Does Care Matter?
Examining how the availability of childcare accelerates mothers time to labor force entry

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ABSTRACT

Today women with children account for a substantial share of the labor supply. Currently 59 percent of mothers with a youngest child below age 3 are in paid employment whereas in 1970 this figure was 27 percent (Cohen 2001). Mothers' participation in paid employment has profound theoretical and practical implications for a broad variety of social relations including the need for families to navigate a balance between work and family responsibilities. Although many studies have made substantial contributions to our understanding of women's labor market participation, only a very small number of studies have arrived at a satisfactory assessment of the determinants associated with the labor force decisions mothers face following the birth of a child. Using event history techniques this paper explores mothers' use of childcare and their subsequent employment using data from the first wave of the Early Childhood Longitudinal Survey – Birth cohort. Conventional explanations of mothers' decision to enter the labor force following childbirth have largely focused on the family's economic and human resources. This paper tests the two classic hypotheses of economic capital negatively effecting mothers' labor force participation, and human capital positively effecting mothers' labor force participation, and introduces a third hypothesis: whether the use of child care – potentially understood as a form of capital - is positively associated with mothers' subsequent labor force entry following childbirth. The results provide strong support for this childcare capital hypothesis and suggest that mothers using any type of prior non-parental childcare have significantly higher odds of entering the labor force in any given week than mothers who did not use any prior non-parental childcare. The effect of using any prior non-parental childcare on the hazard of entering the labor force remains relatively stable, strong, and significant when adding the traditional measures of economic and human capital as well as socio-demographic variables to the model. Thus, this paper argue that prior use of childcare must be included as a separate domain in the literature, while it is an essential and independent tool in mothers' (and families') navigation the work-family dilemma alongside economic and human capital. Moreover, this addition to the literature also holds important implications with regard to public policy, and in doing so the results presented here adds a sociological perspective to previous research examining the use, cost and quality of childcare.

INTRODUCTION

Social change and economic trends since the late 1960s together with recent restructuring of the American welfare system have resulted in a significant increase in women's labor force participation across all demographics and socio-economic backgrounds. Today women with young children account for a substantial share of the labor force. Currently 59 percent of mothers with a youngest child below age 3 are in paid employment whereas in 1970 this figure was 27 percent (Cohen 2001). Additionally, studies have indicated that a substantial number of American women join the labor force within one year of the birth of a child (Joesch 1994; Smith et al 2001); indeed more than 40 percent of mothers of children less than one year old are in paid employment (Klerman et al 1999).

Women's participation in paid employment has profound theoretical and practical implications for a broad variety of social relations including the need for families to navigate between a set of traditional and new norms in general, and for women to manage a balance between work and family responsibilities in particular. A substantial body of literature examines the causes and consequences of women's labor force participation, addressing issues such as its impact on union formation and quality, gender equality, and children's well being. Although many studies have made substantial contributions to our understanding of women's labor market participation, only a very small number of studies have arrived at a satisfactory assessment of the actual labor force transitions mothers face surrounding the birth of a child. This gap in the literature has broad implications for how mothers' employment decisions are viewed, as well as for how potential resource constraints associated with such decisions are formulated. This paper aims at adding to this understanding in at least three ways.

First, this paper argues that when examining mothers' labor market transitions one essential factor has yet to be included; namely the use of childcare. In theory it is broadly recognized that childcare use must have an impact on how families, and mothers in particular, navigate the work-family dilemma. However, no studies have empirically tested the association between the use of any type childcare not associated with employment- including relative care, non-relative care, and center-based care – and women's time to paid employment after the birth of a child. This paper includes childcare as a separate domain in the empirical model. That is, along with adapting and testing the two classic hypotheses of (a) economic capital negatively effecting mothers' labor force participation, and (b) human capital positively effecting mothers' labor force participation, we introduce a third hypothesis: (c) child care – potentially understood as a form of capital - is positively associated with mothers' labor force entry following a childbirth.

Second, by using event history techniques we look not only at whether mothers enter the labor market within a specific length of time, but rather investigate the factors associated with the particular timing of mothers transition into the labor force and the effects economic, human, and care capital has on this timing.

Third, previous studies of women's participation in paid employment often focus on transitions out of the labor force rather than transitions into the labor force, but women moving into the labor force differ in important ways from those moving out or remaining out after birth of a child (Hynes et al 2005).

The research question examined in this paper is *whether mothers' use of childcare prior to their entry or return to work accelerates their time to labor force entry following childbirth?* In what follows we first discuss the relevant literature on women and work, and then introduce childcare

as a separate device in navigating the work-family dilemma. Next we specify the data and population sample used in this study, briefly note the specific data preparation needed for event history analysis, describe the variables used, and an provide an outline of the analysis. After that the results are presented and discussed, followed by a summary and conclusions.

MOTHERS AND WORK

During the past 35 years, labor markets in the United States and other industrialized countries have shifted to favor skilled workers with education and work experience. To meet that demand women have increasingly participated in the labor force. Whereas it is broadly recognized that this participation accounts for a larger supply of skilled workers, the new challenges these changes have posed the family and other institutions responsible for the early development and rearing of young children, has received much less academic attention. Much has been written about women's participation in paid employment and often so using an economic framework. Only limited literature discusses mothers' experience of labor force entry, and even fewer studies focus on this transition immediately following childbirth.

The most prominent argument available in the general literature on women and work, which is for the most part directly transferred to the topic of mothers and work, stem from the economic notion of reservation wage. The argument is made that the economic resources influencing a women's labor supply decision are her access to income, such as a spouse or partner's income or benefits (England 2005). More specifically, any income available to a woman, other than her own earnings, should raise her so-called reservation wage, which is the lowest rate at which she would be willing to accept a particular job. Thus, in the case of mothers, the greater a women's spouse/partner income, the greater her reservation wage can be expected to be - implicitly lowering her likelihood of employment.

Another well established argument is that of human capital. Investment in human capital is argued to raise the potential wage one can earn, although not always right away. Frequently education is cited as a primary source of human capital where higher levels of education may result in overall higher earnings across an entire work career, even though the wages at the initial entry point might not be very high (Becker 1993). Human capital is not only defined as school education, but also includes the stock of skills acquired through training and work experience (ibid). In studies examining fertility's possible effect on employment, women's human capital accumulation is theorized as having a depressing effect on pregnancy (Rindfuss et al 1996; Becker 1991) and birth. This paper investigates the time to labor force entry for women after the birth of a child; the sample only includes women who already gave birth. In this paper the human capital argument would apply in that higher levels of human capital would encourage mothers to enter or re-enter the labor force quickly in order to minimize any loss of income or interruptions in the accumulation of human capital.

The reservation wage argument, and to some degree the human capital argument, assumes that not working is preferred to working and that more money affords that option (Joesh 1994). Using this theoretical lens only, to engage in paid employment is viewed as a result of need (either directly as monetary pay or indirectly as opportunity costs), thus ignoring the fact that in today's America many women work out of preference and not only need (Hynes et al 2005). Yet, when discussing women's work, structural and individual constraints remain crucial to differentiate in the debate on personal preference.

Both the arguments of reservation wage as well as the argument of human capital have often found empirical support, and the aim of this paper is not to disregard these arguments. Rather, taking these established relationships into account, this paper suggests that care capital is a concept that can enrich understanding of women's decisions to return to work, adding sociological nuance to the way in which resources are perceived.

MOTHERS WORK AND CHILDCARE

In today's America, except for self-employment at home, it is nearly impossible to engage in the labor force while simultaneously providing constant care for young children. Thus, for a mother to enter paid employment means that arrangement for a non-maternal alternative caregiver must be made during her work hours. Sometimes, the caregiver is that father, in situations in which fathers do not work or work different shifts than mothers. Sometimes that caregiver is another relative, while other times it is an unrelated home day care provider or a daycare center employee. This paper distinguishes between parental and non-parental types care.

So far, most scholarly work on the link between mothers' labor force participation and childcare has been done within an economic framework focusing on the effect of childcare costs on women's work decisions, as either studies of price effects (Baum 2002; Blau 2001; Kimmel 1998) or studies of actual subsidy programs (Blau et al 2007: Meyers 2002; Van Dijk et al 1996). The vast majority of studies focusing on price effects find a negative relationship between childcare costs and mothers' participation in the labor market, and studies of childcare subsidy programs uniformly report that childcare subsidizes are associated with an increase in the probability of mothers employment (Herbst et al 2008).

However, in sociological and socio-demographic literature the work–family relationship is mainly explained as maternal role incompatibility. Unlike the economic approach outlined above, this approach does not focus exclusively on female wages or human capital, but includes consideration of the ability of women to combine family responsibilities in general, and infant care in particular, with work. This ability is determined by the complex relationship of social and economic institutions, and it is argued that female employment is inversely related to fertility due to the conflict between the roles as a mother and the roles as a worker (Engelhardt et al 2004; Brewster et al 2000; Rindfuss et al 1996). Moreover, this work-family conflict may intensify during the period of childbearing immediately following a child's birth. This paper combines the economic interest in childcare costs with the sociological and demographic concern of role incompatibility, and suggests childcare as a form of capital which mothers use to navigate the work-family dilemma.

Accordingly, it is broadly recognized that a major structural constraint in mothers' challenge of balancing the demands of work and family is the availability and cost of childcare. Yet, only little research has been done to explicitly asses the importance of timing of childcare use, as well as the actual magnitude of childcare use itself on mothers entry into the labor force. Consequently, this paper includes childcare access as a separate entity (care capital) defined as the material, social, and institutional resources available to a mother for the care of her children. In this view, a mother's prior life history, especially her human capital and her family's economic resources at the time of childbirth, create a baseline from which access to childcare is seen as potentially influencing subsequent employment.

Rather than being seen as independent decisions, employment and childcare are closely entwined, and in this paper childcare is approached as an essential part of familial and social

life, contextualizing parenting as shaped by many kinds of input from a range of actors (Budig et al 2004). In this view the decision of mothers to engage in paid employment does not only vary by economic and human capital, but specifically by the range of care resources available. That is, families, and especially mothers, whom can call on an extended family member, are in a different position from those whose only option of non-parental childcare is formal childcare.

Finally, most of the existing literature examining relationships including childcare tends to understand childcare arrangements as mutually exclusive, by focusing on the single most used form of childcare. As a consequence the possibility of using multiple childcare arrangements as well as sudden shifts in type of childcare used is most often ignored. In order to account for this, this paper develops a model that permits multiple childcare arrangements to exist side by side. This formulation supports the possibility of multiple simultaneous childcare arrangements to exist simultaneously and indicate greater access to childcare prior to mothers' entry or re-entry into the labor force following birth.

METHOD

Data and Sample

Data from the first wave of the Early Childhood Longitudinal Survey – Birth cohort (ECLS-B) is used to explore mothers use of childcare and employment; more specifically the question of whether these mothers' use of childcare prior to entry to the labor force accelerate their time to this entry. ESLC-B is a survey designed to follow children's health, development, care and education during the formative years, including extensive information about the parents, and especially of interest to this paper, the employment history of the mother before and after birth the observed child.

The initial sample consisted of a nationally representative sample of 14,000 children born in 2001 with diverse socioeconomic and racial/ethnic backgrounds. Some subpopulations are oversampled including Asian and Pacific Islander children, American Indian and Alaska Native children, Chinese children, twins, and low and very low birth weight children. Children whose birth mothers are younger than 15 years at the time of the child's birth are excluded from the initial sampling frame. The first wave of the survey is collected when the observed child is 9 months old, and among the instruments is a parent interview (usually with the child's mother), and it is the data from this parent interview we have used for the study presented in this paper.[1]

The response rate in the first wave of data collection was 74.1%, which equals 10,374 respondents. We select only respondents who are the biological mother of the observed child. The observed child is youngest child of the mother, but not necessarily the only or first child. In addition, we exclude mothers who used any paid or unpaid maternity leave at any point surrounding the pregnancy and birth of the observed child.[2] The final analytical sample includes 7829 mothers. Additionally, no distinction is made by whether mothers enter the labor force at all, enter the labor force for the first time, are returning to the same job, or engaging in a new job – they are all included in the analysis as entering employment.

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[1] More detailed information about the overall data collection process and instruments is available through http://nces.ed.gov/ECLS/Birth.asp

[2] The data do not provide sufficient information on the start and end date of maternity leaves to control for the length and timing of such leave. Rather than include these cases without this essential information, we decided to exclude them from analysis.

Preparation

The notion of time is an essential element in the formulation of this research question. We are interested in the time to the occurrence of a specific event, namely mothers' entry into paid employment following birth - and whether time to this event is effected by prior use of any non-parental care. When a research question is formulated in terms of time to an event, event history techniques are the preferred method to provide a reliable answer.

In this study the *time* is observed as discrete intervals and the time unit is weeks. The window of observation is 36 weeks and the defining moment for mothers' first exposure to the risk of entering the labor force is the birth of the observed child. Thus, 'time to event' equals the number of weeks since the child was born until the mother enters the labor force. When a mother experiences her first employment after the birth of the observed child, she is censored from the data and is not enrolled again at any subsequent point in time.

The data has been prepared and the analysis carried out using STATA statistical software. After initial preparation of variables the data was turned from wide format into the desired long format, in which each mother is observed each week until the she either experienced the event of entering the labor force or the window of 36 weeks of observation ends.

Variables

The outcome variable in this study is *the hazard of entering the labor force*. Entering the labor force is defined as any number of hours worked in paid employment. The question used to generate this variable asked "How old was [the name of observed child] when you first went [back] to work a job?" No distinction is made between the number of hours worked, such as for example whether the employment obtained is full- or part-time. The reasoning behind this is the fact that our interest is the duration to mothers entry into the labor force, not the actual intensity of labor force participation since childcare is required for any type of out-of-home employment. While we do not distinguish between women who are entering the labor force for the first time and women who are returning to the labor force after employment prior to birth, in the multivariate models we control for the greater probability that women who worked prior to birth will have a higher rate of entering employment following the birth. If a mother did enter the labor force within the 36 weeks of observation her employment status is referred to as 'employed', and if a mother did not enter the labor force within the 36 weeks of observation her employment status is referred to as 'unemployed'.

The overall approach in this paper focuses on resource availability, and holds the underlying assumption that individuals try to reach their goals by allocating financial, personal, and time resources in accordance with their needs and preferences. The determinants of labor force entry are therefore, as also discussed above, considered with regard to three different domains of resources: care capital, economic capital, and human capital.

The key independent variable in this paper is within the domain of care capital and defined as *use of any non-parental care prior to labor force entry*. This variable is time-varying holding the value 1 if use of any type of non-parental care prior to labor force entry occur[3], and 0 if not. The

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[3] This is the 22 percent of the sample who "use any non-parental childcare before employment" in Table 2. This does NOT include cases where childcare and employment begin in the same week.

data available distinguished between three different types of non-parental care: (1) care provided by a relative to the observed child, (2) care provided by a non-relative to the child, and (3) center based care. An early intention of this study was also to asses if there are different effects associated with each of these three types of care, however the survival curves by each of these three types of care are not significantly different from one another, but only different from using fathers' care. Thus, there is no support for distinguishing between the three different types of care in this analysis.

To account for economic capital a set of indicator variables for the household income in the previous year are included. Human capital is operationalized as the mother's highest level of education. A second human capital variable indicates whether the mother worked in the twelve month period prior to the birth. This analysis also includes variables that control for household composition and child health. The first household composition variable is a single indicator variable measuring whether the observed child is singleton or twin or higher order. This variable takes the value 0 if the child is singleton and 1 if the child is twin or higher order. The second household composition variable measures how many siblings the observed child had at time of birth. The third household composition variable measures whether a spouse or partner has been present since the birth of the observed child. This variable equals 1 if a spouse or partner had been present, and 0 if not. Child health is assessed with a variable that indicates whether the child had stayed longer in hospital when born[4]. Finally the model controls for the mother's age at time of birth, and her race and ethnicity.

Variable definitions are summarized in Table 1 together with expected direction of the variables on the risk of entering the labor force, and descriptive statistics for all variables used in the analysis are presented in Table 2.

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[4] Respondents were asked: "Please think back to when (child name) was born. As newborn, did (child name) have to stay longer in the hospital because of medical problems?" Another question then asks the respondents how many days the child stayed longer in the hospital. We are considering to use this second question on the number of days the child stayed longer in hospital to get a more specifically defined measure of child health at baseline instead of the more abstract measure included now.

Table 1: Variable Definitions and Expected Direction of the Variables on the Risk of Entering the Labor Force. Early Childhood Longitudinal Survey – Birth Cohort, 2001.

Variables	Definition	Expected direction
Dependent		
Entering the labor force	=1 in the event that the respondent entered the labor force, and =0 if otherwise [time varying variable]	NA
Independent		
Childcare	=1 if any childcare is used prior to labor force entry	+
Income	= Set of indicator variables (dummies) for whether the household income last year was 5000 or less, 5001 to 15.000, 15.001 to 25.000, 25.001 to 35.000, 35.001 to 50.000, 50.001 to 100.000, or more than 100.001	-
Education	= Set of indicator variables (dummies) for whether the respondent's highest level of education is less than high school, high school or equivalent, high school or equivalent, some collage or equivalent, BA degree or equivalent, or more than BA degree	+
Work experience	=1 if respondent worked at any point during 12 months prior to birth of the observed child, and =0 if otherwise	+
Singleton	=0 if the observed child is singleton, and =1 if twin or higher order	-
Siblings	=Set of indicator variables (dummies) for whether the observed child has no siblings, one sibling, two siblings, or three or more siblings	-
Spouse/partner presence	=1 if a spouse or partner has been present in the household since the birth of the observed child, and =0 if otherwise	-
Child health	=1 if the observed child stayed longer in hospital when born, and =0 if otherwise	-
Age	=Set of indicator variables (dummies) for whether the mother is age 24 or younger, age 25 to 34, or age 35 or older	+ or -
Race	=Set of dummy variables for whether the mother is White, Black, Hispanic, Asian, or of another race	+ or -

Table 2: Selected Characteristics of Analytical Sample by Employment Status. Early Childhood Longitudinal Survey – Birth Cohort, 2001.

	Employed Mothers (N= 4824)	Unemployed Mothers (N=3005)
	Percentage	Percentage
Childcare		
Using any type of non-parental childcare at any point in time	80.0	20.0
Using any type of non-parental childcare before employment	22.5	-
Childcare and employment reported to begin in the same week	46.8	-
Using any type of non-parental childcare after employment	30.7	-
Income [household income last year]		
5000 or less	5.9	14.3
5001 to 15.000	9.6	14.5
15.001 to 25.000	12.3	15.4
25.001 to 35.000	13.1	13.1
35.001 to 50.000	14.9	13.4
50.001 to 100.000	29.7	19.5
100.001 or more	14.5	9.8
Education		
Less than high school	17.1	35.4
High school or equivalent	20.2	17.7
Some collage or equivalent	22.3	16.4
BA degree or equivalent	26.6	21.1
More than BA degree	13.8	9.4
Work experience		
Did not work 12 months prior to birth	13.9	80.0
Did work 12 months prior to birth	86.1	20.0
Household composition		
Child is singleton	85.3	82.3
Child is twin or higher order	14.7	17.7
Child has no siblings	38.5	30.6
Child has one sibling	35.5	33.8
Child has two siblings	17.8	20.8
Child has three siblings or more	8.2	14.8
No spouse/partner present since birth	22.1	20.6
Spouse/partner present since birth	77.9	79.4
Child health		
Child did not stay longer in hospital when born	77.1	75.7
Child did stay longer in hospital when born	22.9	24.3
Age		
Mother age 24 or younger	26.0	30.5
Mother age 25 to 34	53.2	50.5
Mother age 35 or older	20.8	19.0
Race of mother		
White	48.1	42.1
Black	16.9	12.8
Hispanic	14.6	22.7
Asian	13.5	16.2
Other	6.9	6.2

Analysis

In order to understand if mothers who are able to arrange for childcare before entering the labor force have a significantly different time to employment compared to mothers who did not use any type of non-parental childcare prior to entering the labor force, we first conducted a Kaplan-Meier survival analysis of time to employment by use of any prior non-parental childcare. The next analytical step is a discrete-time hazard regression model estimating the risk of entering the labor force. This model of the log odds of entry into paid employment in a person week t is given by:

$$\ln\left[\lambda_{it}/(1-\lambda_{it})\right] = \beta_0 + \beta_1 x_{1it} + \sum_k \beta_k x_{ik}$$

Where λ_{it} is the probability of entering the labor force for mother i in person week t, β_0 the constant term, x_{it} the time varying independent variable (use of any non-parental care prior to labor force entry), and x_k the time invariant independent variables (income, education, work experience, singleton or not, # of siblings, presence of a spouse/partner, child health, age, and race).

Moreover, this model assumed that the baseline hazard is a constant:

$$\hat{\lambda} = h_0(t) = e^{\beta_0}$$

When the hazard probability is defined as a constant, it means in practical terms that it is steady (flat) with regard to time and thereby powerless in ascertaining any form of duration dependence (Box-Steffensmeier et al 2004:75). From a theoretical point of view, we expect the hazard to change over time. For this reason duration in weeks since birth was incorporated in the multivariate model estimating the risk of entering the labor force. The duration variable equaled 1 at the time the observed child is born and increased by one across person week intervals, modeling potential duration dependence in the underlying baseline hazard. In addition to duration, duration squared is included in order to allow for the relationship between duration and the log odds of entering the labor force to be non-linear. These duration variables are interacted with key independent variable (use of any non-parental childcare prior to employment) in order to allow for that relationship to be non-linear too.

RESULTS

Survival Analysis and Hazard Functions

Figure 1 graphs the Kaplan-Meier survival functions for mothers' entry into the labor force by use of any prior non-parental care. An examination these two curves clearly shows that the group of mothers using prior non-parental care has an overall poorer survival compared to mothers not using any prior non-parental care - meaning that mothers using prior non-parental care tend to enter the labor force at an overall greater rate. Of course, during first six weeks of observation the two survival curves for mothers' entry into the labor force by use of any prior non-parental care are not easily distinguishable. At six weeks after the birth of the observed child a clear pattern emerges with mothers having used non-parental childcare being much more likely to begin employment. Both the log-rank test and the Wilcoxon tests indicate that these differences in the survival curves are statistically significant. The fact that mothers using any prior non-parental childcare enter the labor force at an overall greater rate is supported by median survival time for the two groups of mothers. The median survival time for mothers using any prior childcare is 12 weeks compared to 20 weeks for mothers not using any non-parental childcare. Overall, 96 percent of the mothers using any prior non-parental care enter the labor force during the 36 weeks of observation compared to 56 percent of mothers without prior non-parental care.

Figure 1: Kaplan-Meier Survival Estimates for Mothers Employment by Use of Any Prior Non-parental Childcare. Early Childhood Longitudinal Survey – Birth Cohort, 2001.

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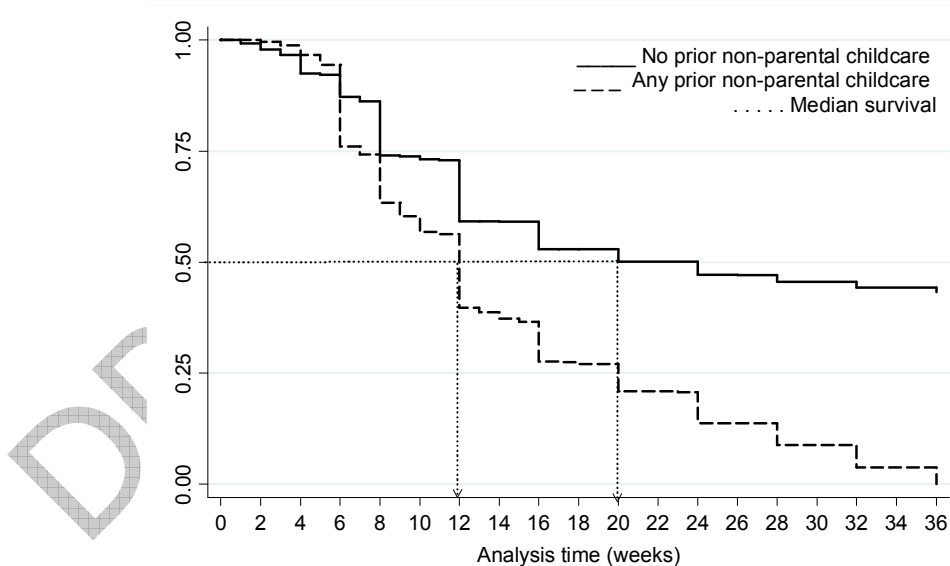
From Table 1 it is clear that the group of mothers entering the labor force within the 36 weeks of observation are more likely to have used non-parental child care at some point, and are more likely to be higher income, have higher levels of education, and to have worked in the 12 month period prior to the birth of the observed child. To assess the net effects of child care capital, economic and human capital and other social and demographic variables are controlled in a discrete-time hazard regression. Results from this regression, estimating the risk of entry into the labor force for all 7829 mothers in the sample across the first 36 weeks after the birth of the observed child, are presented in Table 3 as odds ratios.

Mothers using any type of prior non-parental childcare have significantly higher odds of entering the labor force in any given week than mothers who did not use any prior non-parental childcare (Table 3). In fact they are more than 4 times as likely to enter the labor force in any given week. The estimated odds ratio for using any type of prior childcare remains relatively unaffected once economic capital and human capital are considered in the model, and controls are introduced for household composition, child health, mothers age, and mothers race. Still, mothers using any type of prior non-parental childcare have almost 4 times higher odds of entering the labor force in any given week than their counterparts. This finding denote that the significantly higher risk of labor force entry among mothers cannot be attributed to differences with regard to economic capital and human capital, or to household composition, child health, mothers age, and mothers race. The use of childcare prior to labor force entry matters as an independent factor.

When the mother reports the observed child has an older sibling, the mother is at a 1.13 higher risk of entry into the labor force in any given week compared to mothers of first children. Traditional literature has suggested that having more children would strengthen the need for the mother's presence in the home to care for her family (Becker 1991). However, these results suggest that this is no longer the case. For many women who already have one child, the family will already have reached ways of balancing the work family-dilemma. The mothers may already be established in a type of job that is easy to coordinate with child care needs. Having already arranged childcare for one child it is likely that the same childcare arrangements may work for the second child. This is further evidence of the importance of care capital. Both having a type of work that has worked well they did with one child and the availability of childcare for a second child seem

Economic capital, operationalized as last year's household income, has little effect on the likelihood of employment. Except for slow labor force entry of mothers in the lowest income categories (who are likely to be supported by public welfare), additional family income is not associated with increases in the likelihood of employment after the birth of the child. This surprising finding is undoubtedly related to the inclusion of women's wage income in the economic capital measure, although this is at least partly controlled by including women's employment in the prior year. When a spouse or partner has been present since birth of the observed child, mothers are 0.84 times as likely to enter the labor force in any given week, compared to mothers with no spouse or partner present. With the presence of a spouse or partner of the new mother in the household, the family may be able to rely on his economic contribution and thereby allow for the mother to increase her time off from work during her childbearing years. This is consistent with hypothesized effects of economic capital.

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Table 3: Odds Ratios for Discrete-time Hazard Models Predicting Mothers Entry into Paid Employment. Early Childhood Longitudinal Survey, round 1, 2001 (N=7829)

	Restricted model			Full model		
	Odds Ratio		|z|	Odds Ratio		|z|
Childcare						
Using any type of childcare prior to employment (TVC)	4.53	***	(12.80)	3.89	***	(11.04)
Income [household income the previous year]						
5000 or less (ref.)				1		-
5,001 to 15,000				1.24	***	(2.76)
15,001 to 25,000				1.32	***	(3.67)
25,001 to 35,000				1.28	***	(3.24)
35,001 to 50,000				1.35	***	(3.92)
50,001 to 100,000				1.46	***	(5.02)
100.,01 or more				1.25	***	(2.98)
Education						
Less than high school (ref.)				1		
High school or equivalent				1.25	***	(4.35)
Some collage or equivalent				1.14	***	(2.57)
BA degree or equivalent				1.11	*	(1.79)
More than BA degree				1.12	*	(1.70)
Work experience						
Did not work 12 months prior to birth (ref.)				1		-
Did work 12 months prior to birth				9.86	***	(50.84)
Household composition						
Child is singleton (ref.)				1		
Child is twin or higher order				0.68	***	(8.29)
Child has no siblings (ref.)				1		-
Child has one sibling				1.13	***	(3.25)
Child has two siblings				1.07		(1.46)
Child has three siblings or more				1.09		(1.36)
No spouse/partner present since birth (ref.)				1		-
Spouse/partner present since birth				0.84	***	(3.92)
Child health						
Child did not stay longer in hospital when born (ref.)				1		-
Child did stay longer in hospital when born				0.80	***	(5.99)

Table 3 - continued: Odds Ratios for Discrete-time Hazard Models Predicting Mothers Entry into Paid Employment. Early Childhood Longitudinal Survey, round 1, 2001 (N=7829)

	Restricted model			Full model		
	Odds Ratio		|z|	Odds Ratio		|z|
Age						
Mother age 24 or younger (ref.)				1		-
Mother age 25 to 34				0.87	***	(3.27)
Mother age 35 or older				0.83	***	(3.40)
Race of mother						
White (ref.)				1		-
Black				1.02		(0.37)
Hispanic				1.04		(0.75)
Asian				0.97		(0.71)
Other				1.27	***	(3.78)
Duration	1.15	***	(19.54)	1.21	***	(25.97)
Duration squared	0.99	***	(23.01)	0.99	***	(25.04)
*Any care * Duration*	0.86	***	(8.83)	0.88	***	(7.55)
*Any care * Duration squared*	1.00	***	(8.35)	1.00	***	(7.17)
LR Chi2	1245.59	***		5600.17	***	
Number of person weeks	168423			168423		
Number of women	7829			7829		

(TVC) Time-Varying Covariate.   ***p<0.01 **p<0.05 *p<0.1

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Mothers with a high school diploma or equivalent are at a 1.25 times higher risk of entering employment compared to mothers with less than high school. Mothers with more than a high school education are also more likely to enter the labor force compared to mothers holding less than high school. Except for those mothers who have educational credentials that make employment difficult, higher levels of education are not associated with the rate of entry into the labor force following birth. Work experience has a strong predicting effect on mothers' entry into the labor force. Mothers who worked any amount of time between the birth of the observed child and 12 months prior to this birth are close to 10 times more likely to enter the labor force in any given week compared to mothers who reported they were not working during that period. This undoubtedly relates in part to mothers returning to their jobs following childbirth.

Finally, older mothers are at less risk of employment. Compared to mothers that are 24 or younger, mothers age 25 to 34 are 0.87 as likely to enter the labor force in any given week, and for mothers age 35 or older this figure is 0.83. While human capital theory would ordinarily predict the opposite relationship (because human capital typically increases with age), this may result from a number of other factors. First, childbirth at older ages might be associated with health complications for the mother, which would prevent her from working shortly after childbirth. Second, fertility postponement may cause parents to be extra cautious and attentive to their newborn child; mothers may be more likely to postpone employment after birth in order to maximize maternal investments in children. Third, older cohorts of women may be less accepting of infant care outside of the home during the first year.

As expected when controlling for household composition, mothers of twins or higher birth order children are 0.68 times as likely to enter paid employment in any given week as mothers of singletons. The time following the birth of a child is overall a period of strong physical and emotional demands on the parents, and especially so for the new mother. Having to simultaneously care for two or more infants in many ways intensifies that experience. In addition to experiencing higher care-giving demands compared to parents of singletons, parents of twins or higher order children also need to arrange care for more than one infant. A similar observation applies to mothers raising children with health conditions. A child with poor health is likely to require more attention, and parents face greater difficulty in finding appropriate childcare. Indeed, mothers of children who stayed longer in the hospital upon birth are 0.80 times as likely to entry the labor force in any given week as mothers of children with shorter hospital stays.

SUMMARY AND CONCLUSION

Using data from the first wave of the Early Childhood Longitudinal Survey – Birth cohort, we explore mothers' use of childcare and employment. Conventional explanations of mothers' decision to enter the labor force following childbirth have largely focused on the family's economic and human resources. This paper tests the two classic hypotheses of economic capital negatively effecting mothers' labor force participation, and human capital positively effecting mothers' labor force participation, and introduces a third hypothesis: whether child care – potentially understood as a form of capital - is positively associated with mothers' labor force entry following a childbirth.

Economic capital and human capital have somewhat inconsistent effects on the timing of mother's employment after childbirth. Except for the tendency of the least educated and lowest income mothers to delay entry into work, additional education and higher levels of family income have no impact on the rate of employment in the 36 weeks following birth. Prior employment is

strongly linked to an early return to work, perhaps by allowing mothers to return to their jobs rather than find new employment.

The results provide strong support for the childcare capital hypothesis. More specifically, the results suggest that mothers using any type of prior non-parental childcare, have significantly higher odds of entering the labor force in any given week than mothers who did not use any prior non-parental childcare. The effect of using any prior non-parental childcare on the hazard of entering the labor force remains relatively stable, strong, and significant when adding the traditional measures of economic and human capital as well as socio-demographic variables to the model. In effect, care capital is an essential and unique tool in families navigation of the work-family dilemma, alongside economic and human capital.

Much of the prior research on the effects of economic capital and human capital on the employment of mothers has focused on the first several years after the birth of a child, and typically the analyses have used data for older cohorts among whom employment and child care were often viewed as incompatible. This research is based on cohorts of women who have grown up during times when working mothers are the norm. For these women, a husband's income alone often is inadequate to support the family, and remaining at home to provide fulltime childcare is not a workable option. These also are women who are more career oriented—for many their jobs are part of career ladders which are costly to interrupt. This suggests the need to shift attention from mothers' decisions to obtain childcare and return to work in the years after childbirth to the immediate post-birth period.

An important next step in this research will be to find improved ways to measure economic capital in the family. We also will turn attention to the types of childcare arrangements women use when they return to work, and how these are affected by the various forms of care capital. It is likely that care capital has affects not just on the timing of employment following a birth, but on the type of employment, whether it is part-time or full-time, the wages, and whether that employment is stable. Now that we have established the importance of the care capital concept, we anticipate using this paradigm to investigate all of these issues. We will do so focusing on recent cohorts of mothers and the period immediately following the birth of a child.

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