

The University of Chicago

**Who Should Take Care of the Baby? Understanding How American Families
Decide Their Division of Labor in Parental Leave in the Pre-birth Period**

Yehong Deng

July 2021

A paper submitted in partial fulfillment of the requirements for the
Master of Arts degree in the Master of Arts in Computational Social
Science

Faculty Advisor: Jon Clindaniel

Preceptor: Pedro Alberto Arroyo

Acknowledgment

Thank my mother for supporting me in finishing my master's degree, and I hope you can stay healthy and overcome the disease. Thank Professor Clindaniel and Professor Hodos, for advising me to complete this thesis. Thank my preceptor Pedro for being so helpful and giving his timely and valuable feedback. Thank my friends, Chiv, Joanna, Renee, Harry, and Selina, for every enjoyable weekend. Mencius once said, "when heaven is about to confer a great responsibility on to a man, it will first fill his heart with frustrations, toil his sinews and bones, exposes his body to hunger, subjects him to extreme poverty, confounds his journey with setbacks and troubles. So as to stimulate his alertness, toughen his nature, eventually bridging his incompetence gap and prepare him for the task." In this chaotic period, I wish this old saying can be our mutual encouragement.

Abstract

Based on Gary Becker's analytical tools—the family production model and the interdependent preferences—for family economics and the later criticisms regarding Becker's auxiliary assumptions, the study attempted to answer how American people's calculation of perceived benefits and costs could mediate the effects of economic factors and gender ideology regarding their parental leave norms during the pre-birth period. With data collected through an online survey on MTurk, the study revealed that male respondents in the survey included both the economic factors and gender ideology in calculating their expected gain and loss of family well-being in taking care of the children. For female respondents, only the gender ideology entered their functions of perceived utility. Moreover, regarding the choice of exiting work for full-time parenting, there was a partial mediating effect existed between male respondents' perceived benefits and their economic factors. By comparison, both perceived costs and benefits for female participants partially mediated the effect of gender ideology.

Keywords: Division of labor, Childcare, Gender Equality, Family Economics

Introduction

For the last decades, we have witnessed many signs of progress for gender equality. Within social media platforms, people are raising their voices for gender equalities through hashtags. For instance, #MeToo, one of the most well-known hashtags, called for women who had suffered from sexual harassment and assaults to raise their voices online, and #WhyILeft and #WhyIStayed advocated people to focus on preventing domestic violence (Roy 2018). On the national level, many countries are now financing women's economic independence. According to the OECD (2021), its 2030 Agenda aims for a world of full gender equality. To achieve this goal, the OECD Development Assistance Committee (DAC) members invested an average of 44.8 billion USD per year in gender equality and women's equality in 2016-2017. As a result, we can see a downward trend in the gender wage gap among OECD countries. Regarding the percentage of men's earnings, the difference between men's and women's average earnings for OECD members decreased from 18.8 in 1996 to 12.8 in 2018. Moreover, on the individual level, recent studies found that the reversal of the gender gap in educational attainment and the increase of women's participation in the paid labor market had helped decrease the difference in earnings between men and women (Blau and Kahn 2017; Olivetti and Petrongolo 2016).

Although these achievements have pushed us towards a world where every woman can enjoy full gender equality, several challenges still hinder our pathway to such a goal. Among those obstacles, the family remains one of the most challenging areas of change. As Friedrich Engels (1884) pointed out, the family structure where men played as the breadwinner and women as the housemaker represented a form of exploitation. As he argued, "the modern individual family is founded on the open and concealed domestic slavery of the wife" because "the husband is obliged to earn a living and support his family, and that in itself gives him a

position of supremacy" (39). The role of taking the responsibility of the breadwinner bestows men control over the means of subsistence. Therefore, Engels (1884) concluded that "within the family, he (the husband) is the bourgeois, and the wife represents the proletariat" (39). For Engels, the origin of gender inequality and conflicts is the unequal sexual division of labor in housework and market activities. Nonetheless, Blackledge (2018) later argued that Engels's claim could not stand up to critical scrutiny as a scientific statement, as it did not capture neither "the mediated nature of the domestic relationship for bourgeois women," whose typical experiences of family lives were far different from domestic slavery, nor "the harshness of conditions experienced by proletarian women: most of whom have little choice but to endure both domestic slavery and wage slavery" (313).

Later Marxian theorists argued that the concept of the social reproduction of labor power should include the cost of reproducing the next generation of wage laborers—children. Thus, rather than attributing women's oppression to the sexual division of labor, they claimed that the oppression originated within the modern family conceived as a unit for the privatized reproduction (Vogel 2013, Blackledge 2018). In other words, since a family needs to reproduce its next generation of laborers, a woman has to rely on a man's provision of life subsistence during her childbearing period. Therefore, children's birth forms the material basis for women's subordination within their families. Although pointing out the limitations, Blackledge acknowledged that Engels's claim remained a fundamental resource for people wanting to understand the exploitation of women within a capitalist system. Engels was right to emphasize that men have the material basis for their supremacy within families. However, the source for the material basis was not the sexual division of labor that bestow men control over means of subsistence. Instead, scholars pointed out that a family's demand for children as its future wage

laborers and a woman's need for her husband's provision of subsistence form the material basis for male domination.

Even though later Marxian scholars have pointed out a different mechanism for women's oppression, the unequal sexual division of labor within the family that Engels described seems to persist hundred years later and hinder women's liberation. As OECD's (2019) Social Institutions and Gender Index (SIGI) Global Report has shown, people's households have the highest levels of gender discrimination. Globally, women handle 75 percent of unpaid care and domestic labor as laws and social norms still subordinate women's status and limit women's financial ability. Scholars found that even though the improvements in women's education level and labor participation had promoted gender equality in income, the gender division of labor in housework, especially childcare, helped to persist the gender wage gap (Blau and Kahn 2017). Studies had demonstrated that the traditional belief in women's role in childcare not only handicapped women's labor flexibility (Blau and Kahn 2017; Pettit and Hook. 2005) but also imposed a career penalty for mothers (Aisenbrey et al. 2009). Hence, to improve global gender equality, people should find an equal distribution of housework.

Compared to Engels, instead of interpreting the division of household labor as gender exploitation, Gary Becker (1965, 1976, 1981, 1991) suggested that family members' actions may follow the logic of maximizing family income and utility. Becker (1976, 1991) argued that the assumption of maximizing behavior, stable preferences, and equilibrium in the implicit or explicit market should be used to study family activities systematically. For the gender division of labor in the family, Becker's theory suggests that the distinctions between wife and husband's role in the family economy resulted from specialization based on comparative advantages. In order to maximize the family utility, the role of the breadwinner only depends on who would

earn more income for the family. In other words, if a woman can earn more income in the market than her husband, she would be the one who works while the husband would take the responsibility of the house maker and vice versa. Hence, from Becker's perspective, there may not exist any exploitative relations between the husband and the wife. The seemingly unequal division of domestic labor results from a collective rational decision made by the couple to allow them to specialize in the things they do best.

Although scholars later criticized Becker's theory for his secondary and tertiary auxiliary assumptions on preference (Pollak 2002, Nussbaum 1995) and household production (Pollak 2002), Becker had introduced the economics of the family, and his foundational assumptions of economic approach are now widely accepted among the academia. Guided by Becker's theory, social scientists later studied the effect of economic factors on people's decision on childcare labor and illustrated that the relative wage between the husband and the wife (Aassve et al. 2014; Lappegard 2008; Wood and Marynissen 2019), people's workplace conditions (Wood and Marynissen 2019; Bygren and Duvander 2006), and work hours (Aassve et al. 2014; Wood and Marynissen 2019) were associated with people's decision on parental leave among European countries. However, in the United States, scholars did not find any empirical evidence that supported Becker's theory on the gender division of labor. Instead, studies had shown that for American women, the rapid increase of participation in the labor market did not lead to a decrease in the amount of time spent on childcare for mothers, and American mothers still take much more labor in parenting than their husbands. (Bianchi, 2000; Nock and Kingston, 1988); for American men, Brines (1994) even found that a husband may do less housework if he relied on his wife for economic support. Findings in the United States suggested that the distribution of housework in the United States may serve as a vehicle of symbolic display for masculinity or

femininity (Brines 1993, 1994). In other words, people are performing gender through the gendered division of household labor. For people in European countries, scholars also found that gender ideology affected families' decisions on the division of parental leave usage between husband and wife (Aassve et al. 2014; Jugovic 2016; Duvander et al. 2014). In addition to economic factors and gender ideology, Vierling-Claassen (2013) applied a game-theoretic approach to examine how egalitarian-minded couples would distribute their childcare labor in a game of repeated play. The study illustrated that even an egalitarian-minded couple could end up having an unequal division of labor and pointed out the importance of the timing for couples to plan the distribution of childcare before the birth of a child.

Past studies demonstrated that the economic factors affected European people the same way Becker had suggested, while no empirical data in the United States supported Becker's claim. Such a perplexing situation suggested that housework represents an agent for the symbolic display of masculinity and femininity. Hence, the division of labor in housework, including the care of a young child, epitomized the gender ideology in American society. Moreover, Scholars also discovered that gender ideology affected European people's choice in parental leave. A broad literature has indicated the effects of economic factors and gender ideology in people's division of childcare labor. However, little was known about how people's rational perception could help explain the effects of economic factors and gender ideology on the division of labor in the care for children. In other words, based on Becker's theory, we suppose that the division of childcare labor results from people's attempts to maximize their family utility, and past studies have shown that economic factors and gender ideology can be associated with people's decisions on labor distribution. However, we do not know how people's perceived costs and benefits in family utility are related to economic factors and gender beliefs.

To fill the gap of perceived rationality in the parental decision, I focused on answering how American people's calculation of perceived benefit and cost could mediate the effects of economic factors and gender ideology regarding their parental leave norms during the pre-birth period. More specifically, because most pieces of literature that I applied to build my study focused on the division of labor between males and females, I decided to limit this study's scope exclusively to heterosexual couples, though some scholars have found people's sexual orientation may influence their choices in parental leave (Goldberg and Perry-Jenkins 2007). Moreover, based on Vierling-Claassen's (2013) findings, which suggested equal share of childcare labor depends on careful planning before the child's birth, this study only focused on people's normative evaluation of parental leave during the pre-birth period. To study the mediation effect of people's rational perception, I first aimed to answer whether American people include economic factors and gender ideology into their calculation of benefit and cost. Then, the study continued to investigate how these three variables would contribute to people's parental leave decisions.

The ultimate goal of this research was to explore methods to improve gender distributive justice in the labor market. Many scholars have pointed out that the presence of a child and the traditional role of women in taking childcare responsibility had handicap women from getting equal pay and even imposed career penalties (Blau and Kahn 2017; Pettit and Hook 2005; Aisenbrey et al. 2009). The present study, though, aimed to illustrate the rationale behind a family's gender division of labor in parental leave before transitioning to parenthood. The study also tried to suggest methods for increasing fathers' incentives to use the leave and promote gender equality in parental leave, and further help women pursue a fairer environment in the labor market.

Literature Review

Gary Becker's Family Economics and the Theorem of Gender Division of Labor

There is a vast literature aiming to reveal the rationale behind people's decisions on the division of labor in housework and childcare. Gary Becker provided a systematic approach to study this topic from the perspective of family economics. Becker (1976) had argued that "human behavior is not compartmentalized...Rather, all human behavior can be viewed as involving participants who maximize their utility from a stable set of preferences and accumulate an optimal amount of information and other inputs in a variety of markets" (119). There are three fundamental elements in Becker's theory, maximizing behavior, stable preferences, and equilibrium. Later in his *A Treatise on the Family*, Becker (1991) introduced these three foundational concepts to provide a systematic analysis of the family. To understand Becker's family economics, we first need to know what assumptions Becker made for these elements. First, we have to understand what a family aims to maximize. According to Becker (1965), the traditional theory postulates that households maximize utility from the goods purchased on the market at their prices, with resource constraint of money income that consists of earnings and other income. Nonetheless, Becker noted that a family also had to be concerned about the systematic incorporation of non-working time. Hence, he argued that "households will be assumed to combine time and market goods to produce more basic commodities that directly enter their utility functions" (Becker 1965: 495). More specifically, Becker gave a wide range of examples to define the commodities in a family's production: from "the seeing of a play" and "sleeping" (Becker 1965: 495) to "children, prestige and esteem, health, altruism, envy, and pleasure of the senses" (1991: 24). In other words, in defining a family's maximizing behavior, Becker postulated that members in the family would invest their time and labor to maximize the

consumption of goods, services, and activities that produce the greatest physical and mental well-being.

We now know how family members would maximize the family's well-being by combining time and market goods. However, when one family member's preference is at odds with other members' interests, how would the family make the collective decision that maximizes the family utility? Becker's argument of interdependent preference or altruism helps to solve the problem of conflicting interests within family economics. According to Becker (1981), altruism means that an individual's utility function is positively related to the well-being of his or her spouse and is generally recognized to be important within a family. An altruistic family is of great survival value because it insures the family against negative consequences of uncertainty by inducing all members to bear some of the burdens through changes on contributions from the altruist. More specifically, if the altruist in the family suffers a decline in income, the altruist would lower his or her contribution to the family and, hence, reduce other members' consumption; conversely, if the altruist's partner encounters a sudden disaster, the altruist would lower his or her own consumption to raise the contribution to the partner (Becker 1981: 3). Based on the concept of the altruistic family, Becker continued to introduce the Rotten Kid Theorem: "Each beneficiary, no matter how selfish, would maximize the family income of his benefactor, and thereby would internalize all effects of his actions on other beneficiaries" (Becker 1981: 7). Consequentially, based on the Rotten Kid Theorem, no matter how many different or even conflicting preferences exist among family members, a family as a whole would always make the collective decision that maximizes its utility.

Becker's argument about the division of labor in households follows his discussions about a family's maximizing behavior and interdependent preferences. In *A Treatise on the Family*,

Becker (1991) defined the comparative advantage of a member as "the relation between the ratio of his marginal products in the market and household sectors and the ratios of other members" (33). Then Becker continued to argue that to reach the optimal decision for labor division, a household must consider the differential skill and incentives among the family members. The theory of comparative advantage suggests that a household should allocate resources to various activities according to members' comparative advantage. According to Becker's assumption on the altruistic family, members in a household would willingly allocate their time and resources to maximize the commodity output of their family. As a result, Becker concluded that in a family where members have different comparative advantages, members having the greater comparative advantage in the market sector should specialize entirely in the market jobs and invest only in market capital; members having the greater comparative advantage in the household should specialize and invest only in the household.

Based on the theorem he developed, Becker (1991) explained why a traditional family followed the husband as breadwinner and wife as housemaker model. First, Becker argued that there are intrinsic differences between the sexes. More specifically, he stated that "women not only have a heavy biological commitment to the production and feeding of children, but they also are biologically committed to the care of children in other more subtle ways" (37). By contrast, men have a less biological commitment to childcare and have spent their time in markets activities for centuries, thereby accumulating much more market capital in our culture, convention, and education. Hence, the gender division of labor within a family was not exploitation as Engels (1884) argued but a rational decision that based on utility maximization and altruism, and the gender specialization model would continue to reinforce itself, as boys

having advantages in market activities would continue to invest only in the market sector, and girls continue to specialize in their housework.

Some Criticisms on Becker's family economics

While Becker's economic approach with the fundamental assumptions—maximizing behavior and equilibrium—are now widely accepted in academia, some scholars criticized Becker's approach for not following the foundational assumptions but relying on auxiliary assumptions, for which neoclassical economics lacks empirical support.

Regarding Becker's assumption on family production, criticisms were raised because Becker assumed the absence of joint production and presupposed the observability and measurability of commodities. As Becker's household production model postulated that a family "combine time and market goods to produce more basic commodities that directly enter their utility functions" (Becker 1965), Pollak (2002) argued that shadow prices must exist during the transition from time and market goods to basic commodities. Pollak reasoned that joint production would complicate the interpretation of commodity shadow prices:

"Joint production seriously compromises the validity of the analogy between the shadow prices of commodities in the household production model and the market prices of goods in the theory of consumer behavior. With joint production, the commodity shadow prices facing a household depend not only on the household's resources and technology but also on the household's preferences. In the language of consumer theory, with joint production, the household becomes a monopsonist with a nonlinear budget constraint rather than a competitive consumer with a linear budget constraint" (17).

Moreover, another problematic assumption in Becker's family production model is that it assumed commodities are observable and measurable. Becker's examples of commodities range from "the seeing of a play" and "sleeping" (Becker, 1965) to "children, prestige and esteem, health, altruism, envy, and pleasure of the senses" (1991: 24). Pollak (2002) argued that while commodities like seeing a play or time spent sleeping can be cardinally measurable, prestige,

esteem, and pleasures of the senses appear to be ordinal utilities rather than measurable and observable outputs of a household production process.

For Becker's assumption on preference, critics focused on his insistence on altruistic preferences. Nussbaum (1995), for instance, contended that Becker's altruist model treats the head of the household as an altruistic agent of the interests of all the family members. Then, she proved such an assumption false by giving the empirical evidence of males being neglectful of the interests of females and children and making decisions inimical to those interests.

Furthermore, Pollak (2002) argued that what Becker assumed "altruistic" about preferences was what he defined as "deferential" preferences. Becker's altruistic preferences can be introduced by supposing that the husband is altruistic and the wife is egoistic. From Pollak's perspective, if the husband, Becker's altruist, cares about his own utility as well as his wife's utility, the husband has a deferential preference, as he defers to his wife's preferences regarding her consumption pattern. Nonetheless, Pollak (2002) contended that "causal observation and introspection suggest that family members often have non-deferential preferences" (13), and "non-deferential preferences are compatible with each spouse preferring a different consumption pattern for the other spouse than the other spouse would choose for himself or herself" (14). To illustrate non-deferential preference, Pollak gave an example of a wife requiring her husband to spend more time jogging, as exercise is good for him. However, the husband would rather watch television. By insisting on the assumption of deferential preference, Becker's altruistic model would consider the wife, who wants her husband to jog and watch television less often, as egoistic.

While scholars had raised many criticisms toward Becker's theory, we have to acknowledge Becker's contributions to the analysis of family economics. As Pollak (2002) argued, although Becker neglected the importance of joint production, "the essential insight of the household

production—that incentives matter, and that changes in incentives cause behavior to change in predictable directions—remains valid" (18). Although Becker wrongly insisted on altruistic preferences, he was right to insist on the importance of interdependent preferences. Nonetheless, these criticisms warn us to use Becker's analytical tools with several cautions:

1. Keeping the importance of joint production in mind, we have to abandon the concept of commodity shadow prices when studying a family's maximizing behavior.
2. A family's maximizing mechanism is further complicated by the argument on the observability and measurability of commodities. Since ordinal commodities are not measurable nor observable, people cannot calculate their family consumptions on a universal scale, and their perceived well-being may not include consumptions that yield ordinal utilities. Hence, we must recognize that a family's utility function is not simply a mathematical formula that transfers the household's resources and technology. Instead, we must also consider the household's preferences and realize that a gap may exist between people's calculation of well-being and their actual utilities.
3. Pollak's statement on non-deferential preferences suggests that members in a family may evaluate their family utility differently, following each member's own consumption pattern and logic.

Economic Factors: Empirical Evidence in Europe Supporting Becker's Theory

Many scholars have studied how economic factors had influenced a married couple's division of labor in housework. Aassve et al. (2014) tested four important hypotheses in the gender division of housework:

- the relative resources approach (the partner who earns less does more housework)
- the time availability perspective (the partner who spends less time doing paid work does more housework)
- the economic dependency model (the partner who contributes proportionally less to the household income does more housework)
- the gender ideology perspective (the beliefs on gender roles influence housework sharing in a couple)

Among these four hypotheses, three of them (the relative resources approach, the time availability perspective, and the economic dependency model) were related to people's earnings. Aassve et al.'s results have shown that among European countries, time availability and relative resources mattered in the most egalitarian countries, while economic dependency led to gender inequality in the division of housework in countries where women as the main-wage earners are rare. Moreover, other scholars have shown similar findings. Lappegard (2008) found that mothers' contributions to the family economy led fathers to take more parental leave in Norway. Wood and Marynissen (2019) further indicated that it is less likely for partners in Belgium with higher pre-birth wages, more working hours, higher employment intensity, and larger workplaces to take parental leave. Last but not least, Bygren and Duvander (2006) found that workplace situation was an important factor that affects Swedish parents' choice in parental leave usage. As these findings suggested, the economic factors do influence people's choice of housework.

Based on Becker's calculative rationality, earning relates to people's perceived benefit and cost as it determines the number of inputs for families to make consumption and produce their commodities. As a result, we can see that scholars had found empirical evidence that may directly support Becker's family economics model in Europe. However, scholars found that

empirical data in the United States failed to support Becker's argument of family production. Instead, these pieces of evidence showed that while the rapid increase in women's participation in the labor market had reduced mother's time spent in housework, American mothers did not reduce the amount of time spent on childcare and still take much more labor in parenting than their husbands (Bianchi, 2000; Nock and Kingston, 1988). Moreover, Brines (1994) found that, within the families where the husband relied on the wife for economic support, "dependent husbands did less housework the more they depend on their wives for income" (682). Hence, Brines (1993, 1994) concluded that the distribution of housework in the United States might serve as a vehicle of symbolic display for gender ideology. By doing less or more housework, people in the United States reassert their masculinity or femininity.

Gender Ideology

Scholars had found evidence to support that people's gender ideology would influence their parenting decisions (Brines 1993, 1994; Bianchi, 2000; Nock and Kingston, 1988). Similarly, studies also have demonstrated gender ideology as an essential factor in the gender division of labor in European families. Jugovic (2016) found that in Croatia, people who supported more equally shared parental leave for heterosexual couples attended religious services less often and had more egalitarian beliefs about gender division of labor, as religious (Christian) beliefs generate more traditional attitudes about gender roles. Moreover, the logistic model illustrated that the strongest predictor of the belief about equal parental leave is the gender-role belief. Similarly, Duvander et al. (2014) also pointed out that gender equality orientation affects people's choices regarding the length of parental leave for fathers and mothers in Sweden. Besides illustrating the effects of earnings, Aassve et al. (2014) also affirmed the significance of gender ideology across European countries.

Hypothesis

So, to summarize the preceding, although facing scholar's criticisms on his assumptions on the absence of joint production, the observability and measurability of commodities, and altruistic preferences, Gary Becker proposed an essential concept—the study of maximizing behavior and interdependent preference—as the analytical tool for studying family economics. Studies later provided perplexing results regarding the association between people's economic factors and the gender division of childcare labor. By contrast, most scholars seem to find universal evidence to illustrate the influence of people's gender ideology in people's uptake in parenting labor.

Past studies demonstrated the effects of economic factors and gender ideology in people's division of childcare labor. However, little was known about how people's perceived calculation of their costs and benefits would affect their decision. Criticisms towards Becker's implicit assumption on the observability and measurability of commodities suggested that a gap exists between people's calculative rationality and their actual incentives that promote their maximizing behavior. Studies have not revealed to what extent individuals' perceived costs and benefits mediate the influences of economic factors and gender ideology in their decision on parental leave uptake. To fill the gap of the perceived rationality in the parental decision, I investigated how people's self-reported costs and benefits in taking care of their children would mediate the effects of economic factors and gender ideology in the division of childcare labor.

While Becker proposed the people's incentive-oriented production model as the essential tool for analyzing family economics, the argument of joint production had suggested that not every resource in a family would be transferred into a commodity that enters the family's utility function. Joint production suggests that people have direct preferences for time use and, hence,

implies that some activities in which people prefer not to spend their time relative to other activities may not be considered in people's calculations of their incentives. Moreover, Pollak and Nussbaum's criticisms on Becker's altruistic model suggested that while members in a family may have interdependent preferences, they may not follow the same maximizing behavior as the sole altruist defers to other members' consumption patterns. Instead, members could have distinctive calculations of costs and benefits based on their own logic of utility maximization. Based on the discussions of the production model, the seemingly perplexing evidence regarding the effect of economic factors among European countries versus the United States might suggest that compared to people in European countries, the Americans may not consider their economic factors into their calculation of costs and benefits in parental leave. By contrast, the universal results supporting the influence of gender ideology suggest that people include their gender value in their perceived calculation of costs and benefits during the process of distributing childcare labor. Hence, my first hypothesis states that:

Hypothesis 1 At the stage before the child's birth, people's economic factors do not influence their decision on the division of labor because they do not include economic factors into their perceived calculation of costs and benefits in parental leave uptake. By comparison, gender ideology is associated with the division of childcare labor, as it enters people's calculation of utility. Hence, people's perceived rationality only mediates the effect of gender ideology.

Nonetheless, the arguments of interdependent preferences may propose a different analytical angle. The criticisms of Becker's altruist model imply that in a heterosexual family, it is possible that the husband and the wife would have different logics in maximizing their family utility. On the other hand, Becker's assumption on interdependent preferences still remains valid. Hence, a

possible mechanism may exist where the interaction effect between the economic factors and gender ideology could offset each other. For example, if a husband has less income than his wife but highly agrees with traditional gender ideology, the interdependent preferences may make him take more parental leave to let his wife work more to reduce the opportunity cost in family income. However, his gender value may suggest that he should spend more time working and leave the responsibility of parenting to his wife, as he thinks a woman would be happier to spend her time with the child. As a result, allowing the wife to have more childcare labor is good for her. From this perspective, I arrived at my second hypothesis:

Hypothesis 2 During the pre-birth period, people do consider both the economic factors and gender ideology in their calculation of costs and benefits in the division of childcare labor, and there is an interaction effect between these two variables.

Method

Survey Design

In this study, I designed an online survey to test my hypothesis and distributed the survey through Amazon.com's Mechanical Turk (MTurk). As Berinsky (2012) attempted to examine the potential advantages and limitations of using MTurk as a subject recruitment device for experimental research, they found that respondents recruited by this online platform are often more representative of the U.S. population than in-person convenience samples. Moreover, the authors also described MTurk as a vehicle for performing low-cost and easy-to-field experiments. Based on Berinsky et al.'s discoveries about MTurk, I decided to recruit my respondents for the experiment using this online platform. There are several rationales for collecting my results in this manner. First, since my research aimed to study the decision-making mechanisms for American families, the targeted population for my study is the whole U.S. population, of which the MTurk could provide a more representative sample. Second, it was impractical for me to engage in in-person survey research because I had limited time for the research, and the COVID-19 pandemic had affected the social distances among people during the time of research. Third, As I also had a limited monetary budget, I needed a low-cost method to distribute my surveys. Therefore, based on Berinsky et al.'s study, the MTurk was the most optimal recruiting method for my research.

If respondents agreed to participate in the study, the survey would first collect information about their gender, sexual orientation, education, marital status, annual income, and economic factors, including their work hours, work stability, and workplace size. Then the survey would continue to provide the respondents with a certain situation (see Scenarios in Appendix). More specifically, I would ask the respondents to imagine themselves being a

member of a heterosexual dual-earner couple, in which the wife was pregnant with a baby. Before the birth of the baby, the respondents were prompted to imagine that the husband and the wife were discussing childcare responsibilities. Both of their employers only offered unpaid parental leave but promised that parents who used the policy would keep their jobs. The wife earned a certain hourly wage difference from the husband, which would be randomly chosen from -5\$, 0\$, or 5\$. Under the scenario assigned, the respondents were asked to identify their perceived benefit and cost if they were to take the leave. Then respondents would continue to indicate their decision on parental leave. Then, the survey will continue to ask questions about respondents' gender ideology.

By assigning respondents to these three scenarios and learning about their parental decisions, the survey prompted the respondents to think about what the husband or the wife should do, given the situation provided. In other words, I designed the survey to learn about respondents' normative evaluations of a stranger's division of childcare labor. Instead of directly asking the participants what they would do if they have a newborn baby, I designed my survey in this manner because of the following considerations. First, the wage gap between the husband and the wife is one of the most important variables to be studied. If the study directly asks the participants to tell their own choice of childcare division of labor, they have to compare their own income to their partners'. I could not ensure that all my respondents would clearly know about their own incomes as well as the earnings of their spouses. For respondents who were not entirely sure about their income (e.g., self-employed workers whose incomes may change every year), keeping track of their incomes and then comparing it to their partners' earnings would add unnecessary difficulty to finish the survey. Moreover, it is also difficult to recruit participants having exact equal earnings with their spouses. Second, since I could not control the marital

status of my participants using MTurk, participants who were single and never married would have no spouses to compare their income. As a result, I decided to provide those three different situations for my respondents to make their evaluations, although doing so meant giving up studying people's actual behavior and, instead, learning about their norms in the division of childcare.

In the scenarios in which I prompted my respondents to imagine, I specified that the husband and the wife were making their childcare decision during the pre-birth period because Vierling-Claassen (2013) has indicated the importance of planning the childcare labor before the baby's birth. More specifically, Vierling-Claassen illustrated that even for couples who are willing to share equal work in the care of the children, it is possible that they would end up with an unequal division of labor. By modeling a situation where parental goals are identical for an egalitarian-minded couple, Vierling-Claassen simulated a game of repeated play to model the couple's parental labor. In such a repeated game model, a parent providing more care would not be able to withdraw this care if doing so leads to insufficient childcare. The simulation showed that equal sharing of childcare was a difficult equilibrium to reach. Arriving at such an equilibrium was only possible if a least one parent started out taking half of the care. Moreover, even when both parents started out doing half the care, they could not ensure equally sharing the care in the end. Hence, the author concluded that "if a couple wants to share the care of a young child equally, it is important to start by sharing care, which means planning carefully before the birth of a child" (224).

Vierling-Claassen's repeated game model implied that division of labor in childcare would not be based on a one-shot decision. A parent's share of the care could change from time to time based on his or her preferences and goals. Moreover, although Gary Becker (1976, 1991)

initially introduced stable preferences as a foundational assumption for the analysis of family economics, he later rejected stable preferences and introduced a new mechanism for preference formations and change (Becker 1992). Becker emphasized the importance of the experiences, as he argued that:

"Children carry along into adulthood the baggage of experience they had only a limited role in shaping. Therefore, a rational person can meaningfully state that she does not 'like' her preferences in the sense that she doesn't like the inherited baggage, the guilt, the sexual fears, the propensity to smoke or drink heavily, and so forth. She can change the stocks of experiences over time, but how much a rational person wants to change depends on how long she expects to live, the strength of the influence of the past on present choices, and other factors. We all are to some extent prisoners of experiences we wish we never had" (337).

Thus, Becker suggested that people's preferences could change along with the experiences they had. Consequently, regarding the care of the children, people may change their preferences based on the experiences they had over a period of time. Therefore, it is possible that people's perceived costs and benefits in taking care of children would vary based on their experiences in parental leave. As a result, it is necessary to specify a certain period for studying people's perceived rationality. Based on Vierling-Claassen's finding, I decided to focus on people's expected decisions on parental leave uptake during the pre-birth period.

Variables

Parental labor. The dependent variable for the study is people's parental leave uptake. In Wood and Marynissen's (2019) study, people's parental decision was measured in two ways. Childcare labor was measured either by the length of parental leave uptake or by the decision to exit the labor force. Using the same method in Wood and Marynissen's work, this study first measured people's parental labor by asking the participants to imagine that a total of 6 hours were required to take care of the baby every day, and the 6-hour leave can be taken entirely by one parent or can be split between the couple in any combination. Given the scenarios assigned,

each participant would choose the number of parenting hours they thought they should take in a day (see Question 11). Then the survey continued to query that if one within the couple has to exit employment to be a full-time parent to take care of the baby, would the participants think they should be the ones who quit their jobs (see Question 12). The first question had seven ordered answer categories, ranging from "0 hours" to "6 hours". The second question was answered in "Yes" or "No."

Perceived benefit. Based on Becker's argument for the production model, people would "combine time and market goods to produce more basic commodities that directly enter their utility functions" (Becker 1965: 495). Moreover, the commodities can range from "the seeing of a play" and "sleeping" (Becker, 1965) to "children, prestige and esteem, health, altruism, envy, and pleasure of the senses" (1991: 24). Hence, the commodities Becker described can be summarized as the sum of a family's mental and material well-being. As a result, I measured this variable through the question: "With 0 being not at all and 10 being a great deal, please indicate the degree to which your family will benefit in terms of mental well-being and material well-being if you were to take the parental leave" (see Question 9). As indicated in the question, this variable was measured by an ordered 11-point scale from 0 to 10.

Perceived cost. Similar to the measurement of the perceived benefit, the perceived cost was also measured by an 11-point scale question: "With 0 being not at all and 10 being a great deal, please indicate the degree to which your family will lose in terms of mental well-being and material well-being if you were to take the parental leave" (see Question 10).

Economic Factors. Past studies have shown that wage difference (Aassve et al. 2014; Lappégard 2008; Wood and Marynissen 2019), workplace conditions (Wood and Marynissen 2019; Bygren and Duvander 2006), and work hours (Aassve et al. 2014; Wood and Marynissen

2019) were associated with people's decision on parental leave among European countries. Based on these findings, I measured people economic factors from four different aspects. First, I queried respondents' weekly work hours (see Question 6). There were eight possible categories for the measurement of people's work schedule: (1) not working; (2) less than 20 hours; (3) 20 to 24 hours; (4) 25 to 29 hours; (5) 30 to 34 hours; (6) 35 to 40 hours; (7) 41 to 45 hours; (8) more than 45 hours. Then, in the survey, I continued to ask how respondents felt stable about their current job (see Question 7) and applied a 6-point scale ranging from "not working" (1) to "very stable" (6) in measuring participants' perceived work stability. For measuring people's workplace sizes, I required the participants to self-report the number of colleagues at their work location (see Question 8). The wage difference between the husband and the wife was not measured by a survey question. Instead, as I randomly assigned my respondents into three different scenarios, where the wife would earn an hourly wage either 5\$, 0\$, or -5\$ more than the husband, these assigned conditions were used as the measurements of the wage gaps. Since the description of the provided scenarios specified that "the wife" earn an hourly wage of \$5, \$0, or -\$5 more than the husband, the measurement of wage difference for female respondents would be opposite to male's measurement. For example, if a male participant was assigned to the situation where the wife earned \$5 more than the husband, the wage difference for him would be recorded as -5. By contrast, a female respondent's wage gap in the same situation would be recorded as 5.

The study measured people's workplace size by using the text-entry question "If you are currently working full-time or part-time, please write down the number of people who are employed at your work location. If you are currently unemployed, please write 'not working'". The measurement depended on people's self-reported answers. However, the results turned out that many respondents had difficulty answering this question. Some of the respondents directly

gave the names of their colleagues, while others skipped the question. Considering the amount of missing data in this question, I decided not to use the measurement of workplace size for the analysis of people's economic factors. As a result, I used the mean score of work hours, work stability, and wage difference to measure the variable economic factors.

Gender ideology. Many nationally representative surveys included items measuring gender ideology. Davis and Greenstein (2009) gathered a list of questions measuring gender ideology in multiple questionnaires. They summarized that those questions could be classified into six categories: "primacy of the breadwinner role, belief in gendered separate spheres, working women and relationship quality, motherhood and the feminine self, household utility, and acceptance of male privilege" (89). Davis and Greenstein (2009) had shown that "the majority of research on gender ideology has asked respondents to report whether they agree or disagree with a series of statements about women's and men's responsibilities relevant to the separate spheres framework" (91). Following this tradition, I also presented my respondents with a series of statements to examine how they agree or disagree with it, measured on a 5-point scale ranging from "strongly disagree" (1) to "strongly agree" (5). Among these six themes in querying people's gender ideology, based on the example questions listed by Davis and Greenstein, working women and relationship quality seems to concern about the relationship between husband and wife or the relationship between working mothers and juvenile children. Since this study aimed to study families' division of labor in the care of their babies, I only used the other five categories for measuring respondents' gender ideology (see Question 13). More specifically, within the series of the statements, the one related to the primacy of the breadwinner role was "A man's job is to earn money; a woman's job is to look after the home and family." The statement about the belief in gendered separate spheres claimed that "It is much better for everyone

concerned if the man is the achiever outside the home and the woman takes care of the home and family." For motherhood and the feminine self, I picked the statement, "women are much happier if they stay at home and take care of their children." For household utility, based on Becker's argument about the biological comparative advantage in family production, I made a claim "a man is biologically good at earning money; a woman is biologically good at taking care of children and home." Finally, for acceptance of male privilege, I chose the statement, "men do not need to share the work around the house with women, such as doing dishes, cleaning, and so forth." As a result, I would use the average level of acceptance of these five statements to measure participants' gender ideology. The more a participant would agree with these statements, the more they would support the traditional gender ideology.

Control variables. Past studies have shown that people with different income levels and education may make distinctive decisions in parental leave (Cheng et al. 2020; Margolis et al. 2018). Therefore, I decided to include annual income level as well as people's education degree as my control variables. Moreover, I also considered respondents' marital status as another control variable. I expected that the interdependent preference might have distinctive influences on people with different marital statuses. For instance, for a single and never married individual, he or she might only have to take care of themselves and would not be worried about the preferences of the spouse. Hence, they might be less sensitive to the interdependent preferences than people having other marital statuses.

First, I used a 6-point scale for measuring respondents' highest educational degree (see Question 3): (1) Less than high school; (2) High school graduates; (3) Some college; (4) 2-year degree; (5) 4-year degree; (6) Postgraduate degree. Then, I measured the annual income level by a 12-point scale from less than \$10,000 to more than \$150,000 (see Question 5). Moreover, I had

five response categories for measuring people's marital status (see Question 4): (1) single, never married; (2) married or domestic partnership; (3) widowed; (4) divorced; (5) separated.

Data

Before initiating this study, I completed a pilot study to estimate how much data I needed to collect by using power analysis. In the pilot study, I recruited 407 American participants from MTurk by limiting the IP address. After filtering respondents who did not complete the tasks, I eventually got 308 responses. Because men and women would have opposite measurements of wage differences, I separated my pilot study results into two groups based on participants' gender and had 121 observations for males and 187 observations for females. After running several linear regressions for both groups, I found the smallest R^2 value among male and female groups' observations was .0426. Cohen (1988) proposed that R^2 s of 0.02, 0.13, and 0.26 could conventionally serve as operational definitions for the descriptors for the small, medium, and large effect sizes, respectively. Based on my smallest R^2 in the pilot study, I would expect my effect size to be small. Since my study could have up to eight variables, based on my power analysis (Cohen 1988; Green 1991), I should at least have 757 observations for both male and female groups.

Through MTurk, I had recruited 2198 respondents who had America's IP address when taking the survey. After filtering respondents who did not finish the survey, there were 1928 observations. Goldberg and Perry-Jenkins (2007) had discovered that lesbian couples shared housework equally, but biological mothers tended to take more responsibility in childcare. The study suggested that people's sexual orientation may determine their division of labor in parenting. Nonetheless, in my study, I was exclusively concerned about how heterosexual couples share the care for their children. Hence, I needed to screen participants who did not

consider themselves as heterosexual or straight. After keeping the data from respondents who reported themselves as heterosexual or straight (see Question 2), I eventually got 1492 responses. Moreover, after keeping respondents who recognized themselves as either male or female (see Question 1), I had 662 observations for male participants and 665 results for females.

Models

The study aimed to study how people's perceived costs and benefits would mediate the effects of economic factors and gender ideology on people's norm of the division of labor in childcare before the birth of the baby. Baron and Kenny (1986) had provided a method for testing mediation hypotheses. Based on their argument, three conditions must be met to support mediation. First, the independent variable is shown to significantly predict the dependent variable. Second, the independent variable is shown to significantly predict the mediator. Third, the mediator must significantly predict the dependent variable in the regression where both the independent variable and mediator enter as predictors. In both of my hypotheses, I was interested in whether people consider their economic factors and gender ideology in the calculation of their perceived benefit and cost. Essentially, I was mainly concerned with the second condition in the mediation analysis. Hence, I would first examine whether the independent variables, economic factors and gender ideology, could significantly influence the mediator, perceived benefit and cost. If my observations met this condition, I would continue to examine the first and third conditions for supporting that people's perceived rationality had a mediation effect.

Since one of the measurements for my dependent variable, the length of parental leave uptake, and the mediators, perceived costs and benefits, had ordered categories. As a result, when studying people's decisions on how they would distribute their childcare labor or analyzing how people's utility would change, I would use the ordered logit model. The other measurement

of my dependent variable, the decision to exit the labor force, only had the yes and the no categories. Consequently, when investigating people's choices of specializing in childcare labor as full-time parents, I would use the logistic regression as I had a dichotomous dependent variable.

Results

Since men and women would have opposite measures of wage difference, I separated my observations into two groups. As a result, I had 662 observations for male participants and recorded 665 results for females. In general, according to the descriptive statistics (table. 1a and table. 1b), male respondents, on average, had slightly lower perceived benefits and higher perceived costs in taking parental leave. By comparison, women had a higher willingness to exit their jobs to become full-time parents and longer parental leave hours than men.

The associations of people's economic factors and gender ideology with their perceived utility

To test my hypotheses, I first aimed to understand whether people considered their economic factors and gender ideology in their perceptions of benefits and costs. Based on the table. 2a, we can see that for men's perceived benefits, while the gender ideology did not have a significant effect, the economic factors had a significant association. In terms of odds ratio, controlling for the effects of other variables, higher scores of economic factors significantly decreased the odds of having a higher level of perceived benefit. For a unit increase in men's economic factor, the odds of having a higher level of benefits, for instance, from 6 to 7, would become about .7497 times as much. Moreover, for male's perceived benefits, the interaction effect between the gender ideology and economic factor was also significant. By comparison, table. 2b demonstrated that a higher level of supporting the traditional gender ideology would

increase the odds of having a higher level of the perceived cost. A unit increase in gender ideology would make the odds become 1.8287 times as much, holding other variables in the model constant. Nonetheless, the economic factor and the interaction effect between gender ideology and economic factor did not influence men's rational calculation of their cost at the .05 significance level.

For female respondents, based on the table. 3a and table. 3b, holding other variables constant, if a woman's level of support for traditional gender ideology increased by one point, her odds of having a higher level of perceived benefits in parental leave would be 1.2429 times as much. Similarly, women's gender ideology also positively affected the perception of costs. A one-unit increase in gender ideology would make the odds of a higher calculation of costs become 1.3514 times as much. The economic factor and the interaction effect did not significantly affect women's perceived benefits and costs. Moreover, from the table. 3a, we could also see that education level (educ) played a significant role for women to calculate their benefit in parental leave.

In general, the observations of male respondents had shown that when men were planning their share of parenting during the pre-birth period, they included both the economic factors and gender ideology in calculating their expected gain and loss of family well-being, and the interaction effect between economic factors and gender ideology partially affect the calculation. Hence, the results in the men's group provided evidence that supports my second hypothesis. By contrast, female's results demonstrated that only gender ideology entered women's calculation of costs and benefits in planning the parental leave labor before birth. It is worth noting that gender ideology positively affected both the perceptions of costs and benefits for women. Since neither

the economic factors nor the interaction effects influenced women's perceived rationality in parental leave, the observations in the women's group may support my first hypothesis.

People's parental uptake and full-time parent decision

Based on the table. 4a and table. 4b, we could see that neither the gender ideology nor economic factors affected men's decision on the length of parental leave uptake. Hence, there was no evidence to support the mediating effect of perceived benefits and costs regarding men's distribution of childcare labor. Nonetheless, table. 4c showed that economic factors were significantly associated with men's decision of exiting work. More specifically, having one extra score in economic factors would lead the odds rate for exiting job to be about .5807 times as much. Moreover, as shown in the table. 4d, the mediators, perceived benefits and costs, had significant influences on the choice of exiting work. Previous results (see table. 2a) had shown that economic factors were associated with the perceived benefits. Therefore, we could conclude that men's calculation of gain in parental leave had a partial mediating effect for men's economic factors, as the economic factors still significantly predict the choice of exiting work in the logistic model with mediators.

As previous results (see table. 3a and table. 3b) had shown that women only considered gender ideology in their calculation of costs and benefits, to test whether mediation exists, we only needed to examine the association between gender ideology and the independent variables. As table. 5a and table. 5b had shown, gender ideology did not influence the length of parenting hours. Hence, there was no evidence to support the mediating effect of perceived rationality regarding women's distribution of childcare labor. Nonetheless, it is worth noting women's economic factor was negatively related to their choice of parenting uptake. If the score of economic factors increased by one unit, holding other conditions constant, the odds of having a

longer hour for childcare would become .7898 times as much. By comparison, regarding the choice of exiting work for parenting, both gender ideology and economic factors had significant associations (see table.5c). From the table. 5d, we could see that within the logistic regression equation for females' choice of being full-time parents with mediators, both the independent variable and mediators were significantly associated with the dependent variable. As previous results showed that women's gender ideology influenced both the perceived benefits and costs, we could conclude that women's perceived calculation of costs and benefits partially mediated the effect of gender ideology in their choice of quitting their job for full-time parenting.

Discussion and conclusion

The study attempted to examine how American people's calculation of perceived benefit and cost could mediate the effects of economic factors and gender ideology regarding their parental leave norms during the pre-birth period. In other words, the study first studied whether people included economic factors and gender ideology in their perceived calculations of utility in taking the care of their children. The study then continued to investigate how people's decisions on the length of parenting hours and choices of being full-time parents could be predicted by their economic factors, gender ideology, and calculation of benefits and costs. As the results indicated, male respondents included both economic factors and gender ideology in calculating the expected gain and loss of family well-being. Consequently, my second hypothesis was partially supported. More specifically, men with a higher level of economic conditions would have fewer odds of perceiving higher benefits in taking care of children. Such a finding was consistent with Becker's (1965, 1991) argument of the production model: as a man's economic conditions improved, the opportunity costs for taking parental leave would also increase and,

hence, led to the decrease of perceived benefits. Results also indicated that the interaction effect between economic factors and gender ideology influenced men's calculation of benefits, verifying Pollak's (2002) theory on non-deferential preferences. Moreover, gender ideology had a positive association with men's perception of costs. Such a finding may follow Brines' (1993, 1994) argument about the housework serving as a vehicle for the symbolic display of masculinity and femininity. A man who strongly agreed with the traditional gender role would consider taking the responsibility of childcare as a loss in masculinity, thereby having a higher loss in his mental well-being and perceive a higher cost.

By comparison, observations in female respondents demonstrated that only gender ideology entered women's calculation of costs and benefits in planning the parental leave labor before birth, thereby supporting my claim in the first hypothesis. The fact that only gender ideology entered women's cost and benefit function has two implications. Based on Brines' theory (1993, 1994) on the gender exchange value of housework and Pollak's argument (2002) on joint production, we can imply that women have direct preferences for achieving gender values over the economic consumption and, therefore, considered economic factors irrelevant to their perceived utility. Second, we may theorize that, beyond Becker's family production model (1965), there may exist an alternative mechanism for women to calculate their family utility. Rather than focusing on maximizing consumption of the commodities, women may be most concerned about the expenditure for the family. In other words, as long as the family can afford the expense to maintain their usual level of lifestyle, women would treat economic conditions as exogenous. Moreover, It is worth noting that gender ideology positively affected both the perceptions of costs and benefits for women. Such a result may suggest that women may follow two logics of perceiving their costs and benefits in taking care of children. First, the more a

woman supported the traditional gender ideology, the more she would enjoy achieving her feminine self in housework and childcare, as Brines (1993, 1994) argued. However, at the same time, the more she accepted the primacy of the breadwinner role and male privilege, the more sacrifices she might have to make for the family. Hence, gender ideology contributed to both the perceptions of costs and benefits for women.

Regarding people's distribution of childcare labor hours and the choice of exiting jobs for full-time parenting, there was no evidence to support the mediating effect of perceived benefits and costs regarding men's distribution of childcare labor. However, men's calculation of benefit in parental leave had a partial mediating effect for men's economic factors regarding men's choice of becoming full-time parents. For women, there was no evidence to support the mediating effect of perceived rationality regarding women's distribution of childcare labor. Nonetheless, it is worth noting women's economic factor was negatively related to their choice of parenting uptake, suggesting that economic factors may affect women's parental level uptake beyond their autonomous will. Moreover, results also showed that women's perceived calculation of costs and benefits partially mediated the effect of gender ideology in their choice of quitting their job for full-time parenting.

Overall, based on Becker's foundational analytical tool for family economics and the later criticisms regarding Becker's auxiliary assumptions, I arrived at two distinctive hypotheses. I successfully found evidence to support both of the hypotheses by demonstrating the differential calculations of perceived benefits and costs in taking childcare among men and women. Then I continued to examine the mediating effects of people's rational perception and found that the perceived benefits and cost had a partial mediating effect for men's economic factors regarding men's choice of becoming full-time parents. Moreover, I also revealed that women's perceived

calculation of utility in parental leave was a partial mediator for gender ideology regarding the choice of being full-time parents.

From a theoretical perspective, the study helps to fill the gap of perceived rationality in parental decisions. However, the design of the study may introduce several limitations. First, instead of directly asking participants how they would act when they had newborn babies, the study provided three distinctive scenarios and queried what respondents think the imaginary couple should do. Although I designed my survey in this manner to avoid confusion, through the survey, I essentially studied people's norms rather than their actual behavior in parental leave. Second, the measurement of people's workplace depended on people's self-reported answers, which increased the difficulty for participants to answer. Thus, I did not include people's workplace as one of the elements in measuring economic factors, while past studies (Wood and Marynissen 2019; Bygren and Duvander 2006) had shown its importance in predicting people's parental leave decisions. Third, the definition of economic factors may also neglect the long-term impact of taking parental leave. In Doeringer and Piore's (1971) theory of the internal labor market, they emphasized that a non-temporary nature of transactions exists in the labor market as employment relationships involve recruitment and training costs. Since the employment relationship has a long-term nature, workers would develop firm-specific skills, which can be the basis for promotions and an increase in future wages. Taking parental leave can be a temporary termination of the employment relationship and might lead to loss of certain firm-specific skills, such as the social disconnections with clients and colleagues, knowledge about the state-of-the-art techniques, and understandings of the firms' project. Hence, the limited scope of definition for economic factors had ignored the loss of the social and human capital of taking parental leave in the long term. Moreover, I neglected the cohort effects in this study. Lundberg and Pollak (2007)

showed that the decline in the value of marriage and in individuals' ability and willingness to make long-term commitments led to the increased heterogeneity and instability in American families. Hence, people from different age cohorts may display distinctive strategies in parental leave. This study did not include a measurement for people's age cohort and had missed the opportunity to investigate the cohort effect. For future studies, scholars could explore wider scopes to measure people's long-term economic factors. In addition, future researchers should investigate how people in different generations would have differential parental uptake. Moreover, to take a closer look at how couples would plan their division of childcare labor before the child's birth, a qualitative study that interviews expectant parents would be highly recommended.

References:

1. Aassve, Arnstein, Giulia Fuochi, and Letizia Mencarini. 2014. "Desperate Housework: Relative Resources, Time Availability, Economic Dependency, and Gender Ideology Across Europe." *Journal of Family Issues* 35 (8):1000–1022.
2. Aisenbrey, Silke, Marie Evertsson and Daniela Grunow. 2009. "Is there a Career Penalty for Mothers' Time Out? A Comparison of Germany, Sweden and the United States." *Social Forces* 88 (2):573-605
3. Baron, Reuben M. and David A. Kenny. 1986. "The Moderator–Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." *Journal of Personality and Social Psychology* 51 (6):1173–82.
4. Becker, Gary. 1965. "A Theory of the Allocation of Time." *The Economic Journal* 75 (299): 493-517.
5. Becker, Gary S. 1976. "The Economic Approach to Human Behavior." in *Rational Choice* edited by Jon Elster in 1986. New York: New York University. Press: 108-122.
6. Becker, Gary. 1991. *A Treatise on the Family*. Cambridge, MA: Harvard Univ. Press.
7. Becker, Gary. 1992. "Habits, Addictions, and Traditions." *Kyklos* 45 (3): 327-345.
8. Becker, Gary S. 1981. "Altruism in the Family and Selfishness in the Market Place." *Economica* 48 (189):1.
9. Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.coms Mechanical Turk." *Political Analysis* 20 (3):351–68.
10. Bianchi, Suzanne M. 2000. "Maternal Employment and Time with Children: Dramatic Change or Surprising Continuity?" *Demography* 37 (4):401–14.

11. Blackledge, Paul. 2018. "Frederick Engels, Social Reproduction, and the Problem of a Unitary Theory of Women's Oppression." *Social Theory and Practice* 44 (3):297–321.
12. Blau, Francine D. and Lawrence M. Kahn. 2017. "The Gender Wage Gap: Extent, Trends, and Explanations." *Journal of Economic Literature* 55 (3):789–865.
13. Brines, Julie. 1993. "The Exchange Value of Housework." *Rationality and Society* 5 (3):302–40.
14. Brines, Julie. 1994. "Economic Dependency, Gender, and the Division of Labor at Home." *American Journal of Sociology* 100 (3):652–88.
15. Bygren, Magnus and Ann-Zofie Duvander. 2006. "Parents' Workplace Situation and Fathers' Parental Leave Use." *Journal of Marriage and Family* 68 (2):363–72.
16. Cohen, Jack. 1988. *Statistical Power Analysis for the Behavioral Sciences*. Hillsdale, NJ: L. Erlbaum Associates.
17. Cheng, Yen-Hsin Alice and Chen-Hao Hsu. 2020. "No More Babies without Help for Whom? Education, Division of Labor, and Fertility Intentions." *Journal of Marriage and Family*.
18. Davis, Shannon N. and Theodore N. Greenstein. 2009. "Gender Ideology: Components, Predictors, and Consequences." *Annual Review of Sociology* 35 (1):87–105.
19. Doeringer, Peter and Piore, Michael. 1971. *Internal Labor Market and Manpower Analysis*.
20. Duvander, Ann-Zofie. 2014. "How Long Should Parental Leave Be? Attitudes to Gender Equality, Family, and Work as Determinants of Women's and Men's Parental Leave in Sweden." *Journal of Family Issues* 35 (7):909–26.
21. Engels, Friedrich. 1884. *The Origin of the Family, Private Property and the State*.

22. Goldberg, Abbie E. and Maureen Perry-Jenkins. 2007. "The Division of Labor and Perceptions of Parental Roles: Lesbian Couples across the Transition to Parenthood." *Journal of Social and Personal Relationships* 24 (2):297–318.
23. Green, Samuel B. 1991. "How Many Subjects Does It Take To Do A Regression Analysis." *Multivariate Behavioral Research* 26 (3):499–510.
24. Jugovic, Ivana. 2016. "Beliefs about the Gender Division of Parental Leave and Characteristics Associated with them." *Revija Za Socijalnu Politiku* 23 (3):381.
25. Lappegard, Trude. 2008. "Changing the Gender Balance in Caring: Fatherhood and the Division of Parental Leave in Norway." *Population Research and Policy Review* 27 (2):139-159.
26. Lundberg, Shelly and Robert Pollak. 2007. "The American Family and Family Economics." *The Journal of Economic Perspectives*. 21 (2): 3-26.
27. Margolis, Rachel, Feng Hou, Michael Haan, and Anders Holm. 2018. "Use of Parental Benefits by Family Income in Canada: Two Policy Changes." *Journal of Marriage and Family* 81 (2):450–67.
28. Nock, Steven L. and Paul William Kingston. 1988. "Time with Children: The Impact of Couples' Work-Time Commitments." *Social Forces* 67 (1):59.
29. Nussbaum, Martha. 1995. "Introduction." *Women, Culture, and Development: A Study of Human Capabilities*. Oxford: Oxford University Press: 1-15.
30. Olivetti, Claudia and Barbara Petrongolo. 2016. "The Evolution of Gender Gaps in Industrialized Countries." *Annual Review of Economics* 8: 405-34.

31. OECD. 2019. "SIGI 2019 Global Report: Transforming Challenges into Opportunities", *Social Institutions and Gender Index*, OECD Publishing, Paris, <https://doi.org/10.1787/bc56d212-en>.
32. OECD. 2021. "Development Finance for Gender Equality and Women's Empowerment." Retrieved July 14, 2021 (<https://www.oecd.org/dac/gender-development/development-finance-for-gender-equality-and-women-s-empowerment.htm>).
33. Pettit, B. and J. Hook. 2005. "The Structure of Women's Employment in Comparative Perspective." *Social Forces* 84 (2):779–801.
34. Pollak, Robert. 2002. "Gary Becker's Contributions to Family and Household Economics."
35. Roy, Katica. 2018. "What Hashtag Culture Teaches Us About Gender Equity." *Pipeline Equity*. Retrieved July 14, 2021 (<https://www.pipelineequity.com/katicas-voice/hashtag-culture-teaches-us-gender-equity/>).
36. Vierling-Claassen, Angela. 2013. "Division of Labor in Child Care: A Game-Theoretic Approach." *Rationality and Society* 25 (2):198–228.
37. Vogel, Lise. 2013. *Marxism and the Oppression of Women: Towards a Unitary Theory*. Chicago: Haymarket.
38. Wood, Jonas, and Leen Marynissen. 2019. "Who Steps Back? Dual-Earner Couples' Organization of Paid Work and Leave Uptake After Childbearing in Belgium." *Population* 74 (3):303-330.

Appendix

Tables for Statistics Results

Table. 1a descriptive statistics for male respondents

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|--------------|-----|----------|-----------|-----------|----------|
| educ | 662 | 4.554381 | 1.113487 | 2 | 6 |
| ms | 662 | 1.833837 | .701977 | 1 | 5 |
| income_level | 662 | 6.016616 | 3.040527 | 1 | 12 |
| work_hour | 662 | 4.015106 | 2.215968 | 0 | 7 |
| stablility | 662 | 3.151057 | 1.803885 | 0 | 5 |
| wagedif | 662 | .0906344 | 4.022358 | -5 | 5 |
| benefit | 662 | 7.031722 | 2.104794 | 0 | 10 |
| cost | 662 | 5.836858 | 2.701594 | 0 | 10 |
| exit_work | 662 | .5996979 | .49033 | 0 | 1 |
| parenting_~r | 662 | 3.516616 | 1.665398 | 0 | 6 |
| gender_ide~y | 662 | 2.933837 | 1.069125 | 1 | 5 |
| economic_f~r | 662 | 2.418933 | 1.792775 | -1.666667 | 5.666667 |

Table. 1b descriptive statistics for female respondents

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|--------------|-----|----------|-----------|-----------|----------|
| educ | 665 | 4.300752 | 1.360949 | 1 | 6 |
| ms | 665 | 1.878195 | .733384 | 1 | 5 |
| income_level | 665 | 5.645113 | 3.178961 | 1 | 12 |
| work_hour | 665 | 3.374436 | 2.37449 | 0 | 7 |
| stablility | 665 | 3.043609 | 1.94105 | 0 | 5 |
| wagedif | 665 | .0676692 | 4.101857 | -5 | 5 |
| benefit | 665 | 7.257143 | 2.220194 | 0 | 10 |
| cost | 665 | 5.317293 | 2.870721 | 0 | 10 |
| exit_work | 665 | .8105263 | .3921794 | 0 | 1 |
| parenting_~r | 665 | 3.760902 | 1.473145 | 0 | 6 |
| gender_ide~y | 665 | 2.787368 | 1.153291 | 1 | 5 |
| economic_f~r | 665 | 2.161905 | 1.871639 | -1.666667 | 5.666667 |

Table. 2a ordered logit model for male's perceived benefits

| benefit | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------------|------------|-----------|-------|-------|----------------------|----------|
| gender_ideology | .938006 | .104671 | -0.57 | 0.566 | .7537392 | 1.167321 |
| economic_factor | .749675 | .0887864 | -2.43 | 0.015 | .5943777 | .9455479 |
| educ | | | | | | |
| 3 | .969854 | .3248703 | -0.09 | 0.927 | .5030149 | 1.869958 |
| 4 | .9920989 | .353327 | -0.02 | 0.982 | .4936365 | 1.993897 |
| 5 | 1.670917 | .4979196 | 1.72 | 0.085 | .9317593 | 2.996443 |
| 6 | 2.047453 | .7016809 | 2.09 | 0.037 | 1.045922 | 4.008007 |
| ms | | | | | | |
| 2 | .8712474 | .1503162 | -0.80 | 0.424 | .6212749 | 1.221797 |
| 3 | .2584875 | .2246702 | -1.56 | 0.120 | .0470542 | 1.419974 |
| 4 | 1.074268 | .5429508 | 0.14 | 0.887 | .3989359 | 2.892827 |
| 5 | .4779322 | .2552677 | -1.38 | 0.167 | .1677769 | 1.361446 |
| income_level | | | | | | |
| 2 | .6329128 | .2885679 | -1.00 | 0.316 | .2589705 | 1.546812 |
| 3 | .581479 | .2424156 | -1.30 | 0.193 | .2568458 | 1.316423 |
| 4 | .5092282 | .2169999 | -1.58 | 0.113 | .220895 | 1.173922 |
| 5 | .6566356 | .2807558 | -0.98 | 0.325 | .2840394 | 1.517995 |
| 6 | .7133239 | .2999393 | -0.80 | 0.422 | .3128762 | 1.626301 |
| 7 | .8705149 | .4130865 | -0.29 | 0.770 | .3434429 | 2.206469 |
| 8 | .3974228 | .1838296 | -1.99 | 0.046 | .1605187 | .9839652 |
| 9 | .8307758 | .3952561 | -0.39 | 0.697 | .3269714 | 2.110852 |
| 10 | 1.0263 | .5146432 | 0.05 | 0.959 | .3840922 | 2.742291 |
| 11 | .7637864 | .3429212 | -0.60 | 0.548 | .3168134 | 1.841367 |
| 12 | .3389824 | .176372 | -2.08 | 0.038 | .1222639 | .9398444 |
| gender_economic | 1.105556 | .0414415 | 2.68 | 0.007 | 1.027244 | 1.189838 |

Table. 2b ordered logit model for male's perceived costs

| cost | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------------|------------|-----------|-------|-------|----------------------|----------|
| gender_ideology | 1.828726 | .2099677 | 5.26 | 0.000 | 1.460214 | 2.290237 |
| economic_factor | 1.196068 | .1442813 | 1.48 | 0.138 | .944226 | 1.515082 |
| educ | | | | | | |
| 3 | 1.002943 | .3370143 | 0.01 | 0.993 | .5190996 | 1.937767 |
| 4 | .7630652 | .2741959 | -0.75 | 0.452 | .3773074 | 1.543221 |
| 5 | 1.20636 | .3582422 | 0.63 | 0.528 | .6740673 | 2.158991 |
| 6 | .7240418 | .248522 | -0.94 | 0.347 | .3694835 | 1.418836 |
| ms | | | | | | |
| 2 | 1.12572 | .1901849 | 0.70 | 0.483 | .8083954 | 1.567605 |
| 3 | .6768736 | .7721478 | -0.34 | 0.732 | .0723593 | 6.33171 |
| 4 | .4187459 | .195991 | -1.86 | 0.063 | .1673215 | 1.047971 |
| 5 | 1.0448 | .5941848 | 0.08 | 0.939 | .3427277 | 3.185057 |
| income_level | | | | | | |
| 2 | 2.427161 | 1.08317 | 1.99 | 0.047 | 1.012122 | 5.820559 |
| 3 | 1.876837 | .7698927 | 1.53 | 0.125 | .839957 | 4.193685 |
| 4 | 1.561772 | .6573636 | 1.06 | 0.290 | .6844461 | 3.563656 |
| 5 | 2.274506 | .9594104 | 1.95 | 0.051 | .9950416 | 5.199155 |
| 6 | 2.777154 | 1.149052 | 2.47 | 0.014 | 1.234281 | 6.248647 |
| 7 | 2.362434 | 1.137946 | 1.78 | 0.074 | .9190721 | 6.072529 |
| 8 | 1.250986 | .5637596 | 0.50 | 0.619 | .5171978 | 3.025856 |
| 9 | 2.741155 | 1.269018 | 2.18 | 0.029 | 1.106292 | 6.791997 |
| 10 | 2.364573 | 1.18887 | 1.71 | 0.087 | .8826367 | 6.33466 |
| 11 | 1.726309 | .7862941 | 1.20 | 0.231 | .7069941 | 4.21523 |
| 12 | 1.204199 | .6177546 | 0.36 | 0.717 | .4405869 | 3.291281 |
| gender_economic | .9286644 | .0352993 | -1.95 | 0.052 | .8619934 | 1.000492 |

Table. 3a ordered logit model for female's perceived benefits

| benefit | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------------|------------|-----------|-------|-------|----------------------|----------|
| gender_ideology | 1.242925 | .1263979 | 2.14 | 0.032 | 1.018316 | 1.517074 |
| economic_factor | 1.14179 | .1170273 | 1.29 | 0.196 | .9339909 | 1.395821 |
| educ | | | | | | |
| 2 | 8.642847 | 4.746157 | 3.93 | 0.000 | 2.945952 | 25.35642 |
| 3 | 4.320368 | 2.296335 | 2.75 | 0.006 | 1.524388 | 12.24464 |
| 4 | 3.742213 | 2.138617 | 2.31 | 0.021 | 1.220899 | 11.47036 |
| 5 | 6.574783 | 3.47278 | 3.57 | 0.000 | 2.334959 | 18.51329 |
| 6 | 5.167461 | 2.844459 | 2.98 | 0.003 | 1.756825 | 15.19938 |
| ms | | | | | | |
| 2 | 1.112852 | .1991459 | 0.60 | 0.550 | .7836351 | 1.580377 |
| 3 | 3.31312 | 2.494347 | 1.59 | 0.112 | .7575189 | 14.49042 |
| 4 | 1.041499 | .378464 | 0.11 | 0.911 | .5109119 | 2.123107 |
| 5 | 1.628178 | 1.185878 | 0.67 | 0.503 | .3905995 | 6.786906 |
| income_level | | | | | | |
| 2 | .8267263 | .275693 | -0.57 | 0.568 | .430038 | 1.589339 |
| 3 | 1.132825 | .3747728 | 0.38 | 0.706 | .5923243 | 2.166537 |
| 4 | 1.639312 | .5641774 | 1.44 | 0.151 | .8350571 | 3.218154 |
| 5 | 1.480379 | .5161186 | 1.13 | 0.260 | .7474986 | 2.931807 |
| 6 | 1.765013 | .5858283 | 1.71 | 0.087 | .9209249 | 3.382763 |
| 7 | 1.192345 | .4723804 | 0.44 | 0.657 | .5484976 | 2.591964 |
| 8 | 1.291253 | .4784939 | 0.69 | 0.490 | .624576 | 2.669546 |
| 9 | 1.744903 | .7022617 | 1.38 | 0.167 | .7928531 | 3.840164 |
| 10 | 1.147632 | .4931396 | 0.32 | 0.749 | .4943558 | 2.664192 |
| 11 | 1.803877 | .6941867 | 1.53 | 0.125 | .8484739 | 3.835086 |
| 12 | 1.593308 | .7447188 | 1.00 | 0.319 | .6374474 | 3.982492 |
| gender_economic | .9725501 | .0332302 | -0.81 | 0.415 | .909553 | 1.03991 |

Table. 3b ordered logit model for female's perceived costs

| cost | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------------|------------|-----------|-------|-------|----------------------|----------|
| gender_ideology | 1.351428 | .1355316 | 3.00 | 0.003 | 1.110268 | 1.644969 |
| economic_factor | .9274444 | .0891734 | -0.78 | 0.433 | .7681485 | 1.119774 |
| educ | | | | | | |
| 2 | 1.512139 | .8561511 | 0.73 | 0.465 | .4984868 | 4.58701 |
| 3 | 1.268974 | .698303 | 0.43 | 0.665 | .4315643 | 3.731298 |
| 4 | 1.250343 | .7280983 | 0.38 | 0.701 | .3993542 | 3.914713 |
| 5 | 1.83603 | 1.00077 | 1.11 | 0.265 | .6308309 | 5.343755 |
| 6 | 1.678627 | .9524991 | 0.91 | 0.361 | .5520252 | 5.104455 |
| ms | | | | | | |
| 2 | 1.132187 | .1962573 | 0.72 | 0.474 | .8060612 | 1.590262 |
| 3 | .1788514 | .1537684 | -2.00 | 0.045 | .0331641 | .9645332 |
| 4 | .5594691 | .1913669 | -1.70 | 0.090 | .2861685 | 1.093781 |
| 5 | .9680523 | .6639145 | -0.05 | 0.962 | .2524199 | 3.712566 |
| income_level | | | | | | |
| 2 | 1.453954 | .4659943 | 1.17 | 0.243 | .7757811 | 2.724971 |
| 3 | 1.077427 | .3380501 | 0.24 | 0.812 | .5825286 | 1.992774 |
| 4 | .7077867 | .2335878 | -1.05 | 0.295 | .3706671 | 1.351515 |
| 5 | 1.09308 | .3565325 | 0.27 | 0.785 | .5767845 | 2.071526 |
| 6 | 1.214477 | .3853889 | 0.61 | 0.540 | .6520462 | 2.26204 |
| 7 | 1.373345 | .5368229 | 0.81 | 0.417 | .6383458 | 2.954632 |
| 8 | .9422801 | .3379833 | -0.17 | 0.868 | .4665148 | 1.903245 |
| 9 | 1.48615 | .573652 | 1.03 | 0.305 | .6974286 | 3.166834 |
| 10 | .7785214 | .3178639 | -0.61 | 0.540 | .3497293 | 1.733042 |
| 11 | 1.538088 | .5670211 | 1.17 | 0.243 | .7467633 | 3.167958 |
| 12 | .4916771 | .2198203 | -1.59 | 0.112 | .2047023 | 1.180966 |
| gender_economic | 1.0311 | .0349131 | 0.90 | 0.366 | .9648931 | 1.10185 |

Table. 4a ordered logit model for male's parenting hour without mediators

| parenting_hour | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------------|------------|-----------|-------|-------|----------------------|----------|
| gender_ideology | 1.211201 | .1350883 | 1.72 | 0.086 | .9733733 | 1.507137 |
| economic_factor | 1.039473 | .1192059 | 0.34 | 0.736 | .8302292 | 1.301452 |
| educ | | | | | | |
| 3 | .6240462 | .2075027 | -1.42 | 0.156 | .3252237 | 1.197433 |
| 4 | .3278921 | .1172909 | -3.12 | 0.002 | .1626469 | .661022 |
| 5 | .7528617 | .212844 | -1.00 | 0.315 | .4325828 | 1.310271 |
| 6 | .8136181 | .2702237 | -0.62 | 0.535 | .4243405 | 1.560008 |
| ms | | | | | | |
| 2 | .822972 | .1402173 | -1.14 | 0.253 | .5893292 | 1.149244 |
| 3 | .4953547 | .4936598 | -0.70 | 0.481 | .0702469 | 3.493054 |
| 4 | .8770754 | .3821487 | -0.30 | 0.763 | .3733891 | 2.060213 |
| 5 | .4248901 | .2633539 | -1.38 | 0.167 | .1260921 | 1.431744 |
| income_level | | | | | | |
| 2 | .9449407 | .4107631 | -0.13 | 0.896 | .4030785 | 2.215234 |
| 3 | 1.015508 | .3976713 | 0.04 | 0.969 | .4713613 | 2.187825 |
| 4 | 1.147974 | .4563409 | 0.35 | 0.728 | .5267009 | 2.502076 |
| 5 | .9908991 | .4072304 | -0.02 | 0.982 | .4428031 | 2.217421 |
| 6 | 1.218325 | .4828086 | 0.50 | 0.618 | .5603266 | 2.649017 |
| 7 | 1.068933 | .4951299 | 0.14 | 0.886 | .4311953 | 2.649886 |
| 8 | .6632029 | .2913361 | -0.93 | 0.350 | .2803658 | 1.568801 |
| 9 | 1.013792 | .4605143 | 0.03 | 0.976 | .4161895 | 2.469486 |
| 10 | 1.820222 | .9156959 | 1.19 | 0.234 | .6790662 | 4.879068 |
| 11 | 1.03839 | .4557587 | 0.09 | 0.932 | .4392992 | 2.454486 |
| 12 | .5641911 | .2874596 | -1.12 | 0.261 | .2078417 | 1.53151 |
| gender_economic | .9751871 | .0357796 | -0.68 | 0.493 | .9075225 | 1.047897 |

Table. 4b ordered logit model for male's parenting hour with mediators

| parenting_hour | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------------|------------|-----------|-------|-------|----------------------|----------|
| benefit | 1.372842 | .0526091 | 8.27 | 0.000 | 1.273507 | 1.479925 |
| cost | 1.120285 | .0316689 | 4.02 | 0.000 | 1.059903 | 1.184106 |
| gender_ideology | 1.151145 | .1332902 | 1.22 | 0.224 | .9174241 | 1.444409 |
| economic_factor | 1.114639 | .1300104 | 0.93 | 0.352 | .8868518 | 1.400934 |
| educ | | | | | | |
| 3 | .6072431 | .2019592 | -1.50 | 0.134 | .3164222 | 1.165355 |
| 4 | .3341109 | .1205097 | -3.04 | 0.002 | .1647679 | .6774988 |
| 5 | .6515979 | .1861412 | -1.50 | 0.134 | .3722357 | 1.140621 |
| 6 | .7358726 | .2473094 | -0.91 | 0.361 | .3808324 | 1.421908 |
| ms | | | | | | |
| 2 | .7806354 | .1340436 | -1.44 | 0.149 | .5575549 | 1.092972 |
| 3 | .7627463 | .8450508 | -0.24 | 0.807 | .086962 | 6.690075 |
| 4 | .9532995 | .4230636 | -0.11 | 0.914 | .3994622 | 2.275008 |
| 5 | .5550756 | .3562661 | -0.92 | 0.359 | .1577693 | 1.952908 |
| income_level | | | | | | |
| 2 | 1.028842 | .4563514 | 0.06 | 0.949 | .4313116 | 2.454179 |
| 3 | 1.070556 | .4242884 | 0.17 | 0.863 | .4923307 | 2.327888 |
| 4 | 1.33347 | .5378079 | 0.71 | 0.476 | .6048964 | 2.93958 |
| 5 | .9655387 | .4009297 | -0.08 | 0.933 | .4278753 | 2.178824 |
| 6 | 1.171671 | .4701005 | 0.39 | 0.693 | .533685 | 2.57233 |
| 7 | 1.052241 | .4946619 | 0.11 | 0.914 | .4187574 | 2.644039 |
| 8 | .8601199 | .384611 | -0.34 | 0.736 | .3580435 | 2.066246 |
| 9 | .8870094 | .4023282 | -0.26 | 0.792 | .364621 | 2.157818 |
| 10 | 1.562118 | .7983273 | 0.87 | 0.383 | .5737245 | 4.253281 |
| 11 | 1.055773 | .4643452 | 0.12 | 0.902 | .4458607 | 2.500012 |
| 12 | .7026543 | .3636396 | -0.68 | 0.495 | .2548154 | 1.937572 |
| gender_economic | .9538066 | .0357828 | -1.26 | 0.207 | .8861901 | 1.026582 |

Table. 4c logistic regression for male's choice of being full-time parent without mediators

| exit_work | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|----------------------|------------|-----------|-------|-------|----------------------|----------|
| gender_ideology | .8839276 | .1267082 | -0.86 | 0.389 | .6674206 | 1.170668 |
| economic_factor | .5807423 | .0867829 | -3.64 | 0.000 | .4332959 | .7783632 |
| educ | | | | | | |
| 3 | .6458263 | .2531242 | -1.12 | 0.265 | .2995692 | 1.392305 |
| 4 | .4676916 | .2024509 | -1.76 | 0.079 | .2002155 | 1.0925 |
| 5 | 1.183293 | .4098754 | 0.49 | 0.627 | .6001344 | 2.333114 |
| 6 | 1.097676 | .4440122 | 0.23 | 0.818 | .496777 | 2.42542 |
| ms | | | | | | |
| 2 | 1.76461 | .3541122 | 2.83 | 0.005 | 1.190787 | 2.614948 |
| 3 | .7740746 | .9761589 | -0.20 | 0.839 | .0653675 | 9.166506 |
| 4 | .377596 | .2180763 | -1.69 | 0.092 | .1217378 | 1.171195 |
| 5 | 4.849521 | 4.086672 | 1.87 | 0.061 | .9298111 | 25.29315 |
| income_level | | | | | | |
| 2 | .8180547 | .432439 | -0.38 | 0.704 | .2902828 | 2.305384 |
| 3 | 1.269008 | .6256661 | 0.48 | 0.629 | .482827 | 3.335316 |
| 4 | .9113319 | .4488165 | -0.19 | 0.850 | .347115 | 2.392653 |
| 5 | .9697607 | .4843966 | -0.06 | 0.951 | .3643245 | 2.581314 |
| 6 | .8757146 | .4252377 | -0.27 | 0.785 | .3380867 | 2.268282 |
| 7 | .5498868 | .3134764 | -1.05 | 0.294 | .1798975 | 1.680821 |
| 8 | .5765275 | .3097938 | -1.02 | 0.305 | .2011091 | 1.652754 |
| 9 | 1.066794 | .5890588 | 0.12 | 0.907 | .3614657 | 3.148431 |
| 10 | .6370495 | .373255 | -0.77 | 0.442 | .202043 | 2.008642 |
| 11 | .7347602 | .3922652 | -0.58 | 0.564 | .2580573 | 2.092065 |
| 12 | .2455957 | .1565102 | -2.20 | 0.028 | .0704332 | .8563751 |
| gender_economic_cons | 1.123872 | .0525241 | 2.50 | 0.012 | 1.025501 | 1.23168 |
| | 3.059613 | 1.98617 | 1.72 | 0.085 | .8572404 | 10.92019 |

Table. 4d logistic regression for male's choice of being full-time parent with mediators

| exit_work | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|----------------------|------------|-----------|-------|-------|----------------------|----------|
| benefit | 1.399135 | .0654782 | 7.18 | 0.000 | 1.276509 | 1.533539 |
| cost | 1.200964 | .044748 | 4.91 | 0.000 | 1.116385 | 1.29195 |
| gender_ideology | .7540987 | .123622 | -1.72 | 0.085 | .5468746 | 1.039845 |
| economic_factor | .5641142 | .0933966 | -3.46 | 0.001 | .4077926 | .7803594 |
| educ | | | | | | |
| 3 | .5096344 | .2167139 | -1.59 | 0.113 | .2214618 | 1.172786 |
| 4 | .3797537 | .175264 | -2.10 | 0.036 | .1536934 | .9383152 |
| 5 | .8195165 | .3128608 | -0.52 | 0.602 | .3877937 | 1.731868 |
| 6 | .7934561 | .3483451 | -0.53 | 0.598 | .3356033 | 1.875943 |
| ms | | | | | | |
| 2 | 1.794199 | .3837024 | 2.73 | 0.006 | 1.179872 | 2.728388 |
| 3 | 1.278715 | 1.69293 | 0.19 | 0.853 | .0954646 | 17.12795 |
| 4 | .4119589 | .251255 | -1.45 | 0.146 | .1246532 | 1.361459 |
| 5 | 6.830754 | 6.069211 | 2.16 | 0.031 | 1.197196 | 38.97373 |
| income_level | | | | | | |
| 2 | .6951581 | .3996021 | -0.63 | 0.527 | .2253109 | 2.144792 |
| 3 | 1.178106 | .6259286 | 0.31 | 0.758 | .4158532 | 3.337555 |
| 4 | .955637 | .5091555 | -0.09 | 0.932 | .336341 | 2.715227 |
| 5 | .9129951 | .4906587 | -0.17 | 0.866 | .3184334 | 2.61769 |
| 6 | .7386758 | .388742 | -0.58 | 0.565 | .2633256 | 2.072119 |
| 7 | .4071302 | .24693 | -1.48 | 0.138 | .1240133 | 1.336591 |
| 8 | .7062835 | .4056595 | -0.61 | 0.545 | .2291315 | 2.177075 |
| 9 | .9061451 | .5370592 | -0.17 | 0.868 | .2835978 | 2.895294 |
| 10 | .4426928 | .2805812 | -1.29 | 0.199 | .1278221 | 1.5332 |
| 11 | .6392608 | .3641447 | -0.79 | 0.432 | .2093171 | 1.952322 |
| 12 | .2920311 | .1957028 | -1.84 | 0.066 | .0785239 | 1.086066 |
| gender_economic_cons | 1.130683 | .0589243 | 2.36 | 0.018 | 1.020896 | 1.252277 |
| | .2504266 | .1965601 | -1.76 | 0.078 | .0537739 | 1.166244 |

Table. 5a ordered logit model for female's parenting hour without mediators

| parenting_hour | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------------|------------|-----------|-------|-------|----------------------|----------|
| gender_ideology | .9082701 | .0949078 | -0.92 | 0.357 | .740066 | 1.114704 |
| economic_factor | .7898449 | .0811597 | -2.30 | 0.022 | .6457695 | .9660646 |
| educ | | | | | | |
| 2 | 7.262197 | 4.149565 | 3.47 | 0.001 | 2.369724 | 22.25554 |
| 3 | 3.666287 | 2.025515 | 2.35 | 0.019 | 1.241546 | 10.82655 |
| 4 | 2.821306 | 1.662523 | 1.76 | 0.078 | .8889128 | 8.954498 |
| 5 | 5.389438 | 2.957615 | 3.07 | 0.002 | 1.838321 | 15.80031 |
| 6 | 4.032231 | 2.30794 | 2.44 | 0.015 | 1.31323 | 12.38084 |
| ms | | | | | | |
| 2 | 1.202948 | .2196581 | 1.01 | 0.312 | .8410422 | 1.720585 |
| 3 | 4.261809 | 4.167284 | 1.48 | 0.138 | .6270058 | 28.96785 |
| 4 | 1.178538 | .4057969 | 0.48 | 0.633 | .6001449 | 2.314362 |
| 5 | .4839704 | .3829868 | -0.92 | 0.359 | .1026186 | 2.282504 |
| income_level | | | | | | |
| 2 | 1.815108 | .61958 | 1.75 | 0.081 | .929711 | 3.543699 |
| 3 | 1.309926 | .4413682 | 0.80 | 0.423 | .676771 | 2.53543 |
| 4 | 1.111973 | .3896768 | 0.30 | 0.762 | .5595015 | 2.209973 |
| 5 | 2.263613 | .7986001 | 2.32 | 0.021 | 1.133703 | 4.519653 |
| 6 | 1.883997 | .6258009 | 1.91 | 0.057 | .9825154 | 3.612609 |
| 7 | 1.886009 | .7859876 | 1.52 | 0.128 | .8333139 | 4.268537 |
| 8 | 1.853112 | .6992242 | 1.63 | 0.102 | .8845502 | 3.882225 |
| 9 | 1.584203 | .6571064 | 1.11 | 0.267 | .7026574 | 3.571724 |
| 10 | 2.240994 | .9883543 | 1.83 | 0.067 | .9441305 | 5.319238 |
| 11 | 1.12175 | .4334071 | 0.30 | 0.766 | .5260414 | 2.392061 |
| 12 | 1.229526 | .6020125 | 0.42 | 0.673 | .4709386 | 3.210047 |
| gender_economic | 1.085196 | .0383725 | 2.31 | 0.021 | 1.012534 | 1.163072 |

Table. 5b ordered logit model for female's parenting hour with mediators

| parenting_hour | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|-----------------|------------|-----------|-------|-------|----------------------|----------|
| benefit | 1.127174 | .0387368 | 3.48 | 0.000 | 1.053752 | 1.205712 |
| cost | .9975284 | .0259442 | -0.10 | 0.924 | .9479531 | 1.049696 |
| gender_ideology | .877588 | .0929797 | -1.23 | 0.218 | .713028 | 1.080127 |
| economic_factor | .7719292 | .0796725 | -2.51 | 0.012 | .6305552 | .9450002 |
| educ | | | | | | |
| 2 | 5.461493 | 3.135558 | 2.96 | 0.003 | 1.772632 | 16.8269 |
| 3 | 2.960042 | 1.63813 | 1.96 | 0.050 | 1.000531 | 8.757199 |
| 4 | 2.323641 | 1.369837 | 1.43 | 0.153 | .731758 | 7.378545 |
| 5 | 4.193532 | 2.31432 | 2.60 | 0.009 | 1.42174 | 12.36915 |
| 6 | 3.220258 | 1.85133 | 2.03 | 0.042 | 1.0436 | 9.936822 |
| ms | | | | | | |
| 2 | 1.154883 | .2124296 | 0.78 | 0.434 | .8053189 | 1.656183 |
| 3 | 3.635516 | 3.523527 | 1.33 | 0.183 | .5439827 | 24.29669 |
| 4 | 1.226767 | .4262446 | 0.59 | 0.556 | .6208818 | 2.423902 |
| 5 | .452479 | .3565347 | -1.01 | 0.314 | .0965799 | 2.119873 |
| income_level | | | | | | |
| 2 | 1.806925 | .6167377 | 1.73 | 0.083 | .9255695 | 3.527535 |
| 3 | 1.297416 | .4359208 | 0.77 | 0.438 | .6715568 | 2.506547 |
| 4 | 1.05208 | .3690439 | 0.14 | 0.885 | .5290154 | 2.092327 |
| 5 | 2.156969 | .7612245 | 2.18 | 0.029 | 1.080048 | 4.307694 |
| 6 | 1.782408 | .5907995 | 1.74 | 0.081 | .9308221 | 3.413089 |
| 7 | 1.880007 | .7854941 | 1.51 | 0.131 | .8289248 | 4.263868 |
| 8 | 1.914515 | .7221439 | 1.72 | 0.085 | .9140933 | 4.00984 |
| 9 | 1.480763 | .6145637 | 0.95 | 0.344 | .6564627 | 3.340114 |
| 10 | 2.233946 | .9915802 | 1.81 | 0.070 | .9359453 | 5.332059 |
| 11 | 1.035674 | .3991214 | 0.09 | 0.928 | .4866231 | 2.204214 |
| 12 | 1.140698 | .5630176 | 0.27 | 0.790 | .4335518 | 3.00124 |
| gender_economic | 1.092135 | .0387136 | 2.49 | 0.013 | 1.018833 | 1.17071 |

Table. 5c logistic regression for female's choice of being full-time parent without mediators

| exit_work | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|----------------------|------------|-----------|-------|-------|----------------------|----------|
| gender_ideology | 1.517554 | .2535791 | 2.50 | 0.013 | 1.093731 | 2.105608 |
| economic_factor | .7489099 | .1060404 | -2.04 | 0.041 | .5674209 | .988448 |
| educ | | | | | | |
| 2 | 7.944162 | 5.363946 | 3.07 | 0.002 | 2.115006 | 29.83902 |
| 3 | 7.317748 | 4.800549 | 3.03 | 0.002 | 2.022911 | 26.47147 |
| 4 | 2.992272 | 2.069635 | 1.58 | 0.113 | .7713632 | 11.60762 |
| 5 | 9.252252 | 5.954817 | 3.46 | 0.001 | 2.620643 | 32.66533 |
| 6 | 8.275947 | 5.684096 | 3.08 | 0.002 | 2.153746 | 31.80102 |
| ms | | | | | | |
| 2 | 1.306404 | .3432354 | 1.02 | 0.309 | .7806183 | 2.186332 |
| 3 | .9885567 | 1.153428 | -0.01 | 0.992 | .1004238 | 9.731207 |
| 4 | 1.421441 | .7418038 | 0.67 | 0.500 | .5111104 | 3.95315 |
| 5 | 1.441383 | 1.707538 | 0.31 | 0.758 | .1413846 | 14.69458 |
| income_level | | | | | | |
| 2 | .6484947 | .3058073 | -0.92 | 0.358 | .2573414 | 1.634192 |
| 3 | 1.260242 | .6531871 | 0.45 | 0.655 | .4563243 | 3.48044 |
| 4 | .8850672 | .4488961 | -0.24 | 0.810 | .3275341 | 2.391641 |
| 5 | .918253 | .4711675 | -0.17 | 0.868 | .3358921 | 2.510296 |
| 6 | .8606022 | .4134578 | -0.31 | 0.755 | .3356302 | 2.206703 |
| 7 | 1.305119 | .8292402 | 0.42 | 0.675 | .37568 | 4.534009 |
| 8 | 1.231543 | .6918185 | 0.37 | 0.711 | .4095315 | 3.703493 |
| 9 | .7788434 | .4854746 | -0.40 | 0.688 | .2295476 | 2.642577 |
| 10 | 1.412622 | .9684004 | 0.50 | 0.614 | .3685519 | 5.41444 |
| 11 | .5090862 | .2653555 | -1.30 | 0.195 | .1832787 | 1.414069 |
| 12 | .5613925 | .3814103 | -0.85 | 0.395 | .1482381 | 2.126049 |
| gender_economic_cons | 1.058655 | .057219 | 1.05 | 0.292 | .9522433 | 1.176958 |
| | .2659994 | .1970157 | -1.79 | 0.074 | .0622914 | 1.135883 |

Table. 5d logistic regression for female's choice of being full-time parent with mediators

| exit_work | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] | |
|----------------------|------------|-----------|-------|-------|----------------------|----------|
| benefit | 1.220902 | .059683 | 4.08 | 0.000 | 1.109354 | 1.343666 |
| cost | 1.087272 | .0455241 | 2.00 | 0.046 | 1.00161 | 1.180261 |
| gender_ideology | 1.450694 | .2498969 | 2.16 | 0.031 | 1.035018 | 2.033312 |
| economic_factor | .7324191 | .1056049 | -2.16 | 0.031 | .552113 | .9716087 |
| educ | | | | | | |
| 2 | 5.080987 | 3.473398 | 2.38 | 0.017 | 1.330641 | 19.4015 |
| 3 | 5.401524 | 3.589354 | 2.54 | 0.011 | 1.468542 | 19.86764 |
| 4 | 2.232044 | 1.569476 | 1.14 | 0.254 | .562568 | 8.855856 |
| 5 | 5.806059 | 3.809424 | 2.68 | 0.007 | 1.604715 | 21.00704 |
| 6 | 5.537488 | 3.867146 | 2.45 | 0.014 | 1.408866 | 21.76486 |
| ms | | | | | | |
| 2 | 1.206322 | .3244083 | 0.70 | 0.485 | .712123 | 2.043484 |
| 3 | .8685181 | 1.024287 | -0.12 | 0.905 | .0860823 | 8.762822 |
| 4 | 1.653871 | .9147524 | 0.91 | 0.363 | .5593759 | 4.889892 |
| 5 | 1.254187 | 1.512675 | 0.19 | 0.851 | .1179583 | 13.3351 |
| income_level | | | | | | |
| 2 | .6227168 | .2981636 | -0.99 | 0.323 | .2436273 | 1.591678 |
| 3 | 1.140248 | .6001986 | 0.25 | 0.803 | .4063947 | 3.19927 |
| 4 | .8172368 | .4230671 | -0.39 | 0.697 | .296277 | 2.254228 |
| 5 | .8037842 | .4206102 | -0.42 | 0.676 | .2882148 | 2.241623 |
| 6 | .7568325 | .3716014 | -0.57 | 0.570 | .2891103 | 1.981235 |
| 7 | 1.27174 | .8325077 | 0.37 | 0.713 | .3525201 | 4.587887 |
| 8 | 1.319284 | .7566119 | 0.48 | 0.629 | .4287187 | 4.059794 |
| 9 | .6712151 | .4278646 | -0.63 | 0.532 | .1924266 | 2.341307 |
| 10 | 1.466315 | 1.018436 | 0.55 | 0.582 | .3758559 | 5.720493 |
| 11 | .4127686 | .2200522 | -1.66 | 0.097 | .1451845 | 1.173527 |
| 12 | .5246306 | .3579326 | -0.95 | 0.344 | .1377577 | 1.997981 |
| gender_economic_cons | 1.064962 | .0588768 | 1.14 | 0.255 | .955598 | 1.186843 |
| | .0840523 | .0676247 | -3.08 | 0.002 | .0173665 | .4068064 |

Survey Questions:

Question 1:

What is your current gender?

- Male
- Female
- Transgender
- A gender not listed here

Question 2:

Which of the following best describes your sexual orientation?

- Heterosexual or straight
- Gay, lesbian, or homosexual
- Bisexual
- None of above, other
- Prefer not to say

Question 3:

Please indicate the highest educational degree you received.

- Less than high school
- High school graduate
- Some college
- 2-year degree
- 4-year degree
- Postgraduate degree (including master's and doctorate degree)

Question 4:

What is your marital status?

- Single, never married
- Married or domestic partnership
- Widowed
- Divorced
- Separated

Question 5:

Please indicate your annual income level.

- Less than \$10,000
- \$10,000 - \$19,999
- \$20,000 - \$29,999
- \$30,000 - \$39,999
- \$40,000 - \$49,999
- \$50,000 - \$59,999
- \$60,000 - \$69,999
- \$70,000 - \$79,999
- \$80,000 - \$89,999
- \$90,000 - \$99,999
- \$100,000 - \$149,999
- More than 150,000

Question 6:

If you are currently working full-time or part-time, how many hours per week do you work at present? If you are currently unemployed, please select "not working".

- Not working
- Less than 20 hours
- 20 to 24 hours
- 25 to 29 hours
- 30 to 34 hours
- 35 to 40 hours
- 41 to 45 hours
- More than 45 hours

Question 7:

If you are currently working full-time or part-time, please indicate how stable you think your job is. If you are currently unemployed, please select "not working".

- Not working
- Very unstable
- Somewhat unstable
- Neither stable nor unstable
- Somewhat stable
- Very stable

Question 8:

If you are currently working full-time or part-time, please write down the Number of people who are employed at your work location. If you are currently unemployed, please write "not working".

Scenarios:

Please read the following scenario carefully and answer the survey questions based on this description:

- Please imagine a dual-earner couple family. The wife is pregnant with a baby. Before the birth of the baby, the husband and the wife are discussing childcare responsibilities. Both of their employers only offer unpaid parental leave but promise that parents who use the policy will keep their jobs. **Moreover, the wife earns an hourly wage 5\$ more than the husband.**
- Please imagine a dual-earner couple family. The wife is pregnant with a baby. Before the birth of the baby, the husband and the wife are discussing childcare responsibilities. Both of their employers only offer unpaid parental leave but promise that parents who use the policy will keep their jobs. **Moreover, the wife earns an equal hourly wage with the husband.**
- Please imagine a dual-earner couple family. The wife is pregnant with a baby. Before the birth of the baby, the husband and the wife are discussing childcare responsibilities. Both of their employers only offer unpaid parental leave but promise that parents who use the policy will keep their jobs. **Moreover, the wife earns an hourly wage 5\$ less than the husband.**

Based on the scenario provided, please imagine that you are a member of this couple and answer the following questions:

For following question, by the term “mental well-being,” I mean people’s emotional sense of security, contentment, and/or happiness; by the term “material well-being,” I mean people’s consumption of material goods, such as refrigerators or automobiles.

Question 9:

With 0 being not at all and 10 being a great deal, please indicate the degree to which your family will **benefit** in terms of mental well-being and material well-being if you were to take the parental leave.



Question 10:

With 0 being not at all and 10 being a great deal, please indicate the degree to which your family will **lose** in terms of mental well-being and material well-being if you were to take the parental leave



Question 11:

Imagine that your employers allow you and your partner to take hourly leave every day for the purpose of childcare. You and your partner agree that a total of **6 hours** are required to take care of the baby every day. The 6-hour leave can be taken entirely by one parent or can be split between the two parents in any combination. How many hours a day do you think you should take (assuming that your partner would take the other hours)?

- 0 hour
- 1 hour
- 2 hours
- 3 hours
- 4 hours
- 5 hours
- 6 hours

Question 12:

If you and your partner agree that either one of you will exit employment to be a full-time parent to take care of the baby, do you think you should be the one who should take the parental leave?

- Yes
- No

Question 13:

The following question will present you **5** statements about gender relationship in family. For each following statement, please tell me whether you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with **each** of these statements.

| | Strongly agree | Somewhat agree | Neither agree nor disagree | Somewhat disagree | Strongly disagree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| 1. A man's job is to earn money; a woman's job is to look after the home and family. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. It is much better for everyone concerned if the man is the achiever outside the home and the woman takes care of the home and family. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Women are much happier if they stay at home and take care of their children. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. A man is biologically good at earning money; a woman is biologically good at taking care of children and home. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. Men do not need to share the work around the house with women, such as doing dishes, cleaning, and so forth. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |