

Summary

- Child care costs represent 20 to 25 percent of an average single mother's annual income in Kentucky.
- Child care subsidies can effectively reduce a barrier to work, especially for single mothers with young children.
- A state child care subsidy reducing the price by 10% could boost the employment rate of single mothers in Kentucky by 2-4%. A 25% subsidy could put single mother employment in the state on par with single mother employment nationwide.
- If Kentucky provided a child care subsidy reducing the price by 10 percent to all eligible single mothers with a child under the age of 6, the annual cost to the state would range from \$13.9-\$17.5 million. A subsidy reducing the price by 25 percent would cost \$37.3-\$46.9 million.

The economic impact of child care subsidies for Kentucky¹

by

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The Issue

For parents of young children the decision to work strongly depends on the availability of affordable child care. Child care costs can take up a large portion of a family budget and may serve as an obstacle to work. In 2008 the National Association of Child Care Resource and Referral Agencies (NACCRRA) estimated that Kentucky families recently faced annual infant child care costs of \$6,240 for full-time center care and \$4,956 for school age children during non-school hours.² These costs represent 20 to 25 percent of an average single mother's annual income and rival the tuition costs of attending a 4-year college or university.³ In this policy brief, we describe the federal and state programs that address child care and discuss recent economic research on the links between parental employment and child care. In addition, we forecast the employment effects and costs of a child care subsidy in Kentucky.

1. This policy brief is based on the UKCPR technical report "Child Care Subsidies and the Economic Well-Being of Recipient Families: A Survey and Implications for Kentucky." The full report is available at <http://www.ukcpr.org/Publications/ChildCareSubsidies.pdf>.

2. <http://www.naccrra.org/randd/data/docs/KY.pdf>.

3. Authors' calculations using the Current Population Survey. NACCRRA estimates for annual state college tuition and fees are \$6,287 per year. See <http://www.naccrra.org/randd/data/docs/KY.pdf>.

Background

A variety of child care subsidies and tax credits have emerged on the federal and state level in recent years. Such assistance has been justified by rising employment among women alongside changes in social policy programs for the poor either encouraging work or explicitly making work requisite for receipt of public assistance. The switch from Aid to Families with Dependent Children (AFDC) to Temporary Assistance for Needy Families (TANF) in 1996 is one such policy change that boosted the employment of poor, single mothers by making assistance conditional on work or job-skills training. In the interest of supporting their entrance into the labor force, the 1996 Personal Responsibility and Work Opportunity Reconciliation Act expanded and consolidated the Child Care and Development Block Grant (CCDBG) of 1990 into the Child Care and Development Fund (CCDF). Kentucky administers child care subsidies through two primary sources: 1) Kentucky's TANF program – known state-wide as the Kentucky Transitional Assistance Program (K-TAP); and 2) the CCDF.

While the child care supports included in this legislation are meant to help poor mothers, other child care benefits, such as the Child and Dependent Care Tax Credit and the Child Tax Credit, categorically exclude the very poor because these tax credits require recipient families to earn enough to pay federal income taxes (earnings must exceed \$12,050). Recently, the U.S. House and Senate have introduced the “extenders” bill, S.3335 and H.R. 6049, which if passed would temporarily lower the earnings threshold families must meet to qualify for the Child Tax Credit. If passed, 2.9 million children nationwide would become newly eligible for the benefit. For Kentucky, such a measure would provide assistance to an additional 37,191 children.⁴

4. Sherman, Center on Budget and Policy Priorities (2008). <http://www.cbpp.org/5-15-08tax.htm>.

Evidence on the effect of child care subsidies on employment

The economics literature on child care focuses primarily on the labor-market effects of child care subsidies for parents, particularly the effect subsidies have on the decisions of single mothers to work, total hours of work, hourly wages earned, and on whether parents elect to use formal versus informal child care services. The focus on single mother families is understandable, given the emphasis many government assistance programs place on lifting this population out of poverty. Less evidence is available on the effects of child care subsidies on welfare participation, school attendance, and job satisfaction. And no direct evidence exists on the possible anti-poverty effectiveness of child care subsidies.

A key outcome of interest is the employment response of mothers to changes in the price of child care; that is, how more or less likely a mother is to work given a change in the price of care. For example, if mothers' employment decisions are less sensitive to a change in the child care price, then lowering the price of child care through a subsidy may not be an effective stimulus to enhance labor force participation. On the other hand, if employment is highly sensitive to the price of care, then a subsidy can be very beneficial in encouraging mothers to work.

Across numerous studies, economists have found that on average a 10 percent reduction in the price of child care will increase the likelihood of a single mother being employed by 3 to 4 percent, holding other factors the same. Married mothers tend to be more responsive. The same 10 percent reduction in the price of child care will increase the chances of a married mother working by 5 to 6 percent.⁵ Compared to other major policies that provide an incentive to work, the employment effect of a child care subsidy falls between the employment effect of the minimum wage and the earned income tax credit (EITC).

5. See Table 2 (page 42) in UKCPR technical report (<http://www.ukcpr.org/Publications/ChildCareSubsidies.pdf>) for a detailed review of the employment responses found in the literature.

How would a child care subsidy affect single mothers in Kentucky?

Kentucky single mothers are slightly poorer and less likely to be employed relative to single mothers nationwide.⁶ Table 1 (below) simulates how the employment of single mothers in Kentucky would change after subsidizing the price of child care or increasing the wage. The analysis pools data on Kentucky from the Current Population Survey (CPS), a nationally representative survey of employment and income, over the years 2005 to 2007. To construct our estimates, we rely upon the research results in Tekin (2007) and Connelly and Kimmel (2003), who each used national data to estimate the employment response to child care subsidies. Over the past three years about two-thirds of single mothers in Kentucky with dependent children under 18 were employed.

6. See Table 3 (page 44) in UKCPR technical report (<http://www.ukcpr.org/Publications/ChildCareSubsidies.pdf>) for a comparison of Kentucky single mothers to single mothers nationwide.

If single mothers in Kentucky respond similarly to changes in the price of child care as comparable mothers across the nation, then we estimate that a 10 percent reduction in the price of child care would raise the rate of employment of single moms in Kentucky to 68 to 70 percent. A more generous subsidy of 25 percent would lift the employment rate to 69 to 74 percent, putting single mother employment in the Commonwealth on par with single mother employment nationwide.⁷ An alternative to subsidizing the price is to provide a wage increase, either directly or via the tax code, that can be used to directly pay for child care. The EITC is one possibility through the tax code. A 10 percent wage increase would raise employment to a level as high as 77 percent. A 25 percent wage increase would lead to even higher employment rates.

Table 2 (page 4) simulates the annual cost of a

7. The employment rate for single mothers nationwide is 70.5 percent.

Table 1: Simulated Employment Effects Of Child Care Subsidies For Single Mothers In Kentucky

	Employment Rate
Initial employment rate in Kentucky	66.9 %
Tekin (2007)	
10% reduction in child care price	67.7 %
25% reduction in child care price	68.9 %
Connelly and Kimmel (2003)	
10% reduction in child care price	69.0-69.7 %
25% reduction in child care price	72.2-73.9 %
10% increase in wage	72.3-77.4 %
25% increase in wage	80.4-93.3 %

Note: Applying the employment response to child care subsidies measured by Tekin (2007) and Connelly and Kimmel (2003), we simulate the employment effects of a child care subsidy for single mothers in Kentucky using data from the Current Population Survey (CPS) covering 2005 to 2007. The employment rate of single mothers over this time period begins at 66.9 percent. For example, a 10 percent reduction in child care price will raise employment to 67.7 percent using Tekin's results and 69.0-69.7 percent using Connelly and Kimmel's results. Other values in the table are interpreted similarly.

Table 2: Simulated Cost of Subsidies For Single Mothers In Kentucky

Child Care Costs	Child Care Costs	Percent of Average Family Income
Average, annual fees paid for full-time center care for an infant	\$6,240	24.6%
Average, annual fees paid for full-time center care for 4-year-old	\$5,720	22.6%
Average, annual fees paid for before and after school care for a school-age child in a center	\$4,956	19.6%
Cost of Subsidy	10% Subsidy	25% Subsidy
Total cost for full-time center care for an infant	\$17,498,442	\$46,930,289
Total cost for full-time center care for 4-year-old	\$16,040,239	\$43,019,432
Total cost for before and after school care for a school-age child in a center	\$13,897,801	\$37,273,480

Note: Child care costs taken from 2008 Child Care in the State of Kentucky by NACCRRRA. Percent of average family income is based on income estimates for Kentucky from the 2005 to 2007 Current Population Survey.

Applying the employment rate of 60.5 percent to the number of single mothers with a child under the age of 6 in 2007 gives 26,682 mothers eligible for the subsidy. Applying the employment response to child care price measured by Anderson and Levine (1999) with a 10 percent subsidy to the group of eligible mothers raises employment to 28,042. The annual cost of the 10 percent subsidy is \$624 for an infant. Multiplying this annual cost by the new number of employed mothers (28,042) produces the total cost of the infant care subsidy at about \$17.5 million. The remaining subsidy costs are calculated similarly.

Table 3: 2007 Earned Income Tax Credit and Child Care Subsidy For Single Mothers In Kentucky

Family Description	Gross Earnings	Federal EITC	10% State EITC	15% State EITC	10% Subsidy For Infant	10% Subsidy For 4-year Old	10% Subsidy For School-Age Child
Single Mother Earning Average Kentucky Income							
One Child	\$25,329	\$1,265	\$127	\$190	\$624	\$572	\$496
Two Children	\$25,329	\$2,624	\$262	\$394	\$1,248	\$1,144	\$991
Single Mother Earning Full-Time Minimum Wage (\$5.85/hour)							
One Child	\$12,168	\$2,853	\$285	\$428	\$624	\$572	\$496
Two Children	\$12,168	\$4,716	\$472	\$707	\$1,248	\$1,144	\$991
Single Mother Earning \$10/hour							
One Child	\$20,800	\$1,984	\$198	\$298	\$624	\$572	\$496
Two Children	\$20,800	\$3,571	\$357	\$536	\$1,248	\$1,144	\$991
Single Mother Earning \$15/hour							
One Child	\$31,200	\$322	\$32	\$48	\$624	\$572	\$496
Two Children	\$31,200	\$1,381	\$138	\$207	\$1,248	\$1,144	\$991

Note: This table shows the federal EITC, hypothetical state EITC, and 10 percent child care subsidy a single mother family receives based on earnings and family size. Average family income is estimated for Kentucky from the 2005 to 2007 Current Population Survey. Earnings for full-time minimum wage, \$10/hour, and \$15/hour are based on working 2,080 hours annually. The federal EITC amount comes directly from the 2007 Earned Income Credit Table published by the Internal Revenue Service. The state EITC is calculated as 10 percent and 15 percent of the federal EITC amount. Subsidy amounts come from top panel of Table 2.

child care subsidy to the Commonwealth. The projections are based on annual child care costs reported by the NACCRRA and the number of single mother families with a child under the age of six in 2007, according to the Current Population Survey.⁸ They represent additional expenditures. If the state provided a 10 percent child care subsidy to all eligible mothers, the annual cost would range from \$13.9 million to \$17.5 million. A 25 percent subsidy would cost the state between \$37.3 million and \$46.9 million. As a point of comparison, Meade and Ziliak (2007) estimate the cost of a state refundable earned income tax credit for all workers (not just single mothers) between \$30.9 million and \$216.2 million for 2007, depending on the generosity of the credit. As such, the projected child care subsidy cost compares favorably to the cost of the state EITC.

Table 3 (page 4) provides a sense of how a child care subsidy compares to a state EITC for a typical single mother family with one or two children. The table gives the benefits a single mother family would receive from the federal EITC, a hypothetical state EITC, and a 10 percent child care subsidy. The 2007 federal EITC depends on gross earnings and family size. We calculate the state EITC as 10 and 15 percent of the 2007 federal EITC, respectively. The table shows how these benefits vary by family size, income, and type of care. Specifically, the table compares a single mother family earning the average income in Kentucky to a family earning the minimum wage, \$10/hour, and \$15/hour, respectively. On a per family basis a child care subsidy provides a source of income in addition to a projected state EITC. A single mother earning the average income in Kentucky with an infant receives \$1,265 from the federal EITC, \$127

from a hypothetical 10% state EITC, and \$624 for child care, totaling \$2,079 in assistance for the year. For a mother with an infant earning the minimum wage in Kentucky, she would receive \$2,853 from the federal EITC, \$285 from a hypothetical 10% state EITC, and \$624 for child care, totaling \$3,762 in assistance for the year.

Summary

Child care subsidies can effectively reduce a barrier to work for parents with children, particularly single mothers with young children. Federal and state governments have increasingly become important contributors to the provision of child care, especially internationally. For example, Canada has implemented over the past decade an aggressive child care subsidy program to foster the transition to work for families with young children. A single mother earning \$25,000 per year in Toronto with one infant under 18 months old would pay only \$1.92 per day for child care — an effective subsidy of over \$50 per day.⁹ Single mother employment rates in Kentucky lag behind the rest of the nation, which in part is likely due to the high cost of child care relative to labor-market opportunities. Our survey shows that a state child care subsidy lowering the effective price of child care by 25 percent could benefit single mother families in Kentucky by raising their employment to a level in line with national employment for this group. Indeed, a state EITC coupled with a child care subsidy could be very effective anti-poverty tools to raise the employment and incomes of Kentucky's low-income, working families.

8. NACCRRA only reports costs for infants, 4-year-olds, and school-age children, omitting costs for older children. These estimated costs do not apply to the employment effects reported in Table 1 which cover older children.

9. http://www.toronto.ca/children/fee_calculator.html. As of 8/28/08, \$25,000 (CAD) is approximately equal to \$25,000 (USD).

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The University of Kentucky Center for Poverty Research (UKCPR) was established in October 2002 as one of three federally designated Area Poverty Research Centers, with core funding from the Office of the Assistant Secretary for Planning and Evaluation (ASPE) in the U.S. Department of Health and Human Services. The UKCPR is a nonprofit and non-partisan academic research center housed in the Gatton College of Business & Economics, Department of Economics at the University of Kentucky. The opinions and conclusions in this brief do not necessarily represent those of the federal government or the University of Kentucky.

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