

Child Penalty and Intrahousehold Bargaining Power

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February 26, 2024

Abstract

In this paper, I examine intrahousehold bargaining power as a potential explanation for the child penalty experienced by women and not by men. Following the birth of the first child, households are faced with the decision of selecting the primary caretaker, a choice that can result in reduced labor market participation and income. An important determinant influencing intrahousehold bargaining power is the relative income within the household. In Australia, 75% of women earn less than their partners. As a result, women with lower opportunity costs, on average, bear the cost of parenthood within the household. My results show that the child penalty for women who out-earn their partners is on average 40% smaller than for women who earn less than their partners. However, men do not even experience a child penalty even if they earn less than their partners. I explore childcare responsibilities and parental leave regulations as channels that might influence the intrahousehold bargaining. My results highlight the importance of women's intrahousehold bargaining power for women's participation in the labor force.

JEL-Classification Codes: D13, J13, J3, J7

Keywords: Intrahousehold bargaining power, Child penalty, Gender pay gap

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1 Introduction

There exists a significant and widely documented child penalty for women around the world. The child penalty refers to the substantial decline in women’s labor force participation and compensation after the birth of their first child. In the United States, this penalty amounts to 44% (Kleven et al., 2019). Even in countries like Denmark, renowned for its high female labor market participation and supportive policies for balancing career and family responsibilities, the child penalty remains notable at 21% (Kleven et al., 2019). Hence, the child penalty is a major driver of gender inequality, particularly in developed nations. Understanding the underlying factors driving the child penalty is crucial in addressing gender disparities in the workforce.

In this paper, I examine intrahousehold bargaining power as a potential mechanism explaining the child penalty experienced by women but not by men. After the birth of the first child, households must decide on the primary caretaker, a decision often influenced by the need for flexible and shorter working hours, which can diminish labor market income and even discourage continued participation in the workforce (Goldin, 2014). One significant aspect influencing intrahousehold bargaining power is the relative income within the household. Studies indicate that, on average, women earn less than their husbands, a pattern observed in a majority of couples both in the United States (77% Bertrand et al. (2015)) and Australia (75%). Hence, taking a household perspective, women who, on average, have the smaller opportunity cost experience the (larger) cost of parenthood. This might lead to the observation that women experience a child penalty while men do not experience one. Hence, in this paper I ask the question whether women who out-earn their partner and possess greater intrahousehold bargaining power are more likely to remain in the labor market after the birth of their first child. To answer the research question, I use a representative dataset of the Australian population covering the period from 2001 until 2021 to analyze the impact of household dynamics on the labor force participation and earnings of both males and females.

My results show that the child penalty for women who out-earn their partners is on average 40% smaller than for women who earn less than their partner. Women who out-earn their partners are more likely to stay in the labor force after the birth of their first child and experience smaller decreases in income than women who earn less than their partners. However, men do not experience a child penalty independent of their relative household income. Additionally, I analyze to different

measures of intrahousehold bargaining power to strengthen my main result, i.e. the woman works in a higher occupation than her partner, and the woman has a higher education than her partner. The results confirm that women who have more intrahousehold bargaining power experience a significant smaller child penalty than women who have less intrahousehold bargaining power. Using relative intrahousehold earnings as a measure of bargaining power shows the strongest results compared to relative occupational status and education.

Crucially, my results are not influenced by total household income, age or gender norms. Women who earn more than their partners are typically part of households with household incomes larger than the median household income. Thus, I divide my sample into two subsamples based on the household income and find that the main results hold for both low- and high-income households. These results indicate that the observed effects are robust and specific to the relative income of men and women within a household.

Furthermore, I explore whether childcare responsibilities as a channel might influence the intrahousehold bargaining power of women. First, I analyse household responsibilities and external childcare provisions. Women who out-earn their partners tend to reduce their housework and to engage more in external childcare services compared to women who do not out-earn their partners. There are significant differences in the provision of childcare in rural and urban areas. While there are 0.42 childcare places per child in major cities, there are only 0.21 childcare places per child in remote areas.¹ My results show that there is a smaller child penalty for urban women who out-earn their partner than for urban women who do not out-earn their partners. However, there is no reduction in child penalty for women who out-earn their partners in rural areas. This indicates the potential impact of disparities in childcare availability between urban and rural regions. Second, I examine the change in paid parental leave regulations in Australia. Since 2011, paid parental leave is guaranteed for both mothers and fathers after the birth of the child. The new regulation might incentivize women who earn more than their partners to return to work after the birth of the first child. My results are mainly driven by households that become first-time parents after the introduction of the new regulation.

¹<https://www.vu.edu.au/sites/default/files/how-accessible-is-childcare-report.pdf>

My paper contributes to the extensive body of literature examining the impact of parenthood on female labor supply. This body of research consistently reveals a significant and long-lasting child penalty experienced by women worldwide, contributing significantly to gender inequality in developed countries (Kleven et al., 2019, 2023). As the likelihood of having children might be related to women's career trajectories, Lundborg et al. (2017) use the quasi-random variation in fertility resulting from in vitro fertilization (IVF) treatment to establish a casual effect of motherhood on labor force participation.

Several papers analyse potential mechanism driving the child penalty. For example, Kleven et al. (2021) show that the long-run child penalties of biological mothers and of adoptive mothers are virtually identical. Similarly, Andresen and Nix (2022) explore same-sex couples and show that in same-sex couple both women share the child penalty, i.e. both women experience a decrease in earnings that is half of the decrease of women in heterosexual couples. Both findings challenge the notion that biological factors exclusively drive the child penalty. Chhaochharia et al. (2021) argue that the availability of public childcare provisions plays a crucial role in mitigating the child penalty.

My paper also contributes to the large literature on household labor supply optimization and bargaining power. For instance, studies such as Blundell et al. (2005) and Cherchye et al. (2012) delve into the process of intrahousehold bargaining, emphasizing that families negotiate and jointly decide on work hours and employment. These studies recognize that bargaining power and the individual preferences of both partners play a significant role in determining labor supply outcomes. The authors specifically consider the impact of children on collective labor supply decisions, examining how their presence affects the labor market participation and work hours of both parents.

My paper is closely related to Angelov et al. (2016). They compare the earnings of women to the earnings of men within a household around the birth of the first child. They show that the gap in earnings increases by 10 percentage points after birth of the first child and that the magnitude of the increase depends on relative incomes within the household. My paper augments the results of Angelov et al. (2016) by providing a more in-depth analysis of relative household income as a proxy for intrahousehold bargaining power in several ways. First, I additionally analyze labor force participation. Second, my analysis shows that the results of Angelov et al. (2016) can partly be explained by reduced labor force participation and, most importantly, by the decrease in earnings

for women, while there is no impact on men’s earnings. Third, I do not compare the impact of becoming a first-time parent on earnings gaps within a household but compare women who earn more than their partners to women who do not earn more than their partners. Fourth, I analyze to different measures of intrahousehold bargaining power to strengthen my main result. Fifth, I compare different couples to exclude potential alternative explanations such as total household income. Sixth, I provide childcare responsibilities as a channel that offer potential explanation, i.e., paid parental leave regulation and provision of external childcare, for the results.

The paper continues as follows. In Chapter 2, I describe the data and methodology used for the analysis. In Chapter 3, I provide the institutional background and establish that there exists a child penalty in Australia. In Chapter 4, I provide the main findings of intrahousehold bargaining power as a potential mechanism explaining the child penalty. In Chapter 5, explore childcare responsibilities as a channel that influence intrahousehold bargaining power of women. In Chapter 6, I provide a summary of my main findings.

2 Data and Methodology

This chapter is divided into two Sections. In Section 2.1, I introduce the Household, Income and Labor Dynamics in Australia survey sample and in Section 2.2 I describe my methodology.

2.1 Data

I use household data from the Household, Income and Labor Dynamics in Australia (HILDA) survey. The HILDA survey is a comprehensive panel study encompassing Australian households from 2001 to 2021. It has a sample size of more than 17,000 participants interviewed annually. Participants of the survey are asked about different aspects of life. Particularly, the study contains detailed questions regarding the labor market participation of household members. These questions encompass a wide array of aspects, including work history, employment details and labor market income. Additionally, the survey captures data on children within households. Questions related to child information provide insights into the family structure, age of children, and potentially, childcare arrangements. Furthermore, the HILDA survey offers comprehensive demographic data

concerning household members. These demographics include factors such as age, education, marital status, and socioeconomic background.

2.1.1 Sample

As I am interested in the labor market participation of the survey participants, I only focus on those that are between 16 and 65 years old. Following the methodology of Kleven et al. (2019) to estimate the effect of the child penalty, I create my sample based on the following criteria. Firstly, I include only survey participants who become first-time parents during the survey period. Secondly, I have to observe each participant at least once both before and after the birth of their child. This approach enables a comprehensive analysis of the changes in labor market participation as experienced by individuals when entering parenthood.

To analyze the bargaining power of females within households, I create a household sample based on the following criteria one year before the birth of the first child. Firstly, the individual must be cohabiting with their partner in the same household. Secondly, both partners in the household must be employed.² Thirdly, I compare the yearly wages of the female and male partner within the household. I create an indicator variable that equals one if the female partner earns more than the male partner, and zero otherwise. This indicator serves as a key measure for analyzing the intrahousehold bargaining power.

2.1.2 Summary Statistics

Table 1 presents summary statistics for the households in my sample. Panel A presents individual characteristics and Panel B presents gender differences.

Demographics and Child Information

The median age of the individuals in my sample is 31 years. Panel B shows that females are significantly younger than males (31 years vs. 32 years with a normalized difference of 0.16³). Exactly half of the survey participants are female, providing a balanced representation of both

²I exclude self-employed survey participants. My results are similar when I condition on full-employed survey participants or when I do not condition on employment.

³I use normalized differences calculated as in Imbens and Woolridge (2009) as they are independent of the sample size. According to Imbens and Woolridge (2009), I use a threshold of 0.25 to determine whether there are systematic differences between subsamples.

genders in the dataset. The average number of children is 2.0. There are no gender differences in the number of children (see Panel B).

Labor market participation

In my analysis, I use participants' yearly gross wage and salary from their main job as the primary income variable. Table 1 Panel A shows that the average participant earns 58,700 Australian dollars per year. However, the median survey participant in the sample earns only 51,300 Australian dollars annually. The standard deviation of yearly income is 52,900 Australian dollars. As the distribution of yearly earnings is right-skewed, I also use the inverse hyperbolic sine of yearly earnings in my regression analysis to make sure that my results are not driven by the distribution of earnings (Aihounton and Henningsen, 2021). I also report inverse hyperbolic sine of yearly earnings to allow for the calculation of effect sizes.

To assess employment status, I rely on responses provided in the survey. Based on these responses, I define an indicator variable that equals one if an individual is employed and zero otherwise. For employed participants, I further categorize them into full-time or part-time employed based on their survey responses and define an indicator that is equal to one if an individual is full-time employed and zero if an individual is part-time employed. Within my sample, 86% of individuals are employed, and 75% of employed individuals working full-time.

I observe large differences in income between women and men. This finding is in line with previous research about the gender wage gap (e.g. Blau and Kahn (2017)). Table 1 Panel B shows that women earn on average 32,400 Australian dollars per year less than men. This gender wage gap is highly statistically significant, with a normalized difference of 0.61. Furthermore, these gender differences extend to employment patterns. Women are 12.2% less likely to be employed and 33.3% less likely to be full-time employed compared to their male counterparts.

Female earns more

My main variable of interest is a dummy variable indicating whether the female earns more than her partner. It measures the intrahousehold bargaining power of the female. If a female earns more than her partner, she should have larger bargaining power than a female that earns less than her partner. When looking at the overall HILDA working population, in 24.72% of the households the female earns more than her partner. This fraction aligns with the findings of Bertrand et al. (2015),

who show that in 23% of US households the female partner earns more than her partner. Restricting the sample to households without children the fraction is higher, i.e. in 32.71% of these households the female earn more than her partner. And consequently, focusing on one year before birth of the first child, Table 1 shows that females out-earn their partners in 32.58% of the observations.

2.2 Methodology

I closely follow the event-study methodology of Kleven et al. (2019) to analyze the impact of becoming a parent on earnings and labor market participation. I estimate the following regressions by gender to calculate the child penalty for females and males separately:

$$(1) \quad Y_{i,t} = \sum_{e \neq -1} \beta_e [e = t - b_i] + \alpha_a + \alpha_t + \varepsilon_{a,t},$$

where $Y_{i,t}$ is the labor market participation or the yearly earnings of individual i in year t . Labor market participation is an indicator variable that is one if the individual states in the survey that she is employed in the labor market and has labor market income, and zero otherwise. I use the hyperbolic sine transformation of yearly earnings as the distribution of wages in my sample is right-skewed. $\sum_{e \neq -1} \beta_e [e = t - b_i]$ are the event-time dummies from five years before the birth of the first child to 10 years after the birth of the first child. The event time dummy at $t=-1$ is excluded. It is the baseline measuring the impact of becoming a parent compared to one year before the birth. α_a are age dummies and α_t are year dummies.

I next estimate the counterfactual outcome if there were no children $\tilde{Y}_{e,i,t}$:

$$(2) \quad \tilde{Y}_{e,i,t} \equiv \alpha_a + \alpha_t,$$

where $\tilde{Y}_{e,i,t}$ excludes the event dummies to estimate predicted values of labor market participation or yearly earnings.

And lastly, I calculate the child penalty:

$$(3) \quad ChildPenalty_e \equiv \frac{\tilde{\beta}_e}{E[\tilde{Y}_{e,i,t}|e]}$$

$ChildPenalty_e$ is the loss in earnings expressed as a percentage of total earnings if there were no children. To analyze the impact of the monetary bargaining power of females within a household, I separately estimate the child penalty for females who out-earn their partner and for females who do not earn more than their partner. I do the same for all males in my sample.

Additionally, I use triple differences-in-differences to assess the significance of my findings, i.e. I estimate the following regression model:

$$(4) \quad Y_{i,t} = \beta_1 Female_{i,t} + \beta_2 Post_{i,t} + \beta_3 Female_{i,t} \times Post_{i,t} + \beta_4 Female \text{ Earns More}_{i,t} + \beta_5 Female \text{ Earns More}_{i,t} \times Female_{i,t} + \beta_6 Female \text{ Earns More}_{i,t} \times Post_{i,t} + \beta_7 Female \text{ Earns More}_{i,t} \times Post_{i,t} \times Female_{i,t} + \alpha_a + \alpha_t + \sum \alpha_x + \varepsilon_{i,a},$$

where $Y_{i,t}$ is the labor market participation or the hyperbolic sine transformation of yearly earnings of an employed individual i in year t ⁴. $Female_{i,t}$ is a dummy variable that is equal to one if the individual is female and zero if the individual is male. $Post_{i,t}$ is an indicator variable that is zero in the years before the birth of the first child and one in the years after the birth of the first child. Thus, β_2 indicates whether the labor market participation or the earnings of males change after the birth of the first child. β_3 shows whether the change is different for females than for males. Observing a negative coefficient indicates that there is a larger child penalty for females. $Female \text{ Earns More}_{i,t}$ is an indicator variable which equals one if one year before birth the female earns more than her partner, and zero otherwise. β_6 and β_7 are my coefficients of interest. β_6 indicates whether males who earn less than the females in the household show (a different) child penalty than males who do not earn less than the female in the household. β_7 shows whether the child penalty is different for females who out-earn their partners compared to females who do not earn more than their partners. α_a are age dummies and α_t are year dummies. α_x are a set of varying fixed effects. These include person, education (8 categories including year 11 and below, bachelor and post grad), industry (19 industries including manufacturing, retail trade, financial and insurance services) and occupation (8 categories including managers, professionals, clerical and administrative workers) fixed effects.

⁴I only analyze employed individuals to estimate the intensive margin. Therefore, I do not have no zero earnings observations in my data, and no measurement units issue according to Thakral and Tô (2023)

3 Institutional Background and Child Penalty in Australia

In Section 3.1, I provide institutional background on parental leave in Australia. Further, in Section 3.2, I establish that there exists a large and significant child penalty for women in Australia.

3.1 Institutional Background

There was a major change in parental leave regulations in 2011. Before 2011, there were two main forms of parental leave in Australia. First, parents could take unpaid parental leave for up to 12 months per parent after the birth of the first child. Second, parents could take paid parental leave provided by employers. Paid parental leave was mostly granted to mothers. It varied based on industrial agreements and company policies. For instance, government employees could take up to 14 weeks of paid maternity leave. According to the Equal Opportunity in the Workplace for Women Agency (EOWA), in 2010, 54% of all organizations had paid maternity leave schemes with an average of 10 weeks of employer-paid maternity leave. If any paid paternity leave existed, it was usually only for one week.⁵ In January 2011, the current parental leave scheme was introduced. After the birth of the first child, both parents can receive paid parental leave for 20 weeks (with 2 weeks reserved for each person) based on the following criteria. The mother must have been in the paid workforce before the birth of the first child, and the partner must have been employed for the last 12 months. The maximum amount of paid parental leave is 90 days per parent for couples and 100 days for single parents. During this period, parents are not allowed to work, but their jobs are protected and guaranteed upon their return. The parental leave pay is equal to the weekly rate of the national minimum wage, currently at \$177 a day before tax. Additionally, mothers can start their maternity leave up to six weeks before the expected due date.⁶ As the parental leave regulations changed during my sample period (2001-2021), I will split my sample according to the years of the regulation changes to assess the impact of these changes on my main results.

⁵For more information, see https://www.dss.gov.au/sites/default/files/documents/02_2023/op44.pdf

⁶For more information on the current parental leave regulations in Australia, see <https://www.servicessaustralia.gov.au/having-baby>

3.2 Child Penalty

Next, I document that there exists a large and significant child penalty for women in Australia using the event-study approach outlined in Section 2.2 (see equation 3). I show results in Figure 1. I plot the coefficient estimates representing the impact of becoming a parent on yearly earnings (Panel A) and labor market participation (Panel B). The blue line represents the coefficient estimates for men, and the lavender line represents the coefficient estimates for women in my sample. The baseline for my event-study estimations is set as the year before the birth of the child ($t = -1$).

Figure 1 Panel A shows the impact of having a child on yearly earnings. For men, the blue line remains stable around zero throughout the entire event time. This indicates that men do not experience a significant change in yearly earnings around the birth of the first child. By contrast, women experience a large and significant drop in earnings. The graph representing the change in earnings shows a slight decline for women before the birth of their first child. This drop is possibly due to some women already leaving the labor market during pregnancy. However, there is a significant decline in earnings in the year of the child's birth. Women experience, on average, a decline of 51% in the year of the birth of their first child. One year after birth, the earnings of women recover partly but they still remain significantly lower than before the birth. In particular, two years after the birth women earn, on average, still 31% less. And over the next eight years women earn around 35% less than in the year before birth.

Figure 1 Panel B shows the impact of having a child on labor market participation. The blue line still represents the coefficient estimates for men. The coefficient estimates remain flat around zero around the birth of the first child. Hence, the birth of the first child has no significant effect on the likelihood of men being employed. Again, there are notable differences for women (represented by the lavender line). Already one year before the birth of the first child, women are increasingly more likely to drop out of the labor market. The drop in year $t-1$ can be attributed to the necessity for some women to leave the labor market during pregnancy. The largest decline occurs immediately after giving birth. In the year following the birth, women are 50% less likely to be employed compared to one year before birth. Over the subsequent two to ten years after becoming parents, the likelihood of women being employed stabilizes, with women being 30% less likely to be employed compared to the year before birth.

Overall, there exists a substantial child penalty for women in Australia. While women receive significantly less earnings, are significantly less likely to be employed after birth of the first child, there is, if any, only a small impact of the first child's birth on men's earnings and probability to be employed.

4 Main Results

In this section, I examine intrahousehold bargaining power as a potential explanation for the child penalty experienced predominantly by women. Following the birth of the first child, households are faced with the decision of selecting the primary caretaker, a choice that can result in reduced labor market income and participation. An important factor influencing intrahousehold bargaining power is the relative income within the household. In the subsequent analysis, I explore whether women who out-earn their partners experience a reduced child penalty and investigate if men who are out-earned by their partners face a child penalty. In Section 4.1, I use an event study approach and, in Section 4.2, I use panel regressions. In Section 4.3, I analyze variations of bargaining power measurement. In Section 4.4, I test for robustness and, in Section 4.5, I examine the impact of household characteristics.

4.1 Event Study

I start the analysis by identifying those households in which the woman earns more than her partner one year before childbirth. I then use this identifier to split all women in my sample into two groups, i.e., females who out-earn their partners and females who do not. Next, I employ the methodology outlined in Equations 1 to 3. I plot coefficient estimates in Figure 2. Panel A shows the impact of becoming a first-time parent on yearly earnings, while Panel B illustrates the impact on employment status. Triangles represent estimates for women who earn more than their partners, and squares represent estimates for women who do not earn more than their partners.

First, focusing on Panel A, the graph shows a significant and consistent drop in women's earnings after the birth of a child. Notably, a substantial difference emerges between the two female groups. Women who out-earn their partners experience a decrease of 40% in the year of childbirth, followed by a gradual recovery to a total decline of only 20%-30% over the subsequent 10 years.

By contrast, women who do not out-earn their partners experience a more severe earnings decline. Their earnings drop by 60% in the year of the birth of the first child and remain relatively stable at a decline of around 35%-40% for the next decade. It is crucial to highlight that there are no observable pre-trends. The change in earnings for both groups are comparable in the five years leading up to childbirth, indicating that the divergent post-childbirth trends are not influenced by pre-existing differences between the groups.

Second, Panel B shows the impact of becoming a mother on the participation rate in the labor market. Both groups of women experience a significant decline in labor market participation after becoming a mother. However, women who do not out-earn their partners exhibit a more substantial effect. They are approximately 20 percentage points more likely to leave the labor market after the birth of the first child compared to women who out-earn their partners. Again, the labor force participation of both groups is comparable in the five years leading up to childbirth, indicating that the divergent post-childbirth trends are not influenced by pre-existing differences between the groups.

I also analyze whether the child penalty for males is influenced by household bargaining power. I show results in Figure 3. Again, Panel A displays the estimates for the impact on yearly earnings, while Panel B illustrates the impact on labor market participation. Interestingly, there is no observable difference between men who earn more than their partners (square) and those who earn less than their partners (triangle). Both groups experience a minor drop in earnings and employment after the birth of the first child. It's worth noting that both groups show a small pre-trend of similar size. Most likely, the pre-trends can be attributed to sample construction, as I condition on employment in the year before childbirth.

Consistent with the findings discussed in the previous section, there exists a significant child penalty for women no matter whether they earn more or less than their partners. Both groups of women experience a decline in earnings and employment after the birth of their child. However, the child penalty for women who out-earn their partner is significantly smaller than for women who do not out-earn their partner. There is no child penalty for men.

4.2 Panel Regression

To validate the findings, I conduct panel regressions as outlined in Equation 4. I first focus on labor force participation (extensive margin) and show results in Table 2. Next, I condition the analysis on those who stay in the labor market to estimate the impact of becoming first-time parent on earnings (intensive margin) and present results in Table 3.

Table 2 presents the impact of parenthood on labor market participation. In column (1) to (5), I include age and year fixed effects. In column (2), (4) and (5) I add person fixed. In columns (2) and (5) I include education effects and in column (5) I add industry and occupation fixed effects. Columns (1) to (2) focus on employment. Employment is an indicator variable that equals one if an individual is employed and zero otherwise. Firstly, no significant differences in the likelihood of being employed are observed among females, females who out-earn their partners, males, and males who earn less than their partners. Secondly, becoming a first-time parent has a small but statistically significant negative impact on males' likelihood of employment, with a reduction of 8.1pp (column 1) to 9.0pp (column 2). Thirdly, the impact is more substantial for females. The interaction between the post dummy and female dummy is statistically significant at the 1% level. Females are 34.6pp (column 1) to 36.2pp (column 2) less likely to be employed after birth of the first child.

Interestingly, there is no observable differences for males who earn less than their partners and those who do not. In other words, household bargaining power seems to have no influence on male's probability to participate in the labor force after birth of the first child. However, the triple interaction is positive and statistically significant at the 1% level. The positive coefficient estimates indicate that the likelihood of leaving the labor force is reduced for women with greater household bargaining power. In particular, women who out-earn their partners are 40.9% to 45.7% less likely to leave the labor force than women who do not out-earn their partners.

Columns (3) to (5) focus on full-time employment among those who are part-time and full-time employed. Firstly, the coefficients in column (3) indicate that women are 12.0pp less likely than men to be full-time employed. Women who out-earn their partners are 9.2pp more likely to be full-time employed than women who earn less than their partners. Moreover, the post dummy is statistically significant at the 1% level in columns (4) and (5), indicating that after the birth of the first child,

men are 6.1pp (column 5) to 8.3pp (column 4) less likely to be full-time employed. The effect is even larger for women. The interaction of post and female dummy is negative and statistically significant at the 1% level, indicating that women are 51.0pp (column 3) to 59.7pp (column 4) less likely to be full-time employed.

I do find a smaller child penalty for women who out-earn their partner. The triple interaction is positive and statistically significant at the 1% level in all three columns. Women who out-earn their partner are 36.4pp (column 3) to 48.6pp (column 4) less likely to full-time employed. Consequently, women who out-earn their partners are 17.0% (Column 5) to 28.6% (Column 3) more likely to be full-time employed than women who do not out-earn their partners. As the interaction between the post dummy and female earns more dummy is not statistically significant, there are no differing results for men who out-earn and men who earn less than their partners.

Table 3 presents the impact of parenthood on earnings. I use the hyperbolic sine transformation of yearly earnings to account for the right-skewed distribution of yearly wages across individuals in my sample. I focus on employed individuals to ensure that the analysis primarily captures changes in earnings not driven by fluctuations in labor market participation. In column (1), I include age and year fixed effects. In column (2), I add person fixed effects and in column (3) I also add education, industry, and occupation fixed effects.

In column (1), the female dummy is -0.289. Hence, women earn, on average, 28.9% less than men in my sample. The dummy variable Female Earns More is -0.127 indicating that men who do not out-earn their partners have wages that are lower by 12.7% compared to men who do earn more than their partners. The interaction of Female Earns More and Female is 0.433 indicating that women who earn more than their partners have considerably higher incomes than women who earn less than their partners. These results are in line with expectations. Notably, the post dummy is not statistically significant in columns (1). In columns (2) and (3) the post dummy is negative and statistically significant at the 5% level (column 3) and 1% level (column 2), indicating a 4.2% to 6.7% decrease in male's earnings after birth of the first child. This is inline with the event study results in Figure 3 Furthermore, columns (1) to (3) show that there is a negative and statistically significant coefficient of the interaction of female and post. This implies that women who become first-time parents experience a substantial decrease in earnings, ranging from 54.6% (column 3)

to 59.9% (column 1). The female earns more and post interactions are neither statistically nor economically significant, i.e. there is no observable differences for males who earn less than their partners and those who do not.

The triple interaction of female, female earns more, and post assesses whether women who out earn their partners experience a decrease in earnings that is significantly different from the decrease experienced by women who do not out earn their partners. The triple interaction is positive and statistically significant in columns (1) to (3). This implies that the earnings of women who out-earn their partners decrease by only 32.8% (column 1) to 41.2% (column 2). Consequently, women who earn more than their partners experience a 29.7% (column 3) to 41.0% (column 1) smaller drop in earnings compared to women who do not out-earn their partners after becoming parents.

In conclusion, there exists a large child penalty labor market participation and in earnings for women. Women with higher intrahousehold bargaining power experience a significant smaller child penalty. Women who out-earn their partners are up to 45.7% less likely to leave the labor force than women who do not out-earn their partners. Conditional on staying employed, women who earn more than their partners experience a up to 41.0% smaller drop in earnings compared to women who do not out-earn their partners after becoming parents. Thus, higher intrahousehold bargaining power increases the extensive margin, i.e. probability that women stay in the labor force, and the intensive margin, i.e. earnings of those women who stay in the labor force. I observe only a small impact of becoming a first-time parent on males earnings and labor market participation. Additionally, there is no different impact of becoming a first-time parent for males who earn more and males who earn less than their partner.

4.3 Bargaining Power Variations

In my main results, I use the relative income within the household as a measure of intrahousehold bargaining power. The results suggest that women who earn more than their partner and have greater intrahousehold bargaining power are more likely to stay in the labor market and have higher earnings after the birth of their first child. In this subsection, I analyze two different measures of intrahousehold bargaining power to strengthen my main results. First, I define an indicator that equals one if the woman works in a higher occupation than her partner one year before birth, and

zero otherwise. Second, I define an indicator that equals one if the woman has a higher education than her partner one year before birth, and zero otherwise. I run the same regressions as in equation 4 and replace the female earns more dummy with the female higher occupation dummy and the female higher education dummy.⁷ Table 4 reports the results for labor force participation in columns (1) to (3) and for yearly earnings of all employed individuals in columns (4) to (6). I include age, year, person, and education fixed effects in columns (1) through (6), and I also include industry and occupation fixed effects in columns (4) to (6).

First, columns (1) to (3) focus on employment. Employment is an indicator variable that equals one if an individual is employed and zero otherwise. As in the main analysis, the post dummy is negative and statistically significant at the 1% level. This indicates a small negative impact on the labor force participation of men after the birth of the first child. The negative coefficient of the post and female interaction shows that the impact of parenthood is larger for females. Higher female bargaining power, measured by higher relative earnings (column 1) and higher occupation (column 2) has no effect on male labor force participation. Higher female bargaining power measured by higher female education (column 3), has a small negative impact on male labor force participation. More interestingly, the coefficients of the triple interaction are positive in all three columns. Females who out-earn their partner are 40.9% (14.6 / 35.7) more likely to stay employed than females who do not out-earn their partner. Females who work in a higher occupation than their partner are 30.8% (14.6 / 35.7) more likely to stay employed than females who do not work in a higher occupation. Females who have a higher education than their partner are 25.9% (9.3 / 35.9) more likely to stay employed than females who do not have a higher education.

Second, columns (4) to (6) analyze the impact of becoming first-time parent on the earnings of all employed individuals. The results show a similar picture to the one employment discusses above. In column (4), there is a small negative impact on men's earnings after the birth of the first child. The impact of parenthood is larger for females. Column (4) shows that females who earn more than their partner experience a smaller child penalty compared to females who do not earn more than their partner. The child penalty reduces by 29.7% (16.2 / 54.6). Second, column (5) shows that females who are in a higher occupation than their partner experience a smaller child penalty

⁷Results are comparable when I include all three indicators in one regression.

compared to females who do not work in a higher occupation than their partner. The child penalty reduces by 7.7% (3.5 / 45.2). Third, column (6) shows that the relative female education has impact on females child penalty. The child penalty reduces by 15.6% (7.6 / 48.6).

In conclusion, women who have more intrahousehold bargaining power experience a significant smaller child penalty than women who have less intrahousehold bargaining power. Bargaining power has no impact on men's labor force participation and earnings after the birth of the first child. Using relative intrahousehold earnings as a measure of bargaining power shows the strongest results compared to relative occupational status and education.

4.4 Robustness

In this subsection, I test different specifications of the female earns more dummy variable to assess the robustness of my findings.

First, I alter the timing of the dummy variable. I calculate the female earns more dummy two years before the birth of the first child as opposed to one year in my main analysis. I present the results in Table 5. The results confirm my previous findings. Columns (1) and (2) analyze the impact on labor force participation. Similar to the main specification, a statistically significant decrease in labor force participation is observed for males, with a 9.3pp (5.1pp) decline in the likelihood of being (full-time) employed after the birth of the first child. For females becoming first-time parents, there is a substantial decrease, with a 35.2pp (59.1pp) reduction in the likelihood of being (full-time) employed. Again, it is noteworthy that women who earn more than their partners experience a smaller decline in labor force participation, with reductions of 23.0pp (column 1) and 44.5pp (column 4). Furthermore, column (3) shows the impact of becoming a first-time parent on the yearly earnings of all employed individuals. The post dummy and its interaction with the female earns more dummy are not statistically significant. Hence, there is no impact of becoming a first-time parent on males earnings. In contrast, females experience a significant reduction in earnings, amounting to 51.7% after becoming first-time parents. Notably, the triple interaction term is still positive and significant. Hence, women who out-earn their partners experience a comparatively smaller decrease in earnings, with reductions of 30.4% (16.8pp / 55.3pp) compared to women who do not out-earn their partners. The economic magnitude of all coefficients are comparable to the

main results. Thus, altering the timing of the female earns more dummy to two years before the birth of the first child confirms the results of the main analysis.

Second, I explore different thresholds to define whether a woman earns more than her partner. The indicator variable is set to one if the female earns $1 + x$ more than her partner and zero if she earns equal or less than her partner. As expected, the proportion of females out-earning their partners decreases with higher thresholds. For instance, if I require the women to earn 105% of what their partners earn, the fraction of women out-earning decreases to 28.7% (as compared to 32.6% in my main analysis). The fraction further decreases to 22.4% and 16.3% if I set the threshold to 115% and 130% respectively. I present regression results for varying thresholds in Table 6. Panel A shows the labor force participation results, while Panel B displays the earnings outcomes. Both panels confirm the main finding: females are less likely to be employed and experience lower earnings after the birth of the first child. Using different thresholds to define the female earns more dummy yields consistent results. For instance, in Panel A, column (1) indicates that women who earn more than their partner (threshold 1.05) are 41.6% (15pp/36pp) less likely to leave the labor market than women who do not earn more than their partner, while column (6) shows a 38.9% smaller decrease for women who earn more than their partner (threshold 1.30) than women who do not out-earn their partner. Similarly, in Panel B, column (1) shows that women who earn more than their partner (threshold 1.05) experience a 31.5% (17/54) smaller drop in earnings than women who do not earn more than their partner. Column (6) demonstrates a 37.0% (20/54) smaller decrease for women who earn more than their partner (threshold 1.30) than women who do not earn more than their partner. Hence, it matters whether the women earn more than their partners but not how much more they earn.

Third, I estimate the child penalty in earnings for different groups of relative female household income. Therefore, I first calculate the hypothetical earnings of each individual if she did not have a child based on her age and the year of the observation. Then, I estimate the child penalty in earnings for each individual by dividing the actual earnings (stated in the survey) by the hypothetical earnings. Finally, I group individuals into groups based on the relative female earning within the household. Figure 4 plots the results for the females in my sample. The figure shows that as the relative female earnings ratio increases to one the child penalty drops from 55% to almost 10%. At

100% the child penalty jumps to 5% and stays around that value, as indicated by the yellow line, for relative female earnings ratios up to 1.5. Thus, the Figure 4 confirms the earlier findings. As the relative female household income increases up to 100%, the child penalty decreases. However, it makes no difference whether the relative income is 100%, 110% or 150%.

Forth, I analyse whether females who earn more than their partner are less likely to get pregnant and become first-time parents compared to women who do not earn more than their partner. The HILDA survey explicitly asks the survey participants "Is it likely to have a child in the future?". I do not observe a difference in the expectations to have a child for women who earn more than their partner and women who do not earn more than their partner.

To conclude, these results underscore the robustness of my main findings, demonstrating that women who out-earn their partners, experience a reduced impact on labor force participation and yearly earnings compared to women who do not out-earn their partners when becoming first-time parents. In other words, women with relatively large household bargaining power experience a significantly smaller child penalty than women with relatively low household bargaining power.

4.5 Demographics and Household Characteristics

In this subsection, I explore various demographics and household characteristics that might influence my results. Women who out-earn their partners typically have higher incomes. Before the birth of their first child, women who earn more than their partners have annual earnings of 51,200 dollars, whereas women who do not out-earn their partners have annual earnings of 39,200 dollars. To ensure the robustness of my results, I investigate whether women with high absolute incomes drive my main results. In particular, I conduct the following analysis. In a first step, I calculate the median yearly earnings of females one year before childbirth. Then, I define an indicator variable that equals one if the woman in the household has earnings that are higher than median female earnings one year before child birth and zero otherwise. This indicator, referred to as female wage median dummy, is not highly correlated with the female earns more dummy (correlation of 29.65%). Hence, I include the female wage median dummy and the female earns more dummy in my regression analysis to determine their individual impacts. Table 7 shows that there is a positive and statistically significant impact at the 1% level (columns 1 and 2) and at the 5% level (columns 3) of the triple interaction

with the female earns more dummy. However, there is no statistically significant impact of the triple interaction with the female median wage dummy. Hence, this analysis confirms that my main findings are not influenced by the fact that women who out-earn their partners have higher annual earnings than the average women in my sample.

Moreover, women who earn more than their partners are typically part of households with household incomes larger than the median household income. To explore the potential impact of household income on my main results, I divide my sample into two subsamples based on the household income and conduct the same regressions as in my main analysis. Table 8 presents the results. In columns (1) and (3), I show results for individuals in below-median income households, while in columns (2) and (4) I show results for individuals in above-median income households. I find that there exists a child penalty for women in both low- and high-income households. The child penalty for women in labor force participation amounts to 34.3% in high-income and to 38.1% in low-income households. For men, I observe a negative impact on labor force participation when becoming first-time parents. The child penalty in earnings amounts to 48.1% in high-income and to 52.5% in low-income households. There is no statistically significant impact of becoming a first-time parent on men's yearly earnings. When examining labor force participation and compensation, the triple interaction with the female earns more dummy remains positive and statistically significant for both low- and high-income households. The economic magnitude of the coefficients for low- and high-income households are comparable. To conclude, there exists a child penalty for women in low- and high-income households and the child penalty is smaller for females who out-earn their partner than for females who do not earn more than their partner.

Next, I divide my sample based on the age of the individual at the birth of the first child. The results are presented in Table 9. I show results for individuals who become first-time parents before the age of 30 in columns (1) and (3), and I show results for individuals who become first-time parents after the age of 30 in columns (2) and (4). First, examining columns (1) and (2), I observe a slight negative impact on the likelihood of employment for males after the birth of their first child, consistent with the main results. The impact is 1.3pp larger for younger males. Notably, there is no difference for males in households in which the female earns more than her partner compared to those where the female does not earn more. In contrast, there is a large negative and

statistically significant impact of becoming a first-time mother on females labor force participation. This impact is marginally larger for younger females (27.9 pp) than for older females (24.5 pp). The primary coefficient of interest, the triple interaction, is positive and statistically significant at the 1% level in both columns. Becoming a first-time mother when the female earns more than her partner reduces the impact by 37.8% (14.3/37.8) for younger females and 41.4% (13.7/33.1) for older females. Second, columns (3) to (4) show the impact of becoming a first-time parent on yearly earnings. The post dummy is not statistically significant. The interaction of post dummy and female earns more dummy is positive and statistically significant for younger males. Hence, there is no negative impact of becoming a first-time parent on males earnings. Again, there exists a significant child penalty for females. This penalty varies for younger and older females. The impact is largest for females over 30 years old who earn less than their partner (53.1%). Females younger than 30 experience a decrease in earnings of 46.1%. There is no difference for younger women who earn more or less than their partner. For females that are older than 31 who earn more than their partner, the impact is the smallest with 29.6%.

Lastly, the results of Kleven (2022) suggest that conservative gender norms exacerbate the child penalty, i.e. more conservative areas show a larger disparity for women. Additionally, conservative gender norms might negatively affect the bargaining power of women who out-earn their partners, resulting in a higher child penalty compared to couples with more progressive gender norms. The HILDA survey assesses participants' gender norms using established statements.⁸ I standardize each of the variables with a mean of zero and a standard deviation of one. Values that larger than zero then indicate more conservative gender norms. Then, I combine the five variables to create a Gender Norms Index. I divide my sample into individuals with more conservative gender norms (Gender Norms Index larger zero) and less conservative gender norms (Gender Norms Index smaller one). I run the same regressions as in my main analysis for the two groups separately. In Table 10, I show the impact of becoming a first-time parent on labor force participation (columns 1 and 2) and on yearly earnings for all employed individuals (columns 3 and 4). The triple interaction

⁸Those statements are: 1. "As long as the care is good, it is fine for children under 3 years of age to be placed in child care all day for 5 days a week" 2."It is better for everyone involved if the man earns the money and the woman takes care of the home and children" 3."Mothers who don't really need the money shouldn't work" 4."If both partners in a couple work, they should share equally in the housework and care of children" 5."A working mother can establish just as good a relationship with her children as a mother who does not work for pay"

term is statistically significant in all columns. The relative magnitude of the less conservative triple interaction coefficient (columns 1 and 2) and the conservative one (column 2 and 4) are comparable. Becoming a first-time mother reduces the likelihood of labor force participation (earnings) for less conservative female by 34.0% (32.7%) and for conservative female by 39.3% (25.2%). Thus, gender norms do not have a significant impact on my main results.

5 Childcare Responsibilities

In this section, I explore the influence of childcare responsibilities for the intrahousehold bargaining power of women. In Section 5.1, I analyze housework and childcare provisions. According to gender stereotypes and traditional family models, women are the person in the household who is mainly responsible for home production and childcare. The possibility to rely on (paid) childcare might make it easier for women who earn more than their partners to combine labor force participation and childcare. In Section 5.2, I examine the change in paid parental leave regulations. Since 2011, paid parental leave might incentivize and support women who earn more than their partners to return to work after the birth of the first child.

5.1 Housework and Child Care

In this subsection, I explore the impact of becoming a first-time parent on household chores and childcare responsibilities. In particular, I examine whether women who out-earn their partners spend less time on housework after becoming parents compared to other women and men. Previous research by Bertrand et al. (2015) indicates that women who earn more than their partners tend to invest more time in household work. To understand if this pattern changes after childbirth, I investigate the time allocation for housework in Table 11.

On average, women spend 38.4% more hours on housework than men. Consistent with Bertrand et al. (2015) women who out-earn their partners even spend 53.6% (38.4% + 15.2%) more hours on housework than their partners. After the birth of their first child, both men (11.6%) and women (67.4%) increase the time spent on housework. However, women who earn more than their partners show a smaller increase (41.9%) in housework hours compared to women who do not out-earn their

partners. This raises questions about whether these women are able to outsource their housework responsibilities.

A crucial aspect of post-childbirth household duties is childcare. Thus, I investigate whether households in which women out-earn their partners rely more on external childcare support. The results in Table 12 show that these households utilize 20% more childcare hours than those where women do not earn more than their partners. Specifically, the additional childcare hours involve relatives, such as grandparents (column 2), and formal daycare centers (column 5).

In summary, women who out-earn their partners are more likely to reduce their housework hours and rely on external childcare assistance than women who do not out-earn their partners. These results raise the question whether the provision of external childcare is crucial for the labor force participation of females who out-earn their partners. There are significant differences in the provision of childcare in rural and urban areas. While there are 0.42 childcare places per child in major cities, there are only 0.21 childcare places per child in remote areas.⁹ Hence, women who out-earn their partners in urban areas might be able to use (paid) childcare services while women in rural areas might have no access to (paid) childcare.¹⁰

I categorize households into urban and rural areas based on state sections provided by the HILDA panel. The results, outlined in Table 13, reveal distinct impacts on urban and rural households. Columns (1) and (3) focus on urban locations, while columns (2) and (4) examine rural areas. The results for labor force participation (column 1 and 2) and yearly earnings of all employed individuals (columns 3 and 4) show that the child penalty is comparable for urban and rural areas. Most importantly, the triple interaction is significant only in urban areas. Urban women who out-earn their partners face a 28.3% (column 3) to 44.9% (column 1) smaller child penalty than women who do not out-earn their partners. There is no reduction in child penalty for women in rural areas.

In conclusion, women who out-earn their partners are more likely to rely on external childcare assistance and thus are more likely to stay in the labor market after birth of the first child compared to women who do not out-earn their partners.

⁹<https://www.vu.edu.au/sites/default/files/how-accessible-is-childcare-report.pdf>

¹⁰Results are similar when comparing NSW (highest childcare state) to the other states.

5.2 Paid Parental Leave Regulation Change

Before 2011, 10 weeks of paid parental leave were offered by 54% of employers, primarily granted to mothers. If any paid paternity leave existed, it typically lasted for only one week. Since 2011, both mothers and fathers are guaranteed 18 weeks of paid parental leave, making it easier for men and women to take (paid) parental leave after birth. Thus, the law might incentive and support women who earn more than their partner to return to work 90 days after birth of the first child.

I examine the impact of becoming first-time parents before and after the law change to assess its effect on my main results. In Table 14 columns (1) and (2), I analyze the impact on labor force participation and in columns (3) and (4) I examine the impact on yearly earnings of all employed individuals.

The post dummy is negative and statistically significant in columns (1) to (3), indicating a small negative positive impact of the birth of the first child on males labor force participation and earnings. Across all specifications, interaction between the female and post dummy is negative and statistically significant at the 1% significance level. This indicates a consistent child penalty in earnings and labor force participation for women, regardless of whether their first child was born before or after 2011. For instance, women giving birth to their first child before 2011 experience a drop in labor force participation of 35.8pp (61.6 % in earnings), while those giving birth to their first child after 2010 experience a drop in labor force participation of 37.4pp (46.8 % in earnings).

More importantly, the triple interaction shows that the impact of bargaining power changes over time. The triple interaction is positive and statistically significant for both periods. The child penalty in labor force participation for women who out-earn their partner reduces by 28.8% (column 5) before 2011 and by 45.6% (column 5) after 2010 compared to women who do not earn more than their partners. Additionally, the child penalty in earnings for women who out-earn their partner reduces by 26.0% (column 5) before 2011 and by 34.6% (column 5) after 2010 compared to women who do not earn more than their partners.

To conclude, after 2010, women who out-earn their partners experience a smaller child penalty in labor force participation and in earnings than women who do not out-earn their partners. This could be in line with the parental leave regulation change that might make it easier for women with larger intrahousehold bargaining power to return to work after birth of the first child.

6 Discussion and Conclusion

In this paper, I analyze a potential mechanism driving the child penalty experienced by women in the workforce worldwide. I explore the role of intrahousehold bargaining power in understanding the child penalty, focusing on relative incomes within households. While women, on average, earn less than their husbands, I investigate whether women who out-earn their partners possess greater bargaining power due to their higher household income contribution and thus experience a smaller child penalty.

Analyzing a dataset from the Australian population spanning from 2001 to 2021, my findings reveal that women who out-earn their partners indeed face a smaller child penalty (on average 50%) than women who earn less than their partners. I do not find a child penalty for men in my sample. Importantly, these results are robust to total household income or age of the individual.

Additionally, I explore childcare responsibilities and parental leave regulations as channels that might influence the intrahousehold bargaining. First, considering household responsibilities and childcare, I observe that urban women who out-earn their partners experience a smaller child penalty than rural women who out-earn their partners, possibly due to enhanced access to external childcare. Second, examining the impact of the introduction of Australia's paid parental leave regulation in 2011, I discover that women who out-earn their partners face a smaller child penalty, as the change in regulation might make it easier for women with larger intrahousehold bargaining power to return to work after birth of the first child.

My results highlight the importance of intrahousehold bargaining power of women and the governmental support of mothers in increasing the probability that women will remain in the labor force after the birth of their first child.

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Figure 1: The Child Penalty in Australia

This figure illustrates the impact of becoming a parent, while controlling for year and age, on earnings (Panel A) and labor market participation (Panel B). Earnings are the hyperbolic sine transformation of yearly gross wages and salary from their main job and labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. The blue line represents the coefficients for men, and the lavender line represents the coefficients for women. The estimation is defined in equation 3. The baseline for the event-study estimations is set as the year before the birth of the child ($t = -1$).

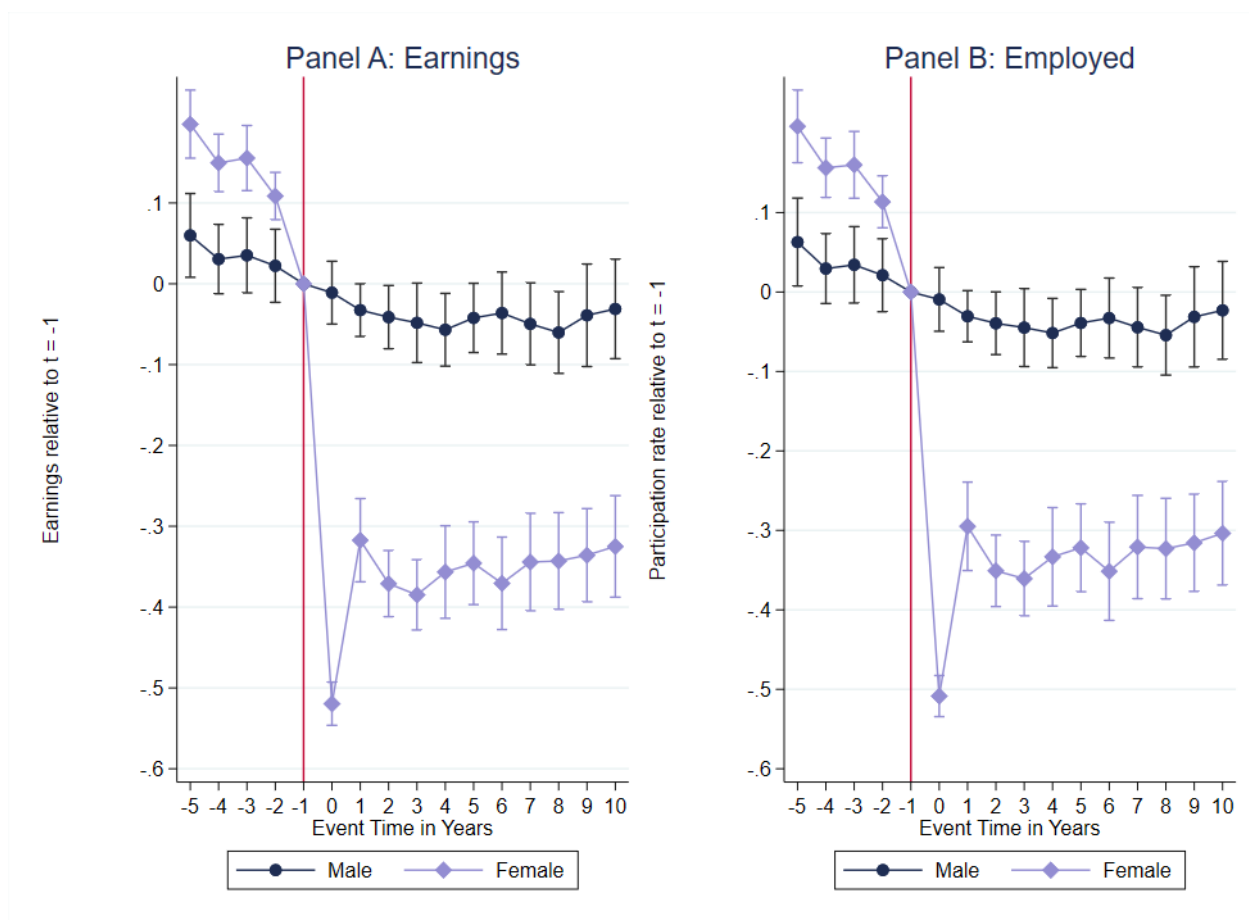


Figure 2: Child Penalty, Females and Intrahousehold Bargaining Power

This figure illustrates the impact of becoming a parent for females based on relative income within the household, while controlling for year and age, on earnings (Panel A) and labor market participation (Panel B). Earnings are the hyperbolic sine transformation of yearly gross wages and salary from their main job and labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. Triangles represent estimates for women who earn more than their partners, and squares represent estimates for women who do not earn more than their partners. The estimation is defined in equation 3. The baseline for the event-study estimations is set as the year before the birth of the child ($t = -1$).



Figure 3: Child Penalty, Males and Intrahousehold Bargaining Power

This figure illustrates the impact of becoming a parent for males based on relative income within the household, while controlling for year and age, on earnings (Panel A) and labor market participation (Panel B). Earnings are the hyperbolic sine transformation of yearly gross wages and salary from their main job and labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. Triangles represent estimates for men who earn less than their partners, and squares represent estimates for men who do not earn less than their partners. The estimation is defined in equation 3. The baseline for the event-study estimations is set as the year before the birth of the child ($t = -1$).

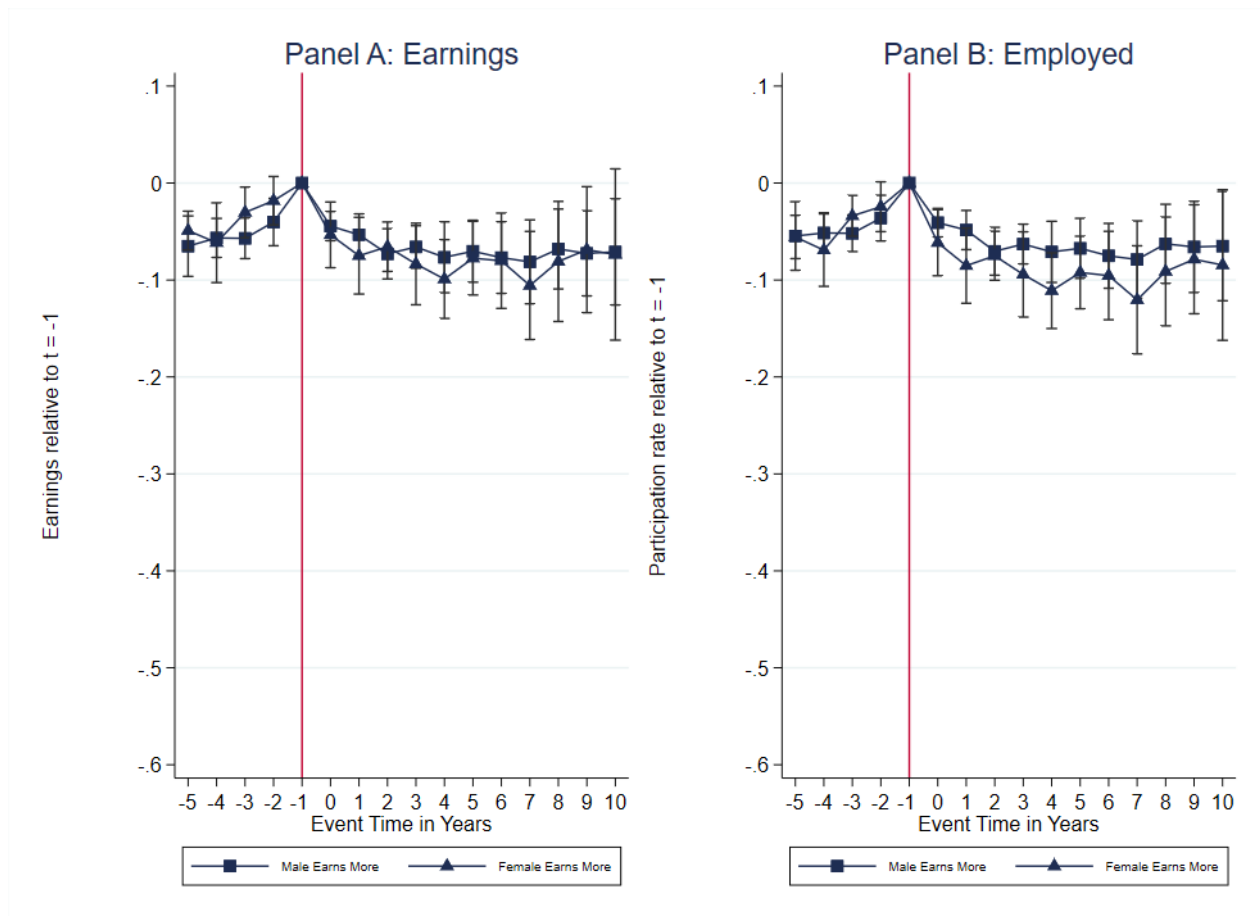


Figure 4: Child Penalty, Female and Relative Female Income Ratio

This figure illustrates the impact of becoming a parent for females based on relative income within the household, while controlling for year and age, on earnings. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from their main job. Relative female income ratio is the ratio of female partner earnings divided by male partner earnings one year before birth. Child penalty earnings is the estimated drop in earnings after birth of the first child. Blue points represent estimates for women who earn less than their partners, and red points represent estimates for women who do earn more than their partners.

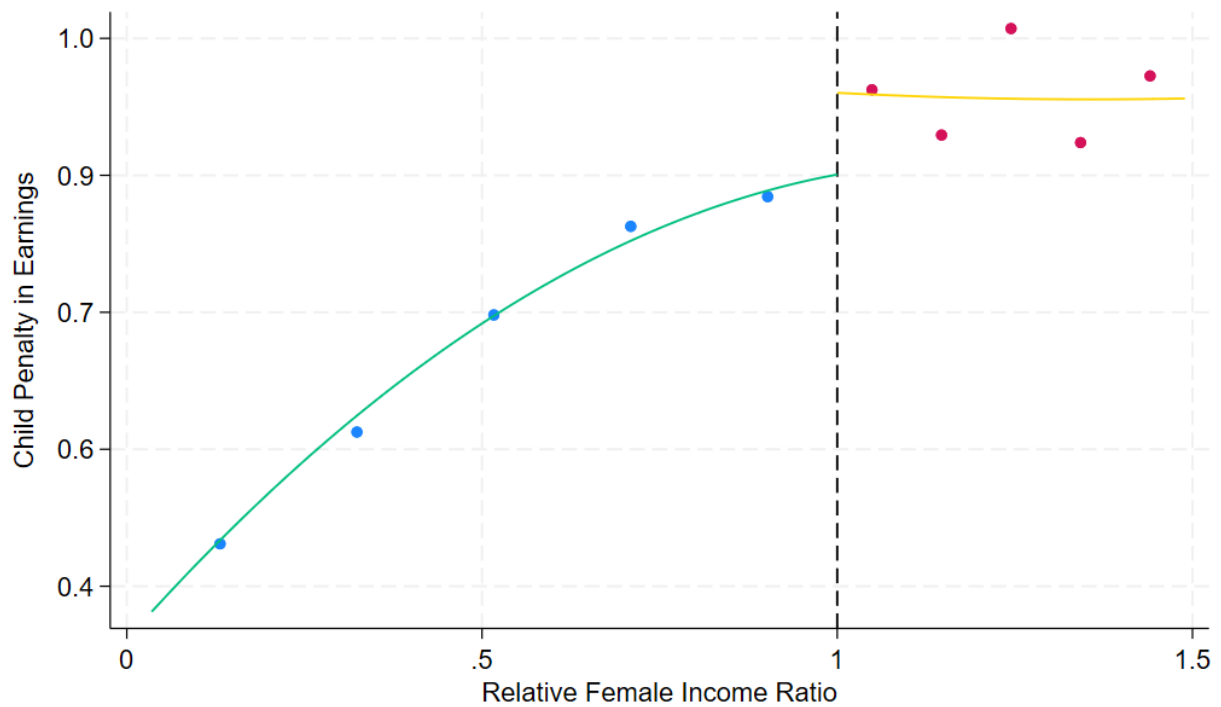


Table 1: Summary Statistics

This table presents summary statistics of the household sample on the main variables used in the paper. Data are obtained from HILDA. The sample runs from 2000 to 2021. Panel A presents individual characteristics. Age is the age of the individual in years. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. Earnings are the yearly gross wages and salary from the main job. Number of Kids is the total number of kids. Employed is an indicator variable that equals one if an individual is employed and zero otherwise. Full Time is an indicator variable that equals one if an individual is full-time employed and zero if part-time employed. Part Time is an indicator variable that equals one if an individual is part-time employed and zero if full-time employed. Female earn more is an indicator variable which equals one if the female partner earns more than the male partner, and zero otherwise. Panel B presents gender differences. Columns (1) and (2) report mean values of different characteristics for women and men separately. Column (3) reports the difference between women and men. In column (4), I report normalized mean differences as in Imbens and Woolridge (2009).

Panel A: Summary Statistics						
	Mean (1)	Median (2)	SD (3)	1 th (4)	99 th (5)	Obs. (6)
Age	31.39	31.00	7.83	16.00	51.00	24,681
Female	0.50	1.00	0.50	0.00	1.00	24,681
Earnings	58,703	51,272	52,886	0.00	294,340	24,591
Sine Earnings	9.98	11.54	4.04	0.00	13.12	24,591
Number of Kids	2.01	2.00	0.83	1.00	4.00	24,681
Employed	0.86	1.00	0.34	0.00	1.00	24,521
Full Time	0.75	1.00	0.43	0.00	1.00	21,180
Part Time	0.25	0.00	0.43	0.00	1.00	21,180
Female Earns More	0.326	0.00	0.47	0.00	1.00	24,681
Panel B: Gender Differences						
	Male	Female	Difference	t-stats	Normalized diff. (< 0.25)	
Age	32.05	30.73	1.320	13.28	0.169	
Earnings	74,911	42,531	32,380	50.43	0.612	
Number Kids	2.01	2.00	0.01	0.79	0.010	
Employed	0.925	0.803	0.122	28.23	0.355	
Full Time	0.909	0.576	0.333	60.82	0.773	
Part Time	0.091	0.423	-0.333	-60.82	-0.773	
Female Earns More	0.321	0.331	-0.010	-1.61	-0.021	

Table 2: Intrahousehold Household Bargaining Power and the Child Penalty in Labor Force Participation

This table presents results on the impact of getting children on females' labor force participation. Columns (1) and (2) show the impact on employment which is an indicator variable that equals one if an individual is employed and zero otherwise. Columns (3) to (5) shows the impact on full-time employment which is an indicator variable that equals one if an individual is full-time employed and zero if part-time employed. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age and wave fixed effects and additionally person fixed effects in columns (2), (4) and (5). Additionally, education, industry and occupation fixed effects are included in column (5). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Employed		Full Time		
	(1)	(2)	(3)	(4)	(5)
Female	0.008 (0.84)		-0.120*** (7.06)		
Female Earns More	-0.002 (0.20)		-0.025 (1.51)		
Female Earns More x Female	-0.011 (0.73)		0.092*** (3.15)		
Post	-0.081*** (6.28)	-0.090*** (7.64)	-0.010 (0.74)	-0.083*** (5.14)	-0.061*** (4.75)
Post x Female	-0.265*** (12.54)	-0.267*** (14.91)	-0.510*** (21.51)	-0.514*** (23.41)	-0.505*** (23.53)
Female Earns More x Post	-0.015 (0.99)	-0.019 (1.31)	-0.022 (1.04)	-0.017 (0.85)	-0.022 (1.19)
Female Earns More x Post x Female	0.169*** (6.20)	0.146*** (5.52)	0.146*** (3.36)	0.111*** (2.77)	0.096** (2.68)
Age FE	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes
Person FE	No	Yes	No	Yes	Yes
Education FE	No	Yes	No	No	Yes
Industry FE	No	No	No	No	Yes
Occupation FE	No	No	No	No	Yes
Adjusted R^2	0.120	0.282	0.332	0.498	0.544
Observations	24519	24519	21180	21168	20783

Table 3: Intrahousehold Bargaining Power and the Child Penalty in Earnings

This table presents results on the impact of getting children on females' earnings. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from the main job. All employed individuals in the household sample are included. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age and wave fixed effects and person fixed effects in columns (2) and (3). Additionally, education, industry and occupation fixed effects are included in column (3). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	(1)	(2)	(3)
Female	-0.289*** (11.11)		
Female Earns More	-0.127*** (7.56)		
Female Earns More x Female	0.433*** (7.33)		
Post	0.014 (0.54)	-0.067*** (2.93)	-0.042** (2.38)
Post x Female	-0.556*** (14.53)	-0.532*** (17.86)	-0.504*** (17.72)
Female Earns More x Post	-0.004 (0.10)	0.005 (0.14)	0.002 (0.07)
Female Earns More x Post x Female	0.228*** (2.90)	0.187*** (3.54)	0.162*** (3.48)
Age FE	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes
Person FE	No	Yes	Yes
Education FE	No	No	Yes
Industry FE	No	No	Yes
Occupation FE	No	No	Yes
Adjusted R^2	0.516	0.732	0.762
Observations	21180	21168	20783

Table 4: Intrahousehold Bargaining Power Variations

This table presents results on intrahousehold bargaining power variations. Columns (1) to (3) presents results on the impact of getting children on females' labor force participation and columns (4) to (6) on females' earnings. Columns (1) to (3) include all employed individuals in the household sample. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from the main job. Columns (4) to (6) show the impact on employment which is an indicator variable that equals one if an individual is employed and zero otherwise. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Female occ more is an indicator variable which equals one if the female is in a higher occupation than her partner, and zero otherwise. Female educ more is an indicator variable which equals one if the female has a higher education than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, person and education fixed effects. Industry and occupation fixed effects are included in columns (4) to (6). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Labor Force Participation			Earnings		
	(1)	(1)	(3)	(4)	(5)	(6)
Post	-0.090*** (7.64)	-0.099*** (8.70)	-0.081*** (6.47)	-0.042** (2.38)	-0.012 (0.68)	-0.021 (1.07)
Post x Female	-0.267*** (14.91)	-0.206*** (10.78)	-0.278*** (15.68)	-0.504*** (17.72)	-0.452*** (12.41)	-0.486*** (15.12)
Female Earns More x Post	-0.019 (1.31)			0.002 (0.07)		
Female Earns More x Post x Female	0.146*** (5.52)			0.162*** (3.48)		
Female Occ More x Post		-0.016 (0.82)			-0.110*** (2.77)	
Female Occ More x Post x Female		0.094*** (2.85)			0.145** (2.49)	
Female Educ More x Post			-0.037*** (2.85)			-0.039 (1.48)
Female Educ More x Post x Female			0.130*** (5.03)			0.076* (1.74)
Age FE	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes	Yes	Yes
Education FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	No	No	No	Yes	Yes	Yes
Occupation FE	No	No	No	Yes	Yes	Yes
Adjusted R^2	0.282	0.240	0.283	0.762	0.765	0.760
Observations	24260	18476	24641	20783	16191	21107

Table 5: Robustness: Relative Income Based on Two Years Before Birth

This table presents results on the impact of getting children on females' labor force participation in columns (1) and (2), and females' earnings in columns (3). Column (1) shows the impact on employment which is an indicator variable that equals one if an individual is employed and zero otherwise. Column (2) shows the impact on full-time employment which is an indicator variable that equals one if an individual is full-time employed and zero if part-time employed. In column (3) includes all employed individuals in the household sample. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from the main job. Female earn more is an indicator variable which equals one if two years before birth the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, education and person fixed effects. Industry and occupation fixed effects are added in columns (2) and (3). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Labor Force Participation		Compensation
	employed (1)	full-time (2)	(3)
Post	-0.093*** (7.72)	-0.051*** (4.00)	-0.036* (1.97)
Post x Female	-0.259*** (14.45)	-0.540*** (24.34)	-0.517*** (17.38)
Female Earns More x Post	-0.013 (0.70)	-0.007 (0.36)	0.012 (0.38)
Female Earns More x Post x Female	0.122*** (4.13)	0.146*** (3.94)	0.168*** (3.36)
Age FE	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes
Person FE	Yes	Yes	Yes
Education FE	Yes	Yes	Yes
Industry FE	No	Yes	Yes
Occupation FE	No	Yes	Yes
Adjusted R^2	0.286	0.549	0.778
Observations	22190	18967	18967

Table 6: Robustness: Relative Income Threshold

This table uses different thresholds to define whether a woman earns more than her partner. Panel A shows the impact on labor force participation and Panel B the impact on earnings. Female earn more dummy is set to one if the female earns $1 + x$ more than her partner and zero if she earns equal or less than her partner. x is equal to 0.05 in column (1), 0.1 in column (2), 0.15 in column (3), 0.2 in column (4), 0.25 in column (5) and 0.3 in column (6). Earnings are the hyperbolic sine transformation of yearly gross wages and salary from the main job. Labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave and person fixed effects. Additionally, industry and occupation fixed effects are included in Panel A. t -statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

Panel A: Labor Force Participation						
	0.05 (1)	0.10 (2)	0.15 (3)	0.2 (4)	0.25 (5)	0.3 (6)
Post	-0.10*** (7.98)	-0.10*** (7.82)	-0.10*** (7.97)	-0.10*** (7.85)	-0.10*** (7.72)	-0.10*** (7.87)
Post x Female	-0.26*** (14.56)	-0.26*** (14.51)	-0.26*** (14.53)	-0.26*** (14.53)	-0.26*** (14.55)	-0.26*** (14.56)
Female Earns More x Post	-0.01 (0.86)	-0.01 (0.58)	-0.01 (0.80)	-0.02 (0.89)	-0.01 (0.77)	-0.02 (0.83)
Female Earns More x Post x Female	0.15*** (5.15)	0.14*** (4.62)	0.15*** (4.98)	0.16*** (5.20)	0.15*** (4.52)	0.14*** (3.99)
Age FE	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.277	0.276	0.278	0.280	0.282	0.284
Observations	23572	22663	22028	21592	21023	20528
Panel B: Compensation						
	0.05 (1)	0.10 (2)	0.15 (3)	0.2 (4)	0.25 (5)	0.3 (6)
Post	-0.04** (2.41)	-0.04** (2.24)	-0.04** (2.12)	-0.04** (2.15)	-0.04** (2.05)	-0.04** (2.07)
Post x Female	-0.50*** (17.76)	-0.50*** (17.69)	-0.50*** (17.72)	-0.50*** (17.70)	-0.51*** (17.75)	-0.50*** (17.76)
Female Earns More x Post	0.01 (0.21)	-0.00 (0.06)	-0.02 (0.59)	-0.02 (0.48)	-0.02 (0.52)	-0.01 (0.33)
Female Earns More x Post x Female	0.17*** (3.38)	0.16*** (3.03)	0.19*** (3.37)	0.19*** (2.26)	0.19*** (2.83)	0.20*** (2.98)
Age FE	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes	Yes	Yes
Education FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Occupation FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.761	0.763	0.761	0.761	0.761	0.762
Observations	19931	19132	18598	18223	17725	17296

Table 7: Does Relative Female Income have an Influence on the Child Penalty?

This table shows the impact of becoming first-time parents depending on female income. Female wage median is an indicator that equals one if, one year before birth, a woman earned more than the median income in my sample and zero otherwise. Columns (1) and (2) show the influence on labor force participation. Labor force participation is an indicator variable that equals one if an individual is (full-time) employed and zero otherwise. Columns (3) present the effect of becoming first-time parents on the earnings of all employed individuals. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from the main job. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, education and person fixed effects. Additionally, industry and occupation fixed effects are included in columns (2) and (3). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Labor Force Participation		Compensation
	employed (1)	full-time (2)	(3)
Post	-0.102*** (7.06)	-0.062*** (4.38)	-0.081** (3.83)
Post x Female	-0.287*** (12.67)	-0.488*** (19.97)	-0.521*** (14.96)
Female Earns More x Post	-0.029* (1.88)	-0.023 (1.17)	-0.030 (1.06)
Female Earns More x Post x Female	0.130*** (4.58)	0.109*** (2.91)	0.156** (3.29)
Female Wage Median x Post	0.031** (2.06)	0.003 (0.18)	0.096*** (3.20)
Female Wage Median x Post x Female	0.049 (1.67)	-0.040 (1.18)	0.032 (0.69)
Age FE	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes
Person FE	Yes	Yes	Yes
Education FE	Yes	Yes	Yes
Industry FE	No	Yes	Yes
Occupation FE	No	Yes	Yes
Adjusted R^2	0.281	0.544	0.807
Observations	24229	20768	20768

Table 8: Does Total Household Income Have an Influence on the Child Penalty?

This table shows the impact of becoming first-time parents depending on household income. Columns (1) and (3) only use households below the median household income and columns (2) and (4) use above-median income household. Household income dummy is an indicator that is equal to one if the household earns more than the median household income one year before birth, and zero otherwise. Columns (1) and (2) show the influence on labor force participation. Labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. Columns (3) and (4) present the effect of becoming first-time parents on the earnings of all employed individuals. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from the main job. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, education and person fixed effects. Additionally, industry and occupation fixed effects are included in columns (3) to (4). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Labor Force Participation		Compensation	
	low (1)	high (2)	low (3)	high (4)
Post	-0.098*** (5.61)	-0.086*** (6.74)	-0.037 (1.59)	-0.034 (1.45)
Post x Female	-0.283*** (10.71)	-0.257*** (10.90)	-0.481*** (11.98)	-0.525*** (13.92)
Female Earns More x Post	-0.025 (1.05)	-0.013 (0.74)	0.053 (1.50)	-0.014 (0.32)
Female Earns More x Post x Female	0.156*** (4.12)	0.138*** (3.49)	0.124** (2.08)	0.202*** (2.84)
Age FE	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes
Education	Yes	Yes	Yes	Yes
Industry	No	No	Yes	Yes
Occupation	No	No	Yes	Yes
Adjusted R^2	0.315	0.235	0.718	0.784
Observations	12530	11730	10518	10264

Table 9: Does Age Have an Influence on the Child Penalty?

This table examines whether individual's age has an influence on the child penalty. Columns (1) and (3) use individuals who become first-time parents at the age of 30 or younger and columns (2) and (4) use individuals who become first-time parents at the age of 31 or older. Columns (1) and (2) show the influence on labor force participation. Labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. Columns (3) and (4) on employed individuals' earnings. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from their main job. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, education and person fixed effects. Additionally, industry and occupation fixed effects are included in columns (3) and (4). t -statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Labor Force Participation		Compensation	
	age \leq 30 (1)	age $>$ 30 (2)	age \leq 30 (3)	age $>$ 30 (4)
Post	-0.099*** (4.61)	-0.086*** (5.97)	-0.034 (0.99)	-0.008 (0.41)
Post x Female	-0.279*** (9.80)	-0.245*** (9.92)	-0.461*** (12.44)	-0.531*** (12.79)
Female Earns More x Post	-0.020 (0.82)	-0.018 (1.11)	0.080* (1.87)	-0.035 (0.92)
Female Earns More x Post x Female	0.143*** (3.15)	0.137*** (4.08)	0.035 (0.52)	0.235*** (3.55)
Age FE	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes
Education FE	Yes	Yes	Yes	Yes
Industry FE	No	No	Yes	Yes
Occupation FE	No	No	Yes	Yes
Adjusted R^2	0.303	0.246	0.746	0.765
Observations	11414	12846	9453	11330

Table 10: The Impact of Conservative Gender Norms on the Child Penalty

This table shows whether the impact of becoming first-time parents is influenced by gender norms. Conservative and non-conservative is defined based on the Gender Norms index. Columns (1) and (3) use individuals with non-conservative gender norms and columns (2) and (4) use individuals with conservative gender norms. Columns (1) and (2) show the influence on labor force participation. Labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. Columns (3) and (4) present the effect of becoming first-time parents on the earnings of all employed individuals. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from their main job. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, education and person fixed effects. Additionally, industry and occupation fixed effects are included in columns (3) to (4). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Labor Force Participation		Compensation	
	non-cons (1)	cons (2)	non-cons (3)	cons (4)
Post	-0.092*** (6.67)	-0.083*** (5.00)	-0.046* (1.92)	-0.037 (1.39)
Post x Female	-0.211*** (10.15)	-0.352*** (13.04)	-0.480*** (12.77)	-0.548*** (13.77)
Female Earns More x Post	-0.016 (0.88)	-0.023 (0.93)	-0.032 (0.85)	0.049 (1.14)
Female Earns More x Post x Female	0.103*** (3.65)	0.171*** (3.56)	0.172*** (2.94)	0.138* (1.85)
Age FE	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes
Education FE	Yes	Yes	Yes	Yes
Industry FE	No	No	Yes	Yes
Occupation FE	No	No	Yes	Yes
Adjusted R^2	0.234	0.339	0.762	0.764
Observations	13160	11099	11443	9339

Table 11: The Impact of Becoming Parent on Housework

This table presents results on the impact of becoming first-time parents on housework. Columns (1) and (2) show the impact on housework hours per week and columns (3) and (4) on the hyperbolic sine transformation of housework hours per week. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, and person fixed effects. *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Hours per week		Sine	
	(1)	(2)	(3)	(4)
Female	2.208*** (10.01)		0.384*** (9.81)	
Female Earns More	-0.088 (0.37)		-0.051 (1.10)	
Female Earns More x Female	0.500 (1.21)		0.152** (2.13)	
Post	1.059*** (4.70)	0.981*** (4.41)	0.129*** (3.34)	0.116*** (4.11)
Post x Female	8.983*** (21.95)	7.745*** (20.08)	0.682*** (14.78)	0.558*** (14.02)
Female Earns More x Post	0.962** (2.68)	0.459 (1.55)	0.158*** (2.75)	0.062 (1.44)
Female Earns More x Post x Female	-3.552*** (4.82)	-2.537*** (3.95)	-0.386*** (4.52)	-0.255*** (3.91)
Age FE	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes
Person FE	No	Yes	No	Yes
Adjusted R^2	0.321	0.530	0.348	0.572
Observations	22210	22203	22210	22203

Table 12: The Impact of Intrahousehold Bargaining Power on Childcare

This table presents results on the impact of relative household income on childcare. Childcare is the hyperbolic sine transformation of total hours per week where childcare is used. Columns (1) is the hours spend in total child care, and columns (2) to (7) is the hours spend in the different child care categories. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. The regression includes age, wave, and person fixed effects. *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Total (1)	Relatives (2)	Friends (3)	Nanny (4)	Day Care (5)	Kindergarten (6)	Other (7)
All							
Female Earns More	0.200** (2.53)	0.154** (2.04)	-0.022 (1.31)	-0.049 (1.24)	0.240*** (3.04)	-0.024 (0.88)	-0.010 (1.33)
Age FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Education FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.050	0.010	0.004	0.053	0.024	0.022	0.002
Observations	4091	4091	4091	4091	4091	4108	4091

Table 13: The Impact of Childcare Availability

This table shows whether the impact of becoming first-time parents is influenced by childcare availability. Columns (1) and (3) only use individuals who live in a urban area and columns (2) and (4) individuals who live in a rural areas. Urban is defined as living in major urban or other urban, and rural is defined as living in bounded locality, rural balance or migratory based on the state section provided by HILDA. Columns (1) and (2) show the influence on labor force participation. Labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. Columns (3) and (4) present the effect of becoming first-time parents on the earnings of all employed individuals. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from the main job. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, education and person fixed effects. Additionally, industry and occupation fixed effects are included in columns (3) to (4). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Labor Force Participation		Compensation	
	urban (1)	rural (2)	urban (3)	rural (4)
Post	-0.075*** (6.18)	-0.158*** (4.67)	-0.031* (1.73)	-0.106** (2.20)
Post x Female	-0.286*** (15.09)	-0.200*** (3.58)	-0.507*** (17.08)	-0.502*** (5.05)
Female Earns More x Post	-0.021 (1.30)	-0.035 (0.72)	-0.005 (0.18)	0.112 (1.42)
Female Earns More x Post x Female	0.162*** (5.77)	0.072 (0.83)	0.152*** (3.11)	0.053 (0.41)
Age FE	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes
Education FE	Yes	Yes	Yes	Yes
Industry FE	No	No	Yes	Yes
Occupation FE	No	No	Yes	Yes
Adjusted R^2	0.277	0.377	0.767	0.797
Observations	20625	3533	17808	2864

Table 14: The Impact of Change of Paid Paternal Leave Regulation

This table shows the impact of becoming first-time parents before and after 2010 to assess potential changes over time and the impact of change in parental leave regulation. Columns (1) and (3) only use individuals who become first-time parents before 2011 and columns (2) and (4) after 2010. Columns (1) and (2) show the influence on labor force participation. Labor force participation is an indicator variable that equals one if an individual is employed and zero otherwise. Columns (3) and (4) present the effect of becoming first-time parents on the earnings of all employed individuals. Earnings are the hyperbolic sine transformation of yearly gross wages and salary from their main job. Female earn more is an indicator variable which equals one if the female earns more than her partner, and zero otherwise. Post is an indicator variable that takes the value of one after birth of the first child, and zero otherwise. Female is an indicator variable that takes the value of one if a person is female, and zero otherwise. The regression includes age, wave, education and person fixed effects. Additionally, industry and occupation fixed effects are included in columns (3) to (4). *t*-statistics based on standard errors clustered by person and age level are shown in parentheses. *, ** and *** denote significance at the 10%, 5% and 1% levels, respectively.

	Labor Force Participation		Compensation	
	≤ 2010 (1)	> 2010 (2)	≤ 2010 (3)	> 2010 (4)
Post	-0.110*** (5.25)	-0.096*** (7.16)	-0.052* (1.71)	-0.021 (1.01)
Post x Female	-0.248*** (7.51)	-0.275*** (12.82)	-0.564*** (11.91)	-0.468*** (12.72)
Female Earns More x Post	-0.020 (0.78)	-0.018 (1.18)	0.049 (1.25)	-0.024 (0.67)
Female Earns More x Post x Female	0.103** (2.27)	0.169*** (5.34)	0.160** (2.14)	0.162*** (2.77)
Age FE	Yes	Yes	Yes	Yes
Wave FE	Yes	Yes	Yes	Yes
Person FE	Yes	Yes	Yes	Yes
Education FE	Yes	Yes	Yes	Yes
Industry FE	No	No	Yes	Yes
Occupation FE	No	No	Yes	Yes
Adjusted R^2	0.314	0.262	0.747	0.771
Observations	9124	15135	7714	13066