



THE GENDER GAP IN PART-TIME EMPLOYMENT

The relationship between working hours of
partners and family well-being

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Abstract

This paper examines the possible relation between the difference in working hours of partners and family well-being. In addition, the impact of gender role attitudes is investigated. In order to conduct this research, survey data of the LISS (Longitudinal Internet Studies for the Social sciences) panel from the period 2011 to 2017 is collected. Subsequently, the empirical analysis is based on a representative sample of married or cohabiting couples in the Netherlands. The main results indicate that family happiness decreases significantly if the female partner works full-time. Moreover, the gender role attitudes of the female partner are found to significantly influence the difference in working hours with the male partner.

Table of Contents

- 1. Introduction 4**
- 2. Theoretical Framework 6**
 - 2.1 Underlying Literature 6
 - 2.2 Hypotheses 10
- 3. Data 11**
 - 3.1 Hypothesis 1 12
 - 3.2 Hypothesis 2 14
- 4. Methodology 17**
 - 4.1 Hypothesis 1 17
 - 4.2 Hypothesis 2 18
- 5. Results 19**
 - 5.1 Hypothesis 1 19
 - 5.2 Hypothesis 2 21
 - 5.3 Robustness Exercise 24
- 6. Discussion 26**
- 7. Conclusion 27**
- References 29**
- Appendix 31**

1. Introduction

“Equal Play, Equal Pay” was stated on a banner during the 2019 world cup of female soccer. Even though the sport has become more popular than ever, women still have a long way to go in attaining equal salaries. Award winning female soccer player Lieke Martens earns €200.000 a year while football legend Cristiano Ronaldo acquires a staggering €99 million. This perfectly illustrates the problem of gender inequality which is one of the most prevalent issues of the 21st century. Despite anti-discrimination efforts of governments, women do not receive the same opportunities in the labor market as men. In 2014, female income in the European Union was on average 39.6 percent lower than the income of men. Although this is a slight improvement in comparison to the gender gap in earnings of 2010 (41.1 percent) and 2006 (44.3 percent), it still shows the female disadvantage when it comes to employment.¹

An explanation for the substantial difference in income between men and women is the fact that women tend to have part-time jobs more often. Especially in the Netherlands, part-time work is very popular among females. The Interdepartmental Policy Research (IBO) shows women usually work less hours and take care of the household, while men are employed full-time and aloof from many family responsibilities. Partners are struggling to make their own choices in shaping the family life as fathers feel obligated to work more hours and mothers are bound to care duties. In response, the Dutch government is looking for ways to balance the division of work and family responsibilities more equally between partners.²

In this paper, the difference in working hours between partners and the impact on the quality of family relations will be analyzed using the following research question:

What is the relation between the working hours of partners and family well-being?

Family well-being is defined as the average quality of family relations as reported by the male and female partner. An individual fixed effects model will be estimated with the working hours of partners as independent variable and family well-being as dependent variable. In addition, the effect of gender role attitudes on the difference in working hours between partners will be analyzed in a linear regression. The research is conducted in the Netherlands using survey data collected from a sample of Dutch households in the period from 2011 to 2017.

¹ <https://ec.europa.eu/eurostat/databrowser/view/teqges01/default/table?lang=en>

² <https://www.rijksoverheid.nl/actueel/nieuws/2020/04/29/ouderschapsverlof-wordt-deels-betaald>

Cousins and Tang (2004) examine the relation between working hours and the occurrence of work and family conflict. In the Netherlands fathers are found to experience more conflicting pressures between work and family life than mothers. However, the impact on family well-being is not mentioned. Booth and Van Ours (2008) analyze the effect of working part-time on job and life satisfaction of the worker self. In later work, the relation with family happiness is examined by allowing for interdependence within the family (Booth and Van Ours, 2009). Booth and Van Ours (2013) continue their research in the Netherlands, a country with a particularly high share of partnered women working part-time. The authors find part-time employment is quite permanent in the Netherlands as women with part-time jobs have high levels of job satisfaction and a low desire to change working hours. This paper extends the research of Booth et al. (2008, 2009, 2013) by analyzing the working hours of partners and the role of gender values. Moreover, family well-being is measured explicitly by evaluating the self-reported quality of family relations instead of looking at life satisfaction. The additional use of very recent panel data makes this study scientifically relevant.

Furthermore, this research could provide more insight in the implications of women working less hours in the Netherlands. In a positive view, the option of part-time employment increases female labor force participation. However, it also entails a non-optimal investment in human capital since many women with part-time jobs are expected to be highly educated (Booth and Van Ours, 2013). On the subject of family well-being, the Dutch government has expressed concerns about the lack of balance in the division of work and family responsibilities between partners. Although this study does not clarify the existence of traditional gender roles, it could explain the difference in working hours between men and women with respect to family characteristics. A better understanding of views on gender roles, distribution of work in the household and family happiness in general could therefore be socially desirable.

The structure of the paper is as follows. First of all, the relevant underlying literature is discussed in the theoretical framework after which two hypotheses are drawn. Secondly, the data is presented and a method for collecting and processing this data is given. In the next section, the research method is described for examining the relation between working hours of partners and family well-being. Subsequently, the results of the statistical analysis are given. The paper concludes with a summary of the most important findings along with a critical discussion of the methodology and recommendations for future research.

2. Theoretical Framework

2.1 Underlying Literature

2.1.1. Household Production and Family Decision Making

Mincer (1962) is one of the first economists to study working hours of women in a family context. In general, there are two effects in the choice between work and leisure. The substitution effect implies an increase in hours of work after a rise in wage rate since leisure time becomes relatively more expensive. The income effect, on the other hand, has a negative effect on hours of work as higher wages lead to more consumption of leisure. The “back-ward bending” supply curve of labor assumes the income effect is stronger than the substitution effect and thus that an increase in wages leads to a decrease in hours of work. In his paper, Mincer (1962) adds hours of work at home to the empirical analysis. The family is considered as one decision-making unit where a household production function determines the distribution of leisure, market work and home work. For instance, an increase in income of one family member may result in a decrease in working hours of another family member. Moreover, earnings and marginal productivities of individual members matter. A rise in wage rate of one individual increases the opportunity cost of leisure and home work for that individual. This should lead to an increase in the working hours for that particular earner.

Becker (1965) introduces a new approach to analyze the work-leisure choice. Changes in income along with changes in productivity of working and consumption activities determine the allocation of time. A decline in working hours is explained by a growth in worker productivity and a prevailing income effect. This theory also has implications for the division of labor within households as time should be allocated efficiently among family members. The most productive individual in the household should work more and spend less time at consumption activities. Becker (1973) expands his study of the family by presenting an analysis of the marriage market. Basic economic theory assumes individuals try to maximize utility and do as well as possible. Depending on income, human capital and the relative difference in wage rates between men and women, marriage can increase well-being in comparison to remaining single. The division of household output is not given in advance, but determined by the marginal productivities of the members. In this view, marriage is a cooperative institution where each member acts in accordance with a single household production function. Partners are assumed to behave in an altruistic way and satisfy family preferences (Becker, 1974).

In accordance with previous studies, Wales and Woodland (1976) define leisure as “the difference between the total time available and the individual’s hours of work at his job”. However, activities undertaken in the time not spent at work do not have the same utility. Wales and Woodland (1977) develop a model in which a distinction is made between working hours, leisure and time spent on housework for both spouses. The results indicate a relation between the income ratios of partners and the division of housework hours. In particular, a negative effect of wage rate on hours of housework is found for families without children.

So far, theory on household-decision making assumes that partners maximize a family utility function which is subject to total income and time constraints. Manswer and Brown (1980) take a different view as they take preferences of both individuals into account. A bargaining model is introduced in an effort to reconcile the differences. The gains to marriage should exceed the single state utility in order to justify the marriage decision, thus providing a threat point to both spouses. In accordance, McElroy and Horney (1981) apply a two-person cooperative game to analyze the outcomes of household decision-making. A bargaining rule is required to determine the optimal allocation and distribution of household goods.

Until now, a woman chooses her number of hours to work based on the hourly wage rate, total family income and family responsibilities. However, the wage rate offered may depend on the number of working hours as well. Moffitt (1984) shows that wage offers to women increase with hours worked, reaching the highest level at 34 hours per week. This suggests working hours affect income of women quadratically. Ermisch and Wright (1993) confirm the hypothesis that women receive lower wages in part-time jobs than in full-time jobs. The magnitude of this wage difference influences the number of hours a woman chooses to work while her husband’s income mainly determines the decision whether to work at all.

2.1.2. Part-time Employment in the Netherlands

Theory on household production and family decision making predicts women to work less hours than men. Figure 2.1 shows the gender gap in part-time employment, which is defined as “the difference between the share of part-time employment in total employment of women and men aged 20-64”, for several countries in the European Union. Especially in the Netherlands, women tend to have part-time jobs more often than men accounting for a difference of more than 50 percent (Table A1, Appendix). This is more than twice as high as the European average (22.7 percent) and relatively high in comparison to other countries.

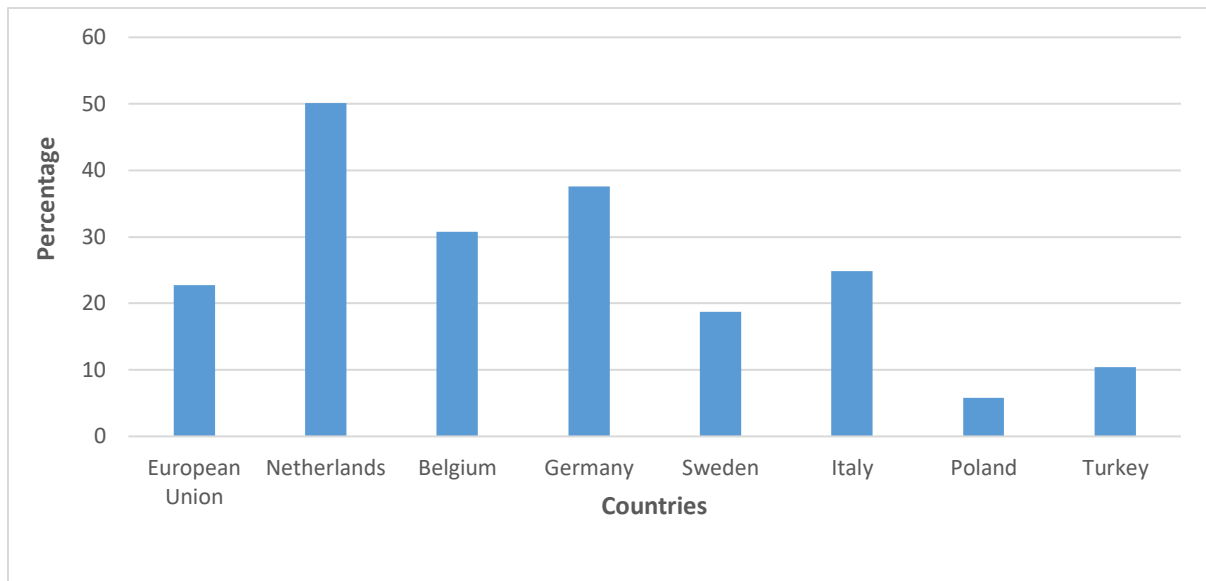


Figure 2.1 The Gender-Gap in Part-time Employment in the European Union in 2019
Adapted source: EuroStat³

The main reason why women predominate in part-time employment is that they have family responsibilities in addition to their employment activities. Part-time jobs offer a more flexible working week allowing women to combine their domestic and labor market work. In this view, marriage and parenthood increase the likelihood of women choosing for part-time employment (Rosenfeld and Birkelund, 1995). However, individual and family characteristics do not explain the varying levels of part-time work across countries. Rosenfeld and Birkelund (1995) identify three categories of country specific factors determining the level of part-time employment: (1) overall demand for labor and the structure of industries, (2) the costs and advantages associated with women's work and (3) the political and ideological context.

Regarding the high share of part-time employment among women in the Netherlands, Euwals and Hoogerbrugge (2006) find a strong relation with labor supply. Although factors of labor demand, like organizational flexibility, can explain the growth of part-time employment internationally, they do not clarify why this should be more prevalent in the Netherlands than in other countries. Bosch, Deelen and Euwals (2010) support this view as they state female labor force participation is relatively high in the Netherlands as a result of women working part-time. This is probably due to societal preferences since the authors found an increasing inclination to work part-time for women born after the early 1950s.

³ https://ec.europa.eu/eurostat/databrowser/view/tepsr_lm210/default/table?lang=en

In accordance with prior literature, Booth and Van Ours (2013) examine part-time jobs from a supply-side perspective. The authors identify two opposing views concerning the efficiency implications of women working part-time. On the one hand, the option of part-time employment increases female labor force participation as many women with part-time jobs would rather not work at all than work full-time. On the other hand, part-time employment involves a wastage of resources and a non-optimal investment in human capital since many women with part-time jobs are expected to be highly educated. Booth and Van Ours (2013) find part-time employment is quite permanent in the Netherlands and is not a transitional phase ending in many women working full-time. That is, women with part-time jobs have high levels of job satisfaction and a low desire to change working hours. Moreover, these women have a higher responsibility in household tasks compared to their male partner.

2.1.3. Working Hours and Family Relations

According to Cousins and Tang (2004), women in the Netherlands work less hours in order to balance work and family life more equally. Also in other countries, women face a trade-off between employment and family involvement forcing them to make severe compromises. In the United Kingdom, for example, women earn less and have lower financial independence as a result of working part-time. In Sweden, on the other hand, women do participate in paid work more equally to men but they experience more difficulty in reconciling their work with family responsibilities. In this context, Cousins and Tang (2004) examine the effect of working hours of men and women on the occurrence of work and family conflict. In the Netherlands, fathers are found to experience more conflicting pressures between work and family life than mothers. However, it is unclear what impact this has on family well-being in general.

Booth and Van Ours (2008) analyze the relation between working hours of British couples and three kinds of individual satisfaction, namely hours of work satisfaction, job satisfaction and life satisfaction. The results show men have higher levels of hour satisfaction if they work full-time, whereas job and life satisfaction are unaffected by working hours. For women, hours of work satisfaction and job satisfaction are higher in part-time jobs, while life satisfaction is independent of working hours. This presents kind of a puzzle as part-time work was expected to increase female life satisfaction granting that working less hours makes it easier to combine work and family responsibilities. Moreover, the authors found no significant effect of partner's health or employment status on own well-being for both men and women.

In later work, Booth and Van Ours (2009) examine the relation between working hours and family happiness in Australia by allowing for interdependence between partners. First of all, women are found to be more satisfied with their working hours if they hold part-time jobs, while men's hour satisfaction is greatest when they work full-time. Secondly, no relationship seems to exist between working hours and job satisfaction for both men and women. Thirdly, female life satisfaction decreases with their own working hours but increases with the working hours of their partner. Conversely, male life satisfaction increases significantly with their own working hours and is independent of their partner's labor market participation. On the whole, life happiness of both partners is greatest when women hold part-time jobs and men work full-time. This finding might be influenced by the fact that the division of domestic work in Australian households is highly gendered as women execute most of the household tasks.

2.2 Hypotheses

In summary, a large and growing economics literature on household production and the determinants of working hours of partners already exists (see for example: Becker, 1974; Manswer and Brown, 1980; Ermisch and Wright, 1993). More recently, the relationship between part-time work and self-reported measures of job and life satisfaction is examined. According to Booth and Van Ours (2008), partnered men have the highest hours-of-work satisfaction if they work full-time while partnered women prefer part-time jobs in terms of hour satisfaction. In regard to life satisfaction, both partners are happiest when the man works full-time and the woman holds a part-time job (Booth and Van Ours, 2009). Following the reasoning set forth by Booth and Van Ours (2008, 2009), this paper hypothesizes that:

Family well-being initially increases with the working hours of both men and women, but decreases with the working hours of women if they work full-time.

Contrary to prior literature, this study measures family well-being explicitly by evaluating the self-reported quality of family relations instead of only looking at job and life satisfaction of partners. The relation between family happiness and working hours of partners could partly explain the large proportion of females working part-time in the Netherlands. However, it might be interesting to examine the impact of personal values, such as views on working women and ideas about gender roles, as well. Therefore, the second hypothesis is as follows:

Conservative views on gender roles increase the difference in working hours between partners while progressive views on gender roles decrease the working hour gap.

Previous studies have already analyzed part-time employment from a supply-side perspective by looking at female labor force participation in the Netherlands (Euwals and Hoogerbrugge, 2006). In addition, Booth and Van Ours (2013) have discovered that part-time working women execute most of the domestic work. This paper examines the impact of the values underlying this gender role distribution on the working hours of partners.

3. Data

This study applies data of the LISS (Longitudinal Internet Studies for the Social sciences) panel administered by CentERdata (Tilburg University, The Netherlands).⁴ The LISS panel consists of a representative sample of Dutch households who periodically take part in internet surveys. The participating households are randomly drawn from the population and a computer and internet connection is provided to those that can otherwise not participate. The panel began in 2007 with 10.000 households and already counts twelve annual waves. Over time attrition of panel members took place as respondents moved away or refused to participate further. However, the representativeness of the sample is checked annually by the CentERdata organization in order to ensure reliability of the panel (Scherpenzeel and Das, 2010).

Before joining the panel, the household box needs to be filled in which includes questions about gender, age, marital status and children. Thenceforth, the contact person completes a survey every month to record any changes in the background variables. This general dataset will be used to support the empirical analysis. Besides, a longitudinal survey is fielded in the panel every year. Each individual in the household participates in this annual questionnaire which covers a large variety of topics such as work, education, health, family life, political views, values and personality. For this research, three domains of the LISS Core Study are of interest. First of all, the questionnaire about “Work and Schooling” which focuses on labor market participation, job characteristics and education. Secondly, the survey “Family and Household” concerning partnerships, parental relations and the division of domestic tasks. Finally, the study on “Politics and Values” is of interest (Scherpenzeel and Das, 2010).

⁴ <http://www.dataarchive.lissdata.nl/>

In order to test the previously stated hypotheses, two different datasets need to be obtained. The first hypothesis requires panel data while the second hypothesis suffices with information from just one year, as will be explained in the methodology section. However, in both analyses, the sample should be restricted to married or cohabiting couples in which both partners are of working age (20 to 67 years). This is done by merging the datasets on a unique household identifier and dropping the observations in which partners do not satisfy the age restriction. The resulting datasets consist of observations at household level with variables on individual characteristics of the partners and joint household characteristics. Table A2 (see Appendix) gives an overview of all the variables, survey questions and answer options.

3.1 Hypothesis 1

The first hypothesis addresses the relation between working hours of partners and family well-being. In order to analyze this, a panel dataset is created by combining data of the LISS “Work and Schooling” and “Family and Household” longitudinal studies. Background variables from the general dataset are added to support the empirical analysis. Data from wave four to ten (2011 to 2017) is used since this period contains surveys with identical questions and answer options. Table A3 (see Appendix) gives the descriptive statistics for the resulting dataset. As can be seen, the average age and education level of the surveyed couples is relatively high. Furthermore, men tend to have paid work more often and earn higher incomes than women.

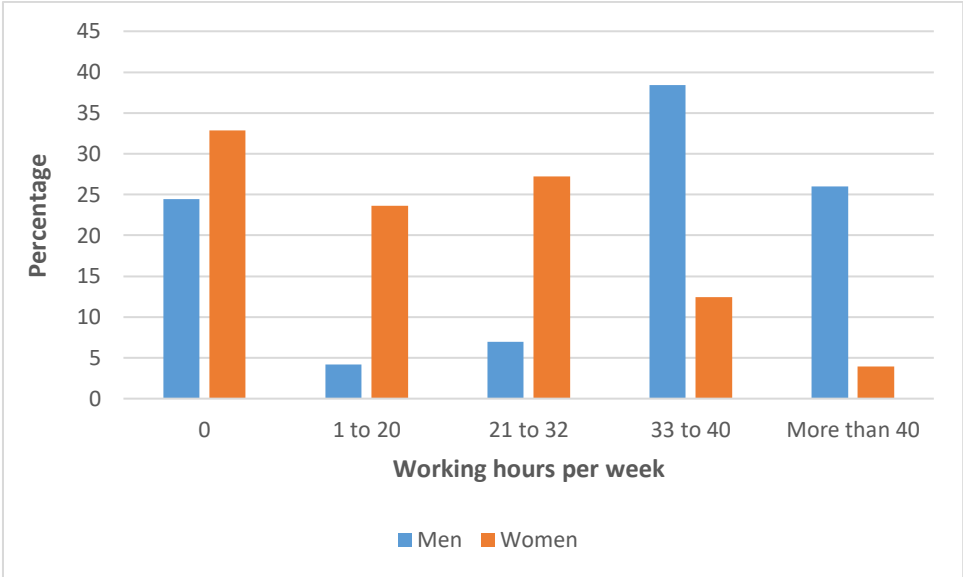


Figure 3.1 Distribution of weekly working hours by gender (in percentage)
Adapted source: CentER data (Tilburg University, The Netherlands)

In this panel dataset, there are two main variables: weekly working hours of partners and average family well-being. In the “Work and Schooling” survey, individuals are asked how many hours per week they actually work (see Table A2, Appendix). Subsequently, the working hour variable is divided into five categories: unemployed (0 hours), small part-time jobs (1 to 20 hours), large part-time jobs (21 to 32 hours), small full-time jobs (33 to 40 hours) and large full-time jobs (more than 40 hours) (Booth and Van Ours, 2013). Figure 3.1, which is based on Table A4 (see Appendix), shows that the distribution of working hours differs per gender. The majority of men are employed full-time with almost 40 percent working 33 to 40 hours per week. Women, on the other hand, dominate in part-time employment. More than 30 percent of the females are unemployed and less than 15 percent hold full-time jobs.

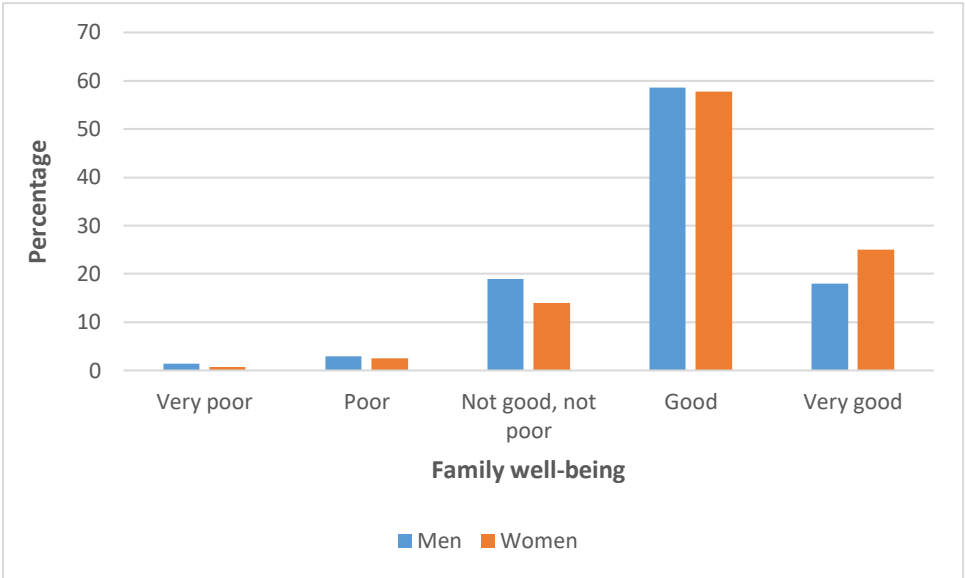


Figure 3.2 Distribution of self-reported family well-being by gender (in percentage)
Adapted source: CentER data (Tilburg University, The Netherlands)

The second variable of interest, family well-being, is measured by the quality of family relations (see Table A2, Appendix). In the “Family and Household” survey, individuals are given five options to indicate the relationship with their family: very poor (1), poor (2), not good not poor (3), good (4) and very good (5). Table A5 (see Appendix) gives a t-test on the difference between male and female reports. Since the p-value is lower than a significance level of five percent, the mean of family well-being is not the same for both genders. However, Figure 3.2 (and corresponding Table A6, Appendix) show that the difference in the distribution between genders is very small. More than 50 percent of men and women rate the relationship with their family as “good” and women only report slightly better family relations than men.

Hence, for the empirical analysis, average family well-being is calculated by taking the mean of male and female reports. To illustrate, if the woman considers her family relations very good (score 5) and her husband evaluates them good (score 4), average family well-being is 4.5. In Table A7 (see Appendix), the averages of family well-being are given by the working hours of men and women. Figure 3.3 graphically represents this relationship between family well-being and weekly working hours of partners. The self-reported quality of family relations seems to be higher when women hold part-time jobs as family well-being decreases in the “small full-time jobs” category of female working hours. The working hours of men, on the other hand, appear to increase the quality of family relations. However, the interval in which average family well-being differs per working hour category is very small. This suggests the correlation between family relations and working hours of partners is relatively weak.

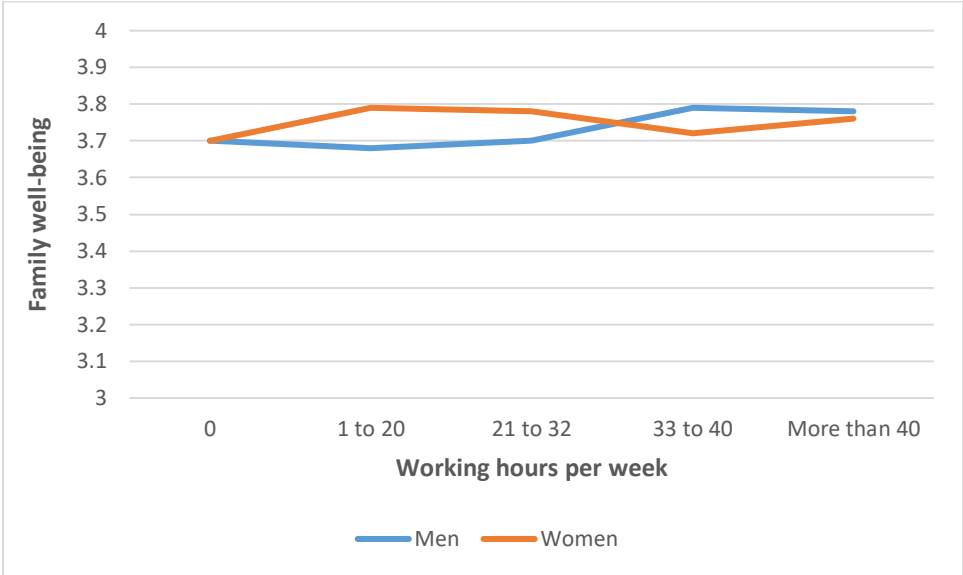


Figure 3.3 Average family well-being by working hours of men and women
Adapted source: CentER data (Tilburg University, The Netherlands)

3.2 Hypothesis 2

The second hypothesis analyses the impact of gender role attitudes on the working hours of partners. Data of the LISS “Work and Schooling” and “Politics and Values” longitudinal studies from wave 10 (in 2017) is used in combination with the general dataset. The observations are merged on individual respondent number and the partners are matched on a household identifier. Table A8 (see Appendix) gives the descriptive statistics for the final dataset.

There are two main variables: the difference in working hours between partners and their views on gender roles. As mentioned earlier, individuals in the “Work and Schooling” survey are asked how many hours per week they actually work (see Table A2, Appendix). Then, the difference in working hours between partners is computed by subtracting female working hours from male working hours. Figure 3.4 shows the distribution of the gap in working hours between partners, which looks relatively normal. Still, two remarkable outliers can be seen in the data. Firstly, the outlier at a difference of zero percent indicates that almost 20 percent of the partners work the same number of hours. Secondly, in more than 10 percent of the observations, the difference in working hours is 40 hours. This suggests a relatively high incidence of situations in which the man is employed full-time and the woman does not work.

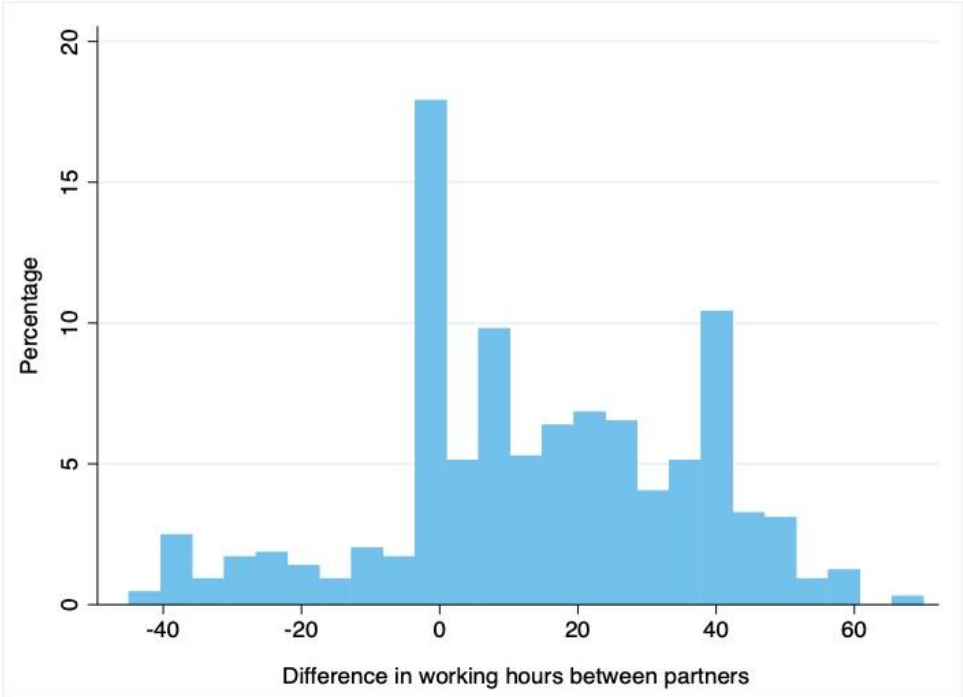


Figure 3.4 Distribution of the difference in working hours between partners (in percentage)
Adapted source: CentER data (Tilburg University, The Netherlands)

The second variable of interest is a collection of views on gender roles. In the “Politics and Values” survey, respondents are given statements on marriage and gender role attitudes (see Table A2, Appendix). The answer options to indicate their agreement with a statement are: fully disagree (1), disagree (2), neither agree nor disagree (3), agree (4) and fully agree (5). For this research, four attitudes on gender roles are examined. Value 1 and 2 represent conservative views, whereas value 3 and 4 indicate relatively progressive views.

Figure 3.5, based on Tables A9 to A12 (see Appendix), presents the male and female distribution of gender role attitudes. The answers to value 1 (overall, family life suffers the consequences if the mother has a full-time job) are distributed evenly across the categories, whereas the answers to value 2 (the father should earn money, while the mother takes care of the household and the family) are more left-skewed. Furthermore, the distribution of value 3 (a working mother’s relationship with her children can be just as close and warm as that of a non-working mother) is more skewed to the right, while the distribution of value 4 (both father and mother should contribute to the family income) has a relatively normal shape. As can be seen, there is not a clear gender difference in the distribution of answers to the statements. Both partners tend to report similar gender role attitudes.

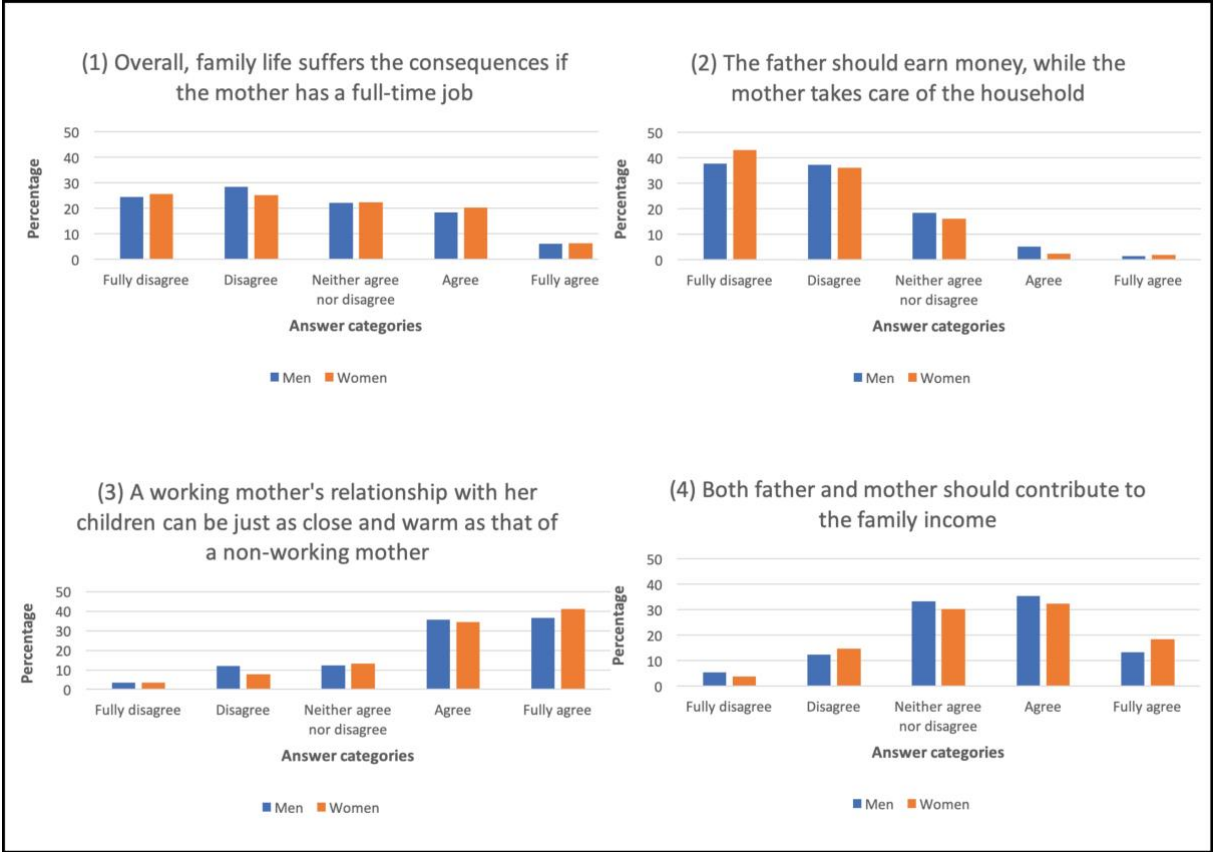


Figure 3.5 Distribution of gender role attitudes per gender (in percentage)
Adapted source: CentER data (Tilburg University, The Netherlands)

4. Methodology

4.1 Hypothesis 1

This research adopts a multivariate regression to determine the impact of working hours of partners on family well-being. In order to study this relationship, the effects of observed and unobserved household characteristics should be taken into account. Therefore, the use of panel data techniques is important. In addition to the variable of interest, household fixed effects, time dummies and a number of control variables are included in the empirical analysis:

$$Y_{ht} = \alpha_h + \beta_1 X_{ht} + \beta_2 Z_{ht} + \delta_t + \varepsilon_{ht}$$

In this model, Y_{ht} is the outcome variable that measures the reports of family well-being on a scale from 1 to 5 for a certain household h in year t . The household fixed effect is given by α_h which controls for all time-invariant variables causing differences between the households. The variables of interest are represented in the term X_{ht} which includes the weekly working hours of partners (four dummy variables for 1 to 20, 21 to 32, 33 to 40 and more than 40 hours worked by the man and woman per week). The time dummies δ_t capture the general factors that influence family well-being annually. Z_{ht} is a vector of control variables that vary over time and are specific to a certain household, in this case number of children and household net-income. The error term is given by the term ε_{ht} . The coefficient β_1 shows if there is a significant effect of the working hours of partners on self-reported family well-being.

This setup tries to control for the existence of variables affecting both family well-being and the working hours of partners. Unobserved personal characteristics, such as education and personality type, can be correlated with the reports of family relations and the choice of hours of work. The household fixed effects capture these time-invariant omitted variables and control for a possible reporting bias in average family well-being if this does not change over time. In addition, the time dummies capture all the factors that change in a specified time-period. However, the fixed effects estimation does not deal with omitted variables that vary over time and are specific to a certain household. Therefore, two control variables that proxy for time-varying shocks to the household and that might affect the working hours of partners and family well-being are added to the model. Still, there might be many other unobserved time-variant variables left which raises the endogeneity concerns for this model.

4.2 Hypothesis 2

In order to analyze the relation between views on gender roles and working hours of partners, a different linear regression model is estimated. Since attitudes on gender roles are assumed to remain constant in a limited amount of time, this variable cannot be captured in an individual fixed effects estimation. Instead, a cross-sectional analysis is more appropriate. Besides the variable of interest, other explanatory variables are added to the regression:

$$Y_h = \alpha + \beta_1 X_h + \beta_2 Z_h + \varepsilon_h$$

In this model, Y_h is the outcome variable that measures the difference in working hours between partners for a certain household h in 2017. The views partners have on gender roles are captured in the term X_h which gives four categorical variables regarding gender attitudes on a scale from 1 (fully disagree) to 5 (fully agree). The model controls for initial differences between the households by including various control variables (age, education, number of children, total household income) in the vector Z_h . Furthermore, the constant is represented by α and the error term is given by ε_h . The coefficient β_1 shows if there is a significant effect of the views partners hold on gender roles on their difference in working hours.

This multivariate regression model tries to account for possible differences between the households by controlling for observable characteristics. Variables that affect both the views partners hold on gender roles and their number of working hours are added to the model in an effort to reduce omitted variable bias. However, there might be unobserved differences between the households left such as family background. Moreover, the relation between gender role attitudes and the difference in working hours is probably subject to simultaneous causality. The number of hours that partners work is likely to affect the views they hold on gender roles as well. On the whole, the estimates of this linear regression model are probably biased as a result of omitted variable and reverse causality problems.

In an effort to reduce heteroscedasticity concerns, both regression models use robust standard errors. In addition, the fixed effects model applies clustered standard errors at household level to solve possible autocorrelation problems in the variables and in the error term. Moreover, this research consistently applies a significance level 0.05, which indicates a five percent risk of concluding that a causal effect exists when there actually is not. The interpretation of the results in the next section depends on this significance level.

5. Results

5.1 Hypothesis 1

The first hypothesis examines the relation between working hours of partners and family well-being. Table 5.1 presents the parameter estimates of the fixed effects model that studies this relationship. The dependent variable is family well-being which is a continuous variable that can take a value from one to five. Model 1 gives the effect of the independent variable of interest through the dummies of male and female working hours. The category 0 working hours is used as a reference category. In model 2, additional explanatory variables (number of children and household income) are included to partly address the endogeneity problems.

Table 5.1 shows a positive, yet not significant, effect of male working hours on family well-being. In model 1, almost every working hour category of men has a positive coefficient, except for the category of 21 to 33 working hours. The coefficient for large part-time jobs indicates a decline in family well-being of 0.005 on a scale from 1 to 5 when the man works 21 to 33 hours per week instead of 1 to 20. However, the effect becomes positive again for 33 to 40 and more than 40 hours of work. This suggests family well-being is rated highest when the man holds a full-time job. Yet, it must be noted that the coefficients of male working hours are not statistically significant and thus that the hypothesis for men cannot be fully accepted.

Secondly, Table 5.1 indicates that family well-being increases when the woman works part-time and decreases when she works full-time. In model 1, the coefficients for the part-time hour categories are positive, while the coefficients for the full-time hour categories are negative. To illustrate, family well-being increases with 0.009 on a scale from 1 to 5 when the female partner works 1 to 20 hours per week compared to when she does not work. However, when the woman holds a small full-time job (33 to 40 hours) family well-being decreases with 0.032 on a scale from 1 to 5 compared to when she holds a large part-time job (21 to 32 hours). Large full-time jobs, in particular, have a significant negative effect on family well-being. With the woman working more than 40 hours, family well-being decreases with 0.124 on a scale from 1 to 5 compared to working 33 to 40 hours. This being the only significant coefficient of female working hours, the hypothesis for women can partly be accepted. In other words, family well-being decreases when the female partner works more than 40 hours per week.

Table 5.1 The relationship between working hours of partners and family well-being; parameter estimates of a fixed effects model

Variable	Model 1	Model 2
Male working hours		
1 to 20	0.021 (0.049)	0.037 (0.051)
21 to 32	-0.005 (0.045)	0.002 (0.049)
33 to 40	0.032 (0.025)	0.040 (0.027)
More than 40	0.028 (0.028)	0.030 (0.31)
Female working hours		
1 to 20	0.009 (0.027)	0.016 (0.029)
21 to 32	0.005 (0.030)	0.011 (0.033)
33 to 40	-0.032 (0.034)	-0.036 (0.036)
More than 40	-0.124** (0.063)	-0.159** (0.064)
Number of children	-	0.004 (0.024)
Household income	-	0.000 (0.000)
Constant	3.700*** (0.030)	3.702*** (0.060)
Observations	6,036	5,452
Adjusted R ²	0.003	0.003

Note. Robust standard errors are in parentheses; year dummies are included; 0 working hours is used as a reference category; *p < 0.10, **p < 0.05, ***p < 0.01

Adapted source: CentER data (Tilburg University, The Netherlands)

As mentioned in the methodology, the fixed effects analysis allows for time-invariant differences between the households, but it does not control for omitted variables that vary over time. In order to examine the relevance of these effects, two control variables that might affect both the working hours of partners and family well-being are included in model 2 (Table 5.1). As can be seen, both number of children and household income have no significant effect on family well-being. Besides, the introduction of these additional explanatory variables only affects the other coefficients a little. In this view, the observed time-varying shocks to the households are not likely to bias the main parameter estimates. Still, endogeneity problems may arise due to the existence of unobserved time-varying omitted variables. Moreover, the R-squared is very low (0.003) as only a small fraction of family well-being is explained.

5.2 Hypothesis 2

The second hypothesis studies the relation between gender role attitudes and the working hour gap. As mentioned before, the difference in hours between partners is computed by subtracting female working hours from male working hours. Model 1 (Table 5.2) shows the linear regression results with male and female views on gender roles as independent variable and the difference in working hours between partners as dependent variable. Value 1 and 2 represent conservative views on gender roles, whereas value 3 and 4 indicate relatively progressive views. In model 2 (Table 5.2), individual characteristics of both partners, namely age and education, are added in an effort to reduce omitted variable bias. In addition, model 3 (Table 5.2) includes the number of children and total household net-income.

As can be seen, the introduction of control variables in model 2 (Table 5.2) affects the parameter estimates of the variables of interest. The inclusion of age and education of the partners reduces, for example, the statistical significance of value 4 of the male views on gender roles. Besides, the coefficients of the control variables in model 2 (Table 5.2) are highly significant. This indicates that some of the effect of gender role attitudes on the difference in working hours runs through the individual characteristics of the partners causing an omitted variable bias in model 1 (Table 5.2). The additional explanatory variables in model 3 (Table 5.2), on the other hand, have no significant effect on the difference in working hours between partners and do not further affect the other parameter estimates. Therefore, model 2 (Table 5.2) remains the preferred model for studying the effect of gender role attitudes.

Table 5.2 The relationship between views on gender roles and the difference in working hours between partners: parameter estimates of a linear regression model

Variable	Model 1	Model 2	Model 3
Male views on gender roles			
Value 1	1.068 (0.839)	1.185 (0.837)	1.446 (0.886)
Value 2	0.648 (1.139)	0.686 (1.140)	1.124 (1.195)
Value 3	1.473 (0.904)	1.577* (0.911)	1.651* (0.955)
Value 4	-1.507* (0.858)	-1.249 (0.856)	-1.062 (0.888)
Female views on gender roles			
Value 1	1.863** (0.833)	1.860** (0.846)	1.769** (0.901)
Value 2	0.516 (1.226)	0.334 (1.260)	-0.121 (1.371)
Value 3	-0.573 (0.981)	-0.391 (0.949)	-0.407 (1.013)
Value 4	-3.176*** (0.883)	-2.863*** (0.877)	-3.048*** (0.911)
Male age	-	-0.689*** (0.254)	-0.655** (0.264)
Male education	-	2.309*** (0.714)	2.538*** (0.767)
Female age	-	0.539** (0.247)	0.520** (0.257)
Female education	-	-2.911*** (0.761)	-2.837*** (0.825)
Number of children	-		0.625 (0.882)
Household income	-		-0.001 (0.001)
Constant	17.367** (7.716)	25.113*** (9.423)	23.242** (9.793)
Observations	641	640	576
Adjusted R ²	0.080	0.117	0.130

Note. Robust standard errors are in parentheses; *p < 0.10, **p < 0.05, ***p < 0.01

Adapted source: CentER data (Tilburg University, The Netherlands)

Table 5.2, first of all, shows the effect of conservative views on gender roles. Value 1 and 2 of the male gender role attitudes both have a positive coefficient which means the variables widen the working hour gap between partners. To illustrate, if a man agrees with value 2 (the father should earn money, while the mother takes care of the household) instead of being indifferent, the difference in working hours with the female partner increases with 0.686 hours. In accordance, conservative views on gender roles held by the female have a positive effect on the working hour gap. If the woman agrees with value 1 (overall, family life suffers the consequences if the mother has a full-time job) rather than being indifferent, the difference in working hours with the male partner increases with 1.860 hours. Since this is the only significant coefficient, the second hypothesis can partly be accepted for conservative views on gender roles. That is, if the woman believes that a full-time job held by the mother negatively impacts family life, the working hour gap between partners increases.

Table 5.2 also shows the effect of progressive gender role attitudes. The variables reflecting male views present kind of a puzzle as value 3 and 4 indicate opposite effects. On the one hand, the working hour gap between partners increases with 1.577 if the man has a higher agreement with value 3 (a working mother's relationship with her children can be just as close and warm as that of a non-working mother). On the other hand, the difference in working hours between partners decreases with 1.249 if the man has a higher agreement with value 4 (both father and mother should contribute to the family income). However, none of the coefficients is statistically significant at the five percent level. Therefore, the gender norms of the male are not found to be relevant in determining the working hours of partners.

Progressive gender role attitudes of females, on the contrary, have an unambiguous and significant effect on the difference in working hours between partners. The coefficients of value 3 and 4 regarding female views on gender roles both have a negative sign which suggests that the variables narrow the working hour gap between partners. In particular, if a woman has a higher agreement with value 4 (both father and mother should contribute to the family income), the difference in working hours with the male partner decreases with 2.863 hours. The second hypothesis can partly be accepted for progressive views on gender roles as only the coefficient of value 4 for females is statistically significant. Overall, the gender norms of the woman matter more in determining the hours gap between partners.

The control variables in model 2 (Table 5.2) also have a statistically significant effect on the difference in working hours between partners. Male age decreases the hours of work gap between partners as men probably work less hours when they get older. Similarly, female age increases the difference in working hours between partners as older women often work part-time. Moreover, the hours of work gap between partners increases with male education and decreases with female education. This finding suggests a positive effect of education on working hours as higher educated men and women tend to work more hours. Still, there might be other variables left that affect both the views partners hold on gender roles and their difference in working hours. Besides, the R-squared is relatively low (0.117) which indicates that only a small fraction of the variation in working hours is explained by the model.

5.3 Robustness Exercise

In this part, additional analyses are executed in order to investigate the robustness of the results. First of all, the independent variable of interest in the fixed effects model is changed. The analysis in the first hypothesis applied male and female working hour categories, whereas the second hypothesis analyzed the difference in working hours between partners. This section provides more insight into the discrepancy between the two models by estimating the effect of the hour gap within the household on family well-being. Table 5.3 shows the results of the fixed effects model, with and without control variables, that study this relationship.

Table 5.3 The difference in working hours between partners and family well-being; parameter estimates of a fixed effects model

Variable	Model 1	Model 2
Difference in working hours	0.001 (0.000)	0.001 (0.000)
Number of children	-	0.005 (0.024)
Household income	-	0.000 (0.000)
Constant	3.705*** (0.017)	3.718*** (0.055)
Observations	6,031	5,447
Adjusted R ²	0.003	0.002

Note. Robust standard errors are in parentheses; *p < 0.10, **p < 0.05, ***p < 0.01

Adapted source: CentER data (Tilburg University, The Netherlands)

As can be seen, the difference in working hours between partners has a very small and insignificant effect on family well-being in both models (Table 5.3). Hence, the hypothesized relation between the hours of work gap within the household and family well-being cannot be accepted. Instead, the fixed effects analysis in section 5.1 provides more insight into the relationship between the working hours of partners and family well-being. In addition, the hours of work categories make it possible to examine the effect of part-time work specifically.

Secondly, this robustness section changes the dependent variable in the fixed effects model in order to make a comparison with the results from previous studies. In accordance with Booth and Van Ours (2008, 2009, 2013), three kinds of individual satisfaction are analyzed, namely hours of work satisfaction, job satisfaction and life satisfaction. In Table A2 (see Appendix) the survey questions and answer options of these new variables can be found. Working hour satisfaction and life satisfaction are measured on a scale from one to ten, while the variable reflecting job satisfaction only consists of four answer options. Table A3 (see Appendix) gives the corresponding descriptive statistics of the individual satisfactions.

Subsequently, the impact of the working hours of partners on self-reported measures of individual satisfaction is examined in three fixed effects models. In line with Booth and Van Ours (2008, 2009), female hours-of-work satisfaction is found to increase significantly in small- and large part-time jobs, whereas male working hour satisfaction only increases significantly in small full-time jobs (see Table A13, Appendix). The results for job satisfaction, on the other hand, present kind of a puzzle. Contrary to Booth and Van Ours (2013), female job satisfaction is found to be highest in large full-time jobs whereas the effect of working hours on male job satisfaction appears to be very small and largely insignificant (see Table A14, Appendix).

With regard to life satisfaction, only two statistically significant effects are found. That is, female life satisfaction increases if their partner works 21 to 32 hours and decreases if their partner works more than 40 hours. No relationship seems to exist between life satisfaction and own working hours for both men and women (see Table A15, Appendix). Given the high share of part-time employment among women in the Netherlands, part-time jobs were expected to increase female life satisfaction. Yet, the findings do not confirm this hypothesis, nor do they solve the discrepancy in the results of Booth and Van Ours (2008, 2009, 2013).

6. Discussion

Three potential concerns may be raised regarding the internal validity of the findings. First of all, the parameter estimates in both regressions might be influenced by an omitted variable bias. The fixed effects analysis in hypothesis one controls for all time-invariant characteristics that affect both the working hours of partners and family well-being. However, it does not account for time-varying shocks influencing hours of work and family happiness, such as a promotion. Although the control variables in the model do not have a significant effect, endogeneity problems may still arise due to the existence of time-varying unobserved factors.

Since attitudes on gender roles remain constant over time and cannot be captured in a fixed effects estimation, the second hypothesis is studied in a cross-sectional analysis. In an effort to reduce omitted variable bias, observable personal characteristics that affect both the views partners hold on gender roles and their number of working hours are added to the regression. However, the Conditional Independence Assumption (CIA) is unlikely to hold due to unobserved individual heterogeneity. Since the parameter estimates are probably biased, the results should be interpreted as a correlation rather than a causation.

The second threat to the internal validity of the research concerns measurement errors in the variables. The use of longitudinal panel surveys has a number of weaknesses influencing the reliability of the research. First of all, the questionnaire might be answered dishonestly as people can be reluctant to reveal certain information, such as income. Secondly, experienced respondents tend to speed through the survey and study the questions less carefully. Finally, the answers to the questionnaire depend on a person's own perspective. In order to measure family well-being, respondents are asked to evaluate their family relations on a scale from one to five. In this setup, people generally tend to avoid the negative answer options and indicate their family relations as "good". Hence, a non-random measurement error is likely to exist in the dependent variable causing a positive or negative selection bias in the results.

Third, both regression models might be subject to a simultaneous causality problem. In hypothesis one, household characteristics, like family happiness, are likely to affect the number of hours that partners choose to work as well. Similarly, the number of hours that partners work is likely to affect the views they hold on gender roles in hypothesis two. As a result, the parameter estimates in both models may be biased. The use of fixed effects and control variables does not solve this endogeneity problem as this only addresses the omitted

variable problem. Instead, natural experiments are more convincing in terms of establishing causality. An instrumental variable or regression discontinuity design might be more appropriate to examine the causal relation between working hours and family well-being.

Given the threats to the internal validity of the research, the external validity of the relation between working hours of partners and family well-being is substantially higher. This study applies data of the LISS (Longitudinal Internet Studies for the Social sciences) panel administered by CentERdata (Tilburg University, the Netherlands). The sample of households participating in the internet surveys is considered representative for the Dutch population for three reasons. First, the sample is randomly drawn from the population register and contains a sufficient number of Dutch households. Second, a computer and internet connection is provided to those that could otherwise not participate. Third, the representativeness of the sample is checked annually in order to account for attrition of panel members over time.

However, internal validity is a necessary condition for external validity. As has been mentioned, the inference about whether the relation between working hours of partners and family well-being reflects a causal relationship is not valid. The cause-effect relationship of this study can, therefore, not be generalized to other populations and settings.

7. Conclusion

In the Netherlands, part-time work is very popular among females. In many households, the woman works less hours and bounds herself to care duties while the man is employed full-time and refrains from certain family responsibilities. This study examined the following research question: What is the relation between working hours of partners and family well-being? In order to answer this question, survey data from the LISS panel was applied. The analysis focused on married or cohabiting couples and the relationship between hours of work and family happiness. Moreover, the impact of gender role attitudes was investigated.

First of all, a fixed effects model was estimated with the working hours of partners as independent variable and self-reported family well-being as dependent variable. Although family happiness was hypothesized to be highest when the man works full-time, no significant effect of male working hours on family well-being was found. Female working hours, on the other hand, did have a statistically significant effect. Family happiness was proven to be lower when the female partner works more than 40 hours per week. Hence, the first hypothesis can partly be accepted for women as family well-being decreases if the female works full-time.

Second of all, the relation between the gender norms of partners and their difference in working hours was studied in a multivariate regression model. As before, no statistically significant effect was found for men. Gender role attitudes of the female partner, however, were proven to determine the working hour gap. That is, if the female partner believes that a full-time job held by the mother negatively impacts family life, the difference in working hours with the male partner increases. Conversely, the hours of work gap between partners decreases if the woman agrees that both father and mother should contribute to the family income. Thus, the second hypothesis can partly be accepted for women as conservative views increase and progressive views decrease the difference in working hours between partners.

The findings of this research are in line with previous literature on the relation between part-time work and self-reported measures of life satisfaction. In accordance with Booth and Van Ours (2008, 2009, 2013), family well-being declines if the female partner works full-time. However, the validity of this causal-inference relationship is threatened by omitted variable bias, measurement error and reverse causality. Future research could, therefore, examine the possibilities to study the relation between working hours of partners and family happiness with the use of natural experiments and improve the internal validity in this scope of research.

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Appendix

Table A1 Gender Gap in Part-time Employment in 2019 (in percentages)

Countries	Gender Gap in Part-time Employment
European Union	22.7
Netherlands	50.1
Belgium	30.8
Germany	37.6
Sweden	18.7
Italy	24.8
Poland	5.8
Turkey	10.4

Adapted source: EuroStat

Table A2 Overview of all the variables, survey questions and answer options

Variable	Survey question	Answer options
<i>1. Background variables</i>		
Age	Age of the household member	Integer
Children	Number of living-at-home children in the household	0. None 1. One child 2. Two children 3. Three children 4. Four children 5. Five children 6. Six children 7. Seven children 8. Eight children 9. Nine children or more
Education	Level of education in CBS	1. Primary school 2. vmbo (intermediate secondary education)

		3. havo/vwo (higher secondary education)
		4. mbo (intermediate vocational education)
		5. hbo (higher vocational education)
		6. wo (university)
Gender	Gender of the household member	1. Male
		2. Female
Household net-income	Net household income	Integer
Net-income	Personal net monthly income	Integer
Paid work	Primary occupation	1. Paid employment
		2. Works in family business
		3. Autonomous professional, freelancer or self-employed
		4. Job seeking after job loss
		5. First-time job seeker
		6. Exempted from job seeking following job loss
		7. Attends school
		8. Takes care of the housekeeping
		9. Is pensioner
		10. Has work disability
		11. Performs unpaid work
		12. Performs voluntary work
		13. Does something else
		14. Is too young to have an occupation

2. Family and household

Family well-being	How would you generally describe the relationship with your family?	1. Very poor 2. Poor 3. Not good, not poor 4. Good 5. Very good
Life satisfaction	On the whole, how happy would you say you are?	0 totally unhappy 1 2 3 4 5 6 7 8 9 10 totally happy

3. Work and schooling

Working hours	How many hours per week do you work on average in your job?	Integer
Hours satisfaction	How satisfied are you with your working hours?	0 not at all satisfied 1 2 3 4 5 6 7 8 9 10 fully satisfied

Job satisfaction	Everything considered, I am satisfied with my job	1 disagree entirely 2 disagree 3 agree 4 agree entirely
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4. Politics and values

Value 1	Overall, family life suffers the consequences if the mother has a full-time job	1. Fully disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Fully agree
Value 2	The father should earn money, while the mother takes care of the household and the family	1. Fully disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Fully agree
Value 3	A working mother's relationship with her children can be just as close and warm as that of a non-working mother	1. Fully disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Fully agree
Value 4	Both father and mother should contribute to the family income	1. Fully disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Fully agree

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A3 Descriptive statistics for panel data (2011 to 2017)

Variable	Men	Women
<i>Personal Characteristics</i>		
Age	50.55 (11.24)	48.28 (11.34)
Education	3.87 (1.40)	3.62 (1.41)
Paid work	0.76 (0.43)	0.61 (0.49)
Net-income	2092.43 (886.81)	1010.77 (784.57)
Hours satisfaction	7.49 (1.59)	7.57 (1.61)
Job satisfaction	3.14 (0.65)	3.14 (0.64)
Life satisfaction	7.73 (1.04)	7.77 (0.99)
Family well-being	3.89 (0.01)	4.04 (0.01)
Working hours per week		
0	0.24 (0.43)	0.33 (0.47)
1 – 20	0.04 (0.20)	0.24 (0.42)
21 – 32	0.07 (0.25)	0.27 (0.44)
33 – 40	0.38 (0.49)	0.12 (0.33)
40+	0.26 (0.44)	0.04 (0.19)

Household characteristics

Difference in working hours	12.96 (22.04)	12.96 (22.04)
Average family well-being	3.75 (0.66)	3.75 (0.66)
Number of children	1.03 (1.15)	1.03 (1.15)
Household net-income	3309.82 (1350.19)	3309.82 (1350.19)
Observations	6,036	6,036

Note. Standard deviation in parentheses.

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A4 Distribution of weekly working hours per gender (in percentage)

	Working hours in categories					Total	Mean	N
	0	1 to 20	21 to 32	33 to 40	More than 40			
Men	24.41	4.21	6.93	38.45	26.00	100.00	29.12	6,036
Women	32.82	23.61	27.23	12.43	3.91	100.00	18.25	6,036

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A5 T-test on the difference between male and female reports of family well-being

Family well-being	Mean	Standard Error	95% CI	Observations
Men	3.89	0.01	3.87 – 3.91	6,036
Women	4.04	0.01	4.02 – 4.06	6,036
Difference	0.15	0.00	0.13 – 0.17	6,036
P (mean female – mean male) = 0.00			P(difference < 0) = 1.00	

Note. Standard deviation in parentheses.

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A6 Distribution of self-reported family well-being per gender (in percentage)

	Family well-being in categories					Total	Mean	N
	Very poor	Poor	Not good, not poor	Good	Very good			
Men	1.47	2.95	18.89	58.65	18.04	100.00	3.89	6,036
Women	0.73	2.49	14.05	57.75	24.98	100.00	4.04	6,036

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A7 Average family well-being by working hours of men and women

Family well-being	Working hours in categories				
	0	1 to 20	21 to 32	33 to 40	More than 40
Men	3.70	3.68	3.7	3.79	3.78
Women	3.70	3.79	3.78	3.72	3.76

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A8 Descriptive statistics for cross-sectional data (in 2017)

Variable	Men	Women
<i>Personal characteristics</i>		
Age	51.67 (10.76)	49.50 (10.89)
Education	4.00 (1.36)	3.82 (1.38)
Paid work	0.78 (0.41)	0.61 (0.49)
Net-income	2214.11 (915.99)	1133.52 (902.60)
Working hours	30.91 (18.75)	16.57 (15.34)

Views on gender roles

Value 1	2.53 (1.22)	2.56 (1.25)
Value 2	1.95 (0.95)	1.84 (0.91)
Value 3	3.90 (0.1.13)	4.02 (1.08)
Value 4	3.39 (1.04)	3.47 (1.07)
<i>Household characteristics</i>		
Difference in working hours	14.34 (22.27)	14.34 (22.27)
Number of children	1.04 (1.17)	1.04 (1.17)
Household net-income	3674.96 (1556.59)	3674.96 (1556.59)
Observations	642	642

Note. Standard deviation in parentheses.

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A9 Distribution of answers to value 1 per gender (in percentage)

	Answer categories					Total	Mean	N
	Fully disagree	Disagree	Neither agree, nor disagree	Agree	Fully agree			
Men	24.61	28.50	22.27	18.54	6.07	100.00	2.53	642
Women	25.74	25.12	22.46	20.28	6.4	100.00	2.56	642

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A10 Distribution of answers to value 2 per gender (in percentage)

	Answer categories					Total	Mean	N
	Fully disagree	Disagree	Neither agree, nor disagree	Agree	Fully agree			
Men	37.69	37.23	18.38	5.30	1.40	100.00	1.95	642
Women	43.21	36.19	16.22	2.50	1.87	100.00	1.84	642

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A11 Distribution of answers to value 3 per gender (in percentage)

	Answer categories					Total	Mean	N
	Fully disagree	Disagree	Neither agree, nor disagree	Agree	Fully agree			
Men	3.43	11.99	12.31	35.67	36.60	100.00	3.90	642
Women	3.59	7.64	13.10	34.48	41.19	100.00	4.02	642

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A12 Distribution of answers to value 4 per gender (in percentage)

	Answer categories					Total	Mean	N
	Fully disagree	Disagree	Neither agree, nor disagree	Agree	Fully agree			
Men	5.45	12.31	33.33	35.51	13.40	100.00	3.39	642
Women	3.90	14.82	30.42	32.45	18.41	100.00	4.47	642

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A13 Working hour satisfaction: parameter estimates of a fixed effects model

Variable	Female	Male
Working hours		
1 to 20	0.308** (0.138)	0.362 (0.224)
21 to 32	0.300*** (0.106)	0.249* (0.145)

33 to 40	0.131 (0.136)	0.268*** (0.083)
More than 40	0.026 (0.209)	0.019 (0.104)
Constant	7.373*** (0.106)	7.386*** (0.085)
Observations	3,448	4,052
Adjusted R ²	0.011	0.028

Note. Robust standard errors are in parentheses; year dummies are included; 0 working hours is used as a reference category; *p < 0.10, **p < 0.05, ***p < 0.01

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A14 Job satisfaction: parameter estimates of a fixed effects model

Variable	Female	Male
Working hours		
1 to 20	0.030 (0.050)	0.025 (0.081)
21 to 32	0.085* (0.044)	0.099* (0.056)
33 to 40	0.100* (0.054)	0.061* (0.033)
More than 40	0.248*** (0.078)	0.059 (0.043)
Constant	3.055*** (0.043)	3.092*** (0.035)
Observations	3,722	4,323
Adjusted R ²	0.006	0.002

Note. Robust standard errors are in parentheses; year dummies are included; 0 working hours is used as a reference category; *p < 0.10, **p < 0.05, ***p < 0.01

Adapted source: CentER data (Tilburg University, The Netherlands)

Table A15 The relationship between working hours of partners and male and female life satisfaction: parameter estimates of a fixed effects model

Variable	Female		Male	
	Model 1	Model 2	Model 1	Model 2
Own working hours				
1 to 20	0.036 (0.046)	0.019 (0.050)	-0.104 (0.098)	-0.138 (0.106)
21 to 32	-0.017 (0.046)	-0.065 (0.050)	0.101 (0.068)	0.108 (0.073)
33 to 40	-0.060 (0.059)	-0.100 (0.062)	-0.088 (0.055)	-0.086 (0.061)
More than 40	-0.179 (0.160)	-0.202 (0.171)	-0.072 (0.051)	-0.081 (0.054)
Partner's working hours				
1 to 20	-0.082 (0.081)	-0.072 (0.082)	-0.011 (0.043)	0.017 (0.045)
21 to 32	0.189** (0.074)	0.114 (0.076)	0.004 (0.048)	0.011 (0.052)
33 to 40	-0.002 (0.048)	-0.003 (0.051)	0.014 (0.062)	0.021 (0.066)
More than 40	-0.126** (0.056)	-0.100* (0.056)	0.058 (0.125)	0.019 (0.127)
Number of children	-	-0.010 (0.050)	-	-0.018 (0.059)
Household income	-	0.000* (0.000)	-	-0.000 (0.000)
Constant	7.775*** (0.054)	7.666*** (0.100)	7.717*** (0.052)	7.777*** (0.092)
Observations	5,240	4723	5,264	4,753
Adjusted R ²	0.002	0.008	0.000	0.000

Note. Robust standard errors are in parentheses; year dummies are included; 0 working hours is used as a reference category; *p < 0.10, **p < 0.05, ***p < 0.01

Adapted source: CentER data (Tilburg University, The Netherlands)