Investigating the impact of child care subsidies on maternal education increases

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The federal child care subsidy program was designed primarily to support low-income mothers transitioning into the workforce, as part of the larger welfare reform legislation of 1996. Since that time, the subsidy program has grown enormously, now serving more children and costing more in public dollars than other, better known public early childhood programs like Head Start and public pre-kindergarten. Research evaluating the subsidy program and its impacts on mothers and their life-cycle transitions has focused almost entirely on the impact of subsidies on maternal employment and welfare receipt: this literature has generally found positive effects – that subsidy receipt increases maternal employment and reduces welfare use among low-income mothers. However, no studies have examined the link between subsidy receipt and the life-cycle transition into education – a well-documented pathway to improving outcomes for low-income children and families. If child care subsidies allow low-income mothers to advance their education by reducing or covering the cost of previously unaffordable child care, thus freeing up time for educational pursuits and connecting mothers to adequate supports and services, this represents a previously unconsidered positive benefit of the subsidy program.

There are strong reasons to suspect that child care subsidy receipt would support low-income mothers’ educational gains. First, receipt of a child-care subsidy, which have been found to reduce child care costs, could promote increases in maternal education by freeing up additional time and money that families would otherwise use to purchase non-parental care. This shift in resource allocation could reduce time and cost constraints on young, low-income mothers that may otherwise prevent them from pursuing additional education. Second, subsidies also increase use of child-care centers, which connect low-income mothers to services and benefits and expand their social networks, all of which may encourage mothers to increase their education. Third, subsidy receipt may affect the home ecology, inspiring mothers to pursue additional education because they observe their own child in an ECE setting. Despite these compelling reasons to hypothesize that subsidy receipt would promote mothers’ education, the current study is the first to empirically test for an impact of subsidy receipt on education increases over time.

Data are drawn from the nationally representative Early Childhood Longitudinal Study – Birth Cohort, designed to provide information about the early experiences of a contemporary, representative sample of U.S. children, and uniquely suited for the current analysis. Chief among its strengths is that at each wave, multiple methods were used to collect rich information on children’s early care and education arrangements, including the source of funding for those arrangements. Extraordinarily rich data were also gathered on a wide array of household demographic and economic characteristics, as well as on mothers’ educational backgrounds dating back to high school. This allows for the inclusion of an unusually thorough set of covariates used to match subsidy recipients to non-recipients and to test balance between groups after matching. This provides us the opportunity to assess the quality of the matching as a step toward reducing the selection bias that arises when predicting education change from subsidy receipt.
The analysis uses a combination of OLS regression, propensity score matching (PSM), and difference-in-difference (DiD) matching approaches to predict changes in maternal education levels from entry into the subsidy program at different child developmental periods during the critical early childhood years and on a low-income sample of mothers who do not initially receive subsidies. This is important, given that subsidy eligibility is conditioned on mothers working or, in some states, being enrolled in post-secondary education. Measuring education change following the point of selection into subsidies reduces the likelihood that maternal education leads to subsidy receipt, rather than the other way around. We repeat this general analytic approach (OLS; PSM; DiD) separately on subgroups defined by mothers’ initial level of education and mothers’ enrollment status prior to subsidy receipt; we selected these subgroups to help address potential bias in estimates of subsidy impacts on outcomes, given that maternal selection into subsidies and education is non-random.

Preliminary results from analytic models with robust covariates that either predict subsidy eligibility or are otherwise correlated with improvements in educational attainment suggest that (1) subsidy receipt when children are 2-years old is significantly related to improvements in maternal education gains from 2- to 4-years, and, to a lesser extent, (2) subsidy receipt when children are 4-years old is significantly related to mothers’ education gains from 4- to 5-years (p < .05). Additionally, models suggest that the impact of subsidies on educational gains is greatest for low-income mothers with young children who have just a high school degree or less, and who are not enrolled in education prior to subsidy receipt. Overall, our findings indicate that subsidies permit low-income mothers to reallocate time previously spent caring for children to time learning in the classroom. Moreover, evidence generated from subgroup analyses lends credibility to the validity of our design choices to minimize selection bias; mothers not enrolled in education prior to subsidy receipt and those with low levels of education would not be eligible for subsidy receipt based on education alone. These findings, coupled with our highly controlled matched design, suggest a causal relationship between subsidy receipt and low-income mothers’ educational gains.

The current proposal fits the SREE conference topic of education and life cycle transitions. Among the intended goals of welfare reform is to transition vulnerable mothers into employment by investing in gains to human capital, and improving education may be necessary to help low-income mothers realize postsecondary success. As access to publicly-funded ECE expands, it has remained an open question as to whether subsidies, a policy lever used by the government to facilitate young, low-income mothers’ transitions from welfare receipt into stable employment, might achieve its potential by improving their educational gains. To this end, the study’s findings have implications for state and federal subsidy administration offices as they implement new policies to promote educational opportunities for young, low-income mothers, and support the wellbeing of their children and families.