THE RELATIONSHIP BETWEEN CHILD CARE ASSISTANCE EXPENDITURES AND MATERNAL LABOR FORCE PARTICIPATION

A Thesis
submitted to the Faculty of the
Graduate School of Arts and Sciences
of Georgetown University
in partial fulfillment of the requirements for the
degree of
Master in Public Policy

By

Rachael Kauss, B.A.

Washington, DC
April 8, 2018
THE RELATIONSHIP BETWEEN CHILD CARE ASSISTANCE EXPENDITURES AND MATERNAL LABOR FORCE PARTICIPATION

Rachael Kauss, B.A.

Thesis Advisor: Adam Thomas, Ph.D.

ABSTRACT

Though the labor force participation rate for U.S. women with young children has risen over the past few decades, mothers are still generally less likely to work than fathers or women without children. The preference of some mothers to act as primary caregivers likely drives part of this disparity, but the high cost of child care may also deter mothers from working. This study explores whether spending on federal child care assistance programs is related to changes in labor force participation rates for mothers with children under the age of six between 2010 and 2014. Using state-level data on maternal labor force participation and child care assistance expenditures through the Child Care and Development Fund and the Temporary Assistance for Needy Families program, this study finds evidence of a positive relationship between child care assistance spending and maternal labor force participation. In addition, this study finds preliminary evidence suggesting that the magnitude of the relationship between an additional dollar of child care assistance spending and maternal labor force participation may be smaller when the cost of child care is higher.
TABLE OF CONTENTS

INTRODUCTION .................................................................................................................. 1
BACKGROUND .................................................................................................................. 4
LITERATURE REVIEW ....................................................................................................... 6
CONCEPTUAL FRAMEWORK ............................................................................................ 10
DATA AND METHODS ...................................................................................................... 14
DESCRIPTIVE RESULTS ................................................................................................... 18
REGRESSION RESULTS .................................................................................................... 21
DISCUSSION ..................................................................................................................... 28
BIBLIOGRAPHY ................................................................................................................. 33
INTRODUCTION

The labor force participation rate among women in the United States with children under the age of six rose from just 39 percent in 1975 to 64.7 percent in 2016 (Bureau of Labor Statistics). Though assessments of the effects of mothers joining the workforce on child development have yielded mixed results (James-Burdumy 2005), the wages that a working mother earns may directly impact the wellbeing of her children, especially in single-parent families. As of 2015, 68.6 percent of families headed by a non-working single mother lived in poverty, compared to 25.8 percent of families headed by a working single mother (Census Bureau). Importantly, female labor force participation may also have broader economic implications. Appelbaum et al. (2014) estimate that between 1979 and 2007, the average number of hours women worked annually increased by 33 percent and U.S. GDP rose by 10.6 percent.

Despite large increases in the number of working mothers in recent decades, women with young children are generally less likely to participate in the labor force than similar women without children (Kahn et al. 2014). Furthermore, the labor force participation rate among mothers (70.5 percent in 2016) still lags far behind the participation rate for fathers (92.8 percent) (Bureau of Labor Statistics). Part of this difference is likely driven by married women who rely on the income of their spouses and actively choose to serve as primary caregivers rather than participate in the workforce (Appelbaum et al. 2014). In contrast, single mothers are more likely to be the sole breadwinners in their families. In 2016, 76.0 percent of single mothers participated in the labor force while only 67.9 percent of married mothers worked, suggesting that married women are more likely to be able to maintain financial security through their partner’s earnings (Bureau of Labor Statistics).
Still, the disparity in labor force participation rates between mothers and non-mothers suggests that additional factors beyond personal preferences may make employment less desirable among parents. The high cost of child care is one of these factors (Blau 2001). Average child care expenses per child increased by 70 percent between 1985 and 2011 (Laughlin 2013). Among families that incurred child care expenses for children under five in 2011, average weekly payments were $179, totaling about $9,308 per child per year and averaging 10.5 percent of a family’s income (Laughlin 2013). Meanwhile, families below the poverty line with child care expenses for children of any age paid 30 percent of their monthly income in child care expenses on average (Laughlin 2013). With the cost of child care so high, it is unsurprising that a 2016 poll found that 31 percent of parents who pay for child care cited the cost of child care as a source of financial strain (NPR et al. 2016).

Faced with such high costs, mothers must decide whether working will yield enough income to offset their child care expenses. This can be especially challenging for low-income families who face high child care costs and low wages. If the costs of child care are sufficiently high, mothers may conclude that it makes more financial sense to stay home with their children than to work a low-paying job and devote a significant portion of their earnings to child care payments.

In light of these considerations, the federal government and the states have implemented various assistance programs to help low-income families with child care costs, making it easier for parents to enter the workforce (Enchaugégui et al. 2016). This paper evaluates the relationship between spending on child care assistance through federal programs and labor force participation rates among women with children under six. Women with young children are of particular
interest because children below school age are most likely to pose an obstacle to mothers seeking work (Bureau of Labor Statistics 2015).

To evaluate the relationship between child care assistance spending and maternal labor force participation rates, this study employs data on state-level maternal labor force participation rates as reported in the American Community Survey and child care expenditure data for the Child Care and Development Fund and Temporary Assistance for Needy Families program as reported by the Office of Child Care at the Administration for Children & Families at the U.S. Department of Health and Human Services. The goal of this research is to determine whether increased spending on child care assistance can help to increase maternal labor force participation.
BACKGROUND

Two programs provide the bulk of federal child care assistance funding: the Child Care and Development Fund (CCDF) and the Temporary Assistance for Needy Families (TANF) program (Lynch 2016).\(^1\) CCDF was created through the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996, which merged several child care funding sources under a single umbrella, including the Child Care and Development Block Grant (CCDBG), a discretionary funding stream, and Child Care Entitlements to States (CCES), a mandatory funding stream. Thus, CCDF funding is allocated to states using two funding formulas. CCDBG funding is distributed based each state’s per capita income, share of children under the age of five, and share of children receiving free and reduced-price lunch. CCES funding is allocated based on historical funding benchmarks and each state’s share of children under thirteen. Some CCDF funds require states to meet matching and maintenance-of-effort requirements, and states can choose whether to provide sufficient funding to meet these requirements and receive full funding.

While some CCDF funds are spent on child care research and improving the quality and availability of care centers, about three-quarters of CCDF funding is dedicated to child care subsidies and direct assistance for low-income families (Office of Child Care 2018). All subsidy funding distributed through CCDF is subject to rules governing how the subsidies should be allocated, though states may choose to set more stringent requirements. CCDF rules include work requirements for parents, a maximum income eligibility threshold of 85 percent of a state’s

---

\(^1\) Unless otherwise indicated, Lynch (2016) is the source for all claims in this section regarding federal child care assistance programs.
median income, and health and safety requirements for care centers. Additionally, CCDF can only provide subsidies for children age twelve or younger.

While all CCDF funds are devoted specifically to child care, states can use their TANF block grant for a broad array of social welfare–related purposes. States receive a fixed amount of TANF funding annually, subject to maintenance-of-effort requirements, but they may also receive additional TANF contingency funds during economic downturns (Falk 2017). Each state can choose how much of its TANF funding to spend on child care assistance; in 2015, about 17 percent of all TANF funds were used for child care (Office of Family Assistance). In addition to providing child care assistance directly through TANF, each state can transfer up to 30 percent of its TANF funds to the CCDF.

The amount that each state spends on child care assistance through CCDF and TANF varies widely, from just $14.08 per capita (Nevada in 2014) to $169.76 per capita (District of Columbia in 2010). In all, about 70 percent of child care expenditures through CCDF and TANF are federal dollars, while state spending accounts for about 30 percent. In other words, federal formulas for allocating CCDF and TANF funds can explain much but not all of the variation in child care assistance spending across states. Differing state decisions as to whether to meet matching and maintenance-of-effort requirements and how much TANF funding to use for child care assistance drive the remaining variation.

---

2 The amount of TANF funding each state receives is based on the amount of welfare funding it received prior to the passage of PRWORA. A state can qualify for limited TANF contingency funds when its unemployment rate and Supplemental Nutrition Assistance Program (SNAP) caseload meet certain thresholds signaling an economic downturn (Falk 2017).

3 See page 14 for further information on how child care assistance expenditures per capita are calculated for this analysis.
LITERATURE REVIEW

There is a wealth of literature on the relationship between child care assistance and maternal labor force participation. Several previous studies have taken a similar approach to the one adopted here by assessing the relationship between aggregate child care assistance expenditures and maternal employment outcomes. Other research has used individual-level data to investigate whether receiving a child care subsidy is related to a mother’s decision to participate in the labor force. Most of these studies have found evidence of a positive relationship between child care assistance and maternal labor force participation, building on previous research that suggests a negative relationship between child care costs and parents’ labor supply.

The Relationship Between Child Care Assistance Expenditures and Maternal Labor Decisions

Many studies have used a combination of state- and individual-level data to evaluate the effect of spending on child care subsidies on the probability that a mother participates in the labor force, and most have found that child care subsidy spending is positively correlated with maternal labor force participation (Enchautegui et al. 2016; Bainbridge et al. 2003; Meyer and Rosenbaum 2001). Most of these studies focus specifically on single mothers, as they are most likely to be eligible for subsidies (Enchautegui et al. 2016). Most recently, Enchautegui et al. (2016) investigated the labor force effects of Child Care and Development Fund (CCDF) spending among women with children under twelve between 2003 and 2012. The authors use Current Population Survey data to determine whether mothers who live in states with more generous CCDF spending are more likely to work. They find that there is a positive relationship between CCDF spending and employment among women potentially eligible for subsidies (Enchautegui et al. 2016). In an earlier but related study, Bainbridge et al. (2003) use data on
single mothers with children under thirteen between 1991 and 1996 (when federal support for child care subsidies was rapidly expanding) and find that a $1,000 per capita increase in child care subsidy spending is associated with a 26 percentage point increase in the maternal employment rate (Bainbridge et al. 2003).

Bainbridge et al. (2003) build on the work of Meyer and Rosenbaum (2001), who analyze the relationship between child care assistance spending and the labor force participation of single mothers between 1984 and 1996 (prior to the creation of CCDF), in addition to analyzing the effects of other welfare programs on labor force participation. They found that a $500 increase in federal child care expenditures per mother with a child under the age of six is associated with associated with a 1 percentage point increase in the probability of employment for that group of mothers (Meyer and Rosenbaum 2001).

The Relationship Between Child Care Subsidy Receipt and Maternal Labor Decisions

While the studies described above investigate the effects of aggregate spending on child care assistance, many previous analyses of the effects of child care subsidies have used individual-level data to determine whether mothers who receive subsidies are more likely to work (e.g., Blau and Tekin 2007; Crawford 2006). Using data from the 1999 National Survey of America’s Families (NSAF)—which specifically asks respondents whether they have received child care subsidies—Blau and Tekin (2007) find that receipt of a child care subsidy is associated with a 13 percentage point increase in the probability of employment among single mothers with children under the age of 13 (Blau and Tekin 2007). Crawford (2006) uses a similar approach to analyze 2002 NSAF data and finds that single mothers with children under
five who received child care subsidies worked 9.4 more hours per week on average than comparable mothers who did not receive subsidies.

The Relationship Between the Cost of Child Care and Maternal Labor Decisions

Research investigating the effects of child care assistance on maternal labor force participation is motivated by the premise that high child care costs might deter parents from the workforce. Blau’s (2001) economic analysis suggests that child care costs disincentivize parents from working by effectively reducing take-home pay. Several studies have investigated the effects of child care costs on parents’ work decisions (Connelly and Kimmel 2003; Blau and Currie 2004; Tekin 2007). Using data from the 1992-1993 Survey of Income and Program Participation, Connelly and Kimmel (2003) analyze the relationship between cost of child care and employment of mothers with children under six and find a significant negative correlation. Similarly, Tekin (2007) analyzes individual-level data from the 1997 NSAF and finds a negative association between child care costs and the probability of full time employment for single mothers. He also finds that high child care costs are a greater obstacle to full-time work than to part-time work. These findings are reinforced by those of Posadas and Vidal-Fernandez (2013), who use the data from National Longitudinal Survey of Youth to show that mothers who can use their child’s grandparents as a source of free child care are more likely to be employed.

Present Study

This study differs from previous research on child care assistance by investigating the relationship between child care assistance expenditures in each state and state-level maternal labor force participation rates among women with children under the age of six, rather than using
individual-level data to evaluate the effects of assistance on the propensity of mothers to work. Relying on aggregate state-level data does have some disadvantages. For example, this approach precludes a focus on single or low-income mothers, who are most likely to receive child care assistance.

The independent variable in this study is an aggregate measure of spending on many forms of child care assistance, rather than solely accounting for spending on subsidies as some previous studies do. The benefit of this approach is the ability to account for spending on both direct and indirect forms of child care assistance. This study also expands on previous research by examining the effects of both CCDF and Temporary Assistance for Needy Families (TANF) child care spending. Most recent work on child care spending (e.g., Enchautegui et al. 2016) has only considered CCDF expenditures. As about one quarter of child care assistance spending through federal programs is disbursed directly through TANF, including TANF expenditures in the analysis provides a more complete picture of child care assistance expenditures (Lynch 2016). Furthermore, apart from Enchautegui et al. (2016) and Crawford (2006), much of the existing research on child care spending relies on data from the 1990s and early 2000s (Bainbridge et al. 2003, Blau and Tekin 2007). This study provides a more recent set of estimates, using data from 2010 to 2014.
CONCEPTUAL FRAMEWORK

Drawing on previous research that found evidence of a positive relationship between child care assistance and maternal labor force participation (Enchautegui et al. 2016; Blau and Tekin 2007; Crawford 2006; Bainbridge et al. 2003 Connelly and Kimmel 2003), this study investigates the hypothesis that there may be a small positive relationship between a state’s spending on child care assistance and its labor force participation rate for mothers with children under the age of six. As only a small subset of mothers is eligible for child care assistance, the effect of additional spending on overall labor force participation rates for mothers with young children is unlikely to be large. Additionally, many demographic, economic, and political factors are related to both state-level maternal labor force participation rates and child care assistance expenditures. The model in this study controls for as many of these factors as possible in order to minimize bias in the results.

Demographic Factors

Many of the demographic factors that are related to child care assistance expenditures may also be related to the maternal labor force participation rate. Federal formulas for allocating Child Care and Development Fund (CCDF) funding take the share of children under thirteen and the share of children under five in each state into account, so there is a direct relationship between these demographic characteristics and child care assistance spending (Lynch 2016). Additionally, when states determine how much to spend on child care, they presumably consider

---

4 From this point forward, “maternal labor force participation rate” generally refers to the dependent variable considered in this study, which is a state’s labor force participation rate for women with children under the age of six. More detail on this variable can be found in Table 1 on page 15.
the demographic characteristics of their populations, since a state’s demographic makeup could
drive the need for subsidies and since certain groups of mothers may be more likely to participate
in the labor force than others. States with larger populations of children eligible for subsidies
(children under thirteen) may spend more on child care assistance due to both increased federal
allocations and state-level policy choices.

Some previous studies conducted using individual-level data have focused exclusively on
the subset of mothers with children eligible for CCDF subsidies (Enchautegui et al. 2016; Blau
and Tekin 2007; Bainbridge et al. 2003), while other research has focused on mothers with
children under six (Connelly and Kimmel 2003; Crawford 2006), who are most likely to need
child care assistance and for whom prohibitive child care costs are most likely to be an obstacle
to work. This study takes the latter approach but also controls for the percentage of a state’s
children who are under twelve.⁵

In addition, because child care costs can be particularly prohibitive for single parents, and
because single parents are most likely to receive assistance, several previous studies on child
care assistance have focused exclusively on or conducted subgroup analysis for single mothers
(Enchautegui et al. 2016; Blau and Tekin 2007; Crawford 2006; Bainbridge et al. 2003). To
account for the increased likelihood that single parents require child care assistance, this study
controls for the percentage of children in each state who live in a single-parent household.

⁵ CCDF rules allow subsidies to be provided for children under thirteen, and federal funding
allocation formulas take a state’s populations of children under thirteen and children under five
into account. While this study would ideally control for these specific factors, instead, this study
controls for the percentage of children in each state who are under twelve due to accessibility of
data. This variable, combined with state and year fixed effects, likely sufficiently reduces bias in
the model due to varying child populations in each state.
Previous studies on this topic have also controlled for a variety of individual characteristics associated with child care subsidy eligibility and maternal labor force participation, including race, ethnicity, and educational attainment (Enchautegui et al. 2016; Blau and Tekin 2007; Bainbridge et al. 2003; Connelly and Kimmel 2003). This study incorporates state-level measures of these individual characteristics. Specifically, the model controls for the percentage of the state’s population that is black, the percentage that is white, and the percentage that is Hispanic, as well as the percentage of the population with high school or college degrees.

Economic Factors

Several previous studies control for individual economic determinants of child care subsidy receipt and maternal labor force participation, such as individual income, poverty status, and employment status (Enchautegui et al. 2016; Bainbridge et al. 2003; Connelly and Kimmel 2003). The model in this study includes state-level measures of these indicators: median income, unemployment rate, and poverty rate. These factors are plausibly associated with both with labor force participation and with child care spending, largely because some state-level economic characteristics (specifically, per capita income and share of children receiving free or reduced-price lunches, which is determined by income) are included in the federal funding formulas used to allocate CCDF funding. Additionally, states with struggling economies may qualify for Temporary Assistance for Needy Families (TANF) contingency funds or may choose spend

---

6 Although the control variables used in this study to account for variation in economic conditions across states deviate from those used in the CCDF federal funding allocation formulas due to accessibility of data, the economic controls used here, combined with fixed effects, will largely account for the economic trends that influence federal allocation of child care assistance funding.
more on child care assistance in order to encourage labor force participation and to meet increased need for assistance.

This study is premised in part on the idea that high child care costs may deter parents from working. The cost of child care varies across states and is likely related both to the maternal labor force participation rate and to child care assistance spending. Child care costs are negatively correlated with maternal labor force participation (Blau 2001), and thus, higher costs provide a potential motivation for states to spend more on assistance. This study controls for the average cost of child care in each state to account for variation in cost across states.

**Political Factors**

Many previous studies have relied on state fixed effects to control for policy and political characteristics of states that are relatively fixed over time. (Bainbridge et al. 2003; Blau and Tekin 2007; Enchautegui et al 2016). This study similarly employs fixed effects, but because this study relies on state-level data, it also includes a separate control for a state’s political climate. This study controls for the percentage of the vote received by the Democratic candidate in the state’s most recent gubernatorial election as a proxy for its liberalism. Controlling for a state’s politics helps to account for any differences in state-level public assistance policy related to the state’s ideological leanings. This control also helps to account for any relationship between political preferences and social values—gender norms in particular—that could be correlated with mothers’ propensity to work.
DATA AND METHODS

This study uses state-year panel data, including observations for all 50 states and the District of Columbia for the five-year period between 2010 and 2014, for a total sample size of 255. The model’s dependent variable is the state-level maternal labor force participation rate among for women with children under six as measured in the American Community Survey (ACS). The key independent variable is child care assistance expenditures per capita. This variable is constructed using Child Care and Development Fund (CCDF) and Temporary Assistance for Needy Families (TANF) child care expenditures as reported by the Office of Child Care at the Administration for Children & Families at the U.S. Department of Health and Human Services and population data gleaned from the ACS.

This study uses an ordinary least squares regression with state and year fixed effects to model the relationship between state-level maternal labor force participation rates and spending on child care assistance. State fixed effects control for all state characteristics that are fixed over time, including most of the differences in social and cultural characteristics among states (e.g., attitudes related to women’s role in society and childrearing practices, ideological inclinations that may be related to both child care spending and labor force participation). Year fixed effects control for time-varying characteristics that are fixed across states at a given point in time, most importantly, national-level economic conditions and any changes in the federal administration of CCDF or TANF. The study also includes several control variables that are likely related to both maternal labor force participation and child care assistance spending. As previously discussed, these control variables are categorized into three groups: demographic, economic, and political. Definitions and data sources for each variable included in the analysis are provided in Table 1.
All financial variables are adjusted for inflation and expressed in 2014 dollars. Child care assistance expenditures and average cost of child care were adjusted using the seasonally adjusted consumer price index for child care and nursery school, while median income was adjusted using the standard seasonally adjusted consumer price index.

Table 1: Variable Definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Labor Force Participation Rate (Maternal LFP)</td>
<td>This continuous variable measures the percentage of women between the ages of 20 and 64 with children under the age of 6 who are working or looking for work.</td>
<td>American Community Survey 5-year estimates (ACS)</td>
</tr>
<tr>
<td><strong>Independent Variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Care Assistance Spending Per Capita</td>
<td>This continuous variable measures the amount each state spent on child care assistance per capita through the Child Care and Development Fund (CCDF) and Temporary Assistance for Needy Families (TANF), expressed in 2014 dollars. This variable is calculated by dividing the total child care expenditures in each state by the population of that state.</td>
<td>Child care expenditures from Office of Child Care, Administration for Children &amp; Families, U.S. Department of Health and Human Services; population data from ACS</td>
</tr>
<tr>
<td><strong>Demographic Factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>This continuous variable measures a state’s total population.</td>
<td>ACS</td>
</tr>
<tr>
<td>Children Under 12</td>
<td>This continuous variable measures the percentage of a state’s child population (which includes anyone under the age of 18) that is under the age of 12.</td>
<td>Annie E. Casey Foundation’s KIDS COUNT Data, originally extracted from U.S. Census Bureau</td>
</tr>
<tr>
<td>Percent Single Parent</td>
<td>This continuous variable measures the percentage of a state’s children under the age of 18 living in single-parent families.</td>
<td>Annie E. Casey Foundation’s KIDS COUNT Data, originally extracted from ACS</td>
</tr>
<tr>
<td>Percent Black</td>
<td>This continuous variable measures the percentage of the state’s population that is black.</td>
<td>ACS</td>
</tr>
</tbody>
</table>

---

7 Child care expenditure data are available by fiscal year, while all other variables are measured by calendar year. Expenditure data are matched with the closest corresponding calendar year. For example, expenditure data from FY2012 is matched with other data from calendar year 2012.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent White</td>
<td>This continuous variable measures the percentage of the state’s population that is white.</td>
<td>ACS</td>
</tr>
<tr>
<td>Percent Hispanic</td>
<td>This continuous variable measures the percentage of the state’s population that is of Hispanic or Latino origin (may be of any race).</td>
<td>ACS</td>
</tr>
<tr>
<td>Percent High School</td>
<td>This continuous variable measures the percentage of the state’s population age 25 or older that has a high school diploma but no college degree.</td>
<td>ACS</td>
</tr>
<tr>
<td>Percent College Degree</td>
<td>This continuous variable measures the percentage of the state’s population age 25 or older that has an associate’s or bachelor’s degree.</td>
<td>ACS</td>
</tr>
</tbody>
</table>

**Economic Factors**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty Rate</td>
<td>This continuous variable measures the percentage of people in a state whose income over the preceding 12 months was below the poverty level.</td>
<td>ACS</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>This continuous variable measures a percentage of a state’s labor force over the age of 16 that is out of work.</td>
<td>ACS</td>
</tr>
<tr>
<td>Median Income</td>
<td>This continuous variable measures a state’s median household income, expressed in 2014 dollars.</td>
<td>ACS</td>
</tr>
<tr>
<td>Cost of Child Care</td>
<td>This continuous variable measures the average cost of year-round child care in a state for four-year-old children, expressed in 2014 dollars.</td>
<td>Child Care Aware’s Parents and the High Cost of Child Care Reports</td>
</tr>
</tbody>
</table>

**Political Factors**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Democratic</td>
<td>This continuous variable measures the percentage of the vote that went to the Democratic candidate in the state’s last gubernatorial election.</td>
<td>CQ Voting and Elections Collection; District of Columbia Board of Elections</td>
</tr>
</tbody>
</table>

---

8 For years in which a gubernatorial election was held, this variable measures the percentage of the vote that went to the Democratic candidate in the last election prior to the one held that year. For example, if a state held a gubernatorial election in 2010, for the state-year observation corresponding to 2010, this variable measures the percentage of the vote that went to the Democrat in the last election before 2010. As most gubernatorial elections are held in November, this means that the variable more accurately reflects the party that held office for most of that year rather than the result of the election at year’s end.

9 For the District of Columbia, this variable reflects the percentage of the vote won by the Democratic candidate in the most recent mayoral election.
The regression model estimated in this study is:

\[(\text{Maternal LFP})_{it} = \beta_0 + \beta_1(\text{Child Care Assistance Spending})_{it} + \beta_2(\text{Demographic Factors})_{it} + \beta_3(\text{Economic Factors})_{it} + \beta_4(\text{Political Factors})_{it} + \alpha_i + \gamma_t + \varepsilon_{it},\]

where $\alpha_i$ represents a set of state fixed-effects dummy variables, $\gamma_t$ represents a set of year fixed-effects dummy variables, $\varepsilon_{it}$ represents the error term, and $\beta_1$ is the coefficient of interest.
DESCRIPTIVE RESULTS

Table 2 reports descriptive statistics for all variables included in this analysis. The sample size is 255 (including observations for 50 states and the District of Columbia for the 5 years between 2010 and 2014). All estimates are weighted by average state population across the five-year period of analysis.¹⁰

Between 2010 and 2014, the weighted average state-level maternal labor force participation rate was 67.5 percent. Maternal labor force participation ranged from 54.2 percent (Utah in 2010) to 79.5 percent (South Dakota in 2011 and 2012). In the same period, states spent an average $43.52 per capita on child care assistance through the Child Care and Development Fund and Temporary Assistance for Needy Families programs. However, this amount varied widely across states, from $14.08 (Nevada in 2014) to $169.76 (District of Columbia in 2010). Excluding the District of Columbia, the most that a state spent on child care assistance per capita was $94.39 (Delaware in 2013). Most states saw their spending per capita decrease across the period of study (2010 to 2014), in part because the American Recovery and Reinvestment Act increased spending on child care in the early years of this period (Lynch 2016). Figure 1 shows the weighted average spending per capita across states in each year.

¹⁰ There are no missing values in the data.
The percentage of children in each state who live in single-parent families also varied widely, from 19 percent (Utah in 2010, 2013, and 2014) to 64 percent (District of Columbia in 2011). Excluding the District of Columbia, the highest percentage of children in a state living in single-parent families was 49 percent (Mississippi in 2012). It is noteworthy that Utah, the state with the lowest maternal labor force participation rate over the five-year period of study, also had the lowest percentage of children living in single-parent families. Utah also had one of the highest percentages of children under the age of twelve (around 70 percent across all years in the analysis). This may reflect a cultural affinity for marriage and childbearing in the state.
Table 2: Descriptive Statistics for Dependent, Independent, and Control Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal LFP</td>
<td>67.5%</td>
<td>4.2%</td>
<td>54.2%</td>
<td>79.5%</td>
</tr>
<tr>
<td><strong>Independent Variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Care Assistance Spending Per Capita</td>
<td>$43.52</td>
<td>$17.52</td>
<td>$14.08</td>
<td>$169.76</td>
</tr>
<tr>
<td><strong>Demographic Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>State Population (in thousands)</td>
<td>13,628</td>
<td>11,011</td>
<td>545</td>
<td>38,066</td>
</tr>
<tr>
<td>Percent of children who are under twelve</td>
<td>65.8%</td>
<td>1.1%</td>
<td>63.0%</td>
<td>73.0%</td>
</tr>
<tr>
<td>Percent of children living in single-parent families</td>
<td>35.2%</td>
<td>4.0%</td>
<td>19.0%</td>
<td>64.0%</td>
</tr>
<tr>
<td>Percent of population that is black</td>
<td>12.6%</td>
<td>8.1%</td>
<td>0.4%</td>
<td>52.9%</td>
</tr>
<tr>
<td>Percent of population that is white</td>
<td>74.0%</td>
<td>9.8%</td>
<td>24.9%</td>
<td>95.6%</td>
</tr>
<tr>
<td>Percent of population that is Hispanic</td>
<td>16.3%</td>
<td>12.8%</td>
<td>1.1%</td>
<td>47.0%</td>
</tr>
<tr>
<td>Percent of population with a high school degree but no college degree</td>
<td>49.4%</td>
<td>4.5%</td>
<td>32.3%</td>
<td>59.4%</td>
</tr>
<tr>
<td>Percent of population with a college degree</td>
<td>25.6%</td>
<td>2.8%</td>
<td>16.4%</td>
<td>32.8%</td>
</tr>
<tr>
<td><strong>Economic Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poverty Rate</td>
<td>14.8%</td>
<td>2.6%</td>
<td>7.8%</td>
<td>22.7%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>9.0%</td>
<td>1.6%</td>
<td>3.1%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Median Income</td>
<td>$55,777</td>
<td>$8,166</td>
<td>$39,464</td>
<td>$76,699</td>
</tr>
<tr>
<td>Cost of Child Care</td>
<td>$8,228.92</td>
<td>$1,970.64</td>
<td>$3,997</td>
<td>$17,842</td>
</tr>
<tr>
<td><strong>Political Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percent Democratic</td>
<td>47.2%</td>
<td>9.8%</td>
<td>17.5%</td>
<td>88.6%</td>
</tr>
</tbody>
</table>

Sample size is 255.
REGRESSION RESULTS

Table 3 reports regression results for six regression specifications. Model 1 uses an ordinary least squares (OLS) regression to estimate the bivariate relationship between maternal labor force participation rates and child care assistance spending. Model 2 estimates the same relationship with the addition of controls for demographic, economic, and political variables. Model 3 adds year fixed effects to the specification in Model 2, and Model 4 adds state fixed effects (but not year fixed effects) to the specification in Model 2. Model 5 controls for demographic, economic, and political variables as well as both state and year fixed effects. Finally, Model 6 adds an interaction term to the specification from Model 5, allowing the relationship between maternal labor force participation and child care assistance spending to vary based on the average cost of child care. All regressions are weighted using the average state population across the five-year period of study, and robust standard errors are reported for all coefficients.\(^\text{11}\)

The simple bivariate OLS regression (Model 1) shows that a one dollar increase in child care assistance spending per capita is correlated with a 0.037 percentage point increase in a state’s maternal labor force participation rate. This result is statistically significant at the 5 percent level, and it is almost certainly biased due to the omission of variables that are correlated with both maternal labor force participation and child care spending. However, the positive

\(^{11}\) All regressions have a sample size of 255, including observations for all 50 states and the District of Columbia for the years 2010 to 2014. Although the District of Columbia is an outlier for many of the variables included in the model, identical regressions that exclude the observations for the District of Columbia from the analysis do not produce substantively different results.
direction of the estimate aligns with the hypothesis of this paper and with the findings of most previous research on this topic.

While stating the magnitude of the coefficient on child care spending per capita in terms of a one dollar increase may seem like a small increment, a one dollar increase per capita would translate to quite a large increase in overall spending for most states. For three-quarters of state-year observations included in this analysis, per capita child care spending was less than $52. This means that a one dollar increase per capita would constitute more than a two percent overall increase in child care spending in most states, costing millions of dollars. Because even small changes to funding levels can be difficult for the federal and state governments to achieve, it is useful to consider the relationship between child care assistance spending per capita and maternal labor force participation in small increments.

The addition of controls for demographic, economic, and political factors (Model 2) produces a negative and statistically insignificant estimate of the relationship between child care assistance spending and maternal labor force participation. This result is also likely biased, as the controls included in the model do not fully account for factors correlated with both maternal labor force participation and child care assistance spending. Controlling for state and year fixed effects helps to eliminate some of this bias.

Model 3 adds year-fixed effects to the specification in Model 2, while Model 4 includes the same controls with state fixed effects (but not year fixed effects). Both models suggest that there is a modest positive relationship between maternal labor force participation and child care assistance spending, though neither estimate is statistically significant. The estimation of separate regressions with state and year fixed effects reveals the relative explanatory power of state and year fixed effects. Model 3, which includes controls and year fixed effects, explains
74.3 percent of the variation in maternal labor force participation rates, which is only slightly more than is explained by Model 2 (71.5 percent). Meanwhile, Model 4, which includes controls and state fixed effects, explains 99.4 percent of the variation in maternal labor force participation, demonstrating that far more of the variation in the dependent variable is explained by state fixed effects than by year fixed effects.

Model 5 includes time-varying controls as well as both state and year fixed effects and indicates that a one dollar increase in child care spending per capita is associated with a 0.014 percentage point increase in maternal labor force participation. This result is statistically significant at the 10 percent level. The positive relationship between maternal labor force participation rates and child care assistance spending is consistent with the findings of previous studies on this topic, including those of Enchautegui et al. (2016), Bainbridge et al. (2003), and Meyer and Rosenbaum (2001).

However, while state and year fixed effects reduce bias by controlling for many factors not explicitly included in the regression (i.e., those that are fixed within states over time or are fixed across states in a given year), their inclusion also limits the potential of the analysis to capture the full relationship between the dependent and independent variable. A regression of maternal labor force participation on state and year dummy variables alone reveals that fixed effects explain 99 percent of the variation in maternal labor force participation rates. This leaves only 1 percent of the variation to be explained by child care assistance spending and the control variables included in the model. Additionally, state and year fixed effects explain 95 percent of the variation in child care assistance spending, limiting the model’s ability to isolate

---

12 More specifically, state fixed effects explain 98.3 percent of the variation in maternal labor force participation, while year fixed effects explain only 0.8 percent of the variation.
variation in child care spending to explain the variation in maternal labor force participation.\textsuperscript{13} For these reasons, it is unlikely that these specifications produce accurate estimates of the true effect of child care assistance spending on maternal labor force participation.

Although the inclusion of state fixed effects in Model 5 reduces the unexplained variation in the model and thus inhibits the model’s ability to estimate an accurate relationship between the dependent and independent variable, the results of this specification remain preferable to those of Model 3, which includes year fixed effects but not state fixed effects. Because state fixed effects explain so much variation in the dependent and independent variables, omitting them from the model (as in Model 3) would substantially bias the coefficient on child care assistance spending. Still, Model 5 likely fails to produce an accurate estimate of the relationship between maternal labor force participation and child care assistance spending, largely due to the overwhelming explanatory power of state fixed effects.

\textsuperscript{13} More specifically, state fixed effects explain 91.7 percent of the variation in child care assistance spending, while year fixed effects explain only 3.5 percent of the variation.
Table 3: Regression Results

<table>
<thead>
<tr>
<th>Dependent Variable: Maternal Labor Force Participation Rate</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care Spending</td>
<td>0.366**</td>
<td>-0.112</td>
<td>0.003</td>
<td>0.073</td>
<td>0.142*</td>
<td>0.532**</td>
</tr>
<tr>
<td>Per Capita (thousands)</td>
<td>(0.171)</td>
<td>(0.114)</td>
<td>(0.099)</td>
<td>(0.084)</td>
<td>(0.079)</td>
<td>(0.222)</td>
</tr>
<tr>
<td>Child Care Spending*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-0.043**</td>
</tr>
<tr>
<td>Child Care Costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.021)</td>
</tr>
<tr>
<td>Population (thousands)</td>
<td>0.000***</td>
<td>0.000***</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Percent of Children</td>
<td>-0.343</td>
<td>-0.389*</td>
<td>-0.020</td>
<td>0.073</td>
<td>0.078</td>
<td></td>
</tr>
<tr>
<td>Under Twelve</td>
<td>(0.232)</td>
<td>(0.226)</td>
<td>(0.099)</td>
<td>(0.084)</td>
<td>(0.081)</td>
<td></td>
</tr>
<tr>
<td>Percent of Children in Single-Parent Families</td>
<td>0.761***</td>
<td>0.706***</td>
<td>0.034</td>
<td>0.006</td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td>Percent Black</td>
<td>0.042</td>
<td>0.050</td>
<td>-0.838**</td>
<td>-0.795**</td>
<td>-0.740**</td>
<td></td>
</tr>
<tr>
<td>Percent Hispanic</td>
<td>-0.192***</td>
<td>-0.165***</td>
<td>0.371</td>
<td>-0.200</td>
<td>-0.230</td>
<td></td>
</tr>
<tr>
<td>Percent with High School Degree</td>
<td>0.352***</td>
<td>0.266**</td>
<td>-0.466*</td>
<td>-0.616***</td>
<td>-0.466**</td>
<td></td>
</tr>
<tr>
<td>Percent with College Degree</td>
<td>(0.108)</td>
<td>(0.112)</td>
<td>(0.235)</td>
<td>(0.218)</td>
<td>(0.196)</td>
<td></td>
</tr>
<tr>
<td>Poverty Rate</td>
<td>-0.537**</td>
<td>-0.930***</td>
<td>-0.764**</td>
<td>-1.011***</td>
<td>-0.954***</td>
<td></td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>-0.285**</td>
<td>-0.418***</td>
<td>0.810***</td>
<td>0.897***</td>
<td>0.865***</td>
<td></td>
</tr>
<tr>
<td>Median Income</td>
<td>0.000</td>
<td>-0.001</td>
<td>-0.002*</td>
<td>-0.003**</td>
<td>-0.003*</td>
<td></td>
</tr>
<tr>
<td>(thousands)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td></td>
</tr>
<tr>
<td>Cost of Child Care</td>
<td>0.001</td>
<td>0.001</td>
<td>-0.000</td>
<td>-0.001</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>(thousands)</td>
<td>(0.002)</td>
<td>(0.002)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td>(0.001)</td>
<td></td>
</tr>
<tr>
<td>Percent Democratic</td>
<td>-0.000</td>
<td>-0.000</td>
<td>-0.009</td>
<td>-0.009*</td>
<td>-0.010*</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.659***</td>
<td>0.259</td>
<td>0.541**</td>
<td>1.154***</td>
<td>1.437***</td>
<td>1.283***</td>
</tr>
<tr>
<td>State Fixed Effects</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year Fixed Effects</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>F Statistic and P-Value for Joint Significance of</td>
<td>3.06*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child Care Spending and Interaction Term</td>
<td>(0.056)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>255</td>
<td>255</td>
<td>255</td>
<td>255</td>
<td>255</td>
<td>255</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.023</td>
<td>0.715</td>
<td>0.743</td>
<td>0.994</td>
<td>0.995</td>
<td>0.996</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1
Given previous research findings that high costs of child care can deter labor force participation, (Blau 2001; Connelly and Kimmel 2003; Tekin 2007), the relationship between maternal labor force participation and child care assistance spending could conceivably vary based on the cost of child care. Because higher child care costs create greater impediments to maternal labor force participation, the effect of child care assistance could be greater in high-cost states. On the other hand, an additional dollar of child care spending could have a greater impact in low-cost states than in high-cost states, as the same amount of child care assistance spending replaces a greater portion of overall child care costs in less expensive states.

Model 6 investigates these hypotheses by interacting the child care spending and child care cost variables. The coefficient on this interaction term is negative and statistically significant at the 5 percent level, suggesting that the relationship between maternal labor force participation and child care assistance spending decreases as the cost of child care increases. This relationship is visualized in Figure 2.

The negative coefficient on the interaction term supports the hypothesis that the impact of an additional dollar of child care assistance spending is greater when average child care costs are lower. However, the model implies that this relationship is statistically significant only when the annual cost of child care is less than approximately $9,000. Additionally, because the previously discussed problems in Model 5 also affect Model 6, the latter also likely fails to produce an accurate estimate of the true relationship between maternal labor force participation and child care assistance spending.
Figure 2: Variation in the Magnitude of the Relationship Between Maternal Labor Force Participation and Child Care Assistance Spending as a Function of the Cost of Child Care

Dotted lines represent upper and lower bounds for 95% confidence intervals.
DISCUSSION

This study investigates the hypothesis that government spending on child care assistance through federal programs may increase the percentage of mothers who work by reducing the high child care costs that deter parents from entering the workforce. The results of this study provide convincing evidence of a small positive association between child care assistance spending and labor force participation among mothers with young children but do not verify a causal relationship between them. Still, this positive relationship is consistent with the findings of most previous research in this field (Enchautegui et al. 2016; Bainbridge et al. 2003; Meyer and Rosenbaum 2001).

This study also finds some evidence that an additional dollar of child care spending has a stronger positive relationship with maternal labor force participation in states where the cost of child care is lower. This finding supports the hypothesis that an additional dollar of spending may have a greater effect on labor decisions where that dollar accounts for a greater portion of overall child care costs. There is not substantial previous research on the differential effects of child care assistance spending depending on the cost of child care; further research in this area is necessary to verify this study’s findings.

Unlike most related research, this study relies solely on state-level data (rather than including individual-level data) to assess the relationship between child care assistance and maternal labor force participation. This approach introduces several complications that limit the usefulness of the results. First, the use of state-level data precludes analysis of specific subsets of mothers. Most research on child care assistance in the past twenty years has focused on single mothers, as they are the most likely recipients of subsidies. It is possible that any variation in the maternal labor force participation rate could be attributed to changes in single mothers’ labor
force participation patterns, and furthermore, child care assistance may have substantially different effects for single mothers and married mothers. The data used in this study do not allow for this sort of disaggregated analysis.

Second, the state-level maternal labor force participation rates used as the dependent variable in this study do not differentiate full-time work from part-time work. Previous research has measured the relationship between child care subsidies and the number of hours that mothers work (Crawford 2006) and analyzed how child care costs relate to full-time work versus part-time work (Tekin 2007). It is possible that child care assistance spending is associated with an increase in the number of hours that mothers work or in how much they earn but is not necessarily related to whether mothers choose to enter the labor force. The data used in the present study do not allow for an analysis of the relationship between child care assistance spending and how much mothers work; they only allow for analysis of the relationship between child care assistance and the percentage of mothers who choose to work at all.

Third, because federal funding allocation formulas explain so much of the variation in Child Care and Development Fund (CCDF) and Temporary Assistance for Needy Families (TANF) funding levels across states, relatively little variation is attributable to state policy choices. The difference between the funding allocation formulas and actual state spending on child care is driven by differences in state matching and maintenance-of-effort decisions and by how much TANF funding states choose to use toward child care assistance. Because this study does not differentiate between funding streams, it is difficult to determine how much of the variation in child care assistance spending per capita is determined by federal funding formulas and how much is determined by state choices. Consequently, this study does not allow for a full evaluation of the implications of federal versus state child care assistance policy decisions.
There are also several variables whose omission from the model may introduce bias into the results. Most importantly, this study does not take into account state-level child care administrative decisions such as varying copayment rates and income eligibility thresholds for subsidies. Previous research has not found conclusive evidence on the effects of copayment rates and income eligibility thresholds (Enchautegui et al. 2016; Michalopoulos et al. 2010), but it is plausible that these sorts of administrative decisions are related both to overall spending and to labor force participation. If this is the case, their omission may introduce bias. Fortunately, however, state fixed effects likely control for most of the variation in these policies over the five-year period of study. Similarly, although this study does not control for the overall availability of child care centers, child care availability within a state likely changes slowly and thus would be relatively static over the five-year period of study. Therefore, state fixed effects limit the bias introduced by this variable’s omission.

---

14 Enchautegui et al. (2016) find that income eligibility limits have a negative relationship with the probability a mother is in the labor force (Enchautegui et al. 2016). In contrast, Michalopoulos et al. (2010) found no significant effect of subsidy receipt on employment in an experiment in Cook County, IL, during which subsidies were provided to a randomly selected sample of families whose incomes were just above the income eligibility limit. These findings suggest that raising income eligibility limits would have little impact on employment. However, the study’s findings also suggested that there may be modest effects of subsidy receipt on the stability of child care arrangements among families with incomes near the eligibility limit (Michalopoulos et al. 2010). Enchautegui et al. and Michalopoulos have also investigated the relationship between child care subsidy copayment rates and maternal employment. Although one might expect lower required copayments to be associated with higher maternal labor force participation, Enchautegui et al. (2016) surprisingly find evidence of a positive relationship between copayment rates and the probability that a mother participates in the workforce. The authors suggest that this could be because states with higher copayment rates can provide subsidies—albeit smaller ones—to larger numbers of people (Enchautegui et al. 2016). However, Michalopoulos’s (2010) study, which lowered copayment rates for a randomly selected sample of families in Washington State, found no discernable effects of copayment rates on employment.
This study also does not control for non-federal child care assistance or programs that may take the place of child care. Many states have their own child care assistance programs, often in the form of child care tax credits, that could be related to maternal labor force participation and child care spending (Tax Policy Center 2017). Not only could further research on federal child care assistance programs control for the presence and size of such of state-level programs, but the relationship between state-level child care assistance programs and labor force participation also warrants independent investigation. Additionally, this study does not control for early childhood education spending. Many parents with young children likely use preschool (such as Head Start) as a form of child care assistance. Thus, states with stronger early education programs may experience less demand for child care assistance and higher maternal labor force participation rates.

Because the direction of the correlations between many of the omitted variables and the dependent and independent variables is ambiguous, the direction of potential bias in the results is unclear. Though the inclusion of fixed effects likely accounts for much of the variation in these omitted factors, bias may still be present. Furthermore, as previously noted, the inclusion of fixed effects reduces the amount of variation in maternal labor force participation left to be explained by child care assistance spending, muddying the results and likely yielding an inaccurate estimate of the magnitude of the relationship between the two variables.

This study also fails to consider how states use federal child care funds; it simply tracks the relationship between spending levels and labor force participation. Most previous research on child care assistance spending has focused exclusively on subsidy spending. Because child care assistance funds can be used not only on subsidies but also on other less direct forms of child care assistance such as research and quality assurance, it is possible that different kinds of
spending relate differently to maternal labor force participation. Future studies could
disaggregate spending for different child care-related purposes to determine what kinds of child
care assistance spending are most strongly related to maternal labor force participation.

Additionally, future studies could investigate how the relationship between child care
spending and maternal labor force participation varies based on state-level administrative
policies such as income eligibility thresholds and copayment rates. Not only does the omission of
these variables from this study have the potential to introduce bias as previously noted, but
determining whether there is a relationship between these policies and the effectiveness of child
care assistance spending in increasing maternal labor force participation could help to inform
state policy choices.

Although this study reinforces previous findings of a positive correlation between child
care assistance spending and labor force participation for mothers with young children, the
results lack clear policy implications due to the aforementioned limitations of the model. Were
this correlation indicative of a causal relationship, it would suggest that states could spend more
on child care assistance to modestly increase maternal labor force participation. Similarly, this
study’s preliminary findings about the varying relationship between child care assistance
spending and maternal labor force participation depending on the cost of child care present
compelling—but not conclusive—evidence that states with higher child care costs would need to
spend more on child care assistance per capita in order to increase labor force participation than
would states with lower child care costs. If this is the case, there may be policy implications for
how federal child care funding should be allocated among the states. Further research on these
questions is necessary to help policymakers make better decisions about the optimal amount and
distribution of spending on child care assistance programs.
BIBLIOGRAPHY


