

Exploring Parental Decision-Making: Subsidies, Employment and Child Care Choice

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Project Description.

Decisions that parents make with regard to nonparental child care for their children are tied to other household decisions. Intuitively, we would expect the choice of maternal employment and the setting of care for young children during the mother's employment hours to be a simultaneous decision. While we refer to these decisions as "choices", it is important to recognize that these occur with the context of (often severe) resource constraints and limited information, and are influenced by social and group norms and expectations. Not all of these constraints and influences are observable by researchers, making the detangling of these choices challenging in quantitative analysis.

This project uses recent, nationally-representative, longitudinal data from the Early Childhood Longitudinal Study – Birth Cohort (ECLS-B) and innovative statistical methods to examine parents' child care and employment decisions in the context of subsidy receipt.

Research questions.

The main research question is straightforward: What factors affect parents' decisions about employment, use of non-parental child care and type of child care used? In particular, what is the role of child care subsidies in these decisions? The analysis examines the interrelationship among employment, child care and subsidy participation accounting for the possible unobserved factors that may influence these decisions.

Sample. The ECLS_B is a nationally representative survey following children from birth to transition to formal schooling. The original sample consisted of over 10,000 children born in 2001. We use Waves 1-4, excluding children once they enter kindergarten and dropped the few cases where the respondent was

not the mother (final sample size = 9,911). The various waves include information on family income, child care subsidy receipt, maternal employment, and characteristics and types of child care arrangements. We focus on the child's primary type of arrangement based on the number of hours in care. Data on characteristics of the geographic location and community of residence of the family (such as state AFDC payment per enrollee, average child care center price, percent of centers accredited in a state and median home value in the family's zip code) were merged with the ECLS_B data.

Methods. We develop a model of parental decision-making that takes into account the simultaneous and interdependent nature of the employment and child care choices. By using innovative Bayesian statistical methods, we are able to estimate the parameters recursively so that one equation may feedback into another. In other words, we expect that the employment decision affects the type of child care chosen, and vice versa. The flexibility of the Bayesian approach allows us to estimate the impact of unobservable variables in the employment decision and implicitly include their impact on the child care choice. Careful modeling of the likelihood of paying for care allows us to account for the selection effect in type of care.

Progress Update. The analysis has been completed and presented at three economics and statistics conferences. We are continuing to refine the model and prepare a journal article.

Key findings: We find strong evidence of simultaneity in child care and maternal employment choices. Unobserved variables that tend to increase the hours a mother works in the labor market also tend to increase the probability of selecting non-parental care. Ignoring this simultaneity leads to imprecise and potentially incorrect statements about the effect of family, child and community

characteristics on child care choices and of key variables such as child care prices and the impact of public subsidy. Our findings also confirm those from other studies about the factors related to mothers' employment and child care decisions. For example, we find that more educated mothers are more likely to use all types of non-parental care compared to those without a high school degree. Younger mothers, those with younger children, and those in deeper poverty are more likely to use child care subsidies. There is some variation in the likelihood of using subsidies across the different types of child care arrangements.

Implications for policy/practice

Simulations of policy changes or analysis of impacts of policy changes must account for the simultaneity of the maternal employment and child care choice decisions. Our findings suggest that ignoring this issue, for example by assuming maternal

employment to be exogenous, may lead to incorrect conclusions.

Implications for research

Bayesian statistical methods are gaining popularity in many fields because of their flexibility in handling complex hierarchical models. These methods have not been used previously to study the interrelated nature of maternal employment and child care use.

For more information:

None available at this time.

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