women I		
	Who does the	Who does the	Who does the	Who does the	Who is
	grocery	cooking?	cleaning?	ironing?	responsible for
	shopping?	<i>(</i>) <i>(</i>)	(1 0 7	5 0.44	childcare?
Mostly self	53.99	61.64	64.87	78.44	33.33
Mostly partner	8.90	11.37	6.30	3.53	3.40
Shared	36.03	25.87	23.47	14.95	20.74
Paid Help Only	1.08	1.12	5.36	3.08	42.53
or someone else		Panel D. C	ender Roles for Men	Teleworkers	
	Who does the	Who does the	Who does the	Who does the	Who is
	grocery	cooking?	cleaning?	ironing?	responsible for
	shopping?	cooking.	cicaning:	noning	childcare?
Mostly self	9.78	13.50	6.59	5.30	5.47
Mostly partner	51.20	55.66	59.81	70.78	30.81
Shared	37.75	29.60	28.58	21.80	25.50
Paid Help Only	1.27	1.24	5.02	2.12	38.23
or someone else	1.27	1.27	5.02	2.12	56.25
		Panel E: Ger	der Roles for Wome	n Teleworkers	
	Who does the	Who does the	Who does the	Who does the	Who is
	grocery	cooking?	cleaning?	ironing?	responsible for
	shopping?				childcare?
Mostly self	58.98	64.84	68.38	76.36	34.64
Mostly partner	9.54	10.41	4.77	3.97	2.86
Shared	30.92	24.12	21.00	17.13	19.06
Paid Help Only	0.56	0.63	5.85	2.54	43.42
or someone else		Danal	F: Weekly Housewor	ly hours	
	Men	Women	Men Non-	Women Non-	
	Teleworkers	Teleworkers	Teleworkers	Teleworkers	
Average Weekly Housework	7.070	16.803	5.027	15.262	
hours					
			l G: Income and Hap	-	
	Men	Women	Men Non-	Women Non-	
n 1-	Teleworkers	Teleworkers	Teleworkers	Teleworkers	
Personal Income	2,137.324	1,225.17	2,027.146	1,168.262	
Household	3,357.823	3,368.338	3,256.206	3179.008	
Income	2.070	0.005	2.000	0.070	
Happiness	3.060	2.987	3.028	2.979	

			Tab	le 2. Correla	tion Matrix				
	Teleworking	Housework hours	Shopping	Cooking	Cleaning	Ironing	Childcare	Happiness	Personal Income
Housework	-0.0409***								
hours	(0.000)								
Shopping	-0.0200***	-0.0406***							
	(0.000)	(0.000)							
Cooking	0.0081**	-0.0508***	0.2353***						
U	(0.0265)	(0.000)	(0.000)						
Cleaning	0.0076***	-0.0437***	0.2051***	0.2450***					
5	(0.0374)	(0.000)	(0.000)	(0.000)					
Ironing	0.0022*	-0.0639***	0.1453***	0.2190***	0.3276***				
0	(0.0012)	(0.000)	(0.000)	(0.000)	(0.000)				
Childcare	-0.0050	-0.0209***	0.0395***	0.1054***	0.0736***	0.0745***			
	(0.1750)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)			
Happiness	0.0041**	-0.0413***	0.0270***	0.0111***	0.0188***	0.0198***	0.0139**		
	(0.0019)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.0062)		
Personal	0.0614***	-0.3072***	-0.0412***	0.0401***	-	0.0629***	0.0706***	0.0351***	
Income	(0.000)	(0.000)	(0.000)	(0.000)	0.0062***	(0.000)	(0.000)	(0.000)	
	、 ,	× /	× /	× /	(0.000)	```	```	× /	
Household	0.0236***	-0.0900***	-0.0792***	0.0324***	-	0.0642***	0.0689***	0.0282***	0.6750***
Income	(0.000)	(0.000)	(0.000)	(0.000)	0.0361***	(0.000)	(0.000)	(0.000)	(0.000)
	× /	× /	× /	× /	(0.000)	```	× ,	` '	× /

Table 2. Co	orrelation	Matrix
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(0.000) p-values within brackets, ***, ** and * indicate significance at 1%, 5% and 10% level.

	Panel A: M	len	Panel B: Women		
	Observation Equation	Selection Equation	Observation Equation	Selection Equation	
	DV: Housework	DV:	DV: Housework	DV:	
	Hours	Teleworking	Hours	Teleworking	
IMR	0.3405	Teleworking	0.0384	1 ciewor King	
	(0.2481)		(0.1250)		
Children 0-2 years old	· · · · ·	0.0404***		0.4283**	
-		(0.0175)		(0.1719)	
Children 3-4 years old		0.0275*		0.0599**	
		(0.0158)		(0.0294)	
Children 5-11 years old		0.0674		0.1756*	
		(0.0628)		(0.0913)	
Children 11-16 years old		0.0594		0.3929	
Children 11(means ald		(0.0390) 0.1542		(0.1495) 0.2521	
Children +16 years old		(0.1667)		(0.2027)	
Commuting Time (Man)	-0.0038**	0.0133***	0.0043	0.0022	
Commuting Time (Man)	(0.0018)	(0.0022)	(0.0050)	(0.0032)	
Commuting Time (Woman)	0.0012	-0.0114***	-0.0042	0.0202***	
Commuting Time (Troman)	(0.0023)	(0.0037)	(0.0042)	(0.0040)	
Labour Income (Man)	-0.5904***	0.2207	0.7744***	-0.6007**	
()	(0.1135)	(0.1584)	(0.2194)	(0.2377)	
Labour Income (Woman)	0.5144***	-0.2009	-1.655***	0.3804*	
	(0.0998)	(0.1522)	(0.1911)	(0.1806)	
Number of Market Hours (Man)	-0.0140***	-0.0089	0.0189**	0.0122	
	(0.0047)	(0.0061)	(0.0090)	(0.0096)	
Number of Market Hours (Woman)	0.0193***	0.0053	-0.1463***	0.0321***	
	(0.0039)	(0.0071)	(0.0090)	(0.0091)	
Age (Man)	0.0662*	0.0204	-0.0641*	0.1319	
	(0.0372)	(0.0439)	(0.0384	(0.1019)	
Age (Woman)	-0.0379*	0.0272	0.1806***	0.0789	
	(0.0193)	(0.0262)	(0.0495)	(0.0714)	
Marital Status (Reference=married)	0.1505	0.1(00	0.5010**	0 4000	
Marital Status (Living as a couple)	0.1585	-0.1690	-0.5918**	0.4809	
Job Status Man (Reference=Self-Employed)	(0.1279)	(0.1978)	(0.2381)	(0.3081)	
Job Status Man (Reference–Sen-Employed) Job Status Man (Employee)	0.1221	-0.0415	-1.5851*	1.2169	
Job Status Man (Employee)	(0.4622)	(0.6318)	(0.9118)	(1.0158)	
Job Status Woman (Reference=Self-	(0.4022)	(0.0510)	(0.7110)	(1.0156)	
Employed)					
Job Status Woman (Employee)	-0.2011	-1.077	1.9132	1.0955**	
······································	(0.7968)	(1.058)	(1.5612)	(0.4711)	
Education Level Man (Reference=Higher	,		()	()	
Degree)					
Education Level Man (1st Degree)	-0.3949	0.1108	0.6500	0.2265	
	(0.4833)	(0.7042)	(0.9833)	(0.3539)	
Education Level Man (None)	-1.137**	-0.7805**	1.5115	-0.5279**	
	(0.476)	(0.3662)	(1.2671)	(0.2511)	
Education Level Woman (Reference=Higher					
Degree)	0.0700	0.0001	0 (110	0.4604	
Education Level Woman (1 st Degree)	-0.0600	0.2221	-0.6418	0.4634	
	(0.5045)	(0.3597) -1.7871**	(1.1832) 3.3375***	(0.6796)	
Education Level Woman (None)	-1.253*			-1.7577*	
Happiness (Reference= Much Less Happier)	(0.0674)	(0.7277)	(1.2601)	(0.0971)	
Happiness (Reference= Much Less Happier) Happiness (Happier)	0.3613		0.4280		
11appiness (11appier)	(0.2946)		(0.4549)		
Health Status Man (Reference=Very Good)	(0.2)+0)		(0.757)		
Health Status man (Very Bad)	0.6641	-0.6450	0.5971***	0.6356	
from Status man (very Dau)	(0.4194)	(0.5684)	(0.1962)	(0.9942)	
Health Status Woman (Reference=Very	(0.1127)	(0.0001)	(0.1702)	(0.7712)	
Good)					
Health Status Woman (Very Bad)	-0.2124	0.7880	-0.5722	-0.3494	
	(0.1566)	(0.5656)	(0.6361)	(0.5809)	

Table 3. Heckman Selection Model Estimates Household Production and Housework E	lours
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Standard Errors within brackets, p-values within square brackets, ***, ** and * indicate significance at 1%, 5% and 10% level.

	Household Pr		
		Panel A: Shopping	
	Outcome: Mostly Partner	Outcome: Shared	Outcome: Paid Service
IMR	0.2442	-0.2830	0.2811
	(0.1935)	(0.2064)	(0.4739)
Labour Income	1.1532***	0.8840***	1.1035***
	(0.292)	(0.0302)	(0.0728)
No. Observations		24,488	
LR chi square		28,089.96	
		[0.000]	
		Panel B: Cooking	
	Outcome: Mostly Partner	Outcome: Shared	Outcome: Paid Service
	DV: Cooking		
IMR	0.1348	-0.0775	1.0061
	(0.1897)	(0.1807)	(0.6213)
Labour Income	1.3925***	0.6119***	0.1565
	(0.0275)	(0.0262)	(0.1060)
No. Observations		24,488	
LR chi square		18,866.21	
		[0.000]	
		Panel C: Cleaning	
	Outcome: Mostly Partner	Outcome: Shared	Outcome: Paid Service
IMR	-0.1443	-0.1465	-0.6639
	(0.2014)	(0.1804)	(0.4363)
Labour Income	1.6834***	0.6820***	1.6227***
Labour meome	(0.0298)	(0.0270)	(0.0561)
No. Observations	(0.0290)	24,488	(0.0001)
LR chi square		24,607.62	
LIX cill square		[0.000]	
		Panel D: Ironing	
	Outcome: Mostly Partner	Outcome: Shared	Outcome: Paid Service
IMR	0.2442	-0.2830	0.2811
INIK	(0.1935)	(0.2064)	(0.4739)
Labour Income	1.7532***	0.8840***	1.1035***
	(0.0292)	(0.0302)	(0.0728)
No. Observations	(0.02)2)	24,488	(0.0726)
LR chi square		28,052.95	
LK chi square		[0.000]	
	Outcome: Mostly Partner	Panel E: Childcare Outcome: Shared	Outcome: Someone Els
IMD	-2.1624		
IMR		-2.2313	-1.4234
T 1 T	(0.2914)	(0.2579)	(0.2523)
Labour Income	1.2905***	0.5152***	0.8748***
NOL	(0.0375)	(0.0336)	(0.0338)
No. Observations		20,365	
LR chi square		31,365.21	
		[0.000]	

Table 4 . Heckman Selection Model and Multinomial Fixed Effects Estimates for Sharing the
Household Production

Standard Errors within brackets, p-values within square brackets, *** indicates significance at 1% level.

	Panel A: To	Panel A: Total Sample		ly Employed	Panel C: Non-Movers	
	Men	Women	Men	Women	Men	Women
Teleworker (Man)	1.1511**	-0.4083*	1.1434**	-0.2707**	1.1349**	-0.2210**
	(0.5384)	(0.2336)	(0.5314)	(0.1239)	(0.4642)	(0.1023)
Teleworker (Woman)	-0.0336	1.8275**	-0.0394	1.4023**	0.0100	1.5909**
	(0.0596)	(0.8356)	(0.0520)	(0.6295)	(0.0163)	(0.7023)
No. observations	25,163	25,163	19,647	19,780	15,331	15,496
R Square	0.1606	0.1946	0.1545	0.1709	0.1308	0.1526

Table 5. Teleworking and Housework Hours Fixed Effects Estimates

Robust standard Errors within brackets, ** and * indicate significance at 5% and 10% level

Table 6. Teleworking and S	and Shopping Multinomial Logit Fixed Effects Estimates					
		A: Men		Women		
	Outcome:	Outcome:	Outcome:	Outcome:		
	Mostly Self	Shared	Mostly Self	Shared		
Teleworker (Man)	-0.0794	-0.1253**	-0.1350**	-0.1713***		
	(0.0870)	(0.0521)	(0.0622)	(0.0528)		
Teleworker (Woman)	-0.1029	-0.1891**	0.1123*	-0.1561**		
	(0.1215)	(0.0776)	(0.0575)	(0.0784)		
Commuting Time (Man)	-0.0030**	-0.0023***	0.0021*	-0.0032***		
	(0.0012)	(0.0007)	(0.0012)	(0.0008)		
Commuting Time (Woman)	0.0099***	0.0054***	-0.0085***	0.0066***		
	(0.0014)	(0.0009)	(0.0015)	(0.0009)		
Labour Income (Man)	-0.1074*	-0.2504***	0.1850***	-0.3755***		
	(0.0642)	(0.0419)	(0.0700)	(0.0422)		
Labour Income (Woman)	0.2240***	-0.0042	-0.1045	-0.0583		
	(0.0634)	(0.0400)	(0.0676)	(0.0403)		
Number of Market Hours (Man)	-0.0191***	-0.0167***	0.0243***	-0.0162***		
	(0.0034)	(0.0022)	(0.0036)	(0.0022)		
Number of Market Hours (Woman)	0.0128***	0.0164***	-0.0223***	0.0205***		
	(0.0033)	(0.0021)	(0.0036)	(0.0021)		
Age (Man)	0.0095*	-0.0148***	-0.0130**	-0.0185***		
	(0.0054)	(0.0034)	(0.0057)	(0.0034)		
Age (Woman)	-0.0118**	-0.0103***	0.0049	-0.0038		
	(0.0056)	(0.0035)	(0.0059)	(0.0035)		
Marital Status (Reference=married)	· · · ·			()		
Marital Status (Living as a couple)	0.1761**	0.2517***	0.1657**	0.2398***		
······································	(0.0882)	(0.0447)	(0.0762)	(0.0441)		
Job Status Man (Reference=Self-	(0.0002)	(0.0117)	(0.0702)	(0.011)		
Employed)						
Job Status Man (Employee)	-0.0476	0.4006	0.4911	0.3630		
	(0.0440)	(0.2754)	(0.5309)	(0.2777)		
Job Status Man (Unemployed)	0.1879	-0.3849	0.6025	-0.3585		
	(0.6486)	(0.4877)	(0.7714)	(0.4887)		
Job Status Man (Retired)	1.1098	0.3042	1.5895*	0.6482		
	(0.7475)	(0.6478)	(0.8519)	(0.6271)		
Job Status Woman (Reference=Self-	((())))	(00000)	(000000)	(000272)		
Employed)						
Job Status Woman (Employee)	0.3177	0.1044	-0.4492	0.0162		
oob Status (Coman (Employee)	(0.7778)	(0.4474)	(0.6613)	(0.4640)		
Job Status Woman (Unemployed)	-0.6797	-0.1581	0.1177	0.1780		
Job Status Woman (Onemployed)	(1.199)	(0.5927)	(0.8813)	(0.6160)		
Job Status Woman (Retired)	-0.7374	1.608	-1.2076	1.4349		
Job Status woman (Retireu)						
Education Level Man	(1.820)	(1.023)	(1.3761)	(1.0009)		
(Reference=Higher Degree)	0.01004	0.0542	0 1 5 7 9	0.0112		
Education Level Man (1 st Degree)	0.01994	-0.0542	0.1578	-0.0113		
	(0.1237)	(0.0875)	(0.1356)	(0.0873)		
Education Level Man (None)	-0.3004**	-0.2344**	-0.2231	-0.2188**		
	(0.1454)	(0.1098)	(0.1586	(0.0961)		

Table 6. Teleworking and Shopping Multinomial Logit Fixed Effects Estimates

· · · · · · · · · · · · · · · · · · ·	Panel A	A: Men	Panel B:	Women
	Outcome:	Outcome:	Outcome:	Outcome
	Mostly Self	Shared	Mostly Self	Shared
Education Level Woman (Reference=Higher	v		v	
Degree)				
Education Level Woman (1 st Degree)	-1.1735***	-0.1484	0.7972***	-0.1175
	(0.1269)	(0.1064)	(0.1346)	(0.1018)
Education Level Woman (None)	-1.0687***	-0.1923*	0.9045***	-0.1884*
	(0.1476)	(0.1115)	(0.1588)	(0.1037)
Happiness (Reference= Much Less Happier)				. ,
Happiness (Happier)	-0.4856*	0.0709	0.0497	-0.0095
	(0.2509)	(0.1798)	(0.2236)	(0.1385)
Health Status Man (Reference=Very Good)		. ,	× /	. ,
Health Status man (Very Bad)	-0.1643	0.3241	0.3115***	0.1880
	(0.3920)	(0.2314)	(0.0865)	(0.2279)
Health Status Woman (Reference=Very Good)		. ,	× /	. ,
Health Status Woman (Very Bad)	0.9858***	0.5114***	-1.1171***	0.2144
	(0.2596)	(0.1969)	(0.2523)	(0.2000)
Man and Woman Should Both Contribute	· · · ·	· · · ·	× /	
(Reference=Strongly Agree)				
Man and Woman Should Both Contribute	-0.2062	-0.3202***	0.3115	-0.2739**
(Strongly Disagree)	(0.2964)	(0.0662)	(0.2744)	(0.0666)
Household Size	0.0389	-0.1802***	-0.0442	-0.2325**
	(0.0257)	(0.0165)	(0.0270)	(0.0167)
House Tenure (Reference=Owned Outright)	× ,	```	× /	· · · · ·
House Tenure (Owned with Mortgage)	0.1530	-0.1834***	0.1565	-0.1691**
	(0.0947)	(0.0557)	(0.0995)	(0.0561)
No. observations	20,	· /	20,2	
LR chi square		7.32	3,740	
		000]	[0.0]	

Table 6. (cont.) Teleworking and Shopping Multinomial Fixed Effects Estimates

Robust standard Errors within brackets, p-values within square brackets, ***, ** and * indicate significance at 1%, 5% and 1% level

	Panel A	A: Men	Panel B:	Women		
	Outcome:	Outcome:	Outcome:	Outcome:		
	Mostly Self	Shared	Mostly Self	Shared		
		Coc	oking			
Teleworker (Man)	0.0074	0.0235*	0.0569	0.0801		
	(0.0768)	(0.0125)	(0.0816)	(0.0571)		
Teleworker	0.0409	0.1475*	0.0340	-0.2077***		
(Woman)	(0.1136)	(0.0795)	(0.1232)	(0.0801)		
No. Observations	20,209		20,241			
LR chi square	3,757.77		3,985.99			
_	[0.000]		[0.000]			
		Cleaning				
Teleworker (Man)	0.1535	0.0298**	-0.0132	0.0299**		
. ,	(0.0987)	(0.0137)	(0.1165)	(0.0143)		
Teleworker	-0.2372*	0.0709	0.4132**	0.0353		
(Woman)	(0.1263)	(0.0815)	(0.1926)	(0.0439)		
No. Observations	20,209		20,241	. ,		
LR chi square	4,265.87		4,459.90			
•	[0.000]		[0.000]			
		Iro	ning			
Teleworker (Man)	0.2648***	-0.0507	0.0888	0.1749***		
	(0.1032)	(0.0610)	(0.1373)	(0.0876)		
Teleworker	0.0783	0.1306	0.1518*	-0.0890		
(Woman)	(0.1555)	(0.0856)	(0.0838)	(0.0639)		
No. Observations	20,209	`	20,241			
LR chi square	3,903.31		3,844.16			
•	[0.000]		[0.000]			
		Chil	dcare			
Teleworker (Man)	1.0526***	0.1492**	0.0770	0.1672**		
	(0.1757)	(0.0681)	(0.0712)	(0.0770)		
Teleworker	0.4166	0.0077	-0.0701	0.0412		
(Woman)	(0.2828)	(0.0112)	(0.0867)	(0.0928)		
No. Observations	15,251	× ,	15,343	- /		
LR chi square	7,968.91		7,908.86			
1	[0.000]		[0.000]			

Table 7. Teleworking and rest of Gender Roles Multinomial Fixed Effects Estimates

Robust standard Errors within brackets, p-values within square brackets, *** and ** indicate significance at 1% and 5% level

		Stayers					
	Panel A:		Panel B:				
	Outcome:	Outcome:	Outcome:	Outcome:			
	Mostly Self	Shared	Mostly Self	Shared			
	Shopping						
Teleworker (Man)	-0.1378	-0.1420	-0.1513	-0.1604*			
	(0.0982)	(0.1004)	(0.1449)	(0.0901)			
Teleworker	-0.1524	-0.1916**	-0.2113**	-0.1745***			
(Woman)	(0.0998)	(0.0773)	(0.1074)	(0.0615)			
No. Observations	11,523		11,714				
LR chi square	3,007.99		3,070.24				
	[0.000]		[0.000]				
		Cooki					
Teleworker (Man)	-0.0603	0.0223*	-0.0599	0.2038**			
	(0.0928)	(0.0132)	(0.0983)	(0.0923)			
Teleworker	0.0129	0.1133**	0.2628**	-0.0962			
(Woman)	(0.0106)	(0.0505)	(0.1256)	(0.0670)			
No. Observations	11,523		11,714				
LR chi square	3,358.80		3,379.79				
	[0.000]		[0.000]				
		Cleani					
Teleworker (Man)	0.0912	-0.0433	-0.0032	0.0313**			
	(0.1189)	(0.0634)	(0.0192)	(0.0148)			
Teleworker	-0.3323**	0.1266	0.3781*	0.0459			
(Woman)	(0.1636)	(0.0825)	(0.1954)	(0.0560)			
No. Observations	11,523		11,714				
LR chi square	3,887.37		4,169.42				
	[0.000]		[0.000]				
		Ironir					
Teleworker (Man)	0.3411***	-0.0601	-0.0441	0.2120**			
	(0.1188)	(0.0722)	(0.0598)	(0.0893)			
Teleworker	0.1693	0.1334	-0.0868	-0.0873			
(Woman)	(0.1521)	(0.0889)	(0.0203)	(0.0655)			
No. Observations	11,523		11,714				
LR chi square	3,371.64		3,745.39				
	[0.000]		[0.000]				
		Childe					
Teleworker (Man)	0.0366**	0.1599**	0.0914	0.1511**			
	(0.0161)	(0.0693)	(0.0722)	(0.0791)			
Teleworker	-0.0038**	0.0073	-0.1073	0.0324			
(Woman)	(0.0018)	(0.0102)	(0.1086)	(0.0431)			
No. Observations	9,624		9,652				
LR chi square	8,189.19		8,379.60				
	[0.000] s within brackets p-val		[0.000]				

 Table 8. Teleworking and Gender Roles Multinomial Fixed Effects Estimates for Non-Movers and Job Stayers

Robust standard Errors within brackets, p-values within square brackets, ***, ** and * indicate significance at 1%, 5% and 1% level

	DV: Men Happiness	DV: Women
$\mathbf{T}_{\mathbf{a}}$	0.0460	Happiness
Teleworker (Man)	0.0469	0.0438**
	(0.0421)	(0.0212)
Teleworker (Woman)	0.0843**	0.0070*
	(0.0412)	(0.036)
Logarithm of Household Income	0.0288*	0.0598***
	(0.0151)	(0.0168)
Number of Market Hours	-0.0019*	0.0010
(Man)	(0.0010)	(0.0013)
Number of Market Hours	-0.0015*	-0.0025**
(Woman)	(0.0008)	(0.0011)
Age (Man)	-0.0428***	-0.0066
	(0.0127)	(0.0056)
Age Square ((Man)	0.00055**	
	(0.00011)	
Age (Woman)	-0.0020	-0.0330**
	(0.0052)	(0.0128)
Age Square (Woman)		0.00039*
o 1 ·····/		(0.00020)
Health Status Man (Reference= Very Good)		()
Health Status Man (Very Bad)	-0.7407***	-0.1956**
ficultin Status What (Very Dau)	(0.1084)	(0.0915)
Health Status Woman (Reference= Very Good)	(0.1001)	(0.0)10)
Health Status Woman (Very Bad)	-0.1452*	-0.7327***
Health Status Wolhan (Very Dau)	(0.0855)	(0.0974)
Marital Status (Defense as-married)	(0.0855)	(0.0974)
Marital Status (Reference=married)	0.0462	0.0702
Marital Status (Living as a couple)	0.0462	-0.0702
	(0.0334)	(0.0552)
Job Status Man (Reference=Self-Employed)	0.1051	0.1.(1.1
Job Status Man (Employee)	-0.1251	-0.1611
	(0.1142)	(0.1318)
Job Status Woman (Reference=Self-Employed)		
Job Status Woman (Employee)	0.2514	-0.0519
	(0.1900)	(0.2277)
Education Level Man (Reference=Higher Degree)		
Education Level Man (1 st Degree)	-0.0900	0.1246
	(0.1317)	(0.1449)
Education Level Man (None)	-0.3485**	0.2930
	(0.1629)	(0.1980)
Education Level Woman (Reference=Higher Degree)		
Education Level Woman (1 st Degree)	-0.2128	0.02050
······································	(0.1386)	(0.1380)
Education Level Woman (None)	-0.0399	0.0654
	(0.1919)	(0.1852)
Household Size	-0.0275**	-0.0366***
HUUSUIUIU SIZU	(0.0139)	(0.0114)
House Tenure (Reference=Owned Outright)	(0.0139)	(0.0114)
	-0.0362	-0.0025
House Tenure (Owned with Mortgage)		
	(0.0377) 23,935	(0.0417) 23,967
No. Observations		

Standard Errors within brackets, ***, ** and * indicate significance at 1%, 5% and 10% level

Table IV. Robustiless Check	s for Happiness Function E	
	DV: Men Happiness	DV: Women Happiness
		GMM System
Lagged Happiness	0.5456***	0.4761***
	(0.0077)	(0.0105)
Teleworker (Man)	0.0240	0.0573**
	(0.0224)	(0.0275)
Teleworker (Woman)	0.0347**	0.0324**
	(0.0152)	(0.0153)
Logarithm of Household Income	0.0573***	0.0615***
C	(0.0136)	(0.0169)
No. Observations	16,865	16,902
Wald Chi Square Statistic	6,660.84	6,858.20
I I	[0.000]	[0.000]
	Panel B: I	BUC Estimates
Teleworker (Man)	0.1014	0.1253**
× ,	(0.0819)	(0.0553)
Teleworker (Woman)	0.2353**	0.0531**
	(0.1017)	(0.0227)
Logarithm of Household Income	0.0821**	0.1031***
5	(0.0375)	(0.0115)
No. Observations	18,495	18,531
Wald Chi Square Statistic	1,929.02	2,067.30
1	[0.000]	[0.000]

 Table 10. Robustness Checks for Happiness Function Estimates

Standard Errors within brackets, p-values within square brackets, ***, ** and * indicate significance at 1%, 5% and 10% level

	s Function Estimates wit	
	DV: Men Happiness	DV: Women
	0.0477	Happiness
Teleworker (Man)	0.0469	0.0438**
	(0.0421)	(0.0212)
Teleworker (Woman)	0.0843**	0.0102*
	(0.0412)	(0.0052)
Housework Hours	-0.0034**	-0.0020*
	(0.0015)	(0.0011)
Shopping Respondent (Base Outcome=mainly		
myself) Shanning Deer on doort (Mainly rev northern)	0.0240	0.0223
Shopping Respondent (Mainly my partner)	0.0249	
	(0.0333)	(0.0275)
Shopping Respondent (Shared)	0.0243**	0.0265**
	(0.0113)	(0.0129)
Shopping Respondent (Paid Only)	-0.0112	-0.1332
	(0.1336)	(0.1423)
Cooking Respondent (Base Outcome=mainly myself)		
	0.0482	0.0210*
Cooking Respondent (Mainly my partner)		
	(0.0330)	(0.0108)
Cooking Respondent (Shared)	0.0268	0.0100**
	(0.0300)	(0.0048)
Cooking Respondent (Paid Only)	0.0738	0.0801
	(0.1319)	(0.1234)
Cleaning Respondent (Base Outcome=mainly myself)		
Cleaning Respondent (Mainly my partner)	-0.0320	-0.0096
Creaning Respondent (Mainly my partner)	(0.0382)	(0.0107)
Cleaning Despendent (Shared)	0.0058	0.0090**
Cleaning Respondent (Shared)		
	(0.0367)	(0.0036)
Cleaning Respondent (Paid Only)	-0.0342	-0.0564
	(0.0586)	(0.0479)
coning Respondent (Base Outcome=mainly myself)		
Ironing Respondent (Mainly my partner)	0.0213**	0.0824*
	(0.0096)	(0.0426)
Ironing Respondent (Shared)	0.0339*	0.0195*
	(0.0191)	(0.0106)
Ironing Respondent (Paid Only)	-0.0574	0.0554
Toming respondent (I and only)	(0.0768)	(0.0649)
Childcare Respondent (Base Outcome=mainly	(0.0700)	(0.001)
myself)		
. ,	0.0521	0.0620
Childcare Respondent (Mainly my partner)	0.0521	-0.0629
	(0.0813)	(0.0542)
Childcare Respondent (Shared)	0.0118*	0.0222**
	(0.0061)	(0.0107)
Childcare Respondent (Someone Else)	0.0043	0.1028
	(0.0104)	(0.1110)
No. Observations	23,118	23,258
R Square	0.1117	0.1193
LR test (3 df)	3.88	3.28
Lix cost (5 ui)	[0.2743]	[0.3232]

Table 11. Probit-OLS Fixed Effects Happiness Function Estimates with Gender Roles

 [0.2743]
 [0.3232]

 Robust Standard Errors within brackets, p-values within square brackets, ***, ** and * indicate significance at 1%, 5% and 10% level

	Switcher			
	Panel A: Outcome:	Outcome:	Panel B: Wo Outcome:	men Outcome
	Mostly Self	Shared	Mostly Self	Shared
	widstry Sen		pping	Sharcu
Job Stayer * Telework for Man	-0.1096	-0.1312**	0.1372	-0.1748**
	(0.0904)	(0.0557)	(0.0975)	(0.0567)
Job Switch* Telework for Man	-0.1524	-0.0952	-0.0767	-0.1439*
Job Switch Telework for Man	(0.0998)	(0.1412)	(0.1096)	(0.0735)
Job Stayer * Telework for Woman	-0.1398	-0.1674**	-0.1847	-0.1732*
sob Stayer Telework for woman	(0.1141)	(0.0728)	(0.1376)	(0.0836)
Job Switch* Telework for Woman	0.0188	0.0484	0.3540	-0.0305
	(0.2901)	(0.0816)	(0.3171)	(0.2178)
No. Observations	20,209	(0.0010)	20,241	(0.2170)
LR chi square	3,577.45		3,758.73	
	[0.000]		[0.000]	
	<u> </u>	Coo	oking	
Job Stayer * Telework for Man	-0.0234	0.0188	-0.1292	0.1621*
-	(0.0824)	(0.0773)	(0.0893)	(0.0715)
Job Switch* Telework for Man	0.0867	0.0140	-0.3601*	0.0783*
	(0.1949)	(0.1503)	(0.1994)	(0.0356)
Job Stayer * Telework for Woman	0.0601	0.1787**	-0.0652	0.1645*
	(0.1072)	(0.0787)	(0.1325)	(0.0857
Job Switch* Telework for Woman	0.1484	0.1553	0.1776	0.5051*
	(0.2523)	(0.1904)	(0.3230)	(0.2175)
No. Observations	20,209		20,241	
LR chi square	3,831.00		4,000.11	
	[0.000]		[0.000]	
		Cle	aning	
Job Stayer * Telework for Man	0.1833	0.0231	-0.0110	0.0535*
	(0.1539)	(0.0581)	(0.1268)	(0.0256)
Job Switch* Telework for Man	-0.0796	-0.0291	0.1411	-0.1225
	(0.2772)	(0.1465)	(0.2901)	(0.1593)
Job Stayer * Telework for Woman	-0.2022	0.1330	0.3431*	0.0243
-	(0.1463)	(0.1088)	(0.1995)	(0.0596
Job Switch* Telework for Woman	-0.4001	0.0213	-0.8896	0.1175
	(0.3993)	(0.0535)	(0.7269)	(0.2292)
No. Observations	20,209		20,241	
LR chi square	4,043.80		4,475.95	
-	[0.000]		[0.000]	
			ning	
Job Stayer * Telework for Man	0.2875***	-0.0636	-0.0017	0.1597*
	(0.0977)	(0.0650)	(0.0142)	(0.0843
Job Switch* Telework for Man	-0.0357	-0.0938	-0.8236*	0.1624
	(0.2859)	(0.1612)	(0.4795)	(0.1660)
Job Stayer * Telework for Woman	0.1552	0.1174	-0.0109	0.1718*
	(0.1428)	(0.0817)	(0.2032)	(0.0931)
Job Switch* Telework for Woman	0.6594**	0.2991	-0.3835	0.1822
	(0.2974)	(0.1995)	(0.6087)	(0.2385)
No. Observations	20,209		20,241	
LR chi square	3,760.62		3,808.41	
	[0.000]	01.1	[0.000]	
	0.1504		ldcare	0 1005*
Job Stayer * Telework for Man	-0.1524	0.1385***	0.0912	0.1985*
Ich Switch* Tolomoul Con Mar	(0.0998)	(0.0234)	(0.0754)	(0.0836)
Job Switch* Telework for Man	-0.1524	0.0128***	-0.0543	0.1200*
Joh Stoven * Tolowerk for Wares	(0.0998)	(0.0013)	(0.1896)	(0.0680)
Job Stayer * Telework for Woman	-0.1524	0.0389***	-0.0073	-0.0323
	(0.0998)	(0.0144) 0.0252	(0.0127)	(0.0247)
Job Switch* Telework for Woman	-0.1524	0.0353	0.4420	0.4033
	(0.0998)	(0.0254)	(0.2796)	(0.5173)
No. Observations	20,209		20,241	
LR chi square	3,887.37		8,874.16	
	[0.000]		[0.000]	

Table 12. Teleworking and Gender Roles Multinomial Fixed Effects Estimates with Job Stayer-
Switcher Dummy

Robust standard Errors within brackets, p-values within square brackets, ***, ** and * indicate significance at 1%, 5% and 1% level

	Men	Women
Job Stayer * Telework for Man	0.0268	0.0365**
	(0.0181)	(0.0162)
Job Switch* Telework for Man	0.0182	-0.0807
	(0.0382)	(0.0751)
Job Stayer * Telework for Woman	0.0705**	0.0051**
	(0.0321)	(0.0022)
Job Switch* Telework for Woman	0.0174	0.0078
	(0.0450)	(0.0084)
No. observations	23,935	23,967
R Square	0.1533	0.1784

Table 13. Happiness adapted Probit Fixed Effects with Job Stayer-Switcher Dummy

Robust Standard Errors within brackets, ***, ** and * indicate significance at 1%, 5% and 10% level

1 able	14. 3SLS for Telework, (<u></u>	***
	Men	Women	Men	Women
	DV: Housework Hours		DV: Shopping-	
			shared	
Teleworker (Man)	1.1458**	-1.4852***	-0.0525***	-0.1320***
	(0.5022)	(0.1553)	(0.0167)	(0.0272)
Teleworker (Woman)	-0.0210	4.7778***	-0.0547***	-0.1842***
	(0.0147)	(0.3571)	(0.0114)	(0.0177)
R Square	0.1041	0.1152	0.1430	0.1482
	DV: Cooking-Shared		DV: Cleaning-	
			shared	
	Men	Women	Men	Women
Teleworker (Man)	0.0208*	0.0413***	0.0235**	0.0180*
	(0.0106)	(0.0152)	(0.0107)	(0.0103)
Teleworker (Woman)	0.0280**	0.1304***	-0.0135	0.2479
· · · · · ·	(0.0133)	(0.0205)	(0.0158)	(0.2428)
R Square	0.1255	0.1334	0.1685	0.1797
_	DV: Ironing-Shared		DV: Childcare-	
	<u> </u>		shared	
	Men	Women	Men	Women
Teleworker (Man)	-0.02189**	0.0845***	0.0306***	0.0359***
	(0.0095)	(0.0145)	(0.0102)	(0.0133)
Teleworker (Woman)	0.0209**	-0.8695	0.0038	0.0263*
	(0.0093)	(1.1785)	(0.0150)	(0.0143)
R Square	0.1516	0.1508	0.1449	0.1472
Roquire	DV: Teleworking	0.1200	DV: Happiness	0.11/2
Teleworker (Man)	DV. Teleworking		0.0179	0.0750***
Teleworker (Mail)			(0.0130)	(0.0173)
Teleworker (Woman)			0.0824***	0.5165***
Teleworker (wollian)			(0.0212)	(0.1910)
Housework Hours	0.0297***	0.0074**	-0.0031**	-0.0589***
Housework Hours	(0.0072)	(0.0038)	(0.0013)	(0.0018)
Shanning (mostly	0.0132	-0.0031***	0.0252*	-0.0089
Shopping (mostly				
partner)	(0.0032)	(0.0009)	(0.0142)	(0.0155)
Shopping (shared)	0.0041	-0.0016***	0.0429***	0.0402***
	(0.0078)	(0.0009)	(0.0131)	(0.0103)
Cooking (mostly partner)	-0.0077	-0.0235***	0.0865***	0.0958***
	(0.0296)	(0.0021)	(0.0308)	(0.0159)
Cooking (shared)	0.0366**	-0.0054***	-0.0054	0.1200***
	(0.0141)	(0.0015)	(0.0071)	(0.0122)
Cleaning (mostly partner)	-0.0028	-0.0062***	0.0125*	-0.0274
	(0.0143)	(0.0013)	(0.0065)	(0.0213)
Cleaning (shared)	0.0459***	-0.0004	0.0320*	0.0597***
	(0.0100)	(0.0008)	(0.0193)	(0.0105)
Ironing (mostly partner)	-0.0218**	-0.0121***	-0.0107	-0.0199
	(0.0107)	(0.0016)	(0.0178)	(0.0238)
Ironing (shared)	0.0111	-0.0081***	0.0226**	0.1313***
	(0.0132)	(0.0011)	(0.0108)	(0.0124)
Childcare (mostly	-0.0907***	-0.0064***	0.0466	-0.0512
partner)	(0.0212)	(0.0013)	(0.0340)	(0.0342)
Childcare (shared)	0.0429**	0.0042***	0.0525**	0.0484***
	(0.0196)	(0.0009)	(0.0256)	(0.0113)
R Square	0.1041	0.1114	0.1510	0.1536
No. observations	20,172	20,227		

Table 14. 3SLS for Telework, Gender Roles and Happiness

Robust Standard Errors within brackets, ***, ** and * indicate significance at 1%, 5% and 10% level