

The Perception of Fairness in the Division of Labor across the Transition to Parenthood

Maria Hornung

Department of Sociology, Demography Unit (SUDA)

Master's Thesis 30 HE credits

Subject: Demography

Multidisciplinary Master's Programme in Demography (120 credits)

Autumn term 2018

Supervisor: Chiara L. Comolli



Stockholms
universitet

The Perception of Fairness in the Division of Labor across the Transition to Parenthood

Maria Hornung

Abstract

Labor division is highly gendered in Germany, especially after the transition to parenthood. When having a child, more women than men are taking parental leave, and mainly women do the additional household chores. While many studies have looked at the distribution of labor across the transition to parenthood, few studies have investigated how this distribution is perceived. This study explores the perceived fairness of the division of labor in a partnership before and after the transition to parenthood using ordinary least squares (OLS) and fixed-effects regressions. As the focus is set on Germany, the data for the analysis derive from pairfam, a German panel study launched in 2008. The results show that men's perceived fairness of the division of labor is hardly affected by the transition to fatherhood. For women, in contrast, motherhood leads to a higher perception of fairness. Employment thereby mediates this relationship by decreasing the effect the transition to motherhood has on the fairness. The findings hint to a dissatisfaction of employed women with the distribution of paid and unpaid work after transitioning to parenthood.

Keywords

perceived fairness, transition to parenthood, division of household labor, gender, employment, longitudinal study, Germany, Pairfam

Contents

- Introduction 1**
- Theoretical Framework 3**
 - Approaches to the Division of Housework 3
 - The Concept of Fairness 4
- Previous Research 6**
 - Family Policy and the Division of Labor in Germany..... 6
 - Life Course Events 7
 - Perceived Fairness of the Division of Labor 9
- Hypotheses 12**
- Methodology..... 14**
 - Data 14
 - Analytic Sample 14
 - Dependent Variable 16
 - Independent Variables 17
 - Method..... 20
- Results 22**
 - The Notion of Fairness: a Descriptive Analysis..... 22
 - A Cross-Sectional Analysis of the Perceived Fairness 23
 - The Perception of Fairness across the Transition to Parenthood 27
- Concluding Discussion..... 31**
- Acknowledgements 34**
- References 35**
- Appendix i**

Figures

FIGURE 1. CONCEPTUAL MODEL ON THE RELATION BETWEEN THE TRANSITION TO PARENTHOOD AND THE PERCEIVED FAIRNESS	13
---	----

Tables

TABLE 1. SUMMARY STATISTICS	19
TABLE 2. DEPENDENT VARIABLE ACROSS GENDER.....	22
TABLE 3. BETWEEN AND WITHIN COMPONENTS OF THE DEPENDENT VARIABLE (N=3431).....	22
TABLE 4. OLS MODEL FOR MEN'S PERCEIVED FAIRNESS.....	24
TABLE 5. OLS MODEL FOR WOMEN'S PERCEIVED FAIRNESS.....	25
TABLE 6. FIXED EFFECTS MODEL FOR MEN'S PERCEIVED FAIRNESS.....	28
TABLE 7. FIXED EFFECTS MODEL FOR WOMEN'S PERCEIVED FAIRNESS.....	29
TABLE A1. STRUCTURE OF THE PAIRFAM DATASET	I
TABLE A2. COMPARISON OF PARENTS AND NON-PARENTS	I
TABLE A3. CHARACTERISTICS OF THE VARIABLE <i>EAST</i>	II
TABLE A4. THE DISTRIBUTION OF THE ORIGINAL DEPENDENT VARIABLE	II
TABLE A5. OVERVIEW OF THE DATASET AND THE ANALYTIC SAMPLE.....	III
TABLE A6. OLS MODEL FOR MEN'S PERCEIVED FAIRNESS WITH VARIABLE <i>EAST</i>	IV
TABLE A7. OLS MODEL FOR WOMEN'S PERCEIVED FAIRNESS WITH VARIABLE <i>EAST</i>	V
TABLE A8. LOGISTIC MODEL FOR MEN'S PERCEIVED FAIRNESS.....	VI
TABLE A9. LOGISTIC MODEL FOR WOMEN'S PERCEIVED FAIRNESS.....	VII

Introduction

Men's involvement in the household is increasing and the division of labor within a partnership is becoming more egalitarian but women are still "bearing the lion's share of housework and childcare" (Fahlén, 2016, p. 1412). The division of labor in a partnership is gendered, and housework is seen as a female domain (Braun, Lewin-Epstein, Stier, & Baumgärtner, 2008; Öun, 2013). Empirical evidence shows that an unequal division of labor in a partnership has a noticeable impact on the partnership stability and may cause depression or divorce (Ruppanner, Brandén, & Turunen, 2016). On the contrary, an equal division of labor can increase union stability and has been associated with higher fertility (Goldscheider, Bernhardt, & Lappegård, 2014). Apart from examining the actual division of labor throughout the life course, studying the perceived fairness of the division of labor can provide a more comprehensive approach. Compared to the actual division of labor, the perceived fairness is not directly linked to an equal or unequal share and is shaped by justifications, the country context and normative gender expectations, which is why it offers a profound perspective to study gender and relationship dynamics (Öun, 2013).

Even though multiple studies deal with the division of labor in a partnership, most studies focus on the actual division of labor and less attention has been directed towards the perceived fairness (Braun et al., 2008). Studies dealing with the perception of fairness detected that the majority of individuals perceive the division of labor in a partnership as fair (Mikula, 1998; Ruppanner, 2008). Thereby, a gender divide is observable with women being more likely to perceive the division as unfair compared to men (Mikula, 1998; Nordenmark & Nyman, 2003; Öun, 2013). If a child is present, studies on the perceived fairness show contradicting results. Some research saw a positive effect of the child on the perception of fairness (Kluwer, Heesink, & van de Vliert, 2002; Ruppanner, Bernhardt, & Brandén, 2017), while others stated that the perception is less fair with a child in the household (Jansen, Weber, Kraaykamp, & Verbakel, 2016). Most of these studies, however, concentrate on cross-sectional data and there is a lack of knowledge how the perceived fairness is affected by the life course and specifically by the birth of a child (Gordon & Mickelson, 2018).

Throughout the life course, the share of labor responsibilities is changing. One important event is the transition of parenthood, which increases the traditional division of labor in a

partnership (Dribe & Stanfors, 2009). After having a child, women tend to stop working, do more housework and provide care, while most men do not change their employment status and their involvement in housework (Schulz, 2010). In addition to changes in the division of labor, a child affects gender norms and expectations (Carlson & Lynch, 2013; Davis, 2007; Dechant, Rost, & Schulz, 2014).

As paid and unpaid work constellations and gender expectations change after becoming a parent, the perception of fairness might change as well. Previous studies found that men and women have divergent perceptions of fairness and the transition to parenthood affects men and women differently, which is why this analysis will distinguish between men's and women's perceptions of fairness during the transition to parenthood. It is important to take men's perspectives into account since the involvement of men in the private sphere of home and family is becoming more and more important (Goldscheider & Bernhardt, 2015). The questions guiding this paper are *How does the transition to a first child affect the perceived fairness for men and for women?* and *What mechanisms explain the perceived fairness across the transition to a first child?*

As mentioned earlier, the country context influences perceptions of fairness. If a country has high gender equality and high female labor force participation, individuals are more sensitive about fairness considerations (Jansen et al., 2016; Öun, 2013). This paper will focus on Germany, a country in which conservative family ideals prevail and women take over the main responsibility for housework (Gangl & Ziefle, 2015; Grunow, Schulz, & Blossfeld, 2012). Nevertheless, ideologies on gender equity and new policies supporting female labor force participation are emerging (Nitsche & Grunow, 2016). A German dataset which serves as a great source to analyze the transition to parenthood is pairfam (Huinink, Brüderl, Nauck, & Walper, 2010). Pairfam is a longitudinal study on partnership and family dynamics in Germany. It was launched in 2008 and surveys have been conducted annually ever since. I use fixed effects models to examine the perceived fairness before and after the transition to parenthood net of individual time-invariant characteristics. To investigate the process of selection I compare the fixed effect results with cross-sectional ordinary least squares (OLS) estimates.

Theoretical Framework

Approaches to the Division of Housework

The division of housework in a partnership has been studied extensively and the theoretical approaches to the topic are diverse. Within the literature on housework division, there are three main theoretical approaches that explain existing gender differences (Öun, 2013; Schulz & Rost, 2012). Those approaches are the resource dependency, the time availability and the gender ideology perspective (Braun et al., 2008; Evertsson & Nermo, 2004; Goldscheider et al., 2014). The resource dependency perspective divides housework depending on the relative resources of partners. Resources hereby include income, wage, education, and occupation. The assumption is that the more resources a person obtains, the more power he/she has to negotiate the housework away (Evertsson & Nermo, 2004). Therefore, women who are economically dependent on their husband will take over household chores (Bianchi, Milkie, Sayer, & Robinson, 2000). One finding supporting the resource dependency perspective is that if both partners have a similar amount of resources at their disposal, the gender gap between the time spent for housework decreases (Evertsson & Nermo, 2004; Ruppner, 2008).

The second theoretical approach is the time availability perspective, which is partly related to the resource dependency perspective as it is also based on a rational cost-benefit calculation. Compared to the resource dependency perspective, however, the focus does not lie on resources such as income but focuses on time (Bianchi et al., 2000; Goldscheider et al., 2014). As a consequence, the person who spends more hours doing paid work spends less time on housework (Aassve, Fuochi, & Mencarini, 2014). This approach has been confirmed by the fact that women who work full-time spend less time on housework compared to women who spend less time doing paid work (Fahlén, 2016).

The two approaches mentioned above have been criticized for presuming that housework is gender-neutral (Bianchi et al., 2000; Fahlén, 2016). Another critique is that the approaches do not clarify cause and effect. It could be that women do more housework because they are less involved in the labor market or that women are less involved in the labor market which is why they do most of the housework (Fahlén, 2016). Obtaining a gender-neutral perspective, the previous approaches additionally fail to explain a very common saying, namely “a Euro earned by a female partner is worth less in negotiations over housework than a Euro earned by a male partner” (Nitsche & Grunow, 2016, p. 83).

The gender ideology theory takes a gendered reasoning into account (Bianchi et al., 2000; Grunow & Valtkamp, 2016). As housework has the connotation of women's work, doing housework is considered to be a gendered activity (Evertsson & Neramo, 2004). The more egalitarian gender ideologies are, the more equally the division of household labor is shared (Bianchi et al., 2000; Gordon & Mickelson, 2018; Nitsche & Grunow, 2016). Contrary to what the resource dependency theories would predict, a gendered perspective on the division of labor has been confirmed by the finding that even among couples in which women have more resources, men are not doing more housework (Dechant et al., 2014; Fahlén, 2016). Furthermore, if a man does less paid work than his partner does, he does not automatically take over more housework. Consequently, rational cost-benefit calculations sometimes do not serve to explain the labor division in a partnership entirely. One could say that in those cases "gender trumps money" (Bittman, England, Sayer, Folbre, & Matheson, 2003, p. 209).

The Concept of Fairness

The approaches to the division of housework presented above accomplish explaining the division of housework but they disregard how men and women perceive this division. One way to approach this limitation is to look at the perception of fairness. A paper by Johnson, Galambos and Anderson (2016) trying to explain housework and the frequency of sexual encounters, explicitly focuses on the perceived fairness instead of the housework division. To them, the perception of fairness serves as a better explanation than the housework division because it focuses on an active cognitive process in which individuals have to evaluate the perception of fairness dependent on other factors such as societal norms and personal preferences.

The concept of fairness contrasts gender equality with gender equity. Unlike the gender equality perspective which evaluates how equally housework is shared between partners, the gender equity perspective measures how fair the division is perceived (McDonald, 2000). In contrast to the gender egalitarian perspective, which expects every labor task to be shared equally, the equity perspective takes other inputs and outputs for the relationship in general into account (Gordon & Mickelson 2018). This means that one can perceive an unequal share of housework between men and women as either fair or unfair. It is important to note that the distribution can be perceived as unfair both if the respondent is advantaged (he or she does less than the equal share) or disadvantaged (he or she does more than the equal share) (Chong & Mickelson, 2016; Sprecher, 2001; Yogevev & Brett, 1985). In both ways, an inequitable share of

labor may cause guilt and frustration (Chong & Mickelson, 2016; Sprecher, 2001; Yogev & Brett, 1985). Nevertheless, some equity theorists are of the opinion that there is a difference between being under or over-benefited, assuming that being under-benefited causes more distress (Sprecher, 2001).

Furthermore, two main theoretical frameworks address the perception of fairness: the relative resources perspective and the distributive justice paradigms (Ruppanner, 2008; Thompson, 1991). The former, echoing the resource perspective in the housework division literature, stresses the importance of an individual's objective resources in shaping the perception of fairness. Women who have fewer resources than their partners are expected to perceive an unequal division of household labor as more fair (Ruppanner, 2008). Thus, the resources someone has not only affect the division of labor between a couple but also how the distribution is perceived.

The distributive justice paradigm highlights the importance of both objective and subjective components of the division of housework within the households. Perceptions of fairness are seen as a result of three factors: outcomes, comparisons, and justifications (Davis, Bianchi, Milkie, Sayer, & Robinson, 2003; Öun, 2013; Ruppanner, 2008; Thompson, 1991). The outcome reflects the objective division of labor and "the individual's aspirations, expectations and desires about the division of labor" (Kluwer et al., 2002, p. 930). Generally, an equal division of labor is evaluated as fairer than an unequal division (Ruppanner et al., 2017). In addition, the more the actual division matches with the expectations, the higher the perception of fairness. The comparison aspect indicates that fairness is perceived differently depending on the person individuals compare themselves to (Ruppanner, 2008). Women tend to compare themselves to other women and men to other men. If the referent is of the same gender, women and men perceive the distribution as fairer (Davis et al., 2003). Between-gender comparisons, however, lead to a less fair perception compared to within-gender comparisons (Ruppanner, 2008). Justifications can be described as "the perceived appropriateness of the current arrangement" (Davis et al., 2003, p. 20). Individuals justify the division of labor with internalized norms for gender roles and economic principles (Davis et al., 2003; Ruppanner, 2008). The fact that women, in general, do more housework than men is reflecting an unequal situation but does not mean that they have to consider this as unfair. One could argue that as housework is considered a female domain, women might not perceive the division of housework as unfair since they consider it part of their role to take over more household responsibilities. The aspect of justification is also referring to the procedural justice that aims to explain how involved the individual is in the decision-making process (Kluwer et al., 2002).

Previous Research

Family Policy and the Division of Labor in Germany

How individuals perceive their household arrangements is up to the institutional and normative context (Öun, 2013). Policies supporting a dual-earner model could for instance create beneficial conditions to support father's engagement in family work and lead to a more equal distribution of housework labor (Neyer, Lappegård, & Vignoli, 2013).

In Germany, traditional gender roles are prevailing and housework is on average traditionally distributed (Cooke et al., 2013; Nitsche & Grunow, 2016; Schulz, 2010). A study by Edlund and Öun (2016) investigated gender attitudes and showed that the most supported constellation of unpaid work in Germany was the one-and-a-half earner model, which was supported by more than two-thirds of the respondents. The second preference was the male breadwinner and female homemaker model (Edlund & Öun, 2016). It is important to note, that in East Germany, more egalitarian values with a higher support for the dual-earner model were observed (Edlund & Öun, 2016; Greenstein & Teachman, 2009).

Certain national policies in Germany are maintaining a traditional labor distribution (Johnson, Galambos, & Anderson, 2016). One policy codifying the traditional family model in Germany is the joint taxation system. This system does not focus on the individual income of a partner but measures both partners' incomes. Joint taxation hinders women to be involved in paid work as it does not have an advantage for the household's economy if women are employed¹ (Krapf, 2014; Neilson & Stanfors, 2014; Schulz, 2010). The labor force involvement of women has been shown to influence the distribution of housework tasks, especially in countries in which female labor force participation is low (Nordenmark & Nyman, 2003; Ruppanner, 2008). Even though Germany is among the 10 most gender equal countries worldwide, the unadjusted gender pay gap² is with 21,5% above the EU-28 average of 16,2% (EUROSTAT, 2018; Nitsche & Grunow, 2016; United Nations Development Programme, 2016). This to some extent originates from women interrupting their career and reducing their working time due to family reasons (BMFSFJ, 2009). Particularly the transition to parenthood

¹ This tax reform is called 'Ehegattensplitting' in German (tax break for married couples) (Andronescu & Carnes, 2015)

² The unadjusted gender pay gap is the difference between average gross hourly earnings of male and female employees as percentage of male gross earnings.

impairs female labor force participation since opinions that a good mother sets aside her career and takes over the role as a full-time housewife as long as the child is small are widespread (Dechant & Rinklake, 2016; Grunow & Valtkamp, 2016; Schulz, 2010). Consequently, women are mostly stopping their work to take over parental allowance which is paid for 12 months³ (14 months if shared by both partners) (BAMF, 2015; BMFSJF, 2018; Lutz, Boehnke, Huinink, & Tophoven, 2013). In addition to gender role expectations, a high part-time employment of mothers in Germany is motivated by an insufficient childcare infrastructure (European Commission, 2018; Evertsson, 2016; Grunow & Valtkamp, 2016; Neilson & Stanfors, 2014). Current EU statistics show, however, that in 2016 Germany reached the Barcelona target⁴ to provide formal childcare for children between 0 to 3 years (European Commission, 2018). Since the parental leave reform in 2007, the involvement of men with regard to parental leave has been increasing. This could, in the long run, contribute to a higher share of men who involve in housework and indicate some upcoming changes in the division of labor (Grunow & Valtkamp, 2016; Ruppner & Maume, 2016; Schulz & Rost, 2012). Nevertheless, the number of hours allocated to housework has for decades constantly been around 10 hours per week for men in Germany while the time women spent on housework varies between 10 and 60 hours per week depending on factors such as the presence of a child or the employment status (Johnson et al., 2016; Röhler, Huinink, & Steinbach, 2000).

Life Course Events

The perception of fairness in this study is examined using a life course perspective. From this viewpoint, the family can be perceived as an institution that crosses several stages, hence one speaks of the family cycle (Bühlmann, Elcheroth, & Tettamanti, 2010). Although this concept is losing its restrictive character as the timing and order of childbearing and marriage highly varies between couples, it emphasizes that different stages within the family cycle can be distinguished by “certain dominating functions, varying intensity and amount of (household) labor, and typical patterns of division of work within the couple” (Bühlmann et al., 2010, p. 52). Relative resources as well as normative expectations can be disrupted by certain life course events and require new constellations within the couple (Nitsche & Grunow, 2016).

³ The law on parental allowance came into force in 2007 (Dechant & Rinklake, 2016).

⁴ The Barcelona objectives were formulated in 2002 and targeted available and affordable childcare provision for pre-school children. The goals were to provide formal childcare to 90% of children between the age of 3 years until the mandatory school age and to 33% of children under the age of 3 (European Commission, 2018).

In Germany, the transition to marriage increases the time women allocate to housework and reduces their time in paid work (El Lahga & Moreau, 2007). In addition, a general tendency is that the longer the marriage duration, the less time men are involved in household work (Grunow et al., 2012; Schulz, 2010). In a study using German panel data of married couples, Schulz (2010) showed that 85% of the couples had a traditional housework distribution 14 years after the marriage. Moreover, the longer the marriage duration, the less likely couples were to change the constellation of the division (Schulz, 2010).

The transition to parenthood, being “one of the most challenging events in couples’ lives” (Kluwer et al., 2002, p. 930), is another event that changes the share of household labor fundamentally. Foremost, the amount of housework which has to be done in the household increases (Dribe & Stanfors, 2009). On average, having small children increases the amount of housework in Germany by 10 hours per week (Grunow et al., 2012). This increased amount links predominantly to a more gendered division of labor, which applies for both paid and unpaid work. Consequently, women engage less in paid work and more in housework (Dechant et al., 2014; Dribe & Stanfors, 2009; Kluwer et al., 2002; Kühhirt, 2012; Levy & Ernst, 2002; Nitsche & Grunow, 2016; Röhler et al., 2000). Two studies with the German pairfam dataset confirmed these tendencies (Dechant et al., 2014; Nitsche & Grunow, 2016). During a three year observation period across the transition to parenthood the woman was either exclusively or predominantly responsible for daily housework routines in 80% of the couples (washing, cooking, cleaning) (Dechant et al., 2014). Accordingly, the transition to parenthood had no striking effect on fathers when it came to their time spent on housework (Nitsche & Grunow, 2016; Schulz, 2010). Another study supported this finding and showed that in some cases, parenthood even decreased the involvement of men in housework (Schulz, 2010). There are some men, however, who might increase the amount of paid work when they become fathers (Dribe & Stanfors, 2009; Kühhirt, 2012; Nitsche & Grunow, 2016).

If a woman has been employed before the birth of the child, she takes up the vast majority of parental leave (Nitsche & Grunow, 2016). Having further children is, yet, not significantly changing the time women allocate to housework (Kühhirt, 2012; Schulz, 2010). Thus, the parenthood status rather than the number of children serves as a predictor of housework time allocation (Kühhirt, 2012). Compared to childless individuals, couples with a child younger than two years old, are less likely to share the housework equally (Schulz, 2010). If the child gets older, women might decrease the time they allocate to housework and the likelihood that the couple moves to a more egalitarian division increases again (Grunow et al., 2012; Kühhirt, 2012; Schulz, 2010). Yet, a gendered distribution is very persistent over the

course of the relationship at least until the child attends secondary school (Dechant et al., 2014; Kühhirt, 2012). Additionally, women with children never reach the pre-birth level of household involvement and do much more housework than women in childless relationships (Kühhirt, 2012).

With regard to education Dechant et al.'s study (2014) concluded that couples in which both partners have a high level of education, were less likely to convert to a traditional division of labor following parenthood. They assumed that the educational background was connected to better economic resources and more openness towards egalitarian attitudes (Dechant et al., 2014). If men were working more than their partners, women were more involved in housework and vice versa, which supports theories about relative resources (Dechant et al., 2014). The time point when women entered into employment seemed to make a change, too. If a woman started to work less than a year after the child was born, the couple was more likely to share housework duties equally compared to couples in which the mother had a longer occupational break (Dechant et al., 2014). A fast transition to employment after childbirth is more notable among women who earned more or the same as their partner before the birth of the child (Kühhirt, 2012).

A finding by Schulz (2010) was that the effect of parenthood on the division of labor decreased the effect of economic resources. In his opinion, this hinted to the fact that especially for mothers, norms had a major effect on the division of labor than economic resources (Schulz, 2010). This assumption was backed by Kühhirt (2012), who concluded that even though relative resources had a minor impact on the effect of parenthood, the effects of normative explanations were more pronounced. Thus, it seems likely that when women become mothers they fall back into more traditional gender roles due to gender norms and expectations (Dechant et al., 2014). Testing for the effect of resources and gender ideology on the division of housework in the first five waves of the pairfam dataset, Nitsche and Grunow (2016) concluded that neither absolute nor relative resources predict changes in the housework distribution. Gender egalitarian ideology, however, predicted the housework distribution (Nitsche & Grunow, 2016).

Perceived Fairness of the Division of Labor

As the distributive justice approach predicts, perceived fairness depends on different factors. First and foremost, the actual division of labor within a partnership determines how fair it is perceived to be. Research has shown that the more equal the division, the greater the perception of fairness (Gordon & Mickelson, 2018; Öun, 2013). Nevertheless, the majority of women

consider the division of housework as fair (Mikula, 1998). Although they do around two-thirds of the housework, only 20-30% of women regard this division as unfair. Thus, there is a paradox between the actual division of housework and the perception of fairness (Ruppanner et al., 2017). Reviewing different studies comparing men and women, a general tendency was that a larger proportion of men perceive the division of housework as fair compared to women (Mikula, 1998; Nordenmark & Nyman, 2003; Öun, 2013).

Many studies pointed out that the perception of fairness was dependent on the country context. Looking at Sweden, the Netherlands and Hungary, Ruppanner (2008) showed that women in countries with a high index in the UN Gender Empowerment measure perceived the housework division as less fair than women in countries with a lower index. This association was supported by Öun (2013) who concluded in her study on 21 European countries and the United States that in countries which advance gender equality by supporting dual-earner models, individuals were more sensitive to an unfair division of housework.

In a study analyzing the perceived fairness of the division of household labor in 29 countries worldwide, Jansen et al. (2016) found that more egalitarian gender norms in a country as well as a higher female labor force participation, increased the likelihood of perceiving doing a larger share as unfair. Fairness was thereby coded into three categories, the individual perceived the division of household work as “fair”, or he/she felt like doing “more than a fair share” or “less than a fair share” (Jansen et al., 2016, p. 58). Thus, Jansen et al. (2016) included the dimension of feeling under or over-benefited and considered both dimensions unfair. They ascertained that the perception of fairness was linked to the division of housework. Spending more time on housework compared to one’s partner increased the probability of perceiving that one does more than one’s share, which equates to feeling under-benefited (Jansen et al., 2016).

In their models, age did not have a significant effect, either for men or for women (Jansen et al., 2016). Women with secondary and tertiary education seemed to be more satisfied with the division of housework than women with a low level of education (Jansen et al., 2016). For men, education did not show a significant effect. Another finding from Jansen et al.’s (2016) country comparison was that the greater the number of hours spent on paid work for women, the more likely they were to perceive the housework as unfair. For men it was the opposite, the greater the number of hours spent on paid work, the more likely they were to perceive the housework as fair. The larger the share of paid work for men, the higher the chance that they perceived the division as unfair (Jansen et al., 2016).

An individual’s values and ideologies are helpful in understanding both the distribution of labor in a couple and the perception of fairness (Gordon & Mickelson, 2018; Jansen et al.,

2016; Nitsche & Grunow, 2016). First and foremost, more egalitarian values lead to a more egalitarian division of housework (Nitsche & Grunow, 2016). In Jansen et al.'s (2016) study, women with egalitarian values were less likely to report doing more than their fair share (Jansen et al., 2016). For men, egalitarian values led to a fairer conception of the division of housework (Jansen et al., 2016). The survey used in this study asked about the division between individuals and their partners. The researchers clearly make a within-gender comparison as explained in the distributive justice approach. Another study by Gordon and Mickelson (2018) on individual and spousal perceived fairness in the United States showed that in couples with traditional ideologies, men perceived the division to be less fair to their spouse, while women perceived it to be fairer to their partner. They concluded that men were more sensitive to whether the division was fair to their wives, while women were both focused on their own as well as their spouses' perceived fairness (Gordon & Mickelson, 2018).

Ruppanner et al. (2017) grouped Swedish couples with a latent class analysis into different types depending on the time spent on housework and the perceived fairness of the distribution. They coded fairness as a variable with a five-point scale reaching from "the woman does more than her fair share" to "the man does more than his fair share" (Ruppanner et al., 2017, p. 509). When the housework was traditionally distributed⁵, it was most likely that the woman perceived it as unfair to her and the man was either agreeing or more positive. If a couple had a semi-traditional housework distribution, it was most likely that the woman viewed this as fair whereas the man viewed this as unfair to her. This result for women is contrary to the findings of Jansen et al. (2016) that doing more housework led to a feeling that one was doing more than a fair share.

The semi-traditional couple type was also the one which was most likely to have a child in the home (Ruppanner et al., 2017). These couples could have judged the distribution knowing that it was only temporary and expecting it to become fairer if the child is older (Ruppanner et al., 2017). Jansen et al. (2016) detected in their study that one or more children in the household made both men and women feel that they are doing more than their fair share. A study by Kluwer et al. (2002) designed to test the distributive justice approach with 293 couples in the Netherlands, observed a decrease of perceived fairness across the transition to parenthood for both men and women.

⁵ *In couples with a traditional distribution, the man did less than 25%, while a semi-traditional distribution meant that the men did 25-40% of the housework (Ruppanner et al., 2017).*

Hypotheses

Existing evidence reports mixed results regarding the effect of having a child on the perception of fairness. On the one hand, a child in the household is associated with a fair perception of women and an unfair perception of men (Ruppanner et al., 2017). On the other hand, there are studies concluding that one or more children in the household make women and men feel that the labor is distributed in an unfair manner (Davis et al., 2003; Jansen et al., 2016; Kluwer et al., 2002). The male breadwinner ideology in Germany makes it more likely that individuals are not very sensitive to an unequal division of housework. Furthermore, labor distribution becomes more traditional after parenthood in Germany. Thus, individuals are not expected to perceive a gendered division as unfair. Therefore, the assumption is that individuals transitioning to parenthood are adjusting to the higher burden of parenthood and have a higher perception of fairness after having a child. As a more gendered division has a higher impact on the woman's situation, the effect of transition to parenthood is assumed to be different for men and women. After all, women are more likely to take over parental leave and involve more in housework so they obtain fewer resources after childbirth and thus perceive the overall increasing unequal division as more fair. In addition, when on parental leave individuals have more time at their disposal which might justify doing for instance more housework. Consequently, following resource dependency theory and time availability theory, I expect that after the transition to parenthood women perceive the division of labor as fairer (Hypothesis 1). For men, the transition to parenthood is not likely to change the perception of fairness.

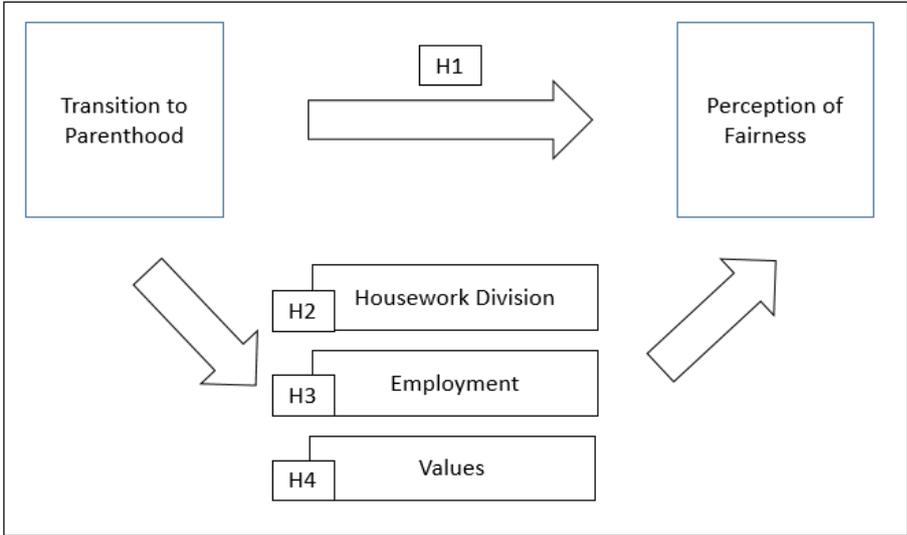
Apart from the direct relationship between having a child and the perception of fairness, there might be some mediating effects (Figure 1). Previous studies showed that the transition to parenthood led to an increase in housework mostly done by women. Following the assumption that an equal division is perceived as fair, I hypothesize that the change in housework distribution after having a child serves as a mechanism to explain the perception of fairness. For women, a less equal distribution of housework after having a child is hypothesized to decrease the perception of fairness (Hypothesis 2). For men, a less equal distribution of housework is expected to have a negative effect on the perception as well.

Additionally, more women than men take parental leave and stop their employment when having a child. Thus, it could be that women change their fairness perception after the transition to parenthood due to stepping out of the labor market. Looking at the resource dependency perspective, part of the effect of having a child on the perception of fairness might be explained

by the employment status. I expect that the child leads to more women being unemployed and consequently if women are employed again after childbirth I await the division to be perceived as more unfair (Hypothesis 3). For the majority of men, the child mostly does not affect the employment status. Hence, the fairness perception is not suspected to change.

Lastly, the effect of values on the division of labor might play a role in the perception of fairness after having a child. Many studies reported that having a child had a traditionalizing effect. Here I hypothesize that as values are becoming more traditional, the perception is becoming fairer for both men and women (Hypothesis 4).

Figure 1. Conceptual model on the relation between the transition to parenthood and the perceived fairness



Methodology

Data

This study will follow a quantitative research design. It uses longitudinal data to answer the research questions. An advantage of panel data is its chronological approach. By investigating longitudinal data, the development of individual processes can be unveiled (Brüderl, 2010). Therefore, many researchers ascribe panel data the power to reveal causal effects instead of limiting the analysis to finding associations (Brüderl, 2010).

The data for this analysis are based on the German Panel Analysis of Intimate Relationships and Family Dynamics (Pairfam, release 8.0) (Brüderl et al. 2017, Huinink et al. 2011). Pairfam was launched in 2008 and has been carried out annually since then (Huinink et al., 2010). The latest wave used for this analysis is the seventh wave, which was conducted in 2014/2015. Respondents are from a random nationwide German sample. The first wave consisted of respondents, who were born 1991-1993, 1981-1983 and 1971-1973 (Brüderl et al., 2015). Thus, the age range in the study reaches from 15-year-olds in 2008 to 42-year-olds in 2015, which corresponds to women's childbearing ages. The pairfam dataset has a non-monotonic design. If a respondent did not take part in one wave, he or she was invited to the study again in the following wave (Müller & Castiglioni, 2015b). This approach generates an unbalanced sample but counteracts problems of drop-outs, a common disadvantage of panel data. There are still some withdrawals in the pairfam sample: from the initial 13891 respondents in the first wave, 5919 respondents remain in the seventh wave (Table A1). This response rate is reasonable for a panel study (42.61%). Especially with regard to relationship dynamics, there is a risk of selection, for instance, if a separation occurred. Müller and Castiglioni (2015b), however, tested the pairfam dataset and concluded that attrition is mostly due to time restriction and not to relationship instability (Müller & Castiglioni, 2015a).

Analytic Sample

The first step was to reduce the sample to people in a co-residential relationship because only those respondents were asked to answer the question about the dependent variable used in this study. The dependent variable was only measured in wave 1, 3, 5 and 7 which is why only those waves were included (Wilhelm, Thönnissen, Alt, Friedrich, & Walper, 2013). Furthermore, if there were observations missing for any independent variables, they were dropped. Thereafter,

the dataset included 16652 observations. The number of observations missing the dependent variable was 295. Those missing observations had a tendency to have a lower education, were younger and less people were married.

Only anchors living in a heterosexual relationship were chosen for the analytic sample. For each anchor, only one relationship was taken into account (Nitsche & Grunow, 2016). For childless people, the partner with whom the anchor experienced the longest co-residency was chosen. If the dependent variable had not been measured in this relationship, the relationship with the highest number of observed waves in the panel was preferred. In cases in which a relationship break or a break of co-residency occurred, all waves with the same partner during a co-residency were included in the sample.

If the couple had a child or observed the birth of a child during the panel, the relationship in which a child was present was preferred over other relationships. Hereby, observations were only included if the child was below the age of 36 months. The reason for this period is that only the effect of the first child in the short run was supposed to be observed. If a second child was born before the 36 months after the first child, observations with more than one child were dropped. Furthermore, only children who lived together with the anchor were included. Those were to a major percentage the biological child from the current partner (97.5%). Some children were adopted, foster or step children (1%) and some children were biological children but not from the current partner (1%). If the type of the child was not indicated (0.5%), the requirement was that the child entered into a co-residential relationship, which meant that the couple had been living together before the child was born. If the dependent variable was not measured when the child was present, the anchor was treated as a childless person and selection measurements for a childless relationship were applied.

The final analytic sample used for the model estimations consists of 5911 observations from 3431 individuals out of which 2022 individuals remain childless and 1409 individuals live together with a child at some point during the observation period (Table A2). The number of individuals for which the dependent variable is available before and after the birth of the first child is 512. Due to the nature of the dataset, the time span between the measurement of fairness before and after the child is on average 24 months (Standard deviation: 5.52). For the other individuals who live together with a child at some point of the observation period, the fairness was only measured when the child had already been born.

A comparison between the dataset and the analytic sample shows that 35.50% of observations and 47.58% of individuals are part of the analytic sample (Table A5). The average age and the share of married individuals is lower in the analytic sample compared to the dataset.

In the analytic sample, there are more individuals with an equal share of housework and egalitarian values. The dataset further consists of a higher percentage of employed individuals. The remarkable differences in the cohabitation duration are due to the fact that only children below the age of 36 months are included in the analytic sample. This precondition might explain many differences. One could assume that parents with children above the age of 3 are older, more likely to be married and are more likely to be employed.

Compared to the dataset in which each person is on average observed for 2.31 waves, the average number of waves in the analytic sample is with 1.72 waves a bit smaller (Table A5). These differences are partly because some people had several co-residential relationships and only one of them is included in the analytic sample.

Dependent Variable

The dependent variable in this study is the perceived fairness of the division of labor. The question on the perceived fairness in the pairfam dataset is adapted from the project *Negotiating the Life Course* and has been used in several papers to address questions of fairness in the division of labor (Baxter & Hewitt, 2013; Evans & Baxter, 2013; Greenstein & Teachman, 2009; Öun, 2013; Ruppanner et al., 2017; Wilhelm et al., 2013). In pairfam, the question refers to both housework and paid work and asks “*How fair is the division of labor between you and your partner?*”⁶ (Wilhelm et al., 2013, p. 42). The answers to this question are organized in a 5-point scale from “1: I do much more than my fair share, 2: I do a bit more than my fair share; 3: I do about my fair share; 4: I do a bit less than my fair share; 5: I do much less than my fair share” (Wilhelm et al., 2013, p. 41).

Most studies on the perception of fairness focus on the division of household labor (Braun et al., 2008; Greenstein & Teachman, 2009; Jansen et al., 2016). Asking about both paid work and housework leads to a more difficult interpretation. Therefore, doing the majority of housework could be justified by doing less paid work. Taking both paid work and housework into account could make individuals with a gendered distribution of labor perceive the division as fairer than only considering housework. Nevertheless, even if the question is only referring to how fair the housework is perceived, individuals might still take the share of division of labor in total into account. This is motivated by the fact that the resource dependency and the time availability approach imply that justifications for doing more housework are linked to paid

⁶ German version: *Wenn Sie einmal alles zusammennemen, also Hausarbeit und Berufstätigkeit: Wie gerecht finden Sie die Arbeitsteilung zwischen Ihnen und Ihrem Partner/Ihrer Partnerin insgesamt?*

work, which is why when asked about only housework, individuals might take paid work into account as well. As only few respondents made use of the extreme response categories, the variable was collapsed into a dichotomous variable corresponding to 1: I do about my fair share and 0: I do not do my fair share (Johnson et al., 2016; Table A4). Thus, the category 0 can mean that the respondent feels both over as well as under-benefited with regard to the division of labor (Ruppanner et al., 2016). Consequently, the interpretation of the adjusted fairness variable is less specific than before (Mikula, 1998). Whether an individual is feeling over- or under-benefited is not measured in this analysis. From the descriptive table, however, there is a significant difference between men and women (Table A4). While around 30% of the women say they do more or much more than their fair share, 8% of men are of this opinion.

Independent Variables

The choice of the independent variables is based on the theoretical background presented above. To measure whether there has been a transition to parenthood, a dummy variable for the birth of a first child was created. This variable is time-varying and based on the century month of the birth of the first child.

The age of the child in months is included in the model as a time-varying variable. For respondents with children, the minimum age of the child in the sample is one month, while for all childless respondents the age of the child is coded as 0. Due to theoretical considerations and the nature of the data, only observations with children below 36 months are included in the sample. Consequently, individuals are observed after the time of their parental allowance as well.⁷ As mentioned in the theoretical section, the age of the child influences both the division of labor as well as the perception. Women with young children might be on parental leave, which could affect the perception. In addition, women with older children decrease their amount of housework. The mean age of the child in the sample is 17.17 months with a standard deviation of 10 months (Table 1). Whether the respondent or the partner is pregnant could have an effect on the perceived fairness. Men could be more attentive and more caring and therefore, pregnancy is included in the model as a control variable. The age of the respondent is added as

⁷ Around 9% of the children in the sample were born before the parental leave system was changed in 2007. For individuals with children before 2007, the parental leave legislation was different. Parents with children born before 2007 had the possibility to obtain a longer leave (up to 2 years) but less amount of payment. In 2013, some amendments were made to the parental leave system and a childcare subsidy (Betreuungsgeld) which could be obtained after parental benefits for a maximum of three years, was introduced (abolished again in 2015). Since only 7% of children were born after the introduction of the childcare subsidy in 2013, it is not expected to have an effect on the results.

a time-varying variable. To allow for non-linear effects, a squared term for the age of the respondent is inserted to the regression models.

Since East and West Germany differ with regard to norms for mothers, a time-varying control variable indicating whether the respondent is currently living in East Germany was added. This variable, however, showed no significant results, which is why it was excluded in the further presentation of the analysis. More information can, however, be found in the appendix (Table A6, Table A7, Table A3).

From the educational classification variable in pairfam, called Comparative Analysis of Social Mobility in Industrial Nations (CASMIN)), a variable indicating the level of education of the respondent at the time of the interview was created. This variable has three categories ranging from 1: No degree or a lower secondary to 3: Tertiary degree (Dechant et al., 2014). The education of the respondent is expected to have an effect on both the division of the housework as well as on the perceived fairness. Even though the resource dependency approach focuses on the relative share of education within a couple and might be more predictive of the division of labor, this analysis will focus on absolute resources as it mainly focuses on the perception of fairness of one individual. In addition, considering the partner's information would have reduced the sample further.

Being married is included in the model as a dichotomous time-varying variable. The assumption is that married individuals have a more traditional division. Consequently, marriage is an important event within a relationship to control for. The duration of the co-residential relationship is included as a time-varying variable in the model. As shown by Schulz (2010), the longer the couple is together, the less likely the distribution is expected to be egalitarian and to be changed which is important to consider when looking at the perceived fairness as well.

A very important variable to look at when examining the perceived fairness is the relative share of labor within a partnership. This is asked for at each wave in the pairfam study by using five categories. Among those five categories one category aims at the division of housework, more precisely it focuses on washing, cooking and cleaning (Wilhelm et al., 2013). The response format is similar to the dependent variable as it has a 5-point scale reaching from 1: (Almost) completely my partner to 5: (Almost) completely me (Wilhelm et al., 2013). To simplify the model and due to the limited distribution of this variable, it was, as the dependent variable, coded into two categories, namely 1: Housework is split about 50/50 and 0: Housework is shared unequally.

Table 1. Summary statistics

	Men (n= 2753)				Women (n=3158)			
	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Fairness	0.71	0.45	0	1	0.65	0.48	0	1
Child	0.28	0.45	0	1	0.29	0.46	0	1
Age of child	16.98	9.96	1	36	17.33	10.08	1	36
Pregnant or partner pregnant	0.10	0.30	0	1	0.08	0.27	0	1
Age	30.96	5.45	15	43	29.39	5.61	15	44
Education	2.04	0.71	1	3	2.09	0.68	1	3
Married	0.42	0.49	0	1	0.44	0.50	0	1
Duration of cohabitation	54.66	46.25	0	270	59.48	49.48	0	305
Housework 50/50	0.47	0.50	0	1	0.42	0.49	0	1
Egalitarian values	0.81	0.39	0	1	0.86	0.35	0	1
Employed	0.80	0.40	0	1	0.59	0.49	0	1
N individuals	1602				1829			

Note: SD: standard deviation; Source: Pairfam, release 8.0; own calculations

Another variable which is expected to have an effect on the perceived fairness is the attitude towards the division of housework. In pairfam, this is measured annually in the statement “*Men should participate in housework to the same extent as women*” (Wilhelm et al., 2013, p. 209). Originally, this variable had five values from 1: Disagree completely, to 5: Agree completely. For the analysis, this variable was again recoded into a dichotomous variable collapsing the former values 4 and 5 into 1: egalitarian values and 1-3 into 0: traditional values.

The employment status of the respondent is included in the model. The information on employment derive from the current activity status of the respondent, (primary) (CASPRIM) (Brüderl et al., 2017). This variable was coded into a dichotomous variable indicating whether one is employed or not. Apart from being unemployed an individual was coded as 0 if she/he was a housewife/househusband, on maternal or paternal leave, enrolled in education or unable to work.

Method

In order to get an overview of the data, a regression with OLS is used. OLS is a popular method to estimate a multiple linear regression model. In this method the OLS estimates are calculated by minimizing the sum of squared residuals. . Because the OLS is cross-sectional, all observations are pooled together disregarding the temporal structure of the data. Therefore, an analysis with fixed effects (FE) is conducted to take the panel structure of the data into account.

The most frequently used model with a binary dependent variable is a logit model. Nevertheless, it is also possible to use a Linear Probability Model (LPM) for dichotomous variables. The LPM estimates the probability of the dependent variable to take the value 1 (Long & Freese, 2006). Thus, the LPM examines the probability of the respondent to consider the division of labor as fair given for instance the presence of a child.

Although using a linear model for a dichotomous variable might seem a bit counterintuitive, the use of the LPM is, under certain circumstances, justified. In cases in which the baseline probability of the dependent variable is about 0.5, it is legitimate to use a LPM as the results of this model and the non-linear logit model are considered to be very similar (Hsiao, 2003; Klaassen & Magnus, 2001). In fact, the linear function and the logistic function differ by less than 1% if the relative deviation in the range is between 0.35 and 0.70 (Hsiao, 2003). In the OLS analysis, the baseline probability ranges from 0.425 to 0.704 (Table 4, Table 5). Thus, the linear probability model is preferred over the logit as it is easier to use and to interpret (Klaassen & Magnus, 2001). In addition, fixed effect estimates with a logit model are problematic to use because the logit model with fixed effects excludes individuals who do not change in the dependent variable over time (Allison, 2009).

A drawback of the LPM is that a probability cannot be below zero or above one and therefore it cannot be linearly related to all possible values of the independent variables. This problem is avoided if the independent variables are near the averages in the sample (Wooldridge, 2013). Most independent variables are discrete in this model, which supports choosing the LPM.

Another disadvantage of the LPM is that heteroscedasticity is present because the variance of the unobserved factors is not constant. The problem of heteroscedasticity can be solved with calculating robust standard errors instead of usual OLS standard errors in Stata. This basically means that the standard errors are adjusted for a presence of heteroscedasticity. Especially for large sample sizes, using the robust option is a valid measurement (Wooldridge, 2013).

As the regression with OLS is disregarding the nature of the panel dataset and consequently the omitted variable bias is high, a linear regression with fixed effects is used to

analyze the change of the perceived fairness during the transition to parenthood. Comparing the OLS model to a fixed effects model also allows for understanding a selection bias in the dataset. The FE regression is a very common method to analyze panel data because it allows to study changes within an individual over time as opposed to changes between individuals (Dechant et al., 2014). The coefficients generated indicate the change in the dependent variable if one unit is changed in the independent variable (Kühhirt, 2012). One model used for this analysis would be:

$$\begin{aligned} \text{Perceived Fairness}_{it} = & a + \text{child}_{it}b_1 + \text{childage}_{it}b_2 + \text{pregnant}_{it}b_3 + \text{age}_{it}b_4 + \\ & \text{age}^2_{it}b_5 + \text{educ}_{it}b_6 + \text{married}_{it}b_7 + \text{cohabdur}_{it}b_8 + \text{housework}_{it}b_9 \\ & + \text{values}_{it}b_{10} + \text{employed}_{it}b_{11} + \nu_i + e_{it} \end{aligned}$$

where the indicator of an individual is i and t is the time and a is the baseline⁸; ν is the time-constant person-specific error term and e is the error term which varies for every individual at each point in time; $b_1 \dots b_{11}$ are the effects of the indicated independent variables. The fixed effects transformation is a pooled OLS estimator based on time-demeaned variables (Wooldridge, 2013). As within estimates are measured, only individuals for which a change in an independent variable is observed contribute to the estimation of the coefficient of this independent variable. As a consequence, the coefficient for the child variable in the fixed effects model is based on individuals that are measured before and after transitioning to parenthood.

Since the error term ν is deleted from the equation as the equation is subtracted from the demeaned equation, ν is cancelled out. Therefore, there is less unobserved heterogeneity in the model as one individual only changes its observed characteristics, which means that each individual can be used as his or her own control (Brüderl, 2010; Dechant et al., 2014). Nevertheless, variables which change over time and are not included in the model could still have an influence on the dependent variable (Allison, 2009; Kühhirt, 2012). In the fixed effects regression the robust option can again be included in Stata to control for heteroscedasticity. One disadvantage of the fixed effects model is that if the changes within individuals for independent variables are less distinct than the differences between individuals over time, the estimates of the fixed effects model are very imprecise (Allison, 2009).

⁸ The baseline captures the mean outcome conditional on all independent variables and fixed-effects=0

Results

The Notion of Fairness: a Descriptive Analysis

The distribution of the dependent variable is an important first examination of the sample. As mentioned earlier the variance in the original variable is not high. Even in the dichotomized outcome, only 32% of the individuals state an unfair distribution (Table 2). Among men, 29% consider the division of labor as unfair while the number of observation from women with an unfair perception is 35%. Men considering the division of labor to be fairer is in line with the research reviewed earlier (Mikula, 1998; Nordenmark & Nyman, 2003; Öun, 2013).

Table 2. Dependent variable across gender

	Men (n=2753)	Women (n=3158)	Total (n=5911)
Unfair	790	1,098	1,888
	28.70%	34.77%	31.94%
Fair	1,963	2,060	4,023
	71.30%	65.23%	68.06%

Source: Pairfam, release 8.0; own calculations

In addition to the high tendency to state a fair division, many keep to this opinion. Table 3 shows the stability of the dependent variable. Out of the 3431 individuals, 1402 have at least once indicated that the division is unfair, while 2614 have at least once indicated that the division is fair. Conditional on an individual ever stating an unfair perception, 77.62% of the observations remain unfair. As individuals who ever stated that the division is fair have a higher percentage of observations remaining fair (89.6%), the fair outcome is more stable than an unfair outcome.

Table 3. Between and within components of the dependent variable (n=3431)

	Overall		Between		Within
Unfair	1888	31.94%	1402	40.86%	77.62%
Fair	4023	68.06%	2614	76.19%	89.63%
Total	5911	100.00%	4016	117.05%	85.43%

Note: Calculated using the xttab command in Stata; Source: Pairfam, release 8.0; own calculation

A Cross-Sectional Analysis of the Perceived Fairness

The LPM Model with OLS for men shows that men with a child have a 3.08% higher probability to regard the division as fair than men who do not have a child (Table 4). The probability, however, is not significant. For women, having a child in the household increases the probability to perceive the labor division as fair by 2.40% and this effect is, as for men, not significant (Table 5). The age of the child as well as a pregnant partner does not significantly affect the perception of fairness for men. For women, both the age of the child as well as a pregnancy have a significant effect. The older the child, the more likely women are to report unfairness. Model 2 in Table 5 shows that the probability to state the division as fair decreases by 0.46% for each month the child grows older. Compared to non-pregnant women, pregnant women are 8.82% more likely to report a fair division. In addition, controlling for the age of the child and a pregnancy increases the effect a child has on the perception of fairness. As shown in Model 2, women with a child are 10.38% more likely to perceive the division of labor as fair (Table 5).

In Model 3, the age of the respondent as well as the education is added in the analysis. For both men and women, neither the linear age variable nor the squared age variable have a significant effect on the perception of fairness. Compared to having a primary education, having a secondary education decreases the likelihood to state the division of labor as fair. This applies for both men and women. For women, however, this effect is not significant. For men, having a secondary education decreases the probability to state the division as fair by 3.96% (significant on 0.1 level). The influence of a tertiary education is more pronounced among women. Compared to women with a primary education, the ones with a tertiary education are 4.83% less likely to state the division as fair.

Although it is hard to compare this finding with other studies due to the operationalization of the educational and the dependent variable, this result is contradicting Jansen et al.'s (2016) conclusion that women with a higher education perceive the division as more fair.

Table 4. OLS model for men's perceived fairness

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Child	0.03075 (-0.006 - 0.068)	0.04021 (-0.025 - 0.106)	0.03858 (-0.027 - 0.104)	0.02523 (-0.042 - 0.092)	0.05844* (-0.007 - 0.124)	0.05935* (-0.006 - 0.125)	0.05707* (-0.008 - 0.122)
Age of child		-0.00055 (-0.004 - 0.003)	-0.00030 (-0.004 - 0.003)	-0.00010 (-0.003 - 0.003)	-0.00045 (-0.004 - 0.003)	-0.00048 (-0.004 - 0.003)	-0.00048 (-0.004 - 0.003)
Partner pregnant		0.01310 (-0.042 - 0.068)	0.00970 (-0.046 - 0.065)	-0.00000 (-0.056 - 0.056)	0.00417 (-0.052 - 0.060)	0.00458 (-0.052 - 0.061)	0.00309 (-0.053 - 0.059)
Age			0.01093 (-0.023 - 0.044)	0.00884 (-0.025 - 0.042)	0.00956 (-0.023 - 0.042)	0.00947 (-0.023 - 0.042)	0.00225 (-0.031 - 0.035)
Age-squared			-0.00021 (-0.001 - 0.000)	-0.00017 (-0.001 - 0.000)	-0.00017 (-0.001 - 0.000)	-0.00017 (-0.001 - 0.000)	-0.00008 (-0.001 - 0.000)
<i>Education</i>			Ref.	Ref.	Ref.	Ref.	Ref.
Primary							
Secondary			-0.03963* (-0.083 - 0.004)	-0.03886* (-0.082 - 0.005)	-0.04153* (-0.084 - 0.001)	-0.04117* (-0.084 - 0.002)	-0.05484** (-0.099 - -0.010)
Tertiary			-0.00042 (-0.050 - 0.049)	-0.00480 (-0.055 - 0.045)	-0.01643 (-0.065 - 0.033)	-0.01515 (-0.064 - 0.034)	-0.02767 (-0.078 - 0.023)
Married				0.04389** (0.004 - 0.084)	0.06932*** (0.030 - 0.109)	0.06924*** (0.030 - 0.109)	0.06769*** (0.028 - 0.107)
Duration of cohabitation				-0.00031 (-0.001 - 0.000)	-0.00020 (-0.001 - 0.000)	-0.00020 (-0.001 - 0.000)	-0.00019 (-0.001 - 0.000)
Housework 50/50					0.17256*** (0.138 - 0.207)	0.17672*** (0.141 - 0.212)	0.18073*** (0.145 - 0.216)
Egalitarian values						-0.02362 (-0.069 - 0.021)	-0.01984 (-0.065 - 0.025)
Employed							0.06379*** (0.016 - 0.111)
Baseline	0.70440*** (0.684 - 0.725)	0.70302*** (0.682 - 0.724)	0.58842** (0.070 - 1.106)	0.61986** (0.100 - 1.140)	0.49897* (-0.007 - 1.005)	0.51670** (0.011 - 1.022)	0.59937** (0.091 - 1.108)
Observations	2753	2753	2753	2753	2753	2753	2753
R-squared	0.001	0.001	0.002	0.004	0.006	0.040	0.043

Note: Statistical significance: *** p<0.01, ** p<0.05, * p<0.1, robust confidence intervals in parentheses; Source: Pairfam, release 8.0; own calculations

Table 5. OLS model for women's perceived fairness

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Child	0.02397 (-0.012 - 0.060)	0.10382*** (0.042 - 0.166)	0.10955*** (0.047 - 0.172)	0.09704*** (0.034 - 0.161)	0.13205*** (0.069 - 0.195)	0.13268*** (0.070 - 0.195)	0.09732*** (0.028 - 0.166)
Age of child		-0.00466*** (-0.008 - -0.002)	-0.00500*** (-0.008 - -0.002)	-0.00505*** (-0.008 - -0.002)	-0.00458*** (-0.008 - -0.002)	-0.00465*** (-0.008 - -0.002)	-0.00374** (-0.007 - -0.001)
Pregnant		0.08825*** (0.030 - 0.146)	0.09348*** (0.035 - 0.152)	0.08229*** (0.023 - 0.141)	0.08924*** (0.031 - 0.148)	0.08250*** (0.024 - 0.141)	0.07730*** (0.019 - 0.136)
Age			0.00100 (-0.028 - 0.030)	-0.00237 (-0.031 - 0.027)	0.00438 (-0.024 - 0.033)	0.00622 (-0.022 - 0.034)	0.01103 (-0.017 - 0.039)
Age-squared			0.00004 (-0.000 - 0.001)	0.00006 (-0.000 - 0.001)	-0.00004 (-0.000 - 0.000)	-0.00007 (-0.001 - 0.000)	-0.00014 (-0.001 - 0.000)
<i>Education</i>							
Primary			Ref.	Ref.	Ref.	Ref.	Ref.
Secondary			-0.03390 (-0.082 - 0.014)	-0.03561 (-0.084 - 0.013)	-0.02867 (-0.076 - 0.019)	-0.02652 (-0.074 - 0.021)	-0.00978 (-0.059 - 0.040)
Tertiary			-0.04825* (-0.103 - 0.007)	-0.04687* (-0.102 - 0.008)	-0.05753** (-0.111 - -0.004)	-0.05052* (-0.104 - 0.003)	-0.03275 (-0.088 - 0.023)
Married				0.04765** (0.009 - 0.087)	0.05420*** (0.016 - 0.092)	0.04844** (0.010 - 0.087)	0.04820** (0.010 - 0.086)
Duration of cohabitation				0.00016 (-0.000 - 0.001)	0.00019 (-0.000 - 0.001)	0.00020 (-0.000 - 0.001)	0.00022 (-0.000 - 0.001)
Housework 50/50					0.22513*** (0.192 - 0.258)	0.23344*** (0.200 - 0.267)	0.23501*** (0.202 - 0.268)
Egalitarian values						-0.08769*** (-0.134 - -0.041)	-0.08543*** (-0.132 - -0.039)
Employed							-0.04790** (-0.088 - -0.008)
Baseline	0.64518*** (0.625 - 0.665)	0.63825*** (0.618 - 0.659)	0.60762*** (0.180 - 1.035)	0.66293*** (0.235 - 1.091)	0.43999** (0.024 - 0.856)	0.48680** (0.072 - 0.902)	0.42462** (0.007 - 0.843)
Observations	3158	3158	3158	3158	3158	3158	3158
R-squared	0.001	0.005	0.006	0.007	0.010	0.065	0.067

Note: Statistical significance: *** p<0.01, ** p<0.05, * p<0.1, robust confidence intervals in parentheses; Source: Pairfam, release 8.0; own calculations

As marriage is associated with more traditional values, the result that married people in the sample have a 4-5% higher chance of reporting a fair division is in line with the presented literature. Additionally to the higher perception of fairness among married individuals, adding the marital status to the model slightly decreased the effect of the child variable for both men and women. This means that the effect of a child is partly due to the fact that the couple is married when they have a child. The duration of the cohabitation has a very small and insignificant effect on the fairness perception, for both men and women.

If a couples shares housework equally, the probability to perceive the division as fair is higher. Women who stated an equal division of housework are 22.51% more likely to report a fair perception. Men who share housework equally report a 17.26 % higher probability of fairness. This is in accord with theoretical assumptions (Gordon & Mickelson, 2018). Adding the housework distribution to the OLS model, increases the probability to perceive the division as fair if a child is present for both men and women. Consequently, men have a 5.84% probability to perceive the division as fair in Model 5 (Table 4), while women with a child have a 13.21% higher probability to state the labor division as fair after taking the housework division into account (Table 5). Due to this change in the effect of the child variable, it seems as if the housework division mediates the relationship between a child in the household and the perception of fairness. Consequently, it is not the child per se that affects the perception of fairness but the fact that couples with a child differ in their housework division compared to childless couples. Egalitarian values decrease the perception of fairness. Women with egalitarian values are 8.77% less likely to perceive the division of labor as fair. For men, the effect is smaller and not significant. The gender values variable does not mediate the relationship between a child and the perception of fairness in the LPM, neither for men nor for women.

Employment has a contrary effect for both men and women. Employed men are more likely to perceive the division of labor as fair (6.38%), while employed women have a 4.79% lower probability to perceive the division as fair compared to unemployed women.

The R-squared for the analysis for men indicates that with Model 7, 4.3% of the variation in the perception of fairness is accounted for in the model (Table 4). For women, 6.7% of the variation can be explained in Model 7 (Table 5). The variance inflation factors (VIF) did not indicate any major multi-collinearity, except for age and age-squared. For the sake of completeness, the results of a logistic regression are added in the Appendix (Table A8, Table A9). As suspected, the logit models show results similar to the LPM model.

The Perception of Fairness across the Transition to Parenthood

By looking at the OLS results causal relationships cannot be displayed. Fixed effects, however, serve better at revealing causal effects as the panel structure of the dataset is taken into consideration in a fixed effects model. Thus, the fixed effects analysis aims to highlight the effect of the transition to parenthood on the perception of fairness. The fixed effects specification for the male sample shows rather similar results to the cross sectional analysis. Transitioning to a child does not have a significant effect on the perception for men. As Model 1 in Table 6 shows, the probability to perceive the division as fair increases by only 2% on average for each man in the sample when transitioning to parenthood. If a woman transitions to parenthood, the probability that she perceives the distribution to be fair increases by 7.19% on average, as shown in Model 1 in Table 7. For women, this coefficient is significant on a 0.05 level.

The age of the child as well as a pregnancy of a partner does not affect the perception of fairness for men significantly. For women, the older the child, the less likely they are to perceive the share of labor as fair. Contrary to men, transitioning to pregnancy has a positive effect (not statistically significant) on the probability to consider the work to be fair. Adding the variables for age to the model indicates that if an individual gets older, the probability to perceive the division as fair decreases by around 6% for men. As the squared term for age is significant from Model 4 on, a curvilinear effect can be assumed for men. This would mean that first men are more likely to perceive the division as unfair but the older an individual gets the more likely he is to perceive the division as fair. The coefficient is, nevertheless, small. While age seems to affect a man's perception of fairness, both the linear as well as the squared term for age does not have a significant effect for women and the coefficients are, especially for the squared term, very small.

Men who obtain a secondary education during the observation period have on average a 25.20% lower probability to perceive the division as fair. When a woman is obtaining a secondary education it does not significantly influence her perception of fairness. Transitioning to a tertiary education has an insignificant effect for both men and women.

Table 6. Fixed effects model for men's perceived fairness

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Child	0.02614 (-0.035 - 0.088)	0.00178 (-0.083 - 0.087)	0.00864 (-0.079 - 0.097)	-0.00977 (-0.098 - 0.078)	0.02082 (-0.068 - 0.109)	0.02081 (-0.068 - 0.109)	0.02081 (-0.068 - 0.109)
Age of child		0.00139 (-0.002 - 0.005)	0.00131 (-0.003 - 0.005)	0.00163 (-0.002 - 0.006)	0.00150 (-0.002 - 0.005)	0.00155 (-0.002 - 0.006)	0.00155 (-0.002 - 0.006)
Partner pregnant		-0.01417 (-0.096 - 0.068)	-0.00712 (-0.091 - 0.077)	-0.01882 (-0.103 - 0.066)	-0.01658 (-0.101 - 0.068)	-0.01663 (-0.101 - 0.068)	-0.01661 (-0.101 - 0.068)
Age			-0.05794 (-0.132 - 0.016)	-0.07436* (-0.156 - 0.007)	-0.07324* (-0.154 - 0.007)	-0.07359* (-0.154 - 0.007)	-0.07339* (-0.154 - 0.008)
Age-squared			0.00088 (-0.000 - 0.002)	0.00107* (-0.000 - 0.002)	0.00106* (-0.000 - 0.002)	0.00107* (-0.000 - 0.002)	0.00107* (-0.000 - 0.002)
<i>Education</i>							
Primary			Ref.	Ref.	Ref.	Ref.	Ref.
Secondary			-0.25201*** (-0.399 - -0.105)	-0.23264*** (-0.383 - -0.082)	-0.24855*** (-0.398 - -0.099)	-0.24903*** (-0.398 - -0.100)	-0.24705*** (-0.408 - -0.086)
Tertiary			-0.07886 (-0.215 - 0.057)	-0.07757 (-0.214 - 0.059)	-0.09463 (-0.225 - 0.036)	-0.09250 (-0.223 - 0.038)	-0.08881 (-0.248 - 0.071)
Married				0.10065*** (0.027 - 0.175)	0.10700*** (0.033 - 0.181)	0.10551*** (0.032 - 0.179)	0.10527*** (0.032 - 0.179)
Duration of cohabitation				-0.00023 (-0.003 - 0.003)	0.00008 (-0.003 - 0.003)	0.00007 (-0.003 - 0.003)	0.00007 (-0.003 - 0.003)
Housework 50/50					0.14655*** (0.083 - 0.210)	0.14504*** (0.082 - 0.208)	0.14499*** (0.082 - 0.208)
Egalitarian values						0.03003 (-0.039 - 0.099)	0.02983 (-0.039 - 0.099)
Employed							-0.00396 (-0.103 - 0.095)
Baseline	0.70569*** (0.688 - 0.723)	0.70734*** (0.686 - 0.729)	1.77772*** (0.589 - 2.967)	2.05660*** (0.594 - 3.519)	1.94910*** (0.487 - 3.411)	1.92943*** (0.467 - 3.392)	1.92695** (0.459 - 3.395)
Observations	2753	2753	2753	2753	2753	2753	2753
R-squared (within)	0.001	0.001	0.004	0.009	0.014	0.036	0.036
N individuals	1602	1602	1602	1602	1602	1602	1602

Note: Statistical significance: *** p<0.01, ** p<0.05, * p<0.1, robust confidence intervals in parentheses; Source: Pairfam, release 8.0; own calculations

Table 7. Fixed effects model for women’s perceived fairness

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Child	0.07187** (0.009 - 0.135)	0.13020*** (0.046 - 0.214)	0.12523*** (0.035 - 0.215)	0.11044** (0.018 - 0.203)	0.12606*** (0.034 - 0.218)	0.12563*** (0.034 - 0.217)	0.04711 (-0.059 - 0.154)
Age of child		-0.00323* (-0.007 - 0.000)	-0.00332* (-0.007 - 0.000)	-0.00319* (-0.007 - 0.000)	-0.00307* (-0.007 - 0.001)	-0.00317* (-0.007 - 0.000)	-0.00093 (-0.005 - 0.003)
Pregnant		0.04774 (-0.033 - 0.129)	0.04479 (-0.038 - 0.128)	0.03604 (-0.048 - 0.121)	0.03877 (-0.045 - 0.123)	0.03973 (-0.044 - 0.123)	0.02638 (-0.055 - 0.108)
Age			0.00107 (-0.069 - 0.071)	-0.01682 (-0.089 - 0.055)	-0.01399 (-0.085 - 0.057)	-0.01149 (-0.083 - 0.060)	-0.01002 (-0.081 - 0.061)
Age-squared			0.00002 (-0.001 - 0.001)	0.00013 (-0.001 - 0.001)	0.00008 (-0.001 - 0.001)	0.00004 (-0.001 - 0.001)	0.00001 (-0.001 - 0.001)
<i>Education</i>							
Primary			Ref.	Ref.	Ref.	Ref.	Ref.
Secondary			0.02975 (-0.108 - 0.167)	0.03753 (-0.100 - 0.175)	0.04735 (-0.088 - 0.183)	0.04835 (-0.087 - 0.184)	0.09590 (-0.044 - 0.235)
Tertiary			-0.00301 (-0.178 - 0.172)	0.00197 (-0.171 - 0.175)	0.00575 (-0.171 - 0.183)	0.00252 (-0.175 - 0.180)	0.09616 (-0.097 - 0.290)
Married				0.06658 (-0.013 - 0.146)	0.06429 (-0.015 - 0.143)	0.06050 (-0.019 - 0.140)	0.06223 (-0.017 - 0.141)
Duration of cohabitation				0.00065 (-0.001 - 0.002)	0.00073 (-0.001 - 0.003)	0.00074 (-0.001 - 0.002)	0.00086 (-0.001 - 0.003)
Housework 50/50					0.10403*** (0.045 - 0.163)	0.10668*** (0.048 - 0.165)	0.11350*** (0.054 - 0.173)
Egalitarian values						-0.06879* (-0.144 - 0.007)	-0.06313 (-0.139 - 0.012)
Employed							-0.09016*** (-0.156 - -0.025)
Baseline	0.63092*** (0.612 - 0.650)	0.62633*** (0.606 - 0.647)	0.56721 (-0.542 - 1.677)	0.92672 (-0.247 - 2.100)	0.82375 (-0.341 - 1.988)	0.84609 (-0.314 - 2.007)	0.82773 (-0.331 - 1.986)
Observations	3158	3158	3158	3158	3158	3158	3158
R-squared (within)	0.004	0.007	0.007	0.007	0.010	0.022	0.027
N individuals	1829	1829	1829	1829	1829	1829	1829

Note: Statistical significance: *** p<0.01, ** p<0.05, * p<0.1, robust confidence intervals in parentheses; Source: Pairfam, release 8.0; own calculations

As in the model without fixed effects, marriage has a positive effect on the fairness perception. Here, the effect is bigger for men: If a man is getting married, he is on average 10% more likely to perceive the share of labor in his relationship as fair. Furthermore, getting married decreases the effect the child has on the fairness perception. When controlling for marriage and the cohabitation duration, the effect of the child on the perceived fairness decreases. If a woman is getting married, she is also more likely to perceive the division as fair but the coefficient here is not significant.

Compared to the OLS regression, the significant coefficients with FE hints to a causal relationship between marriage and perceived fairness, net of the impact of childbearing. After people get married, they perceive the labor division to be fairer. Marriage thus seems to have a traditionalizing effect on individuals. The duration of the cohabitation has a similar effect for both men and women as in the OLS model.

Obtaining a more equal split of housework, increases the probability that the division is recognized as fair. For men, the probability increases by 15% while it increases by 11% for women. For both men and women, these coefficients are significant on a 0.01 level. Adding the housework variable to the model does not significantly change the effect of a child on perceived fairness for men. When the housework is included in the model for women, the coefficient for the transition to parenthood becomes more significant, but the effect is very small. Therefore, a clear mediating effect is not observed, neither for men nor for women (in contrast to the OLS estimates).

Changing to more egalitarian values, net of the other independent variables (except for employment), decreases the fairness perception for women, while transitioning to more egalitarian values increases the fairness perception for men. Adding the values to the analysis has no mediating effect on the relationship between transitioning to parenthood and the perception of fairness.

Transitioning to employment has a negative effect for both men and women. While the effect for men is small and not significant, a woman starting to work is on average 9% less likely to perceive the division of labor as fair compared to the time before she started to work. This estimate is also larger than in the OLS model. It is important to note that when adjusting for the employment status, the effect of the transition to parenthood becomes smaller and insignificant for women. While in Model 6 the transition to parenthood increases the likelihood for a fair indication by 12.6% (significant), the likelihood is only 4.7% when including the employment status (insignificant). Thus, the employment status of a woman largely mediates the relationship between the transition to a child and the perception of fairness. Without adding

the employment status to the regression model, the effect of the child on the perceived fairness is overestimated. This means that a woman perceives the division of labor when having a child as more fair because she is not in the labor market, which strengthens relative resource and time availability theories.

The within R-squared for men indicates that with Model 7, 3.6% of the variation in the perception of fairness can be explained in the model. For women, the within R-squared is with 2.7% lower.

Concluding Discussion

The transition to parenthood is a remarkable event in the life course of a couple. Several constellations that were formerly negotiated within the couple are exposed to changes. Previous research found that the perception of fairness was dependent on the gender, the education, the housework division, gender ideologies and the country context (Jansen et al., 2016; Öun, 2013; Ruppanner, 2008). The presence of a child showed mixed effects on the perception of fairness (Jansen et al., 2016; Kluwer et al., 2002; Ruppanner et al., 2017). In this study, the perception of fairness after the transition to parenthood was examined with the German panel data pairfam. Hereby, fixed effects regressions were chosen to analyse the effect of a child and to carve out mechanisms explaining this relationship. Possible mediating factors such as the employment status, the housework division and values on gender were investigated.

Contrary to the findings of Kluwer et al., 2002, the transition to parenthood did not decrease perceptions of fairness either for men or for women. As expected in Hypothesis 1, the transition to parenthood did not affect perceptions of fairness for men. In line with the hypothesis, women perceived the division of labor as fairer after having a child. In opposition to what was expected, neither the housework nor egalitarian values mediated the relationship between the transition to parenthood and the perception of fairness. Thus, even if the housework division and the values were taken into account, women perceived the labor division as fair after having a child.

Nevertheless, this relationship is partly mediated by the employment status. This supports resource dependency and time availability literature and assumes that women justify the perceived fairness of the division of labor with a decrease in paid work and an increase of available time for unpaid work. Only if they start working after the child, this justification is not maintainable anymore which is when the effect of a child is not significantly explaining the

fairness perception in the fixed effects model. As the child variable is insignificant for women in the FE model but significant in the OLS model (Model 7), the OLS model underestimates the mediating effect of the employment status of women. Thus, whether women are employed or unemployed does only to a small extent mediate the relationship between a child and fairness, but if one woman is unemployed and then enters employment, the effect of transitioning to a child decreases the perception of fairness. This demonstrates that the transition to parenthood does not seem compatible with paid work and causes an increased feeling of unfairness for women. Additionally, it shows the advantage of the fixed effects estimates.

As Kühhirt (2012) detected, in couples where the woman starts to work quickly after having a child, the woman has more resources and the couple is more likely to share housework equally (see also Dechant et al., 2014). Employed women with children could thus be a select group. Nevertheless, only a weak correlation between the employment status and the education (0.2171), the division of housework and the employment status (0.1188) and the values and the employment status (0.0815) is observed for women⁹.

The way the question on pairfam about the perception of fairness is framed, does not clarify whether individuals perceive a gendered division as fair or unfair since they are asked about both paid work and housework. Nevertheless, whether housework was split equally or not had an important impact on the perception of fairness for both men and women. An equal division of housework does play a role and increases the probability to perceive the division as fair by 10-24%.

Finally, it is important to note that this study is not without shortcomings. As the fixed effects regression controls for time-constant unobserved factors, time-varying variables such as for instance the change in marital satisfaction remain unaccounted in this analysis. The fact that the dependent variable does not have much variability and is quite stable throughout the waves, limits the interpretation and does not make it possible to understand whether the respondent felt under or over-benefited in the division of labor over time. The descriptive table shows that men are more likely to feel over-benefited, while a larger proportion of women feels under-benefited (Table A4). During the transition to parenthood, it is unlikely that women feel over-benefited as the descriptive table and the literature show that women rather feel under-benefited and the fact that employment decreased the fairness perception underlines this assumption. For men, however, it might be interesting to understand to what extent they consider their partners'

⁹ For men, the correlations are weak as well: Employment and education (0.2086), division of housework and employment (-0.1117), values and employment (-0.0463).

situation when evaluating their fairness perception across the transition to parenthood and to know whether they start to feel more over or under-benefited. From the current analysis, however, this does not become clear. Many studies on the housework distribution in Germany assume that values are a better predictor for the division of labor than absolute or relative resources. In this study, values had an effect on the perception of fairness for women but they did not explain why the transition to parenthood makes women perceive the division of labor as fairer. It could be that the variable used to measure egalitarian values is not very accurate. An assumed lack of accuracy could be supported by the small correlation between education and egalitarian values for women (0.0722). As the variable was collapsed into two values, not many people might have changed from egalitarian to non-egalitarian values or vice versa. In addition, asking only about the attitude towards the division of housework might not capture possible traditionalizing values after the transition to parenthood. Including all questions on gender ideology in pairfam might have provided a better picture (Nitsche & Grunow, 2016).

Another limitation to the study is that most respondents observed are from the birth cohort 1981-1983. Upcoming waves of the pairfam dataset might include more individuals in the cohort 1991-1993 and reveal a clearer picture of the transition to parenthood for a broader range of individuals.

The findings suggest that future research should pay more attention to working mothers. Although new family policies are introduced and formal childcare for children below the age of three is increasing in Germany, the results of this study show that employed women feel unsatisfied with the division of labor after having to a child. Some studies also found a greater risk of union disruption for employed women in Germany (van Damme & Kalmijn, 2014). Thus, it might be fruitful to investigate for how long after the birth of a child employed women feel that the division of labor is unfair.

Acknowledgements

I would like to thank Chiara Comolli for her guidance and support throughout the master thesis process. Furthermore, I gratefully acknowledge that the data for this paper derive from the German Family Panel Pairfam, coordinated by Josef Brüderl, Karsten Hank, Johannes Huinink, Bernhard Nauck, Franz Neyer, and Sabine Walper. Pairfam is funded as long-term project by the German Research Foundation (DFG).

References

- Aassve, A., Fuochi, G., & Mencarini, L. (2014). Desperate Housework: Relative Resources, Time Availability, Economic Dependency, and Gender Ideology Across Europe. *Journal of Family Issues*, 35(8), 1000–1022.
- Allison, P. D. (2009). *Quantitative Applications in the Social Sciences: Fixed effects regression models*. Thousand Oaks, California: SAGE Publications Ltd.
- Andronescu, C. G., & Carnes, M. E. (2015). Value coalitions and policy change: The impact of gendered patterns of work, religion and partisanship on childcare policy across German states. *Journal of European Social Policy*, 25(2), 159–174.
- BAMF. (2015). Parental allowance and parental leave. Retrieved from <http://www.bamf.de/EN/Willkommen/KinderFamilie/Elterngeld/elterngeld-node.html>
- Baxter, J., & Hewitt, B. (2013). Negotiating Domestic Labor: Women's Earnings and Housework Time in Australia. *Feminist Economics*, 19(1), 29–53.
- Bianchi, S. M., Milkie, M. A., Sayer, L. C., & Robinson, J. P. (2000). Is anyone doing the housework? Trends in the Gender Division of Household Labor. *Social Forces*, 79(1), 191–228.
- Bittman, M., England, P., Sayer, L., Folbre, N., & Matheson, G. (2003). When Does Gender Trump Money? Bargaining and Time in Household Work. *American Journal of Sociology*, 109(1), 186–214.
- BMFSFJ. (2009). Pay Inequality between Women and Men in Germany. Retrieved from <https://www.bmfsfj.de/blob/94442/efbd528467e361882848c23486fcc8d8/pay-inequality-data.pdf>
- BMFSFJ. (2018). Elterngeld und ElterngeldPlus. Retrieved from <https://www.bmfsfj.de/bmfsfj/themen/familie/familienleistungen/elterngeld/elterngeld-und-elterngeldplus/73752>
- Braun, M., Lewin-Epstein, N., Stier, H., & Baumgärtner, M. K. (2008). Perceived equity in the gendered division of household labor. *Journal of Marriage and Family*, 70(5), 1145–1156.
- Brüderl, J. (2010). Kausalanalyse mit Paneldaten. In C. Wolf & H. Best (Eds.), *Handbuch der sozialwissenschaftlichen Datenanalyse* (pp. 963–994). Wiesbaden: VS Verl. für Sozialwiss.
- Brüderl, J., Garrett, M., Hajek, K., Herzig, M., Huyer-May, B., Lenke, R., ... Schumann, N.

- (2017). *Data Manual of the German Family Panel*. Retrieved from http://www.pairfam.de/fileadmin/user_upload/redakteur/publis/Dokumentation/Manuals/Data_Manual_pairfam_9.1.pdf
- Brüderl, J., Schmiedeberg, C., Castiglioni, L., Becker, O. A., Buhr, P., Fuss, D., ... Schumann, N. (2015). Pairfam Technical Paper. Retrieved from <http://www.pairfam.de/en/study/concept-and-design/>
- Bühlmann, F., Elcheroth, G., & Tettamanti, M. (2010). The division of labour among European couples: The effects of life course and Welfare policy on Value-Practice Configurations. *European Sociological Review*, 26(1), 49–66.
- Carlson, D. L., & Lynch, J. L. (2013). Housework: Cause and consequence of gender ideology? *Social Science Research*, 42(6), 1505–1518. <https://doi.org/10.1016/j.ssresearch.2013.07.003>
- Chong, A., & Mickelson, K. D. (2016). Perceived Fairness and Relationship Satisfaction During the Transition to Parenthood: The Mediating Role of Spousal Support. *Journal of Family Issues*, 37(1), 3–28.
- Cooke, L. P., Erola, J., Evertsson, M., Gähler, M., Härkönen, J., Hewitt, B., ... Trappe, H. (2013). Labor and Love: Wives' Employment and Divorce Risk in its Socio-Political Context. *Social Politics: International Studies in Gender, State & Society*, 20(4), 482–509.
- Davis, S. N. (2007). Gender ideology construction from adolescence to young adulthood. *Social Science Research*, 36(3), 1021–1041. <https://doi.org/https://doi.org/10.1016/j.ssresearch.2006.08.001>
- Davis, S. N., Bianchi, S. M., Milkie, M. A., Sayer, L. C., & Robinson, J. P. (2003). Is Justice Contextual? Married Women's Perceptions of Fairness of the Division of Household Labor in 12 Nations. *Journal of Comparative Family Studies*, 191–228.
- Dechant, A., & Rinklake, A. (2016). Anticipating motherhood and fatherhood: German couples' plans for childcare and paid work. In D. Grunow & M. Evertsson (Eds.), *Couples' Transition to Parenthood: Analysing Gender and Work in Europe* (pp. 103–125). Edward Elgar Publishing.
- Dechant, A., Rost, H., & Schulz, F. (2014). Die Veränderung der Hausarbeitsteilung in Paarbeziehungen. Ein Überblick über die Längsschnitfforschung und neue empirische Befunde auf Basis der pairfam-Daten. *Zeitschrift Für Familienforschung*, 26(2), 144–168.
- Dribe, M., & Stanfors, M. (2009). Does parenthood strengthen a traditional household

- division of labor? Evidence from Sweden. *Journal of Marriage and Family*, 71(1), 33–45.
- Edlund, J., & Öun, I. (2016). Who should work and who should care? Attitudes towards the desirable division of labour between mothers and fathers in five European countries. *Acta Sociologica*, 59(2), 151–169.
- El Lahga, A., & Moreau, N. (2007). Would You Marry Me? The Effects of Marriage on German Couples' Allocation of Time. *SEOPpapers on Multidisciplinary Panel Data Research*, (April), 1–31.
- European Commission. (2018). Barcelona objectives. Retrieved from https://ec.europa.eu/info/sites/info/files/bcn_objectives-report2018_web_en.pdf
- EUROSTAT. (2018). Gender pay gap statistics. Retrieved from http://ec.europa.eu/eurostat/statistics-explained/index.php/Gender_pay_gap_statistics#Gender_pay_gap_levels_vary_significantly_across_EU
- Evans, A. R., & Baxter, J. (2013). *Negotiating the life course: stability and change in life pathways*. Dordrecht: Springer Netherlands :
- Evertsson, M. (2016). Institutional context, family policies and women's and men's work outcomes in eight European welfare states. In D. Grunow & M. Evertsson (Eds.), *Couples' Transition to Parenthood: Analysing Gender and Work in Europe* (pp. 34–59).
- Evertsson, M., & Nermo, M. (2004). Dependence within families and the division of labour : comparing Sweden and the United States. *Journal of Marriage and the Family*, 66(5), 1272–1286.
- Fahlén, S. (2016). Equality at home - A question of career? Housework, norms, and policies in a European comparative perspective. *Demographic Research*, 35(48), 1411–1440. Retrieved from <http://www.demographic-research.org/volumes/vol35/48/>
- Gangl, M., & Ziefle, A. (2015). The Making of a Good Woman: Extended Parental Leave Entitlements and Mothers' Work Commitment in Germany. *American Journal of Sociology*, 121(2), 511–563.
- Goldscheider, F., & Bernhardt, E. (2015). The Gender Revolution : A Framework for Understanding The Gender Revolution : A Framework for Understanding Changing Family and Demographic Behavior, 42(2), 207–240.
- Goldscheider, F., Bernhardt, E., & Lappegård, T. (2014). Studies of Men's Involvement in the Family—Part 1: Introduction. *Journal of Family Issues*, 35(7), 879–890.
- Gordon, A. E., & Mickelson, K. D. (2018). Couple-Level Predictors of Perceived Fairness

- During Pregnancy in First-Time Parents. *Journal of Family Issues*, 39(1), 55–77.
- Greenstein, T. N., & Teachman, J. (2009). National Context , Family Satisfaction , and Fairness in the Division of Household Labor. *Journal of Marriage and Family*, 71(4), 1039–1051.
- Grunow, D., Schulz, F., & Blossfeld, H.-P. (2012). What determines change in the division of housework over the course of marriage? *International Sociology*, 27(3), 289–307.
- Grunow, D., & Valtkamp, G. (2016). Institutions as reference points for parents-to-be in European societies: a theoretical and analytical framework. In D. Grunow & M. Evertsson (Eds.), *Couples' Transition to Parenthood: Analysing Gender and Work in Europe* (pp. 3–33). Cheltenham: Edward Elgar Publishing.
- Hsiao, C. (2003). *Analysis of Panel Data. Econometric Society Monographs* (2nd ed.). Cambridge: Cambridge University Press.
- Huinink, J., Brüderl, J., Nauck, B., & Walper, S. (2010). Panel Analysis of Intimate Relationships and Family Dynamics (pairfam): Conceptual Framework and Design. *Journal of Family Research*, 23(1), 1–29. Retrieved from http://www.pairfam.uni-bremen.de/fileadmin/user_upload/redakteur/publis/huinink_et_al_zff_2011.pdf
- Jansen, L., Weber, T., Kraaykamp, G., & Verbakel, E. (2016). Perceived fairness of the division of household labor: A comparative study in 29 countries. *International Journal of Comparative Sociology*, 57(1–2), 53–68.
- Johnson, M. D., Galambos, N. L., & Anderson, J. R. (2016). Skip the dishes? Not so fast! Sex and housework revisited. *Journal of Family Psychology*, 30(2), 203–213.
- Klaassen, F. J. G. M., & Magnus, J. R. (2001). Are Points in Tennis Independent and Identically Distributed ? Evidence From a Dynamic Binary Panel Data Model, 96(454), 500–509.
- Kluwer, E. S., Heesink, J. A. M., & van de Vliert, E. (2002). The Division of Labor across the Transition to Parenthood: A Justice Perspective. *Journal of Marriage and Family VO - 64*, (4), 930.
- Krapf, S. (2014). Who uses public childcare for 2-year-old children? Coherent family policies and usage patterns in Sweden, Finland and Western Germany. *International Journal of Social Welfare*, 23(1), 25–40.
- Kühhirt, M. (2012). Childbirth and the long-term division of labour within couples: How do substitution, bargaining power, and norms affect parents' time allocation in West Germany? *European Sociological Review*, 28(5), 565–582.
- Levy, R., & Ernst, M. (2002). Lebenslauf und Regulation in Paarbeziehungen :

- Bestimmungsgründe der Ungleichheit familialer Arbeitsteilung: Life course and regulation in couples: explanatory factors of inequality in the familial division of labour. *Zeitschrift Für Familienforschung*, 14(2), 103–132. Retrieved from <https://ezp.sub.su.se/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsdsgso&AN=edsdsgso.28255&site=eds-live&scope=site>
- Long, J. S., & Freese, J. (2006). *Regression models for categorical dependent variables using Stata*. College Station, Tex.: Stata Press.
- Lutz, K., Boehnke, M., Huinink, J., & Tophoven, S. (2013). Female Employment, Reconciliation Policies and Childbearing Intentions in East and West Germany. In L. S. Olah & E. Fraczak (Eds.), *Childbearing, women's employment and work-life balance policies in contemporary Europe* (pp. 97–129). Palgrave Macmillan.
- McDonald, P. (2000). Gender Equity in Theories of Fertility Transition. *Population and Development Review VO - 26*, (3), 427. Retrieved from <https://ezp.sub.su.se/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsjsr&AN=edsjsr.172314&site=eds-live&scope=site>
- Mikula, G. (1998). Division of Household Labor and Perceived Justice: A Growing Field of Research. *Social Justice Research*, 11(3), 215–241. Retrieved from <http://dx.doi.org/10.1023/A:1023282615718>
- Müller, B., & Castiglioni, L. (2015a). Attrition im Beziehungs- und Familienpanel pairfam. In J. Schupp & C. Wolf (Eds.), *Nonresponse Bias: Qualitätssicherung sozialwissenschaftlicher Umfragen* (pp. 383–408). Wiesbaden: Springer Fachmedien Wiesbaden. https://doi.org/10.1007/978-3-658-10459-7_12
- Müller, B., & Castiglioni, L. (2015b). Stable Relationships, Stable Participation? The Effects of Partnership Dissolution and Changes in Relationship Stability on Attrition in a Relationship and Family Panel. *Survey Research Methods*, 9(3), 205–219.
- Neilson, J., & Stanfors, M. (2014). It's About Time! Gender, Parenthood, and Household Divisions of Labor Under Different Welfare Regimes. *Journal of Family Issues*, 35(8), 1066–1088.
- Neyer, G., Lappegård, T., & Vignoli, D. (2011). *Gender Equality and Fertility: Which Equality Matters?*
- Nitsche, N., & Grunow, D. (2016). Housework over the course of relationships: Gender ideology, resources, and the division of housework from a growth curve perspective. *Advances in Life Course Research*, 29, 80–94. <https://doi.org/10.1016/j.alcr.2016.02.001>
- Nordenmark, M., & Nyman, C. (2003). Fair or Unfair? Perceived Fairness of Household

- Division of Labour and Gender Equality among Women and Men: The Swedish Case. *The European Journal of Women's Studies*, 10(2), 181–209.
- Öun, I. (2013). Is it Fair to Share? Perceptions of Fairness in the Division of Housework Among Couples in 22 Countries. *Social Justice Research*, 26(4), 400–421.
- Röhler, K. A., Huinink, J., & Steinbach, A. (2000). Hausarbeit in Partnerschaften. Zur Erklärung geschlechtstypischer Arbeitsteilung in nichtehelichen und ehelichen Lebensgemeinschaften. *Zeitschrift Für Familienforschung*, 12(2), 21–53.
- Ruppanner, L. (2008). Fairness and housework: A cross-national comparison. *Journal of Comparative Family Studies*, 39(4), 509–526.
- Ruppanner, L., Bernhardt, E., & Brandén, M. (2017). Division of housework and his and her view of housework fairness: A typology of Swedish couples. *Demographic Research*, 36(1), 501–524.
- Ruppanner, L., Brandén, M., & Turunen, J. (2016). Does Unequal Housework Lead to Divorce? Evidence from Sweden. *Sociology*, 1–20.
- Ruppanner, L., & Maume, D. J. (2016). The state of domestic affairs: Housework, gender and state-level institutional logics. *Social Science Research*, 60, 15–28.
<https://doi.org/10.1016/j.ssresearch.2016.04.006>
- Schulz, F. (2010). *Verbundene Lebensläufe. Partnerwahl und Arbeitsteilung zwischen neuen Ressourcenverhältnissen und traditionellen Geschlechterrollen*. Wiesbaden: VS Verl. für Sozialwiss.
- Schulz, F., & Rost, H. (2012). Hausarbeitsteilung und Erwerbsunterbrechung von Müttern unter den Bedingungen des neuen Elterngeldgesetzes: erste empirische Befunde aus Bayern. *Zeitschrift Fur Familienforschung*, 24(1), 27–45.
- Sprecher, S. (2001). Equity and social exchange in dating couples: Associations with satisfaction, commitment, and stability. *Journal of Marriage and Family*, 63(3), 599–613.
- Thompson, L. (1991). Family work: Women's sense of fairness Journal. *Journal of Family Issues*, 12(2), 181–196. <https://doi.org/10.1177/019251391012002003>
- United Nations Development Programme. (2016). *Human Development Report 2016. United Nations Development Programme*. New York.
- van Damme, M., & Kalmijn, M. (2014). The dynamic relationships between union dissolution and women's employment: A life-history analysis of 16 countries. *Social Science Research*, 48, 261–278. <https://doi.org/10.1016/j.ssresearch.2014.06.009>
- Wilhelm, B., Thönnissen, C., Alt, P., Friedrich, S., & Walper, S. (2013). Scales Manual of the

German Family Panel.

Wooldridge, J. M. (2013). *Introductory Econometrics: A Modern Approach. International Edition* (5th ed.).

Yogev, S., & Brett, J. (1985). Perceptions of the Division of Housework and Child Care and Marital Satisfaction. *Journal of Marriage and Family*, 47(3), 609.

Appendix

Table A1. Structure of the pairfam dataset

Year of survey	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	
Waves	1	2	3	4	5	6	7	
Dependent variable measured	Yes	-	Yes	-	Yes	-	Yes	
<hr/>								
N Observations								Total
Pairfam	13891	9069	9074	8073	7248	6,574	5919	59848
Dataset	5855	-	3942	-	3626	-	3229	16652
Analytic sample	2329	-	1378	-	1187	-	1017	5911

Source: Pairfam, release 8.0; own calculations

Table A2. Comparison of parents and non-parents

	Never parent (n= 3409)				Ever parent (n= 2502)				
	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.	
Female	0.53	0.50	0	1	0.53	0.50	0	1	
Child	-	-	-	-	0.69	0.46	0	1	
Pregnant or partner pregnant	0.05	0.22	0	1	0.14	0.35	0	1	
Age	29.88	6.09	15	44	30.43	4.82	15	43	
Education	2.02	0.72	1	3	2.12	0.66	1	3	
Married	0.33	0.47	0	1	0.58	0.49	0	1	
Duration of cohabitation	55.51	52.21	0	305	59.58	41.65	0	245	
Housework 50/50	0.51	0.50	0	1	0.35	0.48	0	1	
Egalitarian values	0.82	0.36	0	1	0.82	0.38	0	1	
Employed	0.72	0.45	0	1	0.65	0.48	0	1	
<hr/>					<hr/>				
N individuals	2022				1409				

Note: SD: standard deviation; Source: Pairfam, release 8.0; own calculations

Table A3. Characteristics of the variable *East*

	Men (n= 2753)				Women (n=3158)			
	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
East	0.29	0.46	0	1	0.30	0.46	0	1

Note: SD: standard deviation, *East*: Currently living in East Germany; Source: Pairfam, release 8.0; own calculations

Table A4. The distribution of the original dependent variable

	Men (n= 2753)	Women (n= 3158)	Total
I do much more than my fair share.	27	174	201
	0.98%	5.51%	3.40%
I do more than my fair share.	196	781	977
	7.12%	24.73%	16.53%
I do about my fair share.	1963	2060	4023
	71.30%	65.23%	68.06%
I do less than my fair share.	526	131	657
	19.11%	4.15%	11.11%
I do much less than my fair share.	41	12	53
	1.49%	0.38%	0.90%

Source: Pairfam, release 8.0; own calculations; Pearson $\chi^2(4) = 688.9618$, $p < 0.01$

Table A5. Overview of the dataset and the analytic sample

	Dataset (n= 16652)				Analytic Sample (n=5911)			
	Mean	SD	Min.	Max.	Mean	SD	Min.	Max.
Female	0.58	0.49	0	1	0.53	0.50	0	1
Child	0.73	0.44	0	1	0.29	0.45	0	1
Age of child	110.46	69.25	1	424	17.17	10.02	1	36
Pregnant or partner pregnant	0.05	0.23	0	1	0.09	0.29	0	1
Age	34.01	5.90	15	44	30.12	5.59	15	44
Education	2.04	0.67	1	3	2.06	0.70	1	3
Married	0.68	0.47	0	1	0.43	0.50	0	1
Duration of cohabitation	105.39	72.26	0	422	0.57	0.48	0	305
Housework 50/50	0.32	0.47	0	1	0.44	0.49	0	1
Egalitarian values	0.79	0.40	0	1	0.84	0.37	0	1
Employed	0.72	0.44	0	1	0.68	0.46	0	1
N individuals	7211				3431			

Note: SD: standard deviation; Source: Pairfam, release 8.0; own calculations

Table A6. OLS model for men's perceived fairness with variable *East*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Child	0.03075 (-0.006 - 0.068)	0.04021 (-0.025 - 0.106)	0.03835 (-0.027 - 0.104)	0.02394 (-0.043 - 0.091)	0.05755* (-0.008 - 0.123)	0.05847* (-0.007 - 0.124)	0.05571* (-0.010 - 0.121)
Age of child		-0.00055 (-0.004 - 0.003)	-0.00031 (-0.004 - 0.003)	-0.00013 (-0.003 - 0.003)	-0.00047 (-0.004 - 0.003)	-0.00050 (-0.004 - 0.003)	-0.00051 (-0.004 - 0.003)
Partner pregnant		0.01310 (-0.042 - 0.068)	0.00986 (-0.046 - 0.065)	-0.00031 (-0.056 - 0.056)	0.00397 (-0.052 - 0.060)	0.00437 (-0.052 - 0.061)	0.00275 (-0.054 - 0.059)
Age			0.01064 (-0.023 - 0.044)	0.00803 (-0.026 - 0.042)	0.00904 (-0.024 - 0.042)	0.00895 (-0.024 - 0.042)	0.00130 (-0.032 - 0.035)
Age-squared			-0.00020 (-0.001 - 0.000)	-0.00016 (-0.001 - 0.000)	-0.00017 (-0.001 - 0.000)	-0.00016 (-0.001 - 0.000)	-0.00006 (-0.001 - 0.000)
East			0.00658 (-0.031 - 0.045)	0.01498 (-0.024 - 0.054)	0.00972 (-0.029 - 0.048)	0.00970 (-0.029 - 0.048)	0.01439 (-0.024 - 0.053)
Education			Ref.	Ref.	Ref.	Ref.	Ref.
Primary							
Secondary			-0.04076* (-0.085 - 0.004)	-0.04135* (-0.086 - 0.003)	-0.04314* (-0.086 - 0.000)	-0.04278* (-0.086 - 0.001)	-0.05755** (-0.103 - -0.012)
Tertiary			-0.00084 (-0.051 - 0.049)	-0.00593 (-0.056 - 0.044)	-0.01714 (-0.066 - 0.032)	-0.01587 (-0.065 - 0.033)	-0.02903 (-0.079 - 0.021)
Married				0.04699** (0.006 - 0.088)	0.07130*** (0.031 - 0.112)	0.07122*** (0.031 - 0.112)	0.07059*** (0.030 - 0.111)
Duration of cohabitation				-0.00031 (-0.001 - 0.000)	-0.00021 (-0.001 - 0.000)	-0.00020 (-0.001 - 0.000)	-0.00020 (-0.001 - 0.000)
Housework 50/50					0.17231*** (0.138 - 0.207)	0.17648*** (0.141 - 0.212)	0.18046*** (0.145 - 0.216)
Egalitarian values						-0.02361 (-0.069 - 0.021)	-0.01974 (-0.065 - 0.025)
Employed							0.06531*** (0.018 - 0.113)
Baseline	0.70440*** (0.684 - 0.725)	0.70302*** (0.682 - 0.724)	0.59100** (0.073 - 1.109)	0.62826** (0.108 - 1.149)	0.50460* (-0.002 - 1.011)	0.52231** (0.016 - 1.028)	0.60965** (0.100 - 1.119)
Observations	2,753	2,753	2,753	2,753	2,753	2,753	2,753
R-squared	0.001	0.001	0.004	0.006	0.040	0.040	0.043

Note: Statistical significance: *** p<0.01, ** p<0.05, * p<0.1, robust confidence intervals in parentheses; Source: Pairfam, release 8.0; own calculations

Table A7. OLS model for women's perceived fairness with variable *East*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Child	0.02397 (-0.012 - 0.060)	0.10382*** (0.042 - 0.166)	0.11051*** (0.048 - 0.173)	0.09842*** (0.035 - 0.162)	0.13374*** (0.071 - 0.197)	0.13434*** (0.072 - 0.197)	0.09912*** (0.030 - 0.168)
Age of child		-0.00466*** (-0.008 - -0.002)	-0.00497*** (-0.008 - -0.002)	-0.00504*** (-0.008 - -0.002)	-0.00457*** (-0.008 - -0.002)	-0.00464*** (-0.008 - -0.002)	-0.00373** (-0.007 - -0.001)
Pregnant		0.08825*** (0.030 - 0.146)	0.09369*** (0.035 - 0.152)	0.08311*** (0.024 - 0.142)	0.09025*** (0.031 - 0.149)	0.08349*** (0.025 - 0.142)	0.07827*** (0.019 - 0.137)
Age			0.00095 (-0.028 - 0.030)	-0.00220 (-0.031 - 0.027)	0.00460 (-0.024 - 0.033)	0.00643 (-0.022 - 0.035)	0.01119 (-0.017 - 0.040)
Age-squared			0.00004 (-0.000 - 0.001)	0.00005 (-0.000 - 0.001)	-0.00005 (-0.000 - 0.000)	-0.00008 (-0.001 - 0.000)	-0.00015 (-0.001 - 0.000)
East			-0.02163 (-0.058 - 0.015)	-0.01304 (-0.050 - 0.024)	-0.01576 (-0.052 - 0.020)	-0.01540 (-0.052 - 0.021)	-0.01456 (-0.051 - 0.022)
Education			-0.03189 (-0.080 - 0.016)	-0.03442 (-0.083 - 0.014)	-0.02723 (-0.075 - 0.020)	-0.02512 (-0.072 - 0.022)	-0.00856 (-0.058 - 0.041)
Primary			-0.04785* (-0.103 - 0.007)	-0.04660* (-0.102 - 0.009)	-0.05720** (-0.111 - -0.003)	-0.05021* (-0.104 - 0.004)	-0.03257 (-0.088 - 0.023)
Secondary				0.04478** (0.005 - 0.085)	0.05073** (0.012 - 0.090)	0.04506** (0.006 - 0.084)	0.04501** (0.006 - 0.084)
Tertiary				0.00017 (-0.000 - 0.001)	0.00020 (-0.000 - 0.001)	0.00022 (-0.000 - 0.001)	0.00023 (-0.000 - 0.001)
Married					0.22529*** (0.192 - 0.258)	0.23359*** (0.200 - 0.267)	0.23514*** (0.202 - 0.268)
Duration of cohabitation						-0.08758*** (-0.134 - -0.041)	-0.08534*** (-0.132 - -0.039)
Housework 50/50							-0.04758** (-0.087 - -0.008)
Egalitarian values							
Employed							
Baseline	0.64518*** (0.625 - 0.665)	0.63825*** (0.618 - 0.659)	0.61437*** (0.186 - 1.042)	0.66401*** (0.236 - 1.092)	0.44114** (0.025 - 0.857)	0.48787** (0.072 - 0.903)	0.42604** (0.008 - 0.844)
Observations	3,158	3,158	3,158	3,158	3,158	3,158	3,158
R-squared	0.001	0.005	0.008	0.010	0.061	0.065	0.067

Note: Statistical significance: *** p<0.01, ** p<0.05, * p<0.1, robust confidence intervals in parentheses; Source: Pairfam, release 8.0; own calculations

Table A8. Logistic model for men's perceived fairness

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Child	1.16480 (0.967 - 1.404)	1.22253 (0.874 - 1.711)	1.21331 (0.866 - 1.700)	1.13686 (0.806 - 1.603)	1.34767* (0.952 - 1.907)	1.35462* (0.957 - 1.918)	1.33656 (0.945 - 1.891)
Age of child		0.99720 (0.981 - 1.014)	0.99840 (0.982 - 1.015)	0.99937 (0.983 - 1.016)	0.99742 (0.981 - 1.014)	0.99721 (0.981 - 1.014)	0.99725 (0.981 - 1.014)
Partner pregnant		1.06671 (0.810 - 1.405)	1.04965 (0.796 - 1.383)	1.00044 (0.756 - 1.324)	1.02222 (0.766 - 1.365)	1.02473 (0.767 - 1.369)	1.01436 (0.759 - 1.356)
Age			1.05346 (0.895 - 1.239)	1.04301 (0.886 - 1.228)	1.04959 (0.892 - 1.235)	1.04912 (0.892 - 1.234)	1.01246 (0.858 - 1.194)
Age-squared			0.99901 (0.996 - 1.002)	0.99919 (0.997 - 1.002)	0.99912 (0.997 - 1.002)	0.99913 (0.997 - 1.002)	0.99960 (0.997 - 1.002)
<i>Education</i>							
Primary			Ref.	Ref.	Ref.	Ref.	Ref.
Secondary			0.82309* (0.662 - 1.023)	0.82549* (0.664 - 1.026)	0.81194* (0.651 - 1.012)	0.81328* (0.652 - 1.014)	0.75802** (0.602 - 0.955)
Tertiary			0.99649 (0.774 - 1.283)	0.97491 (0.756 - 1.257)	0.91669 (0.709 - 1.185)	0.92246 (0.713 - 1.193)	0.86536 (0.664 - 1.128)
Married				1.24202** (1.020 - 1.512)	1.42185*** (1.160 - 1.743)	1.42136*** (1.160 - 1.742)	1.41392*** (1.152 - 1.735)
Duration of cohabitation				0.99851 (0.996 - 1.001)	0.99900 (0.997 - 1.001)	0.99901 (0.997 - 1.001)	0.99904 (0.997 - 1.001)
Housework 50/50					2.39126*** (1.998 - 2.862)	2.43865*** (2.027 - 2.934)	2.49626*** (2.072 - 3.007)
Egalitarian values						0.89326 (0.717 - 1.113)	0.91059 (0.731 - 1.135)
Employed							1.38299*** (1.092 - 1.752)
Baseline	2.38291*** (2.164 - 2.624)	2.36698*** (2.141 - 2.617)	1.37978 (0.112 - 17.073)	1.60679 (0.128 - 20.128)	0.87500 (0.070 - 10.951)	0.95308 (0.076 - 11.905)	1.42856 (0.112 - 18.261)
Observations	2753	2753	2753	2753	2753	2753	2753

Note: Statistical significance: *** p<0.01, ** p<0.05, * p<0.1, robust confidence intervals in parentheses; Source: Pairfam, release 8.0; own calculations

Table A9. Logistic model for women’s perceived fairness

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Child	1.11231 (0.947 - 1.307)	1.60346*** (1.195 - 2.151)	1.64567*** (1.223 - 2.215)	1.55686*** (1.153 - 2.103)	1.87128*** (1.367 - 2.562)	1.87327*** (1.369 - 2.563)	1.59010*** (1.129 - 2.240)
Age of child		0.97923*** (0.966 - 0.993)	0.97769*** (0.964 - 0.991)	0.97743*** (0.964 - 0.991)	0.97813*** (0.964 - 0.992)	0.97783*** (0.964 - 0.992)	0.98190** (0.968 - 0.996)
Partner pregnant		1.50394*** (1.129 - 2.003)	1.53956*** (1.154 - 2.055)	1.46470** (1.095 - 1.960)	1.54520*** (1.144 - 2.088)	1.49833*** (1.108 - 2.026)	1.45961** (1.080 - 1.974)
Age			1.00454 (0.883 - 1.143)	0.99016 (0.870 - 1.127)	1.02289 (0.896 - 1.167)	1.03191 (0.904 - 1.178)	1.05545 (0.923 - 1.207)
Age-squared			1.00016 (0.998 - 1.002)	1.00024 (0.998 - 1.002)	0.99977 (0.998 - 1.002)	0.99961 (0.997 - 1.002)	0.99929 (0.997 - 1.001)
<i>Education</i>							
Primary			Ref.	Ref.	Ref.	Ref.	Ref.
Secondary			0.85928 (0.691 - 1.069)	0.85283 (0.685 - 1.062)	0.87628 (0.701 - 1.096)	0.88358 (0.706 - 1.106)	0.95499 (0.756 - 1.207)
Tertiary			0.80634* (0.629 - 1.034)	0.81099* (0.632 - 1.040)	0.76867** (0.595 - 0.992)	0.79232* (0.613 - 1.024)	0.86094 (0.661 - 1.122)
Married				1.23660** (1.039 - 1.471)	1.28753*** (1.075 - 1.542)	1.25468** (1.046 - 1.504)	1.25224** (1.044 - 1.501)
Duration of cohabitation				1.00069 (0.999 - 1.003)	1.00089 (0.999 - 1.003)	1.00095 (0.999 - 1.003)	1.00103 (0.999 - 1.003)
Housework 50/50					2.87570*** (2.436 - 3.395)	2.98474*** (2.525 - 3.528)	3.00804*** (2.544 - 3.556)
Egalitarian values						0.66830*** (0.532 - 0.839)	0.67406*** (0.537 - 0.847)
Employed							0.80166** (0.663 - 0.969)
Baseline	1.81830*** (1.667 - 1.984)	1.76449*** (1.614 - 1.929)	1.54072 (0.232 - 10.234)	1.95606 (0.294 - 13.031)	0.70223 (0.101 - 4.896)	0.87052 (0.124 - 6.132)	0.65140 (0.091 - 4.656)
Observations	3158	3158	3158	3158	3158	3158	3158

Note: Statistical significance: *** p<0.01, ** p<0.05, * p<0.1, robust confidence intervals in parentheses; Source: Pairfam, release 8.0; own calculations