

WHY ARE WORKING WOMEN OPTING OUT? ARE THEY HAPPY?

A THESIS

Presented to

The Faculty of the Department of Economics and Business

The Colorado College

In Partial Fulfillment of the Requirements for the Degree

Bachelor of Arts

By

Alejandra Chavez

May 2014

WHY ARE WORKING WOMEN OPTING OUT? ARE THEY HAPPY?

Alejandra Chavez

May 2014

Economics and Sociology

Abstract

This paper identifies factors that contribute to the decision by some married American women to “opt-out” of the labor market. Interestingly, many of these women have invested heavily in their education and have opportunities for career advancement. The “opting-out” phenomenon illustrates women who leave high-profile jobs to seek flexible work arrangements (e.g., part-time jobs) or to be stay-at-home mothers to balance work and family. Opting out is embedded in debates about traditional gender roles, wage penalty, and the loss of valuable human capital for the economy—highly educated mothers. Data for this study come from the 2012 American Time Use Survey (ATUS). This study uses Ordinary Least Squares (OLS) to evaluate the factors that influence the number of hours women work a week. It also uses logistic regression to assess if the effect of spouses’ work status holds after controlling for age, race, region, women’s education, work sector, occupation, household income, number of children, children under five, and time spent on childcare. Furthermore, this study evaluates the different time usage of parents and applies existent household utility maximization models to show the effect of women’s decision to opt out. This study found that while spouses’ works status is a significant contributor to women’s decision to opt out, there are other factors that are stronger predictors. This study also found that married mothers have a strong preference for housework and childcare, which leaves them with less leisure time compared to fathers. Ultimately, this study sheds light on the way a household maximizes its utility based on the division of labor agreed by the couple, which in turn influences labor supply.

KEYWORDS: (child penalty, fast-track, glass ceiling, higher-quality children, human capital, maternal wall, opting-out, positive assortative mating, second-tier)

ACKNOWLEDGEMENTS

I would like to recognize the time and effort of my advisor, Professor Esther Redmount, for her continuous feedback and unconditional support throughout my senior thesis. Esther, I really appreciate the time to meet up, your extended office hours, and your fast-email response. Thanks to you, I never felt alone in this process. Additionally, many thanks to Paraprofessional, Phoenix Van Wagoner, for his help that ranged from modelling to proofreading. Also to Molly Gross, Associate Director of the Writing Center, for her insightful recommendations, which facilitated the writing process. Lastly, I would like to thank my father for the effort he makes so I can study abroad and pursue my goals. This thesis is dedicated to my mother who encouraged my passion for Economics since I was in high school.

ON MY HONOR, I HAVE NEITHER GIVEN NOR RECEIVED
UNAUTHORIZED AID ON THIS THESIS

Signature

TABLE OF CONTENTS

ABSTRACT	ii
ACKNOWLEDGEMENTS	iii
1 INTRODUCTION	1
2 LITERATURE REVIEW	3
2.1 “The Second-tier:” Job flexibility and Less Time Commitment.....	3
2.2 Child penalty: The Cost of Motherhood in the Financial and Corporate Sectors....	6
2.3 The Stay-at-home Spouse Decision.....	7
2.4 Parent’s Time Usage: Children Cannot Wait, Household Duties Can.....	8
2.5 Helping Raise “Higher-Quality” Children.....	9
2.6 Conclusion.....	10
3 THEORY	11
3.1 Maximizing Household Utility: Division of Labor.....	11
3.2 Deciding How Many Hours to Work.....	14
3.3 Income and Substitution Effects.....	15
3.4 Individual Labor Supply.....	18
3.5 Assessing the Limitations of the Utility Maximization Model	19
4 DATA AND METHODOLOGY	21
4.1 Dependent Variables.....	21
4.2 Independent Variables.....	22
4.3 Control Variables.....	22
4.4 Analyses.....	23

5	RESULTS	26
5.1	Factors that Influence Women’s Labor Supply	26
5.2	Factors that Influence Women’s Decision to Work Part-time	30
5.3	Factors that Influence Women’s Decision to Opt-out of the Workforce.....	37
5.4	Married Parents’ Time Usage.....	42
5.4.1	Personal Activities of Married Parents.....	42
5.4.2	Work Activities of Married Parents.....	42
5.4.3	Childcare Activities of Married Parents.....	43
5.4.4	Household Activities of Married Parents.....	43
5.4.5	Leisure Activities of Married Parents.....	44
5.5	Assessing the Impact of Preschoolers in Women’s Time Usage by Work Status..	44
6	CONCLUSION AND FURTHER RESEARCH	47
7	REFERENCES	50
8	APPENDIX A: CODING OF VARIABLES IN THE STUDY	53
9	APPENDIX B: PARENTS’ USE OF TIME (2007-11) - ATUS	55

LIST OF TABLES

4.1	Descriptive Statistics.....	23
5.1	OLS Regression on the Number of Hours Women Work per Week.....	29
5.2	Logistic Regression Predicting Likelihood of Women's Part-Time versus Full-Time Work Status.....	35
5.3	Logistic Regression Predicting Likelihood of Women Not Being in the Labor Force versus Being in the Labor Force	40

LIST OF FIGURES

3.1 The Household's Production Possibility Frontier.....	12
3.2 Alternative Household Divisions of Labor	13
3.3 An Individual's Labor Supply Decision.....	15
3.4 Effect of a Decrease in Wages if the Individual is Initially Not Working.....	16
3.5 Effects of a Decrease in Wages if the Individual is Initially Working.....	17
3.6 An Individual's Supply Curve	18
5.1 Number of Hours Spent in Primary Activities on an Average Day by Mothers' Work Status by Age of Youngest Household Child.....	45
5.2 Number of Hours Spent in Primary Activities by Mothers with Children under the Age of 18 by Employment Status of Self and Spouse.....	46

CHAPTER 1

INTRODUCTION

The entry of women into the workforce reinvented the labor market in the United States. While women have become more involved in their careers, the majority are still the primary caregivers to their children. As a result, many women must juggle time spent between work and family, leading some of them to opt out of the workforce. Opting-out is defined as women with high profile jobs who shift to part-time work or leave the workforce entirely to be stay-at-home mothers. Mothers considered to have opted out certainly retain the possibility of returning to the workforce at a later point in time (Moe and Shandy, 2010). Opting out is but one sliver of the literature exploring traditional gender roles and career penalties for women returning to the labor force after a leave of absence and is the major focus of this paper.

To explore the opt-out phenomenon, one must distinguish between women who never opt-in—defined as those working pink collar jobs and family-friendly jobs, which facilitate plans to balance work and home—and women who opt-out. While the former is more common than the latter, opting out has recently gained traction among upper-class mothers dedicated to providing quality childcare (Moe & Shandy, 2010). While mothers belonging to a lower socio-economic class (particularly single mothers) work full-time due to financial necessity, upper-class mothers (many with a well-to-do spouse) have the

freedom to slow their careers in a manner that facilitates work and family balance. It is upper-class women who have opted out that are the primary focus of this study.

This study explores two research questions. The first being, which factors contribute to women's decision to opt out?

Hypothesis 1: Spouses' work status is the main contributor for middle and upper-class, married, American women to work part-time or depart from the workforce.

Knowing that part-time jobs and less stressful work environments are often characterized by a lower pay (Bertrand et al., 2010), to what extent are women with opportunities for career advancement and who have invested heavily in their education happy with their decision to opt out?

Hypothesis 2: Women facing these penalties are content because they are less time constrained in providing a good quality upbringing to their children.

This study was motivated by a prior Sociological research project in which the researcher assessed spousal-influence in women's decision to opt out using data from the 1972-2010 General Social Survey (GSS). This study looks to recreate the model, validate the results, and reinforce knowledge employing a more extensive Economics dataset—the 2012 American Time Use Survey (ATUS) from the Bureau of Labor Statistics (BLS).

This study first draws on a literature review that shows the strategies women use to balance work and family. Chapter three provides an overview of the economic theory surrounding opting out, including income and substitution effects, and household utility maximization models. Chapter four describes the data, the variables of interest, and the methodology. Chapter five displays the regression results assessing the factors that contribute to women's decision to opt out, and compares the time usage of parents.

CHAPTER 2

LITERATURE REVIEW

The literature review will look at women's preference for part-time jobs and work in the nonprofit sector together with the salary tradeoff both entail. Next, an estimation of "the child penalty" in the corporate sector is presented with an explanation of parent's time usage to provide high-quality childcare.

"The Second-tier:" Job flexibility and Less Time Commitment

Historically, the growth of part-time jobs since the 1930s has given mothers, especially of preschoolers, an opportunity to continue practicing, to some degree, their professions while fulfilling their household obligations (Goldin, 2006). Significantly, female dominated jobs such as secretary, nursing, and teaching have a high volume of part-time jobs (Goldin, 2006). The BLS defines part-time job as a position 34 hours-per-week or less of work. Using data from the Current Population Survey, Blank (1990) reported that from 1968 to 1987 the percentage of women working part-time persisted at 25%, with an average of 80% declaring voluntary part-time work (p.125). Given the influx of women into the working force, a constant 25% rate means that the number of part-time jobs has increased significantly since 1968. Furthermore, the most current report of the BLS (Feb 2013) shows a rise in women's representation in the part-time sector to 32% due to the cut of full-time positions product of the financial crisis.

The literature holds that further increases can be expected for part-time positions in different economic sectors because women's attitudes towards the "ideal" work-family balance have changed. A 2007, Pew Research Center survey reported that only 21% of working mothers of children under the age of 18 stated that full-time work is ideal. Conversely, 80% of part-time working mothers declared they achieved their ideal work status (Moe & Shandy, 2010, p.165). In contrast, fathers prefer full-time jobs. Historical statistics validate the statement that part-time jobs offer the time flexibility highly valued by many mothers often seen in female-dominated industries.

Like part-time jobs, the nonprofit sector is viewed as an alternative option for working mothers. Jobs in this sector often provide less stressful work environments and family friendly policies. Young-joo Lee (2011) explains that throughout history, women have dominated the nonprofit sector because it provides "parental leave, on-site child care, job sharing and flexible hours" (p.11). According to Stark in 2002, women account for 94.8% of nurses, 85.9% of elementary school teachers, 85.9% of librarians, and 99% of secretaries (2007, p.347). The provision of family friendly policies is expected due to "the sector's higher societal expectations and ethical standards of fairness" (Lee, 2011, p.11). It is not surprising, that women are twice as likely to work in the nonprofit sector as men, although it is associated with lower pay (O'Neill and O'Neill, 2005). The female-overrepresentation in the nonprofit sector shows women's willingness to sacrifice their salary for a family-friendly environment. The popularity of part-time jobs and careers in the nonprofit sector provides some evidence that time is a constraint for working mothers.

While part-time jobs and careers in the nonprofit sector are popular among mothers, they do not provide the desired economic and social recognition as their full-

time, for profit counterparts. These jobs are often not highly regarded by colleagues, hold limited career advancement, and lack benefits such as pensions and health insurance (Moen, 1992). Some employers perceive part-time work as a subordinate role in an enterprise often call “the mommy track.” A mother declares, “I feel like not being available to work late, come in early, and work weekends every weekend has ‘mommy tracked’ me” (cited in Moe & Shandy, 2010, p.7). The limited scope for travelling is another important contributor to the “maternal wall.” Moe and Shandy (2010) interviewed and surveyed American women and their families regarding their experience combining a career with raising children. These authors found that the amount of travel required and the frequency of being “on call” were often triggers for women to switch jobs, be self-employed or to drop out of the labor force. Since some employers think that working extra-time and travelling show commitment, it follows that women working part-time are segregated to an underpaid reduced-hour schedule with few opportunities for advancement and recognition.

Why do women, particularly those on top management positions, opt for flexible work environments? Manson’s and Ekman (2007) explore this question by compiling stories of mothers who have opted out of the fast-track to hold “second-tier” jobs. The second-tier designation is controversial, as it is both regretted and welcomed by women. Some, according to Mason and Ekman (2007), believe it is “the kiss of death to their career” (p.53) and others see it as “the Holy Grail” (p.88). Regardless, of women’s differing perceptions of flexible work environments, some women select them because they suit their lifestyles. A magazine designer working at home states that the second-tier’s slower pace allows her to be engaged in her children’s education during their early

years. “I get time to run errands, to take my daughter to the doctor, to have time with the girls” (as cited in Mason & Ekman, 2007, p.76). Opting for second-tiered jobs seems reasonable given that mothers in the fast-track reported working 94 hours a week; 53.3 hours on professional work, 26.8 on care giving, and 14.3 hours on housework (Mason & Ekman, 2007, p.65). Some women find the inflexibility of the fast-track work unbearable and the frantic pace unsustainable, making the second-tier a preferred option.

Child penalty: The Cost of Motherhood in the Financial and Corporate Sectors

Bertrand et al. (2010) studied the career paths of MBA students from the University of Chicago to assess the gender wage gap in the financial and corporate sectors. The wage gap is calculated in log points¹ (a statistical transformation similar to percentage points). These sectors are known for their long working hours and their high child penalty. “Women earn \$115K on average at [MBA] graduation, and \$250K nine years out; men earn \$130K on average at graduation, and \$400K nine years out” (Bertrand et al., 2010, p.236). Bertrand et al. (2010) state that three factors can explain 84% of the 31 log point raw gender gap in earnings following MBA completion: differences in training prior to MBA graduation, differences in career interruptions (a period of 6 months or more), and differences in weekly worked hours (p.230).

Fifteen years after MBA completion, mothers work an average of eight month fewer compared to the average man. In contrast, childless women have a 1.5 month deficit. Women with children also work 24% fewer hours than the average man, while childless women work 3.3% fewer hours (Bertrand et al., 2010, p.230). In other words, childless women have similar career tracks as men; hence their gender wage gap is

¹ The formula for a log point is $100 \cdot \ln(x)$, where x is the amount in dollars. “The difference between two-log points amounts equals the percentage difference between the original two dollar amounts” (Patrick, 2008, p.1)

minimal—reported as 15 log points 10 years after MBA (Bertrand et al., 2010, p.243). Earnings across women and men, parents and non-parents differ largely because of motherhood and the associated career interruptions and necessity for shorter working hours. Furthermore, the relationship between income and time off is highly non-linear.

Child penalty, defined as the difference in parent’s earnings with and without children, differs across sectors. To estimate the child penalty in the financial and corporate sectors, Bertrand et al. (2010) compare the raw earnings deficit for women with and without children relative to men. The raw earnings deficit is 45 log points for women with children and 22 log points for women without children, meaning that the -23 log point raw is the child penalty on women’s earnings which is fully accounted for by the three mentioned factors (Bertrand et al., 2010, p.241). The loss in earnings relative to men is 23 log points (or 23 percentage points) for taking time off.

This gap is increased even further by less accumulated work experience (holding hours worked constant) (Bertrand et al., 2010). Furthermore, it was found that if a mother returns to the workforce on a reduced schedule, the wage penalty increases to 46 log points relative to men (Bertrand et al., 2010, p.240). The high child penalty explains why some women in the corporate sector, particularly corporate leaders, believe that taking advantage of family-friendly policies in the workplace (such as maternal leave or sabbatical) harms their careers (Moe & Shandy, 2010).

The Stay-at-home Spouse Decision

While mothers are heavily penalized for taking the time off that having and raising children entail, fathers are penalized even more. Some argue that this penalty explain the prevalence of women opting out. Moe and Shandy (2010) report that “even if

men feel pulled between job and children, it's less socially acceptable for men to admit to, or to act on, these feelings" (p.85). To a certain extent employers are used to maternity leaves, but paternity leaves signal lack of commitment. Bertrand et al. (2010) ran separate earning regression by sex and found that six years post-MBA, men were more heavily penalized than women for taking time off work. Men face a 45 log points earnings penalty compared to 26 for women. (Bertrand et al., 2010, p.240). The higher penalty for fathers leads some couples to decide that the mother's career is more flexible. Thus, fathers accept more demanding jobs to compensate for the mother's foregone salary.

As a result, five years after the birth of one's first child, men reported higher earnings. In fact, women with high-earning spouses are 30 percentage points less likely to work than the average man and twice less likely to work compared to women with low-earning spouses (Bertrand et al., 2010, p.244). While motherhood is negatively associated with earnings, fatherhood dotes a positive association. It could be argued that women with high-earning spouses choose to work less time, while father simply lack the option to spend more time with their children without being heavily penalized for deviating from the norm.

Parent's Time Usage: Children Cannot Wait, Household Duties Can

Mothers and fathers differ in their time allocation because of their different duties, which are largely dictated by gender roles. Connelly and Kimmel (2010), in their book *The Time Use of Mothers in the United States at the Beginning of the 21st Century*, claim that women have more imbalanced housework responsibilities. These responsibilities are aggravated due to the nature of household tasks that often contribute to family and work conflicts. Most of the tasks historically performed by women need to be done daily, such

as bathing a child or cooking. Tasks such as mowing, more likely performed by men, only need to be done during the weekend (Connelly and Kimmel, 2010). Additionally, women's time is highly constrained by their children's schedule, including childcare, school, extracurricular activities (which differ by children), homework, and sleeping hours. While mothers focus on developmental childcare—including activities like arts and crafts, reading, and helping with homework—men report more fun time when taking care of their children (Connelly & Kimmel, 2010). Due to their primary caregiving role, women are more likely than men to have scheduling conflicts between work and family.

Helping Raise “Higher-Quality” Children

The time balance conflict has worsened due to a recent trend in highly educated parents wishing to raise “higher-quality children” (Connelly & Kimmel, 2010). These parents hope that more time invested in fewer children will help their children to do better in school and to be well prepared to face a competitive labor market. However, for parents and children to reap these future benefits, a substantial amount of time must be allocated to caregiving, which cannot be bought in the marketplace. Childcare needs to be complemented with parents' caregiving time.

Allocating time for caregiving is difficult when couples work more than a full-time job requires. Moe and Shandy (2010) name couples in these situations, “100-hour couples.” Positive assortative mating explains the long working hours of these couples. They have similar interests, education level, and cultural values, enabling them to engage in similar pursuits. (Moe & Shandy, 2010). Yet, the stress of a 70-hour work week and the desire to provide high-quality childcare motivate some mothers to opt out. Recently, the majority of high-income parents are allocating more time for caregiving than past

cohorts. Yet, time pressure is felt differently across non-employed, part-time and full-time employed mothers—the latter sacrificing more personal time to raise their children.

Conclusion

In summary, women are more likely to engage in part-time work, experience job interruptions, and stay at home—particularly if their spouse’s salary and/or their high socioeconomic status compensate for foregone earnings. The literature informs us that opting out is fostered by factors such as couples’ motivation to help raise “higher-quality children,” to be less time constrained, and to save money by not paying for childcare. Since women are generally the principal care takers, they shy away from occupations that do not allow them to fulfill their family responsibilities. This decision, however, comes with a financial penalty and in some cases scarce social recognition. Furthermore, some employers perceive flexible jobs—labeled “the second-tier”—as the alternative for women who cannot stay in the fast-track. Mothers with fast-track careers report high-stress levels as a result of dedicating substantial caregiving time, sacrificing leisure, and postponing household duties for the weekend (Mason & Ekman, 2007).

This study adds to the literature by quantitatively assessing the weight of each factor that contributes towards women’s decision to opt out. In addition, this research investigates the difference between the activities in which unemployed, full-time and part-time working mothers engage, depending on their spouse’s work status, and on the presence of preschoolers in the household. This study attempts to answer the question: Are mothers who have opted out satisfied by gaining more time with their children at the expense of economic independence and advancement in their careers?

CHAPTER 3

THEORY

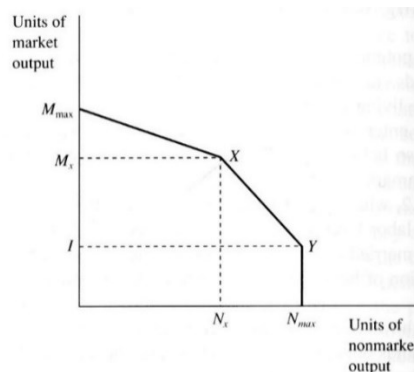
The purpose of this section is to explore the literature on utility maximization models and apply it to the question of women's decision to opt out. Marriage formation is outside the scope of this paper. The following models assume that individuals want to maximize their utility by marrying people either with similar interests (positive assortative mating) or with different but complementary interests (opposites attract). It is also assumed that the household is the economic unit, and that parents would want to maximize their children's utility and each other's utility. There are other models of how households behave, also beyond the scope of this paper. This study aims to shed light on the forces determining the division of labor within the household, which determines an individual's labor supply. Limitations of the model will also be assessed.

Maximizing Household Utility: Division of Labor

To evaluate the factors that influence the division of labor, Jacobsen (2007) describes a model composed of a married-couple household. It is assumed that one spouse has comparative advantage at producing market goods, and the other at producing nonmarket goods. The household's budget constraint contains earned income and nonearned income (e.g., retirement benefits). The household's preference for market and nonmarket goods is represented by the shape and slope of its indifference curve.

The budget constraint is plotted in the household's production possibility frontier (PPF) showing the different combinations of market and nonmarket goods that couples can consume and produce. The slope of the PPF shows the trade-off in terms of time required to produce each type of good (See Figure 3.1). M_{\max} is the amount of market output that couples can consume if they spend all their time on paid work, and the opposite for N_{\max} in which couples spent all their time in nonmarket activities. Both are extreme cases, known as corner solutions, unlikely for the majority of couples. Thus, it is worth looking at alternative solutions in which couples split their time between consuming market goods and producing nonmarket output. These alternatives can be visualized in Figure 3.1 and are plotted in Figure 3.2.

Figure 3.1: The Household's Production Possibility Frontier



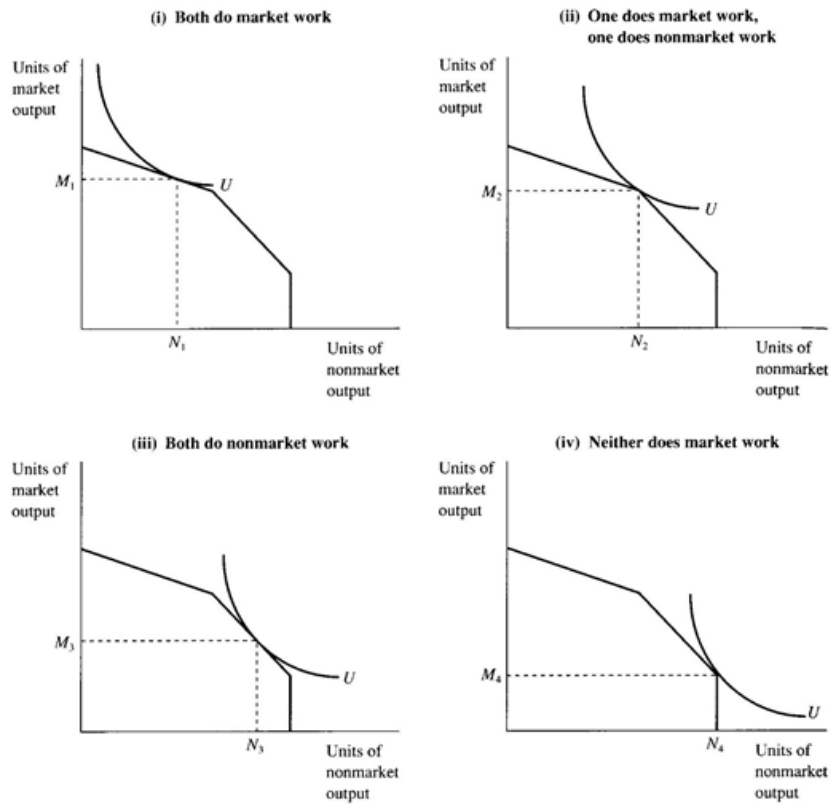
Reprinted from *The Economics of Gender* (p.68), by J. P. Jacobsen, 2007, Malden, MA: Wiley-Blackwell.

In Figure 3.1 from point M_{\max} to X , both spouses do market work, but one spends time doing nonmarket work as well—these households have a strong preference for market output. At point X , one partner specializes in market work, and the other in nonmarket work. From point X to Y , both spouses do nonmarket work, but one does market work as well. Notice that from point X , the slope of the frontier becomes steeper. This happens because the person who is less efficient at producing nonmarket output is

now spending more time producing nonmarket output. Ultimately, at point Y neither does market work—these households have a strong preference for nonmarket output.

Figure 3.2 graphically shows the four alternative divisions of labor for couples; 1) both do market work, 2) one does market work, one does nonmarket work, 3) both do nonmarket work, and 4) neither does market work.

Figure 3.2: Alternative Household Divisions of Labor



Reprinted from *The Economics of Gender* (p.70), by J. P. Jacobsen, 2007, Malden, MA: Wiley-Blackwell.

The choice between the alternative divisions of labor is shown by the position and the slope of the indifference curve where it touches the PPF, which aim to maximize the household's utility; $U = f(\text{market output, nonmarket output})$. If units of market output are on the Y axis and units of nonmarket output are on the X axis, a flatter indifference curve indicates preference for market goods, and vice versa. In cases (i), (ii), and (iii), the spouse with comparative advantage at market work is expected to spend more time on it.

Jacobsen (2007) states;

“Men are, in general, more efficient at generating units of market commodities than at generating units of nonmarket commodities; the opposite holds for women. First, men generally command higher wages than women. [...] Second, women may be more efficient at both market and nonmarket work than men, but they may be relatively more efficient at nonmarket work. (p.70-71)

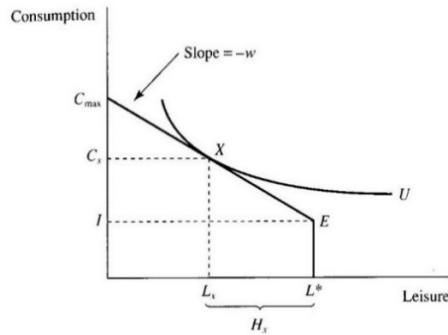
The data of this study are consistent with Jacobsen’s statement—on average, women’s weekly earnings are \$770.23 and men’s are \$1,090.82. Yet, the difference in earnings is not a proxy of women’s bargaining power in the household. Women’s bargaining power depends on income and social norms. Furthermore, socialization can shape women’s preferences, making them derive a higher utility from nonmarket activities than men—explaining the division of labor.

To summarize, couples choose a division of labor that maximizes the household’s utility—which depends on couple’s preferences for market and nonmarket output, negotiating rules within the household, and the bargaining power of each member.

Deciding How Many Hours to Work

An individual chooses the combination of market H_x (paid-work) and nonmarket hours L_x (leisure) that maximizes his utility $U=f(\text{consumption, leisure})$, subject to the constraint of the total money and time available L^* . An individual’s preference for consumption over leisure is evident in his indifference curve. Figure 3.3 shows the tradeoff between labor and leisure for an individual.

Figure 3.3: An Individual's Labor Supply Decision



Reprinted from *The Economics of Gender* (p.107), by J. P. Jacobsen, 2007, Malden, MA: Wiley-Blackwell.

C_{\max} is the maximum an individual can consume with his hourly wage rate (w) and his nonearned income (I). The budget constraint slopes down from C_{\max} to E with a slope of $-w$, where w is the opportunity cost of an hour of nonmarket time. Point E shows the individual's endowment of time and nonearned income.

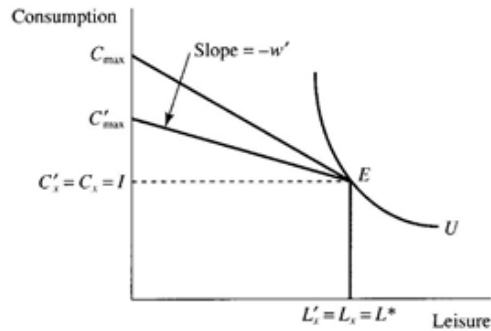
Income and Substitution Effects

A change in the individual's labor supply is caused by (1) changes in the budget constraint, and (2) changes in the individual's preferences for consumption and leisure. Both of these changes might arise when women give birth. For instance, women could face a decrease in wages because they shift to part-time jobs. Alternatively, women could prefer to be more time at home to care of their newborns instead of working long hours.

Figure 3.4 and 3.5 assess the possible scenarios of a decrease in wages and its impact on women's decision to work. An increase in wages would not be analyzed given that the literature illustrates that opting out is negatively associated with wages (Goldin & Katz, 2010). In the case of women who are initially not working, a decrease in wages leads to a pure substitution effect, which is portrayed in Figure 3.4. While the opportunity cost of leisure changes, it has no effect on income, because she has none.

The woman is already at point E getting L^* , the maximum available amount of leisure. For a given change in w , the flatter the indifference curve at E (the less consumption she is willing to give up for an additional hour of leisure), the more likely she is to start working—which is unlikely with a decrease in wages.

Figure 3.4: Effect of a Decrease in Wages if the Individual is Initially Not Working



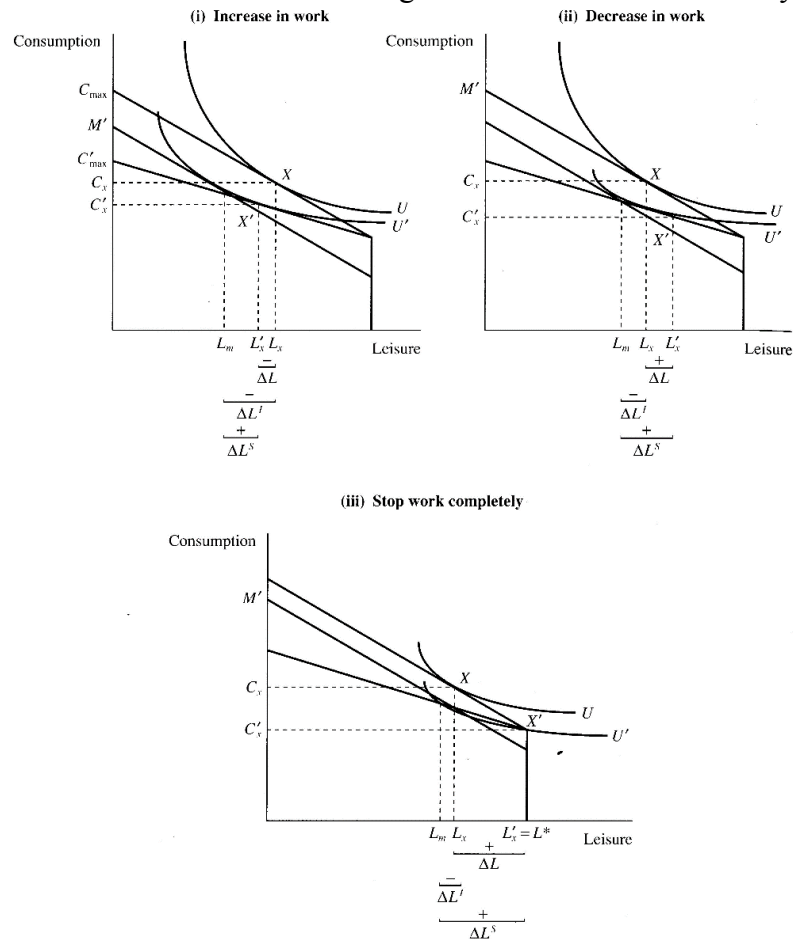
Reprinted from *The Economics of Gender* (p.134), by J. P. Jacobsen, 2007, Malden, MA: Wiley-Blackwell.

In contrast, consider women who are initially working. If the wage decreases, the opportunity cost of leisure falls, making a woman demand more leisure and less consumption (substitution effect). Since potential earned income also falls, a woman would demand less consumption and leisure (income effect). Thus, she would cut consumption, but leisure can increase or decrease depending on the relative sizes of the income effect (ΔL^I) and the substitution effect (ΔL^S). The actual change in leisure (ΔL) is the sum of the negative income effect and the positive substitution effect.²

Figure 3.5 shows the three possible effects of a decrease in wages for a working woman (1) an increase in hours worked, (2) a decrease in hours worked, and (3) a choice to stop working.

² The income effect is found by keeping the wage constant and decreasing (I) until utility equals U^2 , where U^2 is the amount of utility achieved under the lower wage rate. This new utility (U^2) would require a total income of M^2 . The income effect on leisure (ΔL^I) is measured as the distance between L_m to L_x —where L_m is the leisure desired when total income equals M^2 , and L_x is the initial leisure desired. The substitution effect on leisure ΔL^S equals the distance between L_m to L'_x — which represents the change in leisure holding utility constant at the new level U^2 , while the wage is decreased to the new level (Jacobsen, 2007, p.136).

Figure 3.5: Effects of a Decrease in Wages if the Individual is Initially Working



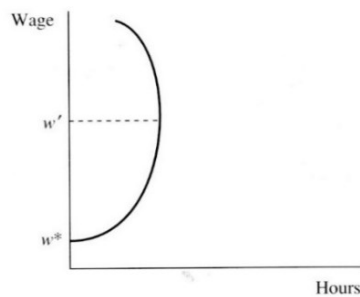
Reprinted from *The Economics of Gender* (p.136), by J. P. Jacobsen, 2007, Malden, MA: Wiley-Blackwell.

If the income effect is larger than the substitution effect, a woman would work more hours. This can be the case of a woman who utilizes her income to pay for childcare, and does not necessarily need more time at home because her child is at a nursery. If the substitution effect is larger than the income effect, a woman would work fewer hours. For instance, if a woman prefers to be raising her own children rather than committing to a full-time job, she can choose part-time employment. However, if the substitution effect completely offsets the income effect, in other words, if a woman's desired leisure is greater than or equal to L^* , she would stop working. For example, if she thinks that working would detract from her children's quality upbringing.

Individual Labor Supply

An individual's labor supply (hours worked with respect to earnings) can be traced by hypothetically changing wages (see Figure 3.6). The reservation wage (w^*) indicates the point at which the individual is indifferent about working and not working. From w^* to w' , the individual works more hours as wages increase. However starting at w' , the supply curve bends backwards, meaning that the individual works less hours even if wage continues to increase. For example, high-earning CEO might decide that she earns enough money, and that she wants to spend more time travelling with her family.

Figure 3.6: Individual's Supply Curve



Reprinted from *The Economics of Gender* (p.137), by J. P. Jacobsen, 2007, Malden, MA: Wiley-Blackwell.

The elasticity of labor supply is the percentage change in hours worked divided by the percentage change in the wage, which follows:

$$e_s = \frac{\Delta H}{H} \frac{w}{\Delta w} = \frac{\frac{\Delta H}{H}}{\frac{\Delta w}{w}} = \frac{\% \Delta H}{\% \Delta w} \quad (3.1)$$

Jacobsen (2007) argues that women's supply curves are more elastic because of their greater sensitivity to wage changes than men's. Men need to work because, in general, they are the breadwinners of the family regardless of wage changes. Jacobsen (2007), however, acknowledges that the elasticity of women's labor supply is decreasing over time; hence, it is becoming more like men's.

Assessing the Limitations of Utility Maximization Model and Labor Supply

Critics have identified two main limitations of the model: 1) leisure as one-category encompassing housework and childcare, and 2) the difference between decision utility and experienced utility.

Connelly and Kimmel (2010) criticize the binary division between consumption and leisure, the later encompassing housework, childcare, and leisure activities. Connelly and Kimmel (2010) advocate a more comprehensive model of a household's utility maximization in which housework and childcare are treated differently rather than being reduced to one category, leisure. Their proposed model is: $U = f(t_{mL}, t_{fL}, CS, G)$, where t_{mL} is mother's leisure time, t_{fL} is father's leisure time, CS denotes child services and G stands for adult consumption goods—subject to household production, child services, income, mother's time constraint, husband's time constraint, and child time constraint.

Alternatively, Kahneman and Thaler (2006) state that there is a difference between decision utility (t_0) and experienced utility (t_1). These authors claim; “People do not always know what they will like; they often make systematic errors in predicting their future experience of outcomes, and as a result fail to maximize their experienced utility” (p.222). For example, a woman who opted out might not realize the importance of having financial independence until she has to ask her husband for money.

In the household's utility maximization model and the labor supply model, it was assumed that utility is maximized by individuals choosing a set of preferences—based on decisions made at a specific time (t_0). Kahneman and Thaler (2006), however, argue that people do not maximize their utility with their choices—particularly in the following cases in which projection bias is more likely to arise.

Kahneman and Thaler (2006) state:

1) where the emotional or motivational state of the agent is very different at t_0 and t_1 ; 2) where the nature of the decision focuses attention on aspects of the outcome that will not be salient when it is actually experienced; 3) when choices are made on the basis of flawed evaluations of past experiences; and 4) when people forecast their future adjustment to new circumstances. (p.223)

These four areas are highly applicable to women's decision to opt out. Consider case (1) in which a woman makes the decision to opt out when pregnant and busy at her job (t_0), but she ignores how she will feel about labor participation after childbirth (t_1). Case (2) could refer to a woman's concern when pregnant of being less physically attractive deciding to opt out to have plastic surgery or to have time to exercise. After childbirth, however, that concern is not as prevalent. Case (3) exemplifies mothers who opted out because of traumatic past pregnancies. Case (4) reflects the subjective ways in which a woman forecasts her change in lifestyle after childbirth, for example, feeling tired and needing more time to exercise while balancing the time spent at caregiving.

Given that now pregnancy can be planned, many couples—particularly the ones focused on their careers—do not enter parenthood without careful planning. However, Kahneman and Thaler argue that forecasts are biased; hence, people are not maximizing their utility with their choices. Moreover, the prediction bias is more common when there is a time gap between decision utility and experienced utility (e.g., before and after childbirth), and when the decision involves emotions (e.g., motherhood). This argument, together with Connelly and Kimmel's more comprehensive model, suggests the question: Can utility for mothers be maximized, modeled and measured?

CHAPTER 4

DATA AND METHODOLOGY

Data for this study come from the 2012 American Time Use Survey (ATUS) collected by the BLS. The ATUS compiles annual information, through survey-type interviews, to measure the amount of time an American cohort spends doing market and nonmarket activities. The year 2012 data were chosen because they provide the most up-to-date information on time usage habits in the recovery phase of the business cycle—which is expected to differ in each phase. The males in the population were dropped because this study focuses on women, their spouses and their children, giving a sample of 136,563 observations.

Dependent Variables

The dependent variables of interest are the number of hours women work per week and the work status of women (part-time and not in the labor force). The time women work per week was selected to quantitatively assess the impact of different factors on women's labor supply. The variable "part-time" is a dummy that compares women who work part-time (coded as 1) versus women who work full-time (coded as 0). This variable measures women's decision to choose flexible work environments. On the other hand, the variable "not in the labor force" is a dummy that compares women who have opted out of the labor force (coded as 1) versus women who are working (either full or part-time) or are currently unemployed (laid off or looking for a job)—the two later

groups coded as zero. By classifying working and unemployed women in the same category, this variable represents women who are currently out of the work force. Self-employment is controlled for by a separate dummy.

Independent Variables

The main independent variables are spouses' work status and spouses' weekly hours worked. Since both of them measure spousal influence on women's decision to opt out, each variable was used in a different regression model. Including both variables in the same model would lead to multicollinearity. Moreover, having two ways to validate the results gave strength to the models. Unemployed spouses were not included in the analysis due to sample selection bias. The data reported unemployment of 23% for men in their prime working years, which is not representative of the US population.

Control Variables

The control variables are age, race, education, weekly earnings, household income, region, number of children living in the household, presence of preschoolers in the household, hours spent on secondary childcare, work sector, occupation, and industry. The information reported is all from women. The variable race was collapsed into three (White, Black, and minority) from the original 26 categories. Average weekly earnings of the respondent were divided by 100 to measure a \$100 increase that yielded more meaningful information. The number of children was originally a continuous variable. To measure the non-linear effect of the quantity of children, the variable was converted into a quasi-continuous one divided into three categories (one, two, and three or more children). The presence of preschoolers (children under the age of five) is a dummy created by using a variable that reported the age of the youngest household child. Time spent on secondary childcare—defined as “time one has a child under 13 years in his or

her care while doing something else as a main activity” (ATUS data dictionary)—was originally measured in minutes; hence, it was divided by 60 to convert it into hours. Since other variables are also measured in hours such as respondent and spouses’ weekly hours worked, this transformation allows for a more accurate comparison. Work sector had eight original categories that were compiled into four (government, private for profit, private nonprofit, and self-employed). Tables 4.1 presents a list of the variables used in this study.

TABLE 4.1.

DESCRIPTIVE STATISTICS

Variable	No. Obs.	Mean	St Dev	Min	1 st Quart.	Median	3 rd Quart	Max
Dependent Variables								
Not in labor force*	136,563	.40	.49	0				1
Part-time*	75,774	.31	.46	0				1
Weekly Hours worked	71,606	36.15	13.09	0	30	40	40	100
Main Independent Variables								
Spouses’ Weekly Hours	50,287	44.52	12.74	2	40	40	50	99
Spouse’s Work Status*	52,900	1.17	.49	1				3
Control Variables								
Age	136,563	48.36	17.74	15	34	47	62	85
Race*	136,563	1.29	.58	1				3
Region*	136,563	2.66	.99	1				4
Weekly earnings	67,854	770.23	589.66	0	348.3	624	1,015.38	2,884.61
Household Income*	136,563	10.40	4.15	1				16
Education*	86,313	2.82	1.25	1				5
No. of children*	136,563	1.90	1.06	1				4
Preschooler*	136,563	.23	.42	0				1
Hours Sec. Childcare	136,563	2.79	4.29	0	0	0	5	17.67
Work sector*	75,659	2.10	.85	1				4
Occupation*	75,774	2.02	1.25	1				6
Industry*	75,774	8.77	2.62	1				13

Note: * Categorical variables for which quartile information is not applicable. Refer to Appendix A for coding.
Data retrieved from: 2012 American Time Use Survey (ATUS)

Analyses

To examine the research question about which factors contribute to the amount of hours women work and their decision to opt out, a multivariate Ordinary Least Squares (OLS) and logistic regression were used. These methods were chosen because the decision of an individual to work is two-fold. First the individual assesses how many

hours she wants to engage in market work, if any (modeled in an OLS). Then she decides either to work full-time or part-time or to depart from the workforce (modeled with logistic regression). In both analyses, regressions were limited to married women because women with other marital status might not have the choice to opt out due to financial constraints. By only including married women in the study, it was possible to measure spousal influence on opting out. These data do not fairly represent homosexual couples.

OLS was used because of the continuous nature of the dependent variable—number of hours worked per week. Since this variable was not normally distributed because 38% of the respondents declared working 40 hours—violating OLS model assumptions—an OLS with robust regression estimates was also run, confirming the results and disregarding multicollinearity and heteroscedasticity.

Logistic regression was chosen over a probit because it allowed for statistical comparison with a previous sociological study performed by this researcher. In this study, a logistic regression measures the probability of women working part-time versus full-time. A separate logistic regression measures the probability of women not being in the labor force versus working. The coefficients for logistic regression are interpreted as odds ratios. Knowing that not being in the labor force is coded as 1 and working is coded as 0, an independent variable (e.g. preschoolers) with an odds ratio above one indicates that mothers of preschoolers are more likely to do not partake in the labor force. Conversely, an independent variable (e.g. annual household income) with an odds ratio below one indicates that a one-category increase in income decreases the likelihood of a woman being out of the labor force.

An OLS model was first conducted. Then, four separate logistic regression models were run for each dependent variable, which gives a total of eight logistic models. At first, logistic regressions were run with a limited number of independent variables informed by the previous study. Then other control variables were added based on the literature. Thus, the opting-out phenomenon was operationalized by using nine models.

The regression equations for the complete models are illustrated in 4.1, 4.2, and 4.3. Weekly earnings are not included in equations 4.2 and 4.3 because of correlation with household income, which is not the case in equation 4.1. Variables such as occupation and work sector were not included in equation 4.3 because these variables do not contain information for unemployed women.

Weekly Hours Worked

$$\begin{aligned}
 &= \beta_0 + \beta_1 Spswrkstat + \beta_2 Age + \beta_3 Race + \beta_4 Region + \beta_5 Weekinc \\
 &+ \beta_6 HouseInc + \beta_7 Education + \beta_8 No.Children + \beta_9 Preschooler \\
 &+ \beta_{10} HrsChildcare + \beta_{11} Occupation + \beta_{12} Industry + \epsilon_i
 \end{aligned}
 \tag{4.1}$$

Part time Employment

$$\begin{aligned}
 &= \beta_0 + \beta_1 Spswrkstat + \beta_2 Age + \beta_3 Race + \beta_4 Region + \beta_5 HouseInc \\
 &+ \beta_6 Education + \beta_7 No.Children + \beta_8 Preschooler + \beta_9 HrsChildcare \\
 &+ \beta_{10} WorkSector + \beta_{11} Occupation + \epsilon_i
 \end{aligned}
 \tag{4.2}$$

Not Being in the Labor Force

$$\begin{aligned}
 &= \beta_0 + \beta_1 Spswrkstat + \beta_2 Age + \beta_3 Race + \beta_4 Region + \beta_5 HouseInc \\
 &+ \beta_6 Education + \beta_7 No.Children + \beta_8 Preschooler + \beta_9 HrsChildcare + \epsilon_i
 \end{aligned}
 \tag{4.3}$$

To summarize, there are nine models, of which one is an OLS and eight are logistic regressions. The two main dependent variables—part-time and not in the labor force—that measure the opting-out phenomenon are tested against spouses’ work status and spouses’ weekly hours worked. Control variables are added to assess if the effects of these main independent variables still hold. While an OLS validates the factors that contribute towards the amount of time women work, the logistic regressions operationalize the opting-out phenomenon.

CHAPTER 5

RESULTS

Factors that Influence Women's Labor Supply

A multivariate regression analysis was conducted to examine the predictors of the number of hours women work per week—shown in Table 5.1. It is important to note that Table 5.1 includes all women in the study, meaning that it captures women who do not work (who report zero hours) and women who work (who report positive hours). Twelve predictors were simultaneously entered into the model: spouse's work status, age, annual household income, weekly earnings of the respondent, race, region, education, number of children, presence of preschoolers, hours spent on childcare, occupation, and industry. Together, these predictors accounted for 26% of the variance in the hours women work per week. All of these variables except for household income were significant.

Women with spouses working part-time work 1.83 fewer hours than women with spouses working full-time. Women with spouses who declared that their hours of work vary work 1.55 fewer hours. An increase of \$100 in women's weekly earnings is associated with an increase of almost one hour worked. Black women work 53 fewer minutes than White women, and minority women work four fewer hours. Table 5.3, however, showed that minority women are more likely to partake in the workforce. The discrepancy of results between regressions might be because some minority women do not work long hours as White women do. This result is probably due to lack of leadership

positions for minority women in their companies or to different cultural values that make them spend more time with their families, for example, by taking care of an elder parent.

Women in the West work 1.33 fewer hours than women in the Northeast and women in the South work 1.74 more hours. Surprisingly, cities associated with long hours of work, like New York and Boston, still do not compensate for the number of hours women work in the South. Compared to women with less than a high school education, women with higher education degrees work fewer hours. This finding is counter-intuitive, since it is expected that more educated women work more hours. An income effect—in which highly educated women work fewer hours because their earnings are higher—could explain this finding. However, the regression controls for a respondent's weekly earnings. While a respondent's weekly earnings is significant, household income is not. Economic literature, however, suggests that household income is an important contributor to the number of hours an individual works. Thus, it could be argued that household income is inaccurately measured in the data. This factor explains that an income effect could be masking the regression coefficients on education.

Women with two children work 3.65 fewer hours and women with three or more children work 5.33 fewer hours than childless women. Mothers of preschoolers work 1.39 more hours compared to mothers with children older than six. This counter-intuitive finding could be due to the nature of the variable preschooler, which is a dummy. The variable preschooler indicates the presence of a preschooler in the household; yet, it does not specify the number of preschoolers.

Compared to women in management occupations, women in service occupations work 1.18 fewer hours, and in construction and maintenance 8.49 fewer hours.

Conversely, women in farming, fishing and forestry work 3.29 more hours, and in production and transportation 4.66 more hours. The occupation women hold heavily influence the number of hours worked even after controlling for industry.

Women employed in agriculture, forestry, and hunting work more hours than women employed in all other industries. The highest coefficient is for women working in transportation and utilities industries with 10.26 fewer hours worked, followed by the construction industry with 9.74 fewer hours worked. The finance industry with 8.96 fewer hours worked is closely followed by the business service with 8.08 fewer hours worked, and the retail industry with 7.11 fewer hours worked. The industry with the lowest coefficient is public administration with 5.35 fewer hours worked. The number of hours women work vary significantly by industry.

In terms of the standardized coefficients, the strongest predictors are weekly earnings of the respondent ($\beta=.47$) and industry. While weekly earnings is positively associated with the time women work, industry is negatively associated.

TABLE 5.1.

OLS REGRESSION ON THE NUMBER OF HOURS WOMEN WORK PER WEEK

Variable	Model 9 b	β	95% Conf. Interval
Spouses' Work Status (ref: Full-time)			
Part-time	-1.83*** (.41)	-.04	[-2.64, -1.01]
Hours worked vary	-1.55** (.55)	-.03	[-2.63, -.48]
Age of the Respondent			
	-.02*** (.01)	-.03	[-.04, -.01]
Annual Household Income			
	.07 (.05)	.02	[-.03, .17]
Weekly Earnings of the Respondent			
	.92*** (.02)	.48	[.87, .97]
Race (ref: White)			
Black	-.89* (.38)	-.02	[-1.64, -.15]
Minority	-4.00*** (.47)	-.09	[-4.92, -3.09]
Region (ref: Northeast)			
Midwest	.37 (.38)	.01	[-.37, 1.11]
South	1.74*** (.36)	.07	[1.04, 2.44]
West	-1.33** (.39)	-.05	[-2.11, -.55]
Education of Respondent (ref: Less than High School)			
High School	-1.27* (.55)	-.05	[-2.35, -.19]
Some college and Associate degree	.89 (.55)	.01	[-.99, 1.18]
Bachelor's	-1.75** (.56)	-.07	[-2.86, -.65]
Master's and Doctorate	-1.29* (.65)	-.04	[-2.57, -.01]
No. of Children in the Household (ref: zero)			
One	-.32 (.42)	-.01	[-1.13, .49]
Two	-3.65*** (.47)	-.10	[-4.58, -2.73]
Three or more	-5.33*** (.72)	-.09	[-6.75, -3.92]
Preschooler in the Household			
	1.39** (.48)	.04	[.46, 2.33]
Hours spent on Secondary Childcare ^a			
	-.11* (.04)	-.03	[-.19, -.02]
Occupation (ref: Management, professional, and related occupations)			
Service	-1.18** (.41)	-.03	[-1.99, -.38]
Sales and office	1.59*** (.27)	.06	[1.05, 2.13]

TABLE 5.1. – Continued

Farming, fishing, and forestry	3.29*** (.86)	.01	[1.60, 4.98]
Construction and maintenance	-8.49*** (1.63)	-.06	[-11.71, -5.29]
Production, and transportation	4.66*** (.63)	.07	[3.43, 5.89]
Industry (ref: Agriculture, forestry, fishing, and hunting)			
Mining, oil and gas extraction	-.53 (1.92)	-.01	[-4.30, -3.25]
Construction	-9.74*** (1.16)	-.11	[-12.01, -7.46]
Manufacturing	-6.07*** (.90)	-.14	[-7.84, -4.31]
Wholesale and retail trade	-7.11*** (.85)	-.19	[-8.79, -5.43]
Transportation and utilities	-10.26*** (.96)	-.17	[-12.15, -8.38]
Information	-7.56*** (1.23)	-.08	[-9.96, -5.14]
Financial activities	-8.96*** (.89)	-.23	[-10.71, -7.22]
Professional and business services	-8.08*** (.92)	-.20	[-9.90, -6.26]
Educational and health services	-7.31*** (.86)	-.33	[-8.99, -5.63]
Leisure and hospitality	-7.79*** (1.03)	-.14	[-9.81, -5.77]
Public Administration	-5.35*** (1.12)	-.10	[-7.56, -3.14]
Other services	-6.01*** (.89)	-.12	[-7.76, -4.27]
Constant	39.65*** (1.28)		[37.13, 42.17]
Adj. R²	.26		
N	8,435		

Note: b= unstandardized regression coefficient with standard error in parentheses; Beta=standardized regression coefficient. *p<.05;**p<.01;***p<.001 (two-tailed tests)

The sample includes all women in the study; hence it captures zero working hours as well as positive hours.

a. It refers to “time one has a child under 13 years in his or her care while doing something else as a main activity” (ATUS Data Dictionary, 2012)

Factors that Influence Women’s Decision to Work Part-time

While Table 5.1 illustrated the factors that influence the amount of hours that women work per week, Table 5.2 and 5.3 would investigate women’s decision to work part-time or to depart from the workforce, respectively. Table 5.2 displays the results of a logistic regression on the likelihood of women working part-time versus full-time. Table 5.2 only examines women who have chosen to work.

Model 1 shows that spouses' work status is a significant predictor. Women with spouses working part-time are 90% more likely to work part-time compared to women with full-time working spouses. By working part-time, these couples might be splitting childrearing during the day. Similarly, women with spouses whose number of weekly hours worked vary are 43% more likely to work part-time as opposed to women with full-time working spouses. In this case, the spouse might be self-employed and his work depends on paid projects. Thus, his wife has a part-time job that offers flexibility to accommodate her husband's varying time commitment.

A one-year rise in women's age increases the likelihood of working part-time by 3%. Future studies should look at interaction effects between age and full and part-time employment. A one-category increase (see Appendix A) in annual household income decreases the likelihood of a woman working part-time by 12% relative to working full-time. This finding could evidence positive assortative mating as opposed to an income effect, in which a dual-earner household would report a higher income. Women's education is not a significant predictor in working part-time rather than full-time, but it is significant to the decision to participate in the labor force (captured in Table 5.3).

Model 1 shows that the variable that contributes the most to women's decision to work part-time is the number of children. One child under the age of 18 living in the household increases the likelihood of a woman working part-time by 1.29 times compared to childless women who are more likely to work full time. Two children increase the likelihood by 2.94 times. Three or more children increase the likelihood by 3.99 times. This finding highlights the non-linear effect of the number of children on women's decision to work part-time. Working a full-time job while being the primary

caregiver becomes constraining when the number of children increases, leading some women to choose part-time employment. These women, by working part-time, maintain a certain degree of financial independence and can contribute to pay for childcare. It is important to remember that only working women are being captured in Table 5.2.

The presence of preschoolers in the household is significant at the 10% level, not shown in Table 5.2, and indicates that women with preschoolers are 16% less likely to work part-time rather than full-time. It could be argued that if women with preschoolers decide to work, it might as well be full-time instead of part-time. Factors such as commuting, dressing up for work, and the time and commitment invested in the job itself make women with preschoolers who have decided to work to do so full-time.

Model 2 provides a more comprehensive examination of women's decision to work part-time versus full-time by including variables such as time spent on secondary childcare, race, region, work sector and occupation. The odds ratio of spouses' work status, age, and household income are similar to Model 1, which means that after controlling for the mentioned variables the effect still holds. The odds ratio of the number of children, however, presents some slight variations. Having one child is no longer significant and having two or more children contribute almost equally to women's likelihood to work part-time.

An hour spent on secondary childcare increases the probability of women working part-time by 5%. This probability is low because 60% of women declared devoting zero hours to secondary childcare—defined as doing a primary activity (e.g., buying groceries) while taking care of a child. The low probability could result from these women

providing primary childcare or a reporting error—the respondent could be confused between primary and secondary childcare.

Race is not a significant predictor. Regarding region, women in the Midwest are 18% more likely than women in the Northeast to work part-time. Women in the South are 23% less likely to work part-time. It might be that women in the South work full-time because of higher poverty. There is limited literature regarding factors that discourage women in the Midwest to work full-time. However, it could be speculated that in the Midwest full-time positions have been shortened due to the automobile industry crisis, and the loss of manufacturing jobs. These findings concerning region should be considered for future research.

Women working in the private nonprofit sector are 1.21 times more likely to be working part-time, and self-employed women are 2.38 times more likely than women working in the government. Goldin and Katz (2010) state that mothers working in the corporate and financial sectors choose self-employment as consultants because they can continue practicing their careers.

Compared to women in management occupations, women in construction and maintenance occupations are 5.58 times more likely to work part-time, probably because of the fluctuation in the number of contracts that pushes employers to contract seasonal workers. Women in service occupations are 2.93 times more likely to work part-time and in sales occupations are 1.35 times more likely than women in management occupations. Women in service and sales occupations could be working shifts in call centers and stores, which explains the nature of their part-time jobs. Conversely, women in production and transportation occupations are 41% less likely to work part-time

potentially due to the long hours of delivery trips and overnight work. In summary, women in management positions, who might occupy leadership roles, are less likely to work part-time because of the time commitment and responsibility demanded to supervise coworkers and to ensure the overall smoothly running of the business.

Models 3 and 4 show the variable for spouses' working hours is not significant at predicting the likelihood of women working part-time versus full-time. Future studies should consider replacing spouses' working hours by spouses' income. Age, annual household income, number of children, work sector, and occupation are significant with similar odds ratios as in Models 1 and 2. The non-linear effect of the number of children reinforces the findings of Models 1 and 2. Model 4 indicates that women in the South and in the West are less likely to work-part time rather than full-time compared to women in the Northeast.

Table 5.2 shows that the two ways of measuring spousal influence on women's decision to work part-time—by using spouses' work status and spouses' weekly hours worked—tell a similar story. This validates and reinforces the findings of the models. Although the number of children living in the household is the variable with the highest odds ratio, it should be noted that it is only one feature of women's decision to opt out. As depicted in Table 5.2, opting-out involves the interplay between different variables.

TABLE 5.2

LOGISTIC REGRESSION PREDICTING LIKELIHOOD OF WOMEN'S PART-TIME VERSUS FULL-TIME WORK STATUS

Variable	Spouses' Work Status				Spouses' Weekly Hours Worked			
	Model 1 Odds Ratio	95% Conf. Interval	Model 2 Odds Ratio	95% Conf. Interval	Model 3 Odds Ratio	95% Conf. Interval	Model 4 Odds Ratio	95% Conf. Interval
Spouses' Work Status (ref: Full-time)								
Part-time	1.90*** (.14)	[1.64, 2.20]	1.79*** (.14)	[1.53, 2.09]	----	----	----	----
Hours worked vary	1.43*** (.14)	[1.19, 1.73]	1.52*** (.15)	[1.25, 1.86]	----	----	----	----
Spouses' Weekly Hours Worked	----	----	----	----	.99 (.00)	[.99, 1.00]	.99 (.00)	[.99, 1.00]
Age of the Respondent	1.03*** (.00)	[1.03, 1.04]	1.03*** (.00)	[1.03, 1.04]	1.03*** (.00)	[1.03, 1.04]	1.03*** (.00)	[1.03, 1.04]
Annual Household Income	.88*** (.00)	[.87, .90]	.91*** (.01)	[.90, .94]	.87*** (.01)	[.86, .89]	.90*** (.01)	[.88, .92]
Education of Respondent (ref: Less than High School)								
High School	.89 (.11)	[.70, 1.12]	.84 (.11)	[.65, 1.09]	.75* (.09)	[.59, .97]	.81 (.11)	[.62, 1.06]
Some college and Associate degree	.83 (.09)	[.66, 1.05]	.82 (.11)	[.64, 1.06]	.87 (.11)	[.69, 1.12]	.97 (.13)	[.74, 1.27]
Bachelor's	1.09 (.13)	[.86, 1.38]	1.18 (.16)	[.91, 1.53]	.98 (.13)	[.77, 1.27]	1.18 (.17)	[.89, 1.56]
Master's and Doctorate	1.01 (.13)	[.79, 1.31]	1.15 (.16)	[.87, 1.51]	1.04 (.14)	[.80, 1.36]	1.35* (.20)	[1.01, 1.81]
No. of Children in the Household (ref: zero)								
One	1.29** (.12)	[1.07, 1.54]	1.03 (.10)	[.85, 1.26]	1.32** (.13)	[1.14, 1.65]	1.05 (.11)	[.86, 1.29]
Two	2.94*** (.25)	[2.49, 3.48]	2.16*** (.22)	[1.78, 2.63]	3.08*** (.27)	[2.68, 3.75]	2.26*** (.23)	[1.85, 2.76]
Three or more	3.99*** (.48)	[3.15, 5.06]	2.55*** (.35)	[1.94, 3.34]	4.38*** (.54)	[3.43, 5.59]	2.88*** (.41)	[2.19, 3.80]

TABLE 5.2 - Continued

Preschooler in the Household	.84 (.08)	[.70, 1.01]	.83 (.08)	[.69, 1.01]	.84 (.08)	[.70, 1.02]	.86 (.08)	[.70, 1.04]
Hours spent on secondary childcare^a	----	----	1.05*** (.01)	[1.03, 1.07]	----	----	1.05*** (.01)	[1.03, 1.07]
Race (ref: White)								
Black	----	----	1.13 (.10)	[.95, 1.36]	----	----	1.16 (.11)	[.97, 1.39]
Minority	----	----	.89 (.09)	[.74, 1.07]	----	----	.89 (.09)	[.74, 1.09]
Region (ref: Northeast)								
Midwest	----	----	1.18* (.09)	[1.01, 1.39]	----	----	1.02 (.08)	[.87, 1.19]
South	----	----	.77** (.06)	[.66, .89]	----	----	.75*** (.06)	[.64, .87]
West	----	----	.93 (.08)	[.78, 1.09]	----	----	.84* (.07)	[.71, .99]
Work sector (ref: Government)								
Private, for profit	----	----	1.19** (.07)	[1.05, 1.35]	----	----	1.31*** (.08)	[1.14, 1.49]
Private, nonprofit	----	----	1.21* (.11)	[1.01, 1.44]	----	----	1.04 (.10)	[.86, 1.26]
Self-employed	----	----	2.38*** (.24)	[2.40, 3.36]	----	----	3.03*** (.27)	[2.55, 3.61]
Occupation (ref: Management, professional, and related occupations)								
Service	----	----	2.93*** (.23)	[2.50, 3.41]	----	----	3.16*** (.26)	[2.69, 3.71]
Sales and office	----	----	1.35*** (.08)	[1.19, 1.52]	----	----	1.35*** (.08)	[1.20, 1.53]
Farming, fishing, and forestry	----	----	1.51 (1.31)	[.27, 8.36]	----	----	1.02 (1.03)	[.14, 7.38]
Construction and maintenance	----	----	5.58*** (1.39)	[3.41, 9.11]	----	----	5.93*** (1.5)	[3.66, 9.61]
Production and transportation	----	----	.59** (.09)	[.43, .81]	----	----	.61** (.10)	[.44, .85]
Log likelihood	-5,465.76		-5,175.97		-5,134.07		-4,839.34	
LR χ^2(DF)	686.55 (12)***		1,250.26 (26)***		619.78 (11)***		1,198.57(25) ***	
N	10,021		10,015		9,445		9,441	

Note: *p < .05 **p < .01 ***p < .001 (two-tailed test); standard errors in parentheses. For the dependent variable, women working part-time are coded as 1 and women working full-time are coded as 0.

a. It refers to “time one has a child under 13 years in his or her care while doing something else as a main activity” (ATUS Data Dictionary, 2012).

Factors that Influence Women’s Decision to Opt-out from the Workforce

Table 5.3 exhibits the logistic regression results on the likelihood of women completely opting out of the workforce versus working. It is important to note that Table 5.2 compiled the results of women who are all working, which is not the case in Table 5.3 that also exhibits information on women who have decided to stay at home. Table 5.2 captures couples who are located in the budget constraint (see Figure 3.1) between M_{\max} to Y (excluding point X and Y), in which both spouses do market and nonmarket work. Whereas Table 5.3 focuses on couples located at point X, in which the husband specializes in market work, and the wife in nonmarket work. Point Y refers to retired couples—not shown in any of the regressions in this study.

Model 5 indicates that spouses’ work status is a significant predictor of women’s decision to opt out of the workforce. Women with spouses working part-time are 51% more likely to be stay-at-home wives compared to women with full-time working spouses. Women with spouses whose number of weekly hours worked vary are 59% more likely. As a result, women with full-time working spouses are more inclined to partake in the workforce, which displays the two-earner household trend. It also illustrates the “100-hour couples” phenomenon—a term used by Moe and Shandy (2010) to describe couples who work more than 40 hours a week each.

A one-year increase in age makes women 7% more likely to be out of the labor force. A one-category increase in income (see Appendix A) decreases the likelihood of a woman being a stay-at-home wife by 11%. In fact, economic theory states that an increase in wages causes an increase in labor supply—at least in the short term when the

substitution effect is larger than the income effect—illustrated in the upward-sloping portion of the supply curve.

Women's education is a significant predictor of women's likelihood to be out of the labor force versus working—which was not the case in Table 5.2. Using women with less than a high school education as a reference group, women with a bachelor's degree are 34% less likely to be stay-at-home wives; and women with master's and doctorate degrees are 17% less likely. After attending graduate school, some women often decide to take a temporary break from work to raise a family (Bertrand et al., 2010). It could also be the case that highly educated women are self-employed.

The presence of children in the household is significant, which reinforces the findings of Table 5.2. One child increases the likelihood of a woman being a stay-at-home wife by 1.43 times compared to childless women. Two children increase the likelihood by 1.92 times. Three or more children increase the likelihood by 2.57 times. Again the turning point on a woman's decision regarding her career is the birth of her second child. Once a woman has opted out of the workforce, having more than two children seems not to make much of a difference in her decision to stay at home.

Childcare becomes more financially constraining when the number of children increases. As a result, the mother could consider to opt-out and save the money that is being paid on childcare. Furthermore, some mothers believe that the quality of upbringing for their children is better if they take care of them (Goldin and Katz, 2010). The presence of preschoolers is significant and has the highest odds ratio of 3.10 times contributing to a woman's decision to stay at home. Women raising preschoolers are more likely not to work because of the time and attention than young children demand.

Model 6 shows that the odds ratio of spouses' work status remains similar to Model 5. Women with spouses working full-time are more likely to work. Yet, the odds ratio of the number of children and the presence of preschoolers varied. One and two children are no longer significant variables. Taking childless women as a reference group, women with three or more children are 1.38 times more likely to be a stay-at-home mother (compared to 2.57 times from Model 5). Similarly, the odds ratio of preschoolers decreased from 3.10 (Model 5) to 2.67 (Model 6). The change of odds ratio means that race and region were intervening variables masking the effect of the number of children and of the presence of preschoolers on women's likelihood to opt out of the workforce. It might be that for minority women, the number of children and preschoolers do not influence their work status because they need to work. In fact, minority women are 21% less likely to be out of the labor force compared to White women.

Models 7 and 8 show that the variable spouses' working hours is not significant at predicting women's likelihood to opt out of the workforce. Preschooler is again the most significant contributor, followed by the number of children. As education increase from high school to a bachelor's degree, the likelihood of a woman being a stay-at-home wife decreases. Women who have invested in their education are more likely to work.

Model 8 adds information on race, region and time spent on secondary childcare. An hour spent on secondary childcare increases the probability of a woman opting out by 11%. Similar to Model 6, Model 8 shows that the number of children and the presence of preschoolers have a different effect for women from different races and regions. Future research should look at interaction effects between the variables number of children, presence of preschoolers, race and region.

TABLE 5.3

LOGISTIC REGRESSION PREDICTING LIKELIHOOD OF WOMEN NOT BEING IN THE LABOR FORCE VERSUS BEING
IN THE LABOR FORCE

Variable	Spouses' Work Status				Spouses' Weekly Hours Worked			
	Model 5 Odds Ratio	95% Conf. Interval	Model 6 Odds Ratio	95% Conf. Interval	Model 7 Odds Ratio	95% Conf. Interval	Model 8 Odds Ratio	95% Conf. Interval
Spouses' Work Status (ref: Full-time)								
Part-time	1.51*** (.08)	[1.34, 1.69]	1.52*** (.09)	[1.36, 1.71]	----	----	----	----
No. of hours worked vary	1.59*** (.12)	[1.37, 1.85]	1.53*** (.12)	[1.32, 1.78]	----	----	----	----
Spouses' Weekly Hours Worked								
	----	----	----	----	.99 (.00)	[.99, 1.00]	.99 (.00)	[.99, 1.00]
Age of the Respondent	1.07*** (.00)	[1.07, 1.08]	1.07*** (.00)	[1.07, 1.08]	1.08*** (.00)	[1.07, 1.08]	1.08*** (.00)	[1.08, 1.0]
Annual Household Income	.89*** (.01)	[.88, .91]	.89*** (.00)	[.88, .91]	.90*** (.00)	[.89, .91]	.89*** (.01)	[.88, .91]
Education of Respondent (ref: Less than High School)								
High School	.63*** (.05)	[.53, .75]	.59*** (.05)	[.50, .71]	.61*** (.06)	[.51, .74]	.59*** (.06)	[.49, .72]
Some college and Associate degree	.53*** (.04)	[.45, .63]	.51*** (.04)	[.43, .60]	.50*** (.05)	[.42, .60]	.48*** (.04)	[.40, .58]
Bachelor's	.66*** (.06)	[.56, .79]	.65*** (.06)	[.54, .77]	.68*** (.07)	[.57, .82]	.67*** (.07)	[.55, .81]
Master's and Doctorate	.83* (.07)	[.69, .99]	.77** (.07)	[.63, .93]	.81* (.08)	[.66, .98]	.76** (.08)	[.62, .93]
No. of Children in the household (ref: zero)								
One	1.43*** (.12)	[1.22, 1.69]	1.01 (.09)	[.85, 1.21]	1.38*** (.12)	[1.16, 1.63]	1.01 (.09)	[.84, 1.21]
Two	1.92*** (.15)	[1.64, 2.24]	1.17 (.11)	[.98, 1.39]	1.98*** (.16)	[1.69, 2.33]	1.25** (.11)	[.84, 1.21]
Three or more	2.57*** (.27)	[2.09, 3.17]	1.38* (.16)	[1.10, 1.74]	2.73*** (.29)	[2.21, 3.38]	1.49*** (.18)	[1.18, 1.89]

TABLE 5.3 - Continued

Preschooler in the Household	3.10*** (.24)	[2.65, 3.63]	2.67*** (.22)	[2.28, 3.13]	2.96*** (.25)	[2.52, 3.48]	2.62*** (.22)	[2.23, 3.08]
Hours spent on Secondary Childcare^a	----	----	1.11*** (.01)	[1.09, 1.13]	----	----	1.11*** (.01)	[1.09, 1.13]
Race (ref: White)								
Black	----	----	.89 (.07)	[.76, 1.02]	----	----	.89 (.07)	[.77, 1.04]
Minority	----	----	.79* (.06)	[.68, .93]	----	----	.69*** (.06)	[.58, .81]
Region (ref: Northeast)								
Midwest	----	----	1.16* (.08)	[1.02, 1.33]	----	----	1.25** (.09)	[1.09, 1.44]
South	----	----	.89 (.06)	[.79, 1.01]	----	----	1.08 (.07)	[.95, 1.23]
West	----	----	.98 (.06)	[.85, 1.11]	----	----	1.13 (.08)	[.99, 1.30]
Log likelihood	-7,709.67		-7,582.13		-7,173.77		-7,060.08	
LR χ^2(DF)	2,136.61 (12)***		2,391.71 (18)***		1,835 (11)***		2,062.37(17)***	
N	14,632		14,632		13,648		13,648	

Note: *p < .05 **p < .01 ***p < .001 (two-tailed test); standard errors in parentheses. For the dependent variable, women not in the labor force are coded as 1 and women in the labor force (either employed or unemployed) are coded as 0.

a. It refers to “time one has a child under 13 years in his or her care while doing something else as a main activity” (ATUS Data Dictionary, 2012).

To summarize, the nine models portrayed in Tables 5.1, 5.2, and 5.3 show consistent results. The factors that contribute the most to women’s likelihood to drop out are number of children, presence of preschoolers, race, education, household income, spouses’ work status, and type job—in terms of occupation, work sector, and industry. The numbers of weekly hours worked are also highly influenced by the type of job held. The factor that contribute the least is region. Keeping in mind the factors that contribute to women’s decision to opt out, the following section compares parents’ time usage. Time usage informs about couples’ lifestyles, which can be traced back to household utility maximization models.

Married Parents' Time Usage

This section compares the time usage between married fathers and mothers. On an average day, mothers regardless of their work force status were more likely to do household activities and to care for household members than were married fathers. Factors that influenced the time spent on different activities and the likelihood of doing them were the respondent's employment status, their spouse's employment status, and the age of their youngest child. The charts analyzed compile information on married parents' time usage from 2007 to 2011. The charts can be found in Appendix B.

Personal Activities of Married Parents

Among mothers of children under the age of 18, unemployed mothers reported more time doing personal care activities—e.g., sleeping, eating—followed by part-time working mothers and lastly full-time employed mothers. (See Table A-6; Appendix B).

Work Activities of Married Parents

Among full-time working parents of children under the age of 18, mothers—particularly those of preschoolers—were less likely to work on an average day than were fathers. Mothers employed full-time worked on average 37.4 hours per week, and fathers worked 42.7 hours. The difference between the numbers of hours worked reflects that mothers are more likely to be absent from work. Regardless of the age of their youngest child, about 74.6% of fathers were employed full-time. (See Table A-6).

In households with children under the age of 18, where both spouses worked full-time, fathers spent 8 minutes fewer per day working than did fathers whose wives were unemployed. This finding suggests that fathers did not compensate for their wives' foregone salary by working more hours, but with a better paying job. (See Table A-7).

Childcare Activities of Married Parents

Among full-time working parents of children under the age of 18, mothers were more likely to engage in travel related to childcare than were fathers—41.3% versus 24%. On an average day, 70.3% of these mothers and 55.9% of these fathers spent time caring for and helping household children. Among mothers of preschoolers, full-time employed mothers spent 1.99 hours on childcare, part-time working mothers spent 2.68 hours, and non-employed mothers spent 3.25 hours. Regardless of employment status, both mothers and fathers of preschoolers spent more than twice as much time on childcare compared to parents with children older than six (See Table A-6).

In households with children under the age of 18 where mothers were unemployed and fathers were employed full-time, mothers spent three times the amount of time providing childcare on average than fathers did—3.35 hours versus 1.11 (See Table A-7)

Household Activities of Married Parents

In households with children under the age of 18, full-time working mothers were more likely to do household activities on an average day than fathers (87.9 versus 66%). Lawn and gardening, however, were more likely done by fathers. Unemployed mothers spent an average of 3.47 hours per day doing household activities, mothers working part-time spent 2.64 hours, and mothers working full-time spent 1.94 hours. (See Table A-6).

In households with children under the age of 18 where both spouses were employed full-time, mothers spent an average of 1.95 hours per day doing household activities, while fathers spent about 1.34 hours. Yet, these fathers spent more time on household activities than fathers whose wives were unemployed. This finding reflects that couples who work full-time have to share housework (See Table A-7).

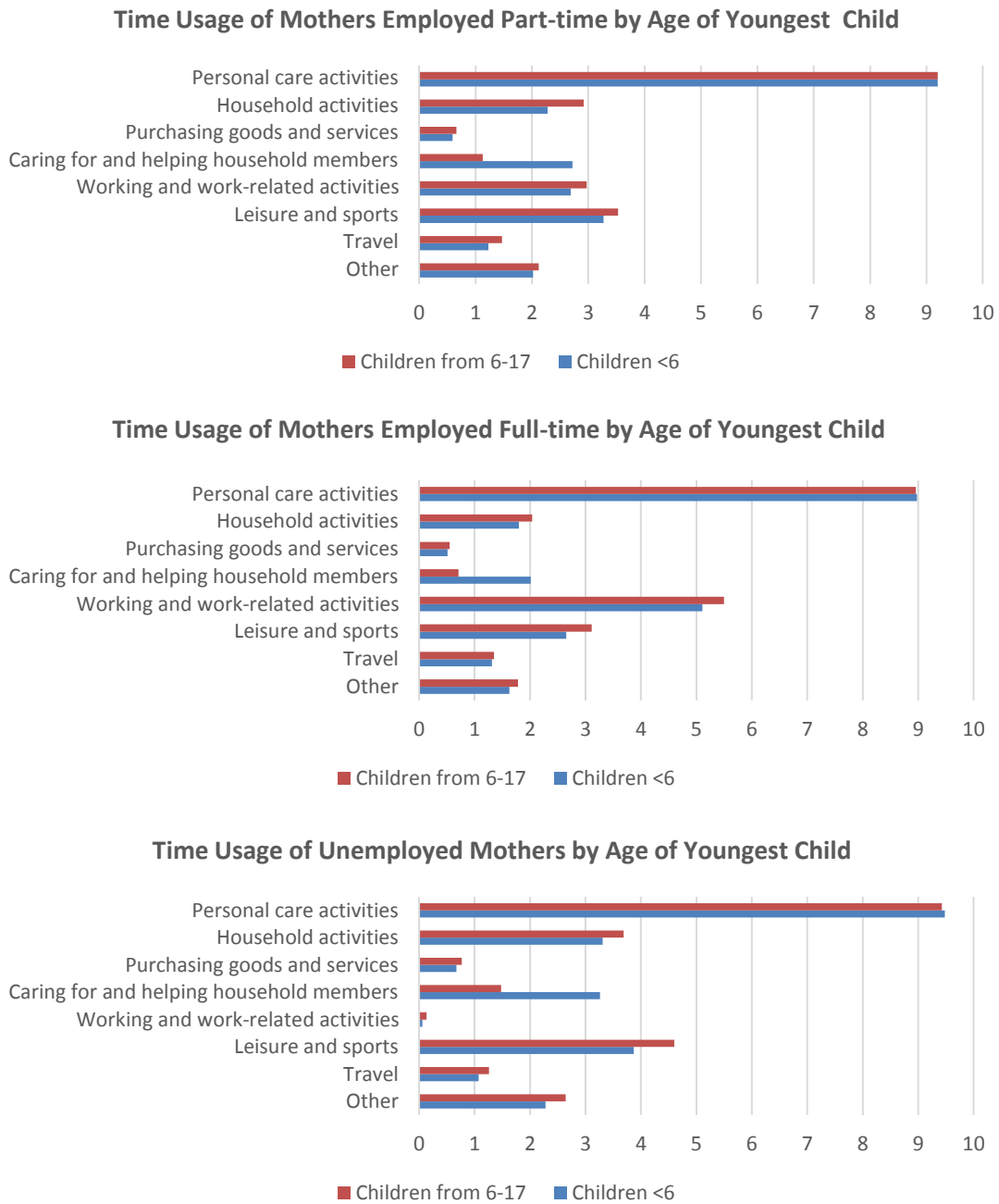
Leisure Activities of Married Parents

Comparing parents with the same work status, fathers were more likely to engage in leisure activities than mothers. Mothers spent more time doing housework and childcare, which left them with less time for leisure. Mothers employed full-time with children under the age of 18 spent 2.92 hours on leisure activities on an average day (versus 3.64 hours for fathers), while unemployed mothers spent 4.18 hours (versus 6.18 hours for fathers). Among full-time and unemployed mothers, the difference in leisure is mainly accounted by time spent on watching television and socializing. Full-time working mothers of preschoolers spent 2.65 hours in leisure compared to 3.11 hours for mothers whose children were older than six (See Table A-6).

Assessing the Impact of Preschoolers in Women's Time Usage by Work Status

Figure 5.1 indicates the time usage of mothers with different work status on an average day by age of youngest household child. Full-time employed mothers with preschoolers spent more time on caregiving compared to mothers with children older than six, and spent less time on all the other activities. Regardless of the presence of a preschooler, part-time employed mothers spent more time on personal activities, caring for household members, doing housework, and on leisure than full-time employed mothers. There is a significant increase on time spent on household activities, caregiving, leisure, and traveling for unemployed mothers compared to full-time and part-time working mothers. Regardless of work status, women with preschoolers spent more time on caregiving and less time on other nonmarket activities. As mothers dedicated less time to work, they spent more time on caregiving, and housework, but also on leisure and travelling—particularly the ones whose children were older than six.

Figure 5.1: Number of Hours Spent in Primary Activities on an Average Day by Mothers' Work Status by Age of Youngest Household Child (2007-2011)

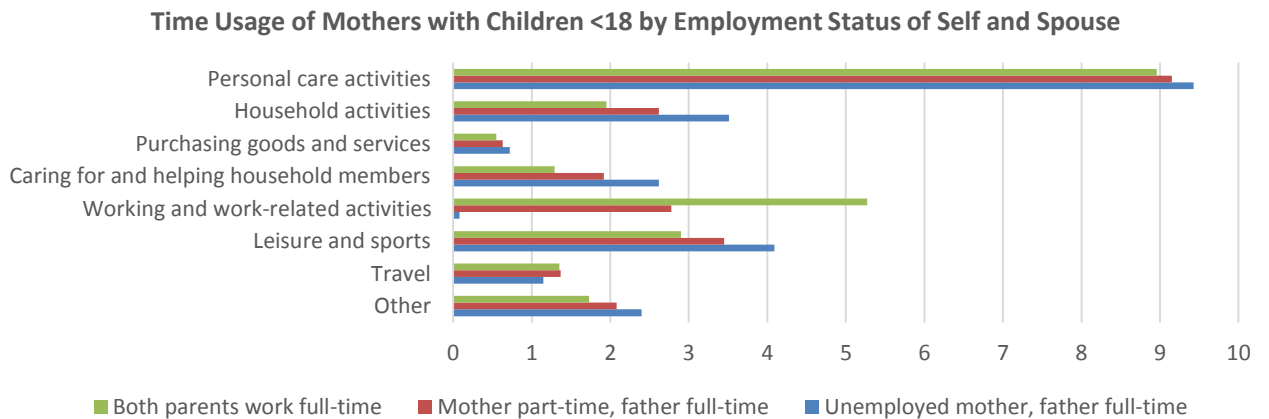


Note: Data only include married women. Data are annual averages for the combined years 2007-11.
 Source: Bureau of Labor Statistics, American Time Use Survey

Figure 5.2 indicates the time usage on an average day of mothers with children under the age of 18 by employment status of self and spouse. In households with an unemployed mother and a full-time working father, mothers spent more time on personal

care activities, household activities, shopping, caregiving, and leisure and sports— compared to households with a full-time or part-time working mother and a full-time employed father. Among working mothers, mothers employed full-time spent less time on household activities (-40 minutes), caregiving (-38 minutes), and leisure (-33 minutes) compared to mothers employed part-time. Full-time working mothers have less hours to distribute among nonmarket activities; hence they face a greater opportunity cost.

Figure 5.2: Number of Hours Spent in Primary Activities by Mothers with Children under the Age of 18 by Employment Status of Self and Spouse (2007-2011)



Note: Data only include married women. Data are annual averages for the combined years 2007-11.
 Source: Bureau of Labor Statistics, American Time Use Survey

To summarize, the amount of time dedicated to nonmarket activities depends on the mother’s work status and the presence of preschoolers. Full-time working mothers of preschoolers spent more time on childcare (2.01 hours versus .70) and less time on household activities (1.80 hours versus 2.04) than mothers of children older than six (See Table A-6). Because of the time constraint of holding a full-time job while raising a preschooler, these mothers need to decide between childcare and housework—choosing childcare. While the traditional division of labor prevails, it is further emphasized when the mother is unemployed or works part-time and her spouse works full-time.

CHAPTER 7

CONCLUSION AND FURTHER RESEARCH

While spouses' work status is a significant contributor to women's decision to opt out, other factors such as the number of children, the presence of preschoolers, education and the type of job are more likely to influence women's decision to opt out. Thus, the hypothesis stating spouses' work status is the main contributor to women's decision to opt out is false. This study concludes that women's personal satisfaction regarding opting out depends upon the combined utility maximization of her and her partner through an agreed division of labor. A combined leisure/labor decision allows both parties to consume market goods and produce nonmarket output at their utility maximizing level.

This study illustrates that women with spouses working full-time are less likely to be working part-time and are more likely to be part of the workforce. The significant control variables tell the following story: the higher a woman's education, the more likely she is to work part-time and to be out of the labor force. The higher the annual household income, the less likely a woman is to work part-time or not to work. The higher the number of children living in the household, the more likely a woman is to work part-time and not to work. The odds ratio increases considerably with the second child, even more with the third child effectively showing the non-linear effect of the number of children.

Black and minority women are less likely to work part-time and to be out of the labor force. However, they work fewer hours than their White peers. A woman's

likelihood to work part-time varies considerably by work sector, occupation, and region of residence. There is a wide range of hours women work across occupations and industries. The study found race and region mitigate the effect of the number of children and the presence of preschoolers in women's likelihood to work part-time and to be out of the labor force. Future research should look at interaction effects. Region alone is a variable worth investigating in relationship to women's work force status.

While this study portrays dual-career couples, it also provides evidence of couples in which one member, usually the mother, sacrifices her career to raise children. There is little evidence that fathers are the primary caregivers. In fact, mothers spend more time on caregiving and housework than fathers. Even if the mother is employed full-time, she sacrifices leisure, personal activities and postpones housework to provide childcare.

Couples maximize their utility through a combination of market and nonmarket output. For the traditional division of labor to prevail, women should have a comparative advantage at producing nonmarket output relative to men. Women, however, can have absolute advantage as well. On average, women also earn lower salaries than men which could lead to the decision that the mother is the one who should opt-out. As the literature suggests, the traditional division of labor is changing. It is expected that more fathers become the primary caregivers, particularly when the mother works a high-paying job.

When applying a utility maximization model to women's decision to opt out, it is evident that there was a decrease in wages and a change in the shape of the indifference curve. This demonstrates a preference for leisure relative to consumption. The exact combination of consumption and leisure or market and nonmarket output that would maximize a household's utility cannot be assessed, since it depends on couple's

preferences. Critiques to the utility maximization model arise because housework, childcare, and free time are reduced to one category, leisure, and due to the difference between decision utility, and experienced utility.

Further research on household's utility maximization models is encouraged—particularly research employing time series data. This type of data informs the sharing rule within the household which could be employed to assess the relative position of power among couples. Policies could be targeted for shared parenthood and for taking advantage of the human capital that currently is being wasted—highly educated professional mothers. Future studies should measure the decision to opt-out with a multinomial logit that ranges from women working full-time, part-time, to stay-at-home wife. Future research should also aim to answer: When do the wage gender gap and “the glass ceiling” become “the maternal wall” in which women are discriminated in their current or potential status as mothers? How does child penalty differ by economic sectors and countries? How do gendered role socialization and workplace policies perpetuate the traditional household division of labor?

As a final thought, society has defined two parallel paths for women: one based on a career, the other on family. Yet, women seem to challenge the idea of a linear experience in which they go to college to then build a career, separate from family. A spiral appears to have developed, in which women move back and forth between family and career, often enduring high penalties when they return to their jobs after having children. Significantly, childbearing years coincide with work years in which women are more likely to establish themselves in their careers and seek early advancement. Motherhood is an important obstacle to economic equality for women.

References

- American Time Use Survey (2012). American Time Use Survey—2012 Microdata Files [Data file]. Retrieved from http://www.bls.gov/tus/datafiles_2012.htm
- American Time Use Survey (2012). Married Parents Tables A-6 and A-7 years 2007-11. Retrieved from <http://www.bls.gov/tus/home.htm>
- Bertrand, M., Goldin C., & Katz, L.F. (2010). Dynamics of the Gender Gap for Young Professionals in the Financial and Corporate Sectors. *American Economic Journal: Applied Economics*, 2 (3): 228-255. doi: 10.1257/app.2.3.228
- Blank, R. M. (1990) Are part-time jobs bad jobs? In G. T. Burtless (Eds.), *A future of lousy jobs?: The changing structure of U.S. wages* (pp.125-155). Washington, D.C.: Brookings Institution.
- Bureau of Labor Statistics. (2013). Persons at work in nonagricultural industries by age, sex, race, hispanic or latino ethnicity, marital status, and usual full- or part-time status. Retrieved from <http://www.bls.gov/web/empstat/cpseea27.htm>
- Chavez, A. (2013). *Spousal influence on opting-out*. (Unpublished research paper). Colorado College, Colorado Springs, CO. Available from the author, alejandra.chavez@coloradocollege.edu
- Connelly, R., & Kimmel, J. (2010). *The time use of mothers in the United States at the beginning of the 21st century*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.

- Goldin, C. (2006). The Quiet Revolution that Transformed Women's Employment, Education, and Family. *American Economic Review*, 96 (2):1-21. doi: 10.1257/000282806777212350
- Jacobsen, J. (2007). *The Economics of Gender*. Malden, MA: Wiley-Blackwell.
- Kahneman, D., & Thaler, R. H. (2006). Anomalies: Utility maximization and experienced utility. *The Journal of Economic Perspectives*, 20 (1), 221-234. Retrieved from <http://www.jstor.org/stable/30033642>
- Lee, Y. (2011). *The determinants of sector choice: What attracts people to the nonprofit sector and are there gender differences?*. University of Texas at Dallas, TX. Retrieved from <http://www.pmranet.org/conferences/OSU2009/papers/Lee,%20Young-joo.%20%20The%20Determinates%20of%20Sector%20Choice%20-%20What%20Attracts%20People%20to%20the%20Nonprofit%20Sector%20and%200are%20there%20Gender%20Differences.pdf>
- Mason, M. A., & Ekman, E. M. (2007). *Mothers on the fast track: How a new generation can balance family and careers*. Oxford, NY: Oxford University Press.
- Moe, K. S., & Shandy, D. J. (2010). *Glass ceilings and 100-hour couples: What the opt-out phenomenon can teach us about work and family*. Athens, GA: University of Georgia Press.
- Moen, P. (1992). *Women's two roles: A contemporary dilemma*. New York: Auburn House.

- O'Neill, J. E., & O'Neill, D. M. (2005). What do Wage Differentials Tell Us about Labor Market Discrimination?. *NBER Working Paper Series, Working Paper 11240*. Retrieved from <http://www.nber.org/papers/w11240>
- Patrick (2008). *A Loonie Saved*. Retrieved February 11, 2014, from <http://a-loonie-saved.blogspot.com/2008/08/log-points.html>
- Stark, R. (2007). Gender and inequality. In *Sociology* (10th edition ed., pp. 324-357). Belmont, CA: Wadsworth, Inc.

Appendix A

CODING OF VARIABLES IN THE STUDY

Variable Name	N	Type	Variable Description	Coding
Demographics				
AGE	136,563	Interval	Age of respondent	[15,85]
RACE	136,563	Categorical	Race of respondent	1 = White 2 = Black 3 = Minority
PEMARITL	86,313	Categorical	Marital status of respondent	1 = Married- spouse present 2 = Married - spouse absent 3 = Widowed 4 = Divorced 5 = Separated 6 = Never married
EDUCATION	151,842	Categorical	Educational attainment of respondent	1 = Less than High School 2 = High School degree 3 = Some college and Associate degree 4 = Bachelor's 5 = Master's, Professional and Doctorate
REGION	136,563	Categorical	Region of household location	1 = Northeast 2 = Midwest 3 = South 4 = West
CHILDNUM	136,563	Quasi-interval	No. of children <18 living in the household	1 = No Children 2 = One child 3 = Two children 4 = Three or more children
PRESCHOOLER	67,386	Dichotomous	Children < 5	0 = No 1 = Yes
HRSCHILD CARE	136,563	Interval	Time spent daily on secondary childcare for children <13 (hours)	[0-17.67]
Job and Income Variables				
WEEKINC	68,709	Interval	Weekly earnings of respondent	[\$0-\$2,884.61] categories of \$100
HOUSEINC	136,563	Interval	Household income	1 = Less than \$5,000 2 = \$5,000 to \$7,499 3 = \$7,500 to \$9,999 4 = \$10,000 to \$12,499 5 = \$12,500 to \$14,999 6 = \$15,000 to \$19,999 7 = \$20,000 to \$24,999 8 = \$25,000 to \$29,999 9 = \$30,000 to \$34,999 10 = \$35,000 to \$39,999 11 = \$40,000 to \$49,999 12 = \$50,000 to \$59,999 13 = \$60,000 to \$74,999 14 = \$75,000 to \$99,999 15 = \$100,000 to \$149,999 16 = \$150,000+

HRSWORK	71,606	Interval	Number of weekly hours of work	[1-100]
NOTLBRFRCE	136,563	Dichotomous	Labor force status	0 = Not in labor force 1 = In labor force
PARTIME	75,774	Dichotomous	Full or part-time status	0 = Full-time 1 = Part-time
WORKSECTOR	75,659	Categorical	Work sector (main job)	1 = Government, federal 2 = Private, for profit 3 = Private, nonprofit 4 = Self-employed
OCCUPATION	75,774	Categorical	Occupation (main job)	1 = Management, professional, and related occupations 2 = Service occupations 3 = Sales and office occupations 4 = Farming, fishing, and forestry occupations 5 = Construction and maintenance occupations 6 = Production, transportation, and material moving occupations
INDUSTRY	75,774	Categorical	Industry of employment (main job)	1 = Agriculture, forestry, fishing, and hunting 2 = Mining, quarrying, and oil and gas extraction 3 = Construction 4 = Manufacturing 5 = Wholesale and retail trade 6 = Transportation and utilities 7 = Information 8 = Financial activities 9 = Professional and business services 10 = Educational and health services 11 = Leisure and hospitality 12 = Other services 13 = Public administration
Spouse's Variables				
SPSWRKSTAT	52,900	Categorical	Spouse's part-time status	1 = Full-time 2 = Part-time 3 = Hours vary
SPSHRSWRK	50,287	Interval	Spouse's weekly hours worked	[1-99]

Appendix B
PARENTS' USE OF TIME (2007-11) – AMERICAN TIME USE SURVEY

Table A-6. Time spent in primary activities ¹ and the percent of married mothers and fathers who did the activities on an average day by employment status and age of youngest own household child, average for the combined years 2007-11

Own household children under 18

Activity	Average hours per day spent in primary activities ¹					Percent doing the activity on an average day				
	Married mothers			Married fathers ²		Married mothers			Married fathers ²	
	Employed full time	Employed part time	Not Employed	Employed full time	Not Employed	Employed full time	Employed part time	Not Employed	Employed full time	Not Employed
Total, all activities	24.00	24.00	24.00	24.00	24.00	100.0	100.0	100.0	100.0	100.0
Personal care activities	8.96	9.20	9.46	8.63	9.51	100.0	100.0	99.9	100.0	100.0
Sleeping	8.14	8.46	8.83	8.04	8.96	99.9	100.0	99.9	99.9	99.4
Household activities	1.94	2.64	3.47	1.21	2.34	87.9	93.5	95.8	66.0	79.4
Housework .....	.81	1.15	1.55	.23	.61	50.2	64.1	73.2	18.3	34.4
Food preparation and cleanup .....	.80	1.00	1.46	.32	.63	75.2	81.4	88.4	42.9	56.5
Lawn and garden care .....	.07	.11	.13	.22	.36	4.6	6.7	8.6	10.8	14.0
Purchasing goods and services .....	.54	.63	.71	.35	.50	51.5	57.0	53.6	38.5	42.4
Grocery shopping .....	.12	.16	.18	.07	.12	16.6	21.4	21.2	9.5	14.1
Consumer goods purchases, except grocery shopping .....	.33	.37	.39	.23	.27	38.2	41.2	38.1	30.3	29.8
Caring for and helping household members	1.25	1.84	2.51	.88	1.32	74.3	79.2	85.1	57.3	61.4
Caring for and helping household children	1.24	1.80	2.49	.86	1.26	73.3	78.3	84.6	55.9	59.6
Physical care .....	.55	.72	1.00	.28	.40	54.7	61.9	70.9	34.1	37.4
Education-related activities .....	.10	.17	.25	.06	.13	12.5	17.5	19.6	6.9	11.1
Reading to/with children .....	.04	.06	.08	.03	.04	10.7	14.0	15.0	6.6	6.2
Playing/doing hobbies with children .....	.22	.36	.59	.29	.36	15.5	21.6	30.0	17.5	16.0
Working and work-related activities ³	5.34	2.84	.09	6.10	.53	70.3	57.1	4.2	74.6	18.0
Working ³	5.31	2.79	.03	6.06	.06	69.9	55.9	1.2	73.9	2.3
Leisure and sports	2.92	3.41	4.18	3.64	6.18	92.2	95.6	95.9	94.1	97.2
Socializing and communicating .....	.59	.76	.85	.55	.91	38.0	44.9	44.1	34.2	41.0
Watching television	1.55	1.66	2.23	2.06	3.72	72.5	74.7	79.1	77.8	85.1
Participating in sports, exercise, and recreation .....	.17	.23	.23	.31	.38	14.4	17.2	17.3	17.5	20.3
Travel	1.33	1.36	1.15	1.42	1.16	94.8	93.3	82.8	94.2	80.3
Travel related to caring for and helping household children .....	.22	.28	.29	.13	.21	41.3	46.1	42.2	24.0	28.0
Other activities, not elsewhere classified	1.72	2.08	2.43	1.77	2.46	98.1	98.4	98.6	98.3	97.8

See footnotes at end of table.

Table A-6. Time spent in primary activities ¹ and the percent of married mothers and fathers who did the activities on an average day by employment status and age of youngest own household child, average for the combined years 2007-11—Continued

Own household children, youngest under 6

Activity	Average hours per day spent in primary activities ¹					Percent doing the activity on an average day				
	Married mothers			Married fathers ²		Married mothers			Married fathers ²	
	Employed full time	Employed part time	Not Employed	Employed full time	Not Employed	Employed full time	Employed part time	Not Employed	Employed full time	Not Employed
Total, all activities	24.00	24.00	24.00	24.00	24.00	100.0	100.0	100.0	100.0	100.0
Personal care activities	8.98	9.20	9.48	8.64	9.31	100.0	100.0	99.9	100.0	99.9
Sleeping	8.20	8.49	8.92	8.09	8.88	100.0	100.0	99.9	100.0	99.9
Household activities	1.80	2.28	3.31	1.13	2.05	87.4	92.3	96.4	64.3	76.6
Housework .....	.76	1.00	1.46	.24	.68	47.4	60.1	72.8	18.6	37.7
Food preparation and cleanup .....	.77	.96	1.47	.33	.59	75.8	81.0	88.7	43.0	55.7
Lawn and garden care .....	.05	.07	.11	.16	.22	3.2	5.1	7.0	8.7	9.7
Purchasing goods and services .....	.51	.59	.66	.37	.55	50.8	56.5	50.7	39.6	47.0
Grocery shopping .....	.13	.14	.16	.08	.12	16.8	19.2	18.5	10.2	15.5
Consumer goods purchases, except grocery shopping .....	.30	.34	.38	.23	.28	36.5	42.8	36.5	30.8	33.2
Caring for and helping household members	2.01	2.72	3.26	1.27	2.19	91.0	91.8	93.9	70.4	79.4
Caring for and helping household children	1.99	2.68	3.25	1.25	2.11	90.8	91.6	93.8	69.5	78.9
Physical care	1.05	1.26	1.46	.46	.76	83.0	86.0	87.8	51.6	58.3
Education-related activities .....	.08	.11	.20	.05	.11	10.2	12.8	17.1	5.5	9.5
Reading to/with children .....	.08	.10	.11	.05	.08	18.2	23.2	20.8	11.3	12.1
Playing/doing hobbies with children .....	.46	.71	.93	.49	.75	31.7	41.0	45.3	29.3	30.8
Working and work-related activities ³	5.11	2.69	.06	6.05	.61	68.4	55.5	3.1	74.3	21.0
Working ³	5.09	2.65	.02	6.01	(⁴)	68.2	54.4	.7	73.4	2.0
Leisure and sports	2.65	3.27	3.87	3.48	5.76	89.8	94.4	95.5	93.7	96.9
Socializing and communicating .....	.61	.80	.85	.60	1.11	36.8	44.7	43.0	34.7	41.3
Watching television	1.37	1.57	2.11	1.94	3.22	71.0	74.2	78.1	76.5	85.4
Participating in sports, exercise, and recreation .....	.17	.21	.20	.28	.35	13.9	14.9	15.4	16.8	20.7
Travel	1.31	1.23	1.07	1.36	1.13	94.6	90.4	81.6	94.3	81.6
Travel related to caring for and helping household children .....	.27	.27	.29	.12	.21	48.6	48.0	41.7	23.9	31.1
Other activities, not elsewhere classified	1.63	2.02	2.28	1.72	2.41	98.2	98.0	98.4	98.3	97.3

See footnotes at end of table.

Table A-6. Time spent in primary activities ¹ and the percent of married mothers and fathers who did the activities on an average day by employment status and age of youngest own household child, average for the combined years 2007-11—Continued

Own household children 6-17, none younger

Activity	Average hours per day spent in primary activities ¹					Percent doing the activity on an average day				
	Married mothers			Married fathers ²		Married mothers			Married fathers ²	
	Employed full time	Employed part time	Not Employed	Employed full time	Not Employed	Employed full time	Employed part time	Not Employed	Employed full time	Not Employed
Total, all activities	24.00	24.00	24.00	24.00	24.00	100.0	100.0	100.0	100.0	100.0
Personal care activities	8.96	9.20	9.43	8.63	9.65	100.0	100.0	100.0	100.0	100.0
Sleeping	8.09	8.44	8.71	7.99	9.01	99.8	100.0	99.9	99.8	99.1
Household activities	2.04	2.92	3.69	1.29	2.54	88.2	94.5	95.0	67.6	81.3
Housework .....	.84	1.28	1.68	.22	.56	52.3	67.3	73.7	18.0	32.1
Food preparation and cleanup .....	.81	1.04	1.46	.31	.66	74.7	81.7	87.9	42.9	57.1
Lawn and garden care .....	.08	.13	.16	.26	.45	5.7	7.9	10.7	12.7	16.8
Purchasing goods and services .....	.55	.66	.77	.33	.46	52.0	57.4	57.6	37.5	39.4
Grocery shopping .....	.12	.17	.21	.06	.12	16.5	23.1	25.1	8.8	13.1
Consumer goods purchases, except grocery shopping .....	.35	.39	.41	.22	.26	39.4	40.0	40.2	29.8	27.5
Caring for and helping household members .....	.70	1.13	1.48	.52	.73	62.3	69.0	73.0	45.3	49.3
Caring for and helping household children .....	.69	1.10	1.45	.49	.68	60.5	67.7	71.8	43.4	46.6
Physical care .....	.20	.29	.36	.10	.17	34.2	42.6	47.4	18.0	23.3
Education-related activities .....	.12	.21	.32	.08	.14	14.2	21.4	22.9	8.2	12.2
Reading to/with children .....	.02	.03	.04	.01	~0	5.3	6.7	7.0	2.2	2.3
Playing/doing hobbies with children .....	.04	.08	.12	.09	.10	3.7	6.1	8.7	6.7	6.0
Working and work-related activities ³	5.50	2.97	.13	6.15	.47	71.7	58.4	5.7	74.9	16.0
Working ³	5.47	2.91	.06	6.11	.08	71.2	57.0	2.0	74.5	2.5
Leisure and sports	3.11	3.53	4.60	3.78	6.47	93.9	96.6	96.3	94.3	97.4
Socializing and communicating .....	.58	.73	.85	.51	.78	38.8	45.0	45.7	33.8	40.8
Watching television	1.68	1.73	2.39	2.18	4.05	73.5	75.0	80.4	79.0	84.9
Participating in sports, exercise, and recreation .....	.17	.25	.26	.34	.40	14.8	19.0	20.0	18.1	20.1
Travel	1.35	1.47	1.26	1.48	1.19	94.9	95.7	84.6	94.2	79.4
Travel related to caring for and helping household children .....	.19	.29	.30	.13	.22	36.0	44.6	43.0	24.0	25.9
Other activities, not elsewhere classified	1.78	2.12	2.64	1.82	2.49	98.1	98.7	98.9	98.3	98.2

¹ A primary activity refers to an individual's main activity. Other activities done simultaneously are not included.
² Estimates for part-time workers are not shown because it is uncommon for fathers of household children to work part time.
³ Estimates include a small amount of work time done by persons who do not meet the ATUS definition of employed.
⁴ Estimate is suppressed because it does not meet the American Time Use Survey standard for quality and reliability.
 ~0 Estimate is approximately zero.

NOTE: Data refer to persons 15 years and over. For technical information about the American Time Use Survey, see the ATUS User's Guide: www.bls.gov/tus/atususersguide.pdf.
 SOURCE: American Time Use Survey, Bureau of Labor Statistics

Table A-7. Time spent in primary activities¹ by married mothers and fathers with own household children under 18 by employment status of self and spouse and age of youngest child, average for the combined years 2007-11

Own household children under 18

Activity	Average hours per day						Differences in married mothers' and fathers' time use on an average day (hours) ²		
	Both spouses work full time		Mother employed part time and father employed full time		Mother not employed and father employed full time		Both spouses work full time	Mother employed part time and father employed full time	Mother not employed and father employed full time
	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers			
Total, all activities	24.00	24.00	24.00	24.00	24.00	24.00	0.00	0.00	0.00
Personal care activities	8.96	8.59	9.15	8.52	9.43	8.74	.37	.63	.69
Sleeping	8.12	7.98	8.41	7.96	8.80	8.15	.15	.45	.65
Household activities	1.95	1.34	2.62	1.21	3.51	1.07	.62	1.40	2.44
Housework .....	.82	.26	1.13	.21	1.57	.20	.56	.92	1.37
Food preparation and cleanup .....	.79	.37	1.00	.30	1.45	.28	.43	.70	1.18
Lawn and garden care .....	.07	.23	.11	.24	.14	.18	-.16	-.13	-.05
Purchasing goods and services .....	.55	.34	.63	.34	.72	.37	.21	.30	.35
Grocery shopping .....	.13	.06	.15	.06	.19	.08	.06	.09	.11
Consumer goods purchases, except grocery shopping .....	.34	.22	.38	.22	.42	.23	.12	.15	.18
Caring for and helping household members	1.29	.88	1.92	.93	2.62	.84	.41	.99	1.77
Caring for and helping household children	1.28	.86	1.89	.91	2.60	.82	.42	.98	1.78
Physical care .....	.57	.28	.76	.33	1.03	.25	.29	.43	.78
Education-related activities .....	.11	.09	.17	.05	.26	.04	.02	.12	.22
Reading to/with children .....	.05	.03	.07	.03	.09	.03	.02	.03	.05
Playing/doing hobbies with children .....	.22	.24	.38	.30	.63	.33	-.02	.08	.30
Working and work-related activities ³	5.27	6.07	2.78	6.07	.08	6.20	-.80	-3.29	-6.12
Working ³	5.24	6.03	2.72	6.02	.02	6.15	-.79	-3.30	-6.13
Leisure and sports	2.91	3.68	3.45	3.62	4.09	3.55	-.78	-.17	.54
Socializing and communicating .....	.60	.54	.78	.58	.87	.55	.06	.20	.32
Watching television	1.53	2.15	1.65	1.89	2.13	2.06	-.62	-.24	.08
Participating in sports, exercise, and recreation .....	.18	.32	.24	.35	.24	.27	-.14	-.11	-.03
Travel	1.35	1.41	1.37	1.48	1.15	1.40	-.06	-.11	-.25
Travel related to caring for and helping household children .....	.23	.16	.28	.12	.30	.09	.08	.16	.22
Other activities, not elsewhere classified	1.73	1.70	2.08	1.83	2.40	1.82	.03	.25	.58

See footnotes at end of table.

Table A-7. Time spent in primary activities¹ by married mothers and fathers with own household children under 18 by employment status of self and spouse and age of youngest child, average for the combined years 2007-11—Continued

Own household children, youngest under 6

Activity	Average hours per day						Differences in married mothers' and fathers' time use on an average day (hours) ²		
	Both spouses work full time		Mother employed part time and father employed full time		Mother not employed and father employed full time		Both spouses work full time	Mother employed part time and father employed full time	Mother not employed and father employed full time
	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers			
Total, all activities	24.00	24.00	24.00	24.00	24.00	24.00	0.00	0.00	0.00
Personal care activities	9.00	8.63	9.16	8.43	9.45	8.72	.38	.73	.73
Sleeping	8.22	8.07	8.46	7.92	8.89	8.15	.15	.54	.74
Household activities	1.81	1.22	2.30	1.15	3.33	1.04	.59	1.15	2.29
Housework .....	.75	.27	1.00	.25	1.47	.21	.48	.75	1.26
Food preparation and cleanup .....	.78	.39	.97	.30	1.45	.29	.40	.66	1.16
Lawn and garden care .....	.05	.16	.08	.21	.11	.15	-.11	-.13	-.04
Purchasing goods and services .....	.52	.37	.60	.30	.64	.40	.15	.30	.25
Grocery shopping .....	.13	.07	.14	.07	.16	.08	.06	.06	.08
Consumer goods purchases, except grocery shopping .....	.32	.24	.35	.19	.39	.24	.07	.16	.15
Caring for and helping household members	2.05	1.35	2.84	1.47	3.35	1.11	.70	1.37	2.24
Caring for and helping household children	2.04	1.33	2.81	1.46	3.33	1.09	.71	1.35	2.24
Physical care	1.06	.51	1.32	.59	1.48	.37	.54	.73	1.12
Education-related activities .....	.09	.08	.11	.04	.20	.03	.01	.08	.17
Reading to/with children .....	.08	.05	.11	.06	.12	.05	.03	.05	.07
Playing/doing hobbies with children .....	.47	.46	.75	.57	.97	.50	.02	.18	.48
Working and work-related activities ³	5.05	5.93	2.53	6.20	.05	6.11	-.88	-3.67	-6.06
Working ³	5.02	5.88	2.48	6.16	-.0	6.07	-.86	-3.68	-6.06
Leisure and sports	2.62	3.51	3.35	3.36	3.89	3.50	-.89	-.01	.38
Socializing and communicating .....	.60	.58	.82	.63	.89	.60	.02	.19	.29
Watching television	1.34	1.98	1.58	1.72	2.07	2.01	-.65	-.14	.05
Participating in sports, exercise, and recreation .....	.19	.31	.23	.30	.22	.24	-.13	-.08	-.02
Travel	1.33	1.37	1.21	1.35	1.05	1.35	-.04	-.14	-.29
Travel related to caring for and helping household children .....	.29	.17	.28	.13	.29	.08	.12	.15	.21
Other activities, not elsewhere classified	1.62	1.63	2.01	1.74	2.24	1.78	-.01	.26	.46

See footnotes at end of table.

Table A-7. Time spent in primary activities ¹ by married mothers and fathers with own household children under 18 by employment status of self and spouse and age of youngest child, average for the combined years 2007-11—Continued

Own household children 6-17, none younger

Activity	Average hours per day						Differences in married mothers' and fathers' time use on an average day (hours) ²		
	Both spouses work full time		Mother employed part time and father employed full time		Mother not employed and father employed full time		Both spouses work full time	Mother employed part time and father employed full time	Mother not employed and father employed full time
	Mothers	Fathers	Mothers	Fathers	Mothers	Fathers			
Total, all activities	24.00	24.00	24.00	24.00	24.00	24.00	0.00	0.00	0.00
Personal care activities	8.92	8.56	9.15	8.60	9.41	8.78	.36	.55	.63
Sleeping	8.05	7.91	8.38	7.99	8.67	8.14	.14	.38	.53
Household activities	2.06	1.42	2.87	1.27	3.78	1.11	.64	1.61	2.67
Housework .....	.87	.25	1.24	.19	1.72	.19	.62	1.05	1.52
Food preparation and cleanup .....	.80	.35	1.03	.29	1.46	.26	.45	.74	1.20
Lawn and garden care .....	.08	.29	.13	.26	.18	.23	-.21	-.13	-.05
Purchasing goods and services .....	.57	.32	.66	.36	.83	.34	.25	.30	.49
Grocery shopping .....	.12	.06	.16	.06	.23	.08	.07	.11	.14
Consumer goods purchases, except grocery shopping .....	.35	.21	.40	.25	.45	.22	.15	.15	.23
Caring for and helping household members .....	.73	.54	1.16	.51	1.55	.48	.18	.65	1.07
Caring for and helping household children .....	.72	.52	1.14	.49	1.53	.44	.20	.64	1.08
Physical care .....	.20	.10	.30	.13	.37	.08	.10	.18	.29
Education-related activities .....	.12	.09	.22	.07	.35	.07	.03	.16	.28
Reading to/with children .....	.02	.01	.03	.01	.04	.01	.01	.02	.03
Playing/doing hobbies with children .....	.04	.09	.07	.09	.13	.10	-.05	-.02	.03
Working and work-related activities ³	5.43	6.17	2.98	5.96	.12	6.32	-.74	-2.98	-6.20
Working ³	5.40	6.14	2.92	5.91	.04	6.27	-.74	-3.00	-6.23
Leisure and sports	3.12	3.81	3.54	3.82	4.39	3.62	-.69	-.29	.78
Socializing and communicating .....	.59	.51	.74	.54	.83	.47	.08	.20	.36
Watching television	1.66	2.27	1.72	2.03	2.23	2.11	-.60	-.31	.12
Participating in sports, exercise, and recreation .....	.18	.32	.25	.38	.27	.30	-.14	-.13	-.03
Travel	1.36	1.43	1.50	1.58	1.30	1.48	-.07	-.08	-.18
Travel related to caring for and helping household children .....	.19	.15	.29	.12	.33	.10	.05	.17	.23
Other activities, not elsewhere classified	1.81	1.75	2.14	1.90	2.62	1.87	.06	.24	.75

¹ A primary activity refers to an individual's main activity. Other activities done simultaneously are not included.

² In each employment category, differences are calculated by subtracting fathers' average hours from mothers' average hours.

³ Estimates include a small amount of work time done by persons who do not meet the ATUS definition of employed.

-0 Estimate is approximately zero.

NOTE: Data refer to persons 15 years and over. For technical information about the American Time Use Survey, see the ATUS User's Guide: www.bls.gov/tus/atususersguide.pdf.

SOURCE: American Time Use Survey, Bureau of Labor Statistics

