

An Equilibrium Model of the Impact of Increased Public Investment in Early Childhood Education

Executive Summary

by Jonathan Borowsky, Jessica H. Brown, Elizabeth E. Davis, Chloe R. Gibbs,
Chris M. Herbst, Aaron Sojourner, Erdal Tekin, and Matthew Wiswall

What We Do

- Develop a model of demand and supply in the child care industry that includes household decisions about work and child care, production costs for different types of providers, and child care teacher wages.
 - Simulate the effects of a range of policies loosely based on currently proposed expansions of child care subsidies to understand how these policies are likely to affect mothers' employment, use of child care, child care worker wages, and child care expenditures for families across the income distribution.
 - We modeled two scenarios: (1) a "narrow" expansion of child care subsidies for all eligible households up to 85% of median income and (2) a broader program including households up to 250% of median income. In both scenarios, household contributions (copays) would start at zero for the poorest households, increase with income, and be capped at or below 7% of income up to the maximum income-eligibility threshold. We focus only on child care subsidies for children aged 0 to 4 years.
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What We Find

- *Expanded Subsidies Increase Child Care Utilization, Especially for Low-Income Households*
 - Under a broad expansion of child care subsidies, 2.6 million households shift their young children to formal care settings that are eligible for subsidies, representing an increase from 39% to 60% of children aged 0 to 4 using formal, regulated care (i.e., home- and center-based care).
 - Under the narrow expansion of subsidies, the percentage of young children in formal care increases by a smaller amount, from 39% to 52%.
 - Shifts are particularly pronounced for low-income households, with a 40 percentage-point increase in the use of formal care among households in the lowest income quintile under the broad expansion. The shift is also larger for single-parent families than those with two parents.
- *Expanded Subsidies Encourage More Low-Income Mothers to Work*
 - Overall, a broad expansion of subsidies will lead to an additional 1.2 million mothers of young children working full-time, from just under 50% to nearly 60%. A narrow expansion will lead to an increase in full-time employment about half as large. Mothers both enter the labor force and shift from part-time to full-time work because of the subsidies.
 - Among mothers in the lowest income quintile, full-time employment moves from 67% to 85%, an increase of more than 450,000 mothers under the broad expansion of subsidies.
- *Child Care Expenditures Are Reduced for Most Families Despite Modest Increases in Market Prices*
 - Average annual child care expenditures for households with a young child using full-time care fall by over one-third from over \$8,000 to approximately \$5,000 under the broad expansion of subsidies. Falling ECE expenditures combined with rising incomes (from increased work) means that households will spend considerably less on ECE as a share of their income, with expenses declining from 18% of income to 6%.
 - For households in the bottom income quintile, expenditures for full-time care decline 76% under the broad expansion of subsidies.

- A narrow expansion of subsidies leads to a much smaller improvement in affordability. Average annual child care expenditures for full-time care for a young child decline 6% overall and 31% for the poorest fifth of households. As a share of income, expenditures for full-time care fall from 18% to 12% under the narrow expansion of subsidies..
- The increased demand leads to higher market prices for child care but for most households these increases are more than counteracted by the expanded subsidies.
- *Increased Demand Drives Increased Wages for ECE Teachers*
 - An expansion of child care subsidies increases demand for ECE, which drives increased demand for ECE teachers. ECE teacher wages are estimated to increase by 19% (29%) for teachers with at least a bachelor's degree under a narrow (broad) expansion. For teachers with less formal education, hourly wages rise by 10% under the narrow expansion and 14% under the broad expansion.
 - These changes correspond approximately to average annual full-time earnings increasing from \$39,000 to \$48,000 (\$51,000) for those with a bachelor's degree and from \$25,000 to \$27,000 (\$28,000) for those with less formal education under the narrow (broad) expansion.

Implications

- Findings suggest that the expansion of child care subsidies would mitigate family-income gaps in access to formal care, and to center-based care in particular.
- Shifts imply improvements in the quality of care experienced while simultaneously supporting mothers' ability to work.
- ECE teacher wage increases will likely further quality improvements through the stability of the caregiver workforce; increased compensation for teachers and ECE workers is likely to reduce ECE's high turnover rates, provide more continuity in child-caregiver relationships, and improve the quality of children's ECE experiences.
- A tradeoff inherent in child care subsidy program design is that a broader expansion necessarily generates more demand for ECE teachers, raising their wages and increasing overall provider-side costs, while a narrow program generates smaller shifts in ECE participation and maternal employment. The narrower expansion of subsidies provides far less relief to families struggling to pay for child care.

Who We Are

A team of economists who study child care and early education, and specifically, the effects of policy on children, their families, and the provision of ECE services in the private and public sectors.

For more information, please see below for our email addresses:

Borowsky (borow080@umn.edu) and Davis (edavis@umn.edu) – University of Minnesota

Brown (Jessica.Brown@moore.sc.edu) – University of South Carolina

Gibbs (chloe.gibbs@nd.edu) – University of Notre Dame

Herbst (chris.herbst@asu.edu) – Arizona State University

Sojourner (sojourner@upjohn.org) – W. E. Upjohn Institute for Employment Research

Tekin (tekin@american.edu) – American University

Wiswall (mjwiswall@wisc.edu) – University of Wisconsin–Madison