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The Child Care Problem for Low-income Working Families

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Introduction

What are the child care concerns facing low-income working families? I summarize these concerns as ones of affordability, availability, and quality, although the three are related. To get at the underpinnings of these concerns, it is helpful to start with a brief overview of the economic circumstances facing low-income working families and a description of their current child care utilization patterns. Then I turn to a discussion of the relationship between child care and employment, presenting first a theoretical derivation and then some empirical evidence. Next, I discuss the justification for governmental intervention in the child care market, the types of intervention in existence today, and the possible consequences of such intervention. Finally, I suggest a set of proposals designed to alleviate some of the child care problems facing low-income families today.

But first, what has brought our society to facing this discussion? During the latter part of the twentieth century, there were three driving forces behind the rising demand for (and subsequent concerns about) child care: the rise in single parent families, the increase in the percentage of mothers with young children working, and more recently, evolving attitudes towards welfare recipients. The percentage of families with children under the age of 18 that are headed by a single parent has increased from 7.4 percent in 1950 to 27.3 percent in 1998. As shown in Figure 1, female labor force participation (LFP) rates grew throughout the second half of the twentieth century, from 32.7 percent in 1948 to 60.2 percent in 2000. Both single and married women have experienced this upward trend in LFP rates, with singles increasing from 50.8 percent in 1955 to 68.7 percent in 1999, and married women increasing from 28.5 percent to 61.2 percent in the same time frame. While single mothers continue to work at higher rates, the gap has closed considerably in the past 45 years. Alongside the upward trend in female LFP

rates has been an increase in the LFP rates of mothers with preschool-aged children (shown in Figure 2), and mothers who work full-time. As seen in Figure 3, in the year 2000, 76.6 percent of mothers with school-aged children worked full-time, compared to 68.3 percent in 1975. The percentage working full-time for mothers with preschool children barely budged over this time frame, increasing just 1.3 percentage points, from 68.0 percent to 69.3 percent. Still, with the overall increase in female employment rates, the absolute number of children with working mothers has increased, and even the absolute number of mothers working full-time has increased as well. With the recent federal reform of welfare, the percentages of single parents participating in paid employment, and even working full-time is expected to increase even further.¹ All these demographic and political trends point to an increased demand for non-maternal child care.

Low-income Working Families

According to Gregory Acs, Katherin Ross Phillips, and Daniel McKenzie (2000), one out of six non-elderly Americans who work at least part-time still live with incomes that place them at or below twice the federal poverty level of income. This basic fact contradicts the common media representation of the poor as somehow deserving, either due to failure to work or due to single-parenthood. In fact, in these working poor families, nearly 70 percent are headed by a married couple. Evaluating data from the newly available National Survey of America's Families (NSAF), Acs et al examine low-income working families in detail.² They define

¹The 1996 federal legislation that replaced AFDC (Aid to Families with Dependent Children, the previous version of cash welfare) with the largely state-run TANF (Temporary Assistance for Needy Families) was titled the Personal Responsibility and Work Opportunity Reconciliation Act, or PRWORA.

²I use the expression low-income to refer to families whose income levels are at or below twice the federal poverty threshold, and higher-income for those whose income is above this cut-off value.

working as having had worked at least half-time for the year 1996. Working low-income families make up over 50 percent of the total low-income population in the United States; that is, more poor individuals live in working families than in non-working families.

Low-income families have family heads who are five years younger on average than higher-income family heads, with 63 percent of those heads male (versus 73 percent of the higher-income heads). Far more have low education levels, with 22 percent of heads of low-income working families having less than a high school education versus 4 percent of the higher-income family heads. These characteristics serve as job market disadvantages. One outcome of this overall disadvantage is that the median hourly wage for these lower-income workers is \$7.55, which is less than half of the \$16.67 hourly wage earned by the primary earner in higher income working families. Further, significantly fewer primary earners in low-income working families have employer-provided health insurance coverage, 54 percent versus 85 percent.

Finally, family composition varies by income level as well. Lower-income families are more likely to include children, partly because their family heads are younger, and are more likely to include more children on average than higher-income families. Also, the children tend to be younger in low-income families. Therefore, lower-income families are most likely to face costly child care expenditures.

Child Care Expenses and Utilization Patterns

Linda Giannarelli and James Barsimantov (2000) use the 1999 National Survey of America's Families to describe child care utilization patterns nationwide and for 12 key states. Their estimates are based on child care usage for spring or fall of 1997, and provide information on the paid child care usage for working families with children under age 13. Forty-eight percent

of their sample of all working families pays for care. For these families who pay for care, the average payment per month is \$286, and on average, these families pay 9 percent of their total earnings for this care. As the authors point out, these averages mask great variation across different family types in child care expenses. For low-income families (which includes 36 percent of all working families with pre-teen children), 40 percent reported paying for care, compared with 53 percent of higher-earning families. On average, low-income families report paying \$217 a month for care while their higher-earning families counterpart reported paying \$317.³ These expenditures reflect 16 percent of total family earnings for lower-income families but only 6 percent of earnings for higher earning families. In fact, 27 percent of lower earning families that pay for care report paying over one-fifth of earnings for care. As the authors report, there is still great variability within these figures for lower-earning families. Expenditures vary across families depending on the number and ages of the children in paid care, and whether the family is a single-parent or two-parent family. Because child care is most expensive for the youngest children, low-income families with very young children pay the highest amounts for child care and devote the largest percentages of their incomes to child care.

Of parents who use non-maternal care, single parent low-income families are more likely to pay for care than two-parent low-income families, 50 percent versus 29 percent. Part of this difference might be due to the availability of subsidies for single-parent families, which typically support formal market types of care. Across income levels, single parents have less access to relatives who might be willing to provide care for free or at low cost. Of these two family types

³To put these costs in perspective, consider a recent report by Karen Schulman (2000) that showed for four year old children living in urban areas, the average annual cost of care exceeds the average annual cost of tuition at a public college in all but one state.

that pay for care, single parent families pay 19 percent of their incomes for child care, versus 11 percent of two-parent families' incomes. So, while single-parent families are not all low-income as well, the two groups overlap greatly and share many of the same childcare problems. (See Rachel Connelly and Jean Kimmel 2001b for a discussion of married versus single mothers' child care situations.)

Jennifer Ehrle, Gina Adams, and Kathryn Tout (2001) also use the NSAF data to examine the child care utilization patterns for very young children. Breaking down patterns of care by family income, they find that there are differences in the types of care used for these infants and toddlers. For example, younger children of lower-income families are more likely to be cared for by relatives while the same-aged children in higher-income families are more likely to be cared for in center-based care. When breaking down these differences based on the mother's work status (full-time versus part-time), however, the patterns become more complicated.

School-aged children still require adult supervision during the before and after school hours that their parents work. For these older children (in either single-parent or two-parent families), the care is often focused on structured activities or educational programs. Looking at after-school child care arrangements for children ages 5 to 14 with an employed mother regardless of income level, 19 percent are cared for in their own home not by a parent, 19 percent in another home, 8 percent in an organized day care facility, 21 percent by their father, 5 percent by their mother while she works, and 12 percent care for themselves (Green Book Table 9-6, pg. 581). Focusing on low-income families, children in low-income families are less likely to care for themselves (due to a greater availability of nonworking relatives and teenaged siblings), and also are less likely to participate in enrichment activities like lessons or sports after school.

Racial Differences in Child Care Utilization Patterns

Previous research has shown that racial background plays a role in child care utilization patterns. (See, for example, Bruce Fuller, Susan Holloway, and Xiaoyan Liang 1996.) It can be difficult to draw conclusions as to the reasons for observed racial differences because of other well known differences across racial groups, such as rates of single-parenthood, income levels, and education levels. The NSAF data report cited earlier (Ehrle, Adams and Tout, 2001) focuses on three groups: white non-Hispanic (referred to as white), African-American/non-Hispanic (referred to as African-American), and Hispanic. Other racial and ethnic groups are too small in available national surveys to permit this sort of stratification.

Hispanic children are much less likely to be placed in center care (10 percent) compared to white (24 percent) or African-American children (30 percent). White children are more likely to be cared for by nannies or babysitters than African-American children (8 percent versus 3 percent), and Hispanic children are most likely to be cared for by relatives (39 percent), compared with 27 percent of African-American children and 25 percent of white children. One mode choice that does not differ by race is the total number of non-parental arrangements used per child. Approximately 33 percent of young children are in more than one arrangement, regardless of race. A final observation concerning young children relates to the number of hours in non-parental care. Fifty-eight percent of African-American children of employed mothers are in full-time non-parental child care, compared to just 36 percent of white children and 34 percent of Hispanic children. Obviously, this difference arises in large part from racial differences in mothers' probability of working full-time.

For school-aged children less than 10 years old, 27 percent of African-American children with working mothers rely on wrap-around care (i.e., care before and after school) compared to

16 percent of Hispanic children. For older school-aged children (ages 10–12), 30 percent of white children use self-care as the primary mode of care, compared to 15 percent of Hispanic children and 11 percent of African-American children.

Availability and Quality of Care

Issues of the availability of child care and the quality of that care are also issues of concern for low-income working families. While the research literature on the effects of child care quality on child development and child well-being is somewhat contradictory, the bulk of studies are in agreement as to the particular importance of high quality care for disadvantaged children. These children (defined as disadvantaged due to low family income or low levels of parental education) are helped the most by high quality care and harmed the most by poor quality care (Deborah Vandell and Barbara Wolfe, 2000). By most measures of quality, most available care in the United States is of mediocre or poor quality.

The most acute shortages of regulated suppliers is found in low-income neighborhoods. And, there continue to be supply shortages in off-hours care, as required by those who work a nonstandard work schedule. Finally, shortages also persist in infant care. All of these shortages are most felt by low-income workers (Ann Collins, et al 2000). Despite state and local efforts to increase supply in the 1990s, these shortages persist both due to the rising demand that resulted from welfare reform and the decline in the supply of childcare workers that resulted from the strong economy that provides better economic opportunities for those workers.

Child Care Costs and Employment Behavior

The relationship between child care decisions and employment decisions can be modeled formally using behavioral models often employed by economists. Typically, these models assume utility-maximizing behavior on the part of individuals or families, and rely on choice constraints (such as confining budgets and time constraints) to yield model outcomes. One example of such a model that incorporates child care costs into the employment decision is shown using graphical analysis in the appendix. As shown in these figures, child care costs enter into the theoretical model of individual labor supply both through a purely variable hourly cost that in effect lowers the worker's hourly wage rate (making the budget line flatter), and as a quasi-fixed costs of work that shifts the budget line downward. In this formulation, the theoretical model predicts that the effect of child care costs on labor force participation depends on the relative preferences for income and leisure, as well as the hours of employment before child care costs are considered.

There is a growing literature on the empirical relationship between child care costs and employment behavior.⁴ The bulk of this literature relies on estimates of the child care price elasticity of employment, that is, the relative responsiveness of employment to changes in the quantity demanded of child care.⁵ Jean Kimmel (1995) examines a group of low-income single

⁴ See, for example, David Blau and Phil Robins (1988), Rachel Connelly (1992), David Ribar (1992), and Jean Kimmel (1998).

⁵ Because the outcome being examined is the employment state (employed or not employed), it is modeled as a 0–1 dependent variable. The employment equation is estimated with a probit model, which transforms the discrete observed yes/no employment outcome into a continuous, latent measure of paid work preferences. These most simple models rely on many unrealistic assumptions, including the notion that an individual's available time (24 hours in a day) is divided into paid market work or leisure. Unpaid work in the home is ignored. The employment probit is formulated as any general regression; that is, with a dependent variable on the "left hand side" (namely, the 0–1 employment measure), and a series of independent variables on the "right hand side" of the equation, including family income, a measure of the potential hourly wage, and other factors that help to explain why some individuals choose to work and some choose not to work.

mothers and estimates that the child care price elasticity of employment is -0.35 , which implies that a 1 percent increase in the hourly price of child care will cause a 0.35 percent decline in the probability of employment. Estimates differ by marital status because married mothers are more likely to have more good substitutes for paid market care in their husbands as well their husbands' families.

An example of the complexity inherent in these studies is seen in the work of Connelly and Kimmel (2001c). They examine the importance of work status in estimates of these price elasticities. That is, they argue that the choice for part-time work is fundamentally different than the choice for full-time work (due to substantive differences in job opportunities, wage and benefit structures, and hourly child care costs), and so the elasticities should be estimated separately for the two types of employment states and separately for married and single mothers. They find that the child care price elasticity of full-time employment is -0.71 for married mothers and -1.22 for single mothers, and the elasticity for part-time employment is -0.08 and -0.37 for married and single mothers, respectively. These elasticities show that single mothers' full-time and part-time employment decisions are influenced more by changes in child care prices than married mothers' decisions. While estimates are not available separately by income level, the bulk of the single mothers are also low-income so these results provide an indication of the likely behavior of low-income working families.

Connelly and Kimmel (2001a) focus on low-income mothers who are at risk of welfare receipt. They run simulations to examine the importance of child care subsidies and find that a 50 percent child care subsidy for low-income single mothers would reduce welfare receipt by 10 percent and increase employment by 25 percent. As it is discussed later in this

chapter, there are sufficient problems with inadequate subsidies and unavailability of care that the potential success of welfare reform is hindered.

Justifications for Intervention in the Market for Child Care

What are the justifications for intervention in the child care market by the state or federal government? Economists tend to think of market intervention being justified due to some sort of failure of the market mechanism to work properly. When a market works properly, the outcome is efficient. Efficiency implies that the quantity that producers are willing to supply is exactly equal to the quantity buyers wish to purchase at a single equilibrium price, and that no individual can be made better off by some other outcome unless someone else is made worse off by that different outcome. This is the result of a perfectly competitive market that economists often reference as somewhat representative of many real-world markets. When a market does not operate efficiently, the quantity supplied may be inadequate at the equilibrium price, the equilibrium price may be too high to be affordable, or quality may suffer. Previous sections of this chapter described some of these problems, namely child care that may be too expensive for low-income families, insufficient supply of child care, and inadequate quality care even for higher income families.

James Walker (1991) focuses on the efficiency concerns in the market for child care. There are three significant factors that might cause the market outcome to be an inefficient allocation of resources: imperfect competition, externalities, and public goods. (See Walter Nicholson, 2000) The child care market is subject to all three of these failures. Imperfect competition and externalities are discussed in the earlier chapter in this volume by Julie Nelson.

In addition, markets can also operate improperly due to equity considerations; that is, when the equilibrium price and quantity do not permit sufficient distribution of the good at a reasonable price. While discussions of equity turn on normative arguments, still there is room for economists to enter the discussion. In the child care market, much as is true for 5–18 year old education, a sufficient supply of affordable quality care is desirable due to two facets of fairness: for the family as a unit and the individual child. For the family, child care transfers are redistributive, raising the overall standard of living. For low-income families, child care simply cannot be fit into the limited family budget, making it impossible for these families to achieve financial independence through market work. For the child, quality care plays an important role in the child's quality of life. Also, to the extent that the positive effects of quality child care persist through adulthood, improving the availability of this care serves to improve that child's own life prospects. Quality child care helps to give a more equal start to every child.

Issues of redistribution and equal opportunity are particularly relevant for recent welfare leavers. With the economic expansion of the 1990s, federal welfare reform waivers granted to states, and finally the 1996 federal welfare reform that imposed a maximum five-year lifetime federal welfare eligibility limit, more and more very low-skilled single mothers with very little work experience are entering the workforce. These women receive very low incomes and therefore confront serious child care affordability problems. For welfare reform to be successful, these families will have to be able to afford quality child care. Without that, our society might be creating as many problems as we are solving with the recent welfare reform.

Current Federal and State Child Care Policies

Currently, the government is involved in the child care market in numerous ways.⁶ A significant portion of the government's involvement is designed to make child care more affordable. The Dependent Care Tax Credit benefits mostly the middle class and is expected to cost the federal government \$2.2 billion in the year 2000 (Green Book 2000). The credit is not refundable so that families with low earnings who face limited, if any, federal tax burden do not benefit from this policy. There are also child care subsidy funds targeted to low-income families and ex-welfare recipients. These are monies made available through the Child Care and Development Block Grant (CCDBG), and block-granted to the states as a result of the 1996 federal reform of welfare. The federal government has allocated \$3.6 billion in fiscal year 2000 for these funds. But these funds are being made available only to approximately 15 percent of the families who meet the federal income eligibility limit, so that only the poorest of the poor families receive any support (U.S. Department of Health and Human Services, 1999).

These subsidies have the intended consequence of making child care more affordable and might also increase the quality of care consumed. However, as not all forms of child care are eligible for the subsidies (particularly unlicensed, informal care arrangements), these subsidies also may have the consequence of altering the choice of mode of care. For example, even if family day care homes are preferred by the parents, since licensed providers are not in as great supply as unlicensed providers, parents who prefer such care might be forced to choose center-based care in order to be eligible for a child care subsidy. It is not clear if this is a good or bad

⁶ See Blau (2000a) for a comprehensive discussion of child care subsidy programs.

outcome because while some parents might feel they are being forced to forego their first choice of care arrangements, center-based care is often of higher quality.

Finally, the availability of work-based child care subsidies might encourage more parents (particularly mothers) to enter the workforce. In general, there is a benefit from enabling mothers to choose freely between caring for their children full-time themselves and purchasing part-time or full-time care in the market. When women have this choice, their labor force participation rates rise, thereby enhancing the overall productive potential of our society, and making it possible for women to work in a broader array of occupations, some of which do not permit short or long-term work interruptions. Society benefits when both men and women can work as doctors, scientists, entrepreneurs, as well as nurses, teachers, and daycare providers. The National Association of Child Advocates'(2000) examination of child care evaluation research tells us that quality out-of-home child care education programs are the best way to improve child outcomes. This implies that child care policies that also tend to encourage work should not be avoided because the result can be an increased reliance on pre-kindergarten education programs. In particular, lower-income children benefit the most from quality care. Recent evidence shows us that these benefits can be both short and long term, lasting well into young adulthood. (See, for example, *Early Learning, Later Success: The Abecedarian Study*, 2000.)

The government is also involved with policies designed to improve the quality of care or the availability of care. All states have some set of licensing standards (some not particularly binding, though) that establish quality standards for licensed care providers. These standards include maximum allowed child to staff ratios (for example, 4:1 for infants) as well as required staff training. And, some states have programs that subsidize child care worker training and provide bonuses for workers with specific training or relatively long tenures with the same child

care provider. The federal Head Start program is probably the largest and most well known program that is designed specifically to affect quality and availability simultaneously. Head Start provides two years of half or full-day pre-kindergarten to children living in low-income families, and is expected to cost the federal government \$3.9 billion in fiscal year 2000. (Green Book, 2000)

Government intervention in the quality of care by licensing providers and setting quality standards for licensed care can have the intended consequence of improving the quality of care provided in licensed family day care homes or center-based care. However, it can also have the unintended consequence of raising the price of such care. Additionally, it can have the unintended consequence of increasing the numbers of providers choosing to forego the licensing process entirely. Currently, it is estimated that nearly 90 percent of family day care homes are not licensed. These providers do not break any laws by operating without a license (which is akin to a professional credential), and they avoid the hassles and costs of meeting state standards.

Solutions to the Child Care Problems Facing Low-income Families

Probably the most important change in policy would be to make the child care tax credit refundable which would provide reimbursements for child care expenditures for the lowest income workers. This increased subsidy eligibility is consistent with the notion of child care subsidies as redistributive in-kind transfers designed to improve the living standards of lower-income families. A second important change would be to extend kindergarten from the half-day program that is available currently in most localities throughout the country to a full-day program that follows the same time schedule as the rest of elementary school. This would improve children's readiness for first grade while also easing the child care burden for working

parents of transporting kindergartners from one program to another at mid-day. Part of this change would also extend after-school care availability for older children as well. A third important change would be to fully fund Head Start so that all eligible low-income children could attend. Currently, only about 35 percent of eligible children are enrolled (Janet Currie 2001). Also, Head Start should be expanded to a full-day full-year program nationwide. Finally, a policy change that is not income-based could be considered. Local school districts could extend the availability of one year of free full-day pre-kindergarten school. Many districts already have a young-fives program for children who are nearly old enough for kindergarten but just not emotionally or academically ready. Providing this free year of pre-kindergarten would improve the kindergarten-readiness of at-risk children in particular, and help to put all children on a more equal footing at the start of kindergarten. This would be a largely middle-class subsidy, however, and place an even greater burden on already-challenged public schools, without the federal oversight of Head Start.

The advisability of increased regulation in the child care market is unclear. Certainly, those states that lack sufficient standards on child:staff ratios for center-based care and family day care homes should adjust those standards to meet the average standards across states. But there is some concern about the impact of standards on the overall availability of care and the willingness of unregulated family day care providers to enter the licensed market. Blau (2000b) offers a broad prescription for the current child care problems that includes offering financial incentives for parents to seek out quality care. However, the ability of state and local governments to identify quality providers and monitor their care is limited at best. It does seem reasonable that the states with the most lax standards improve those standards.

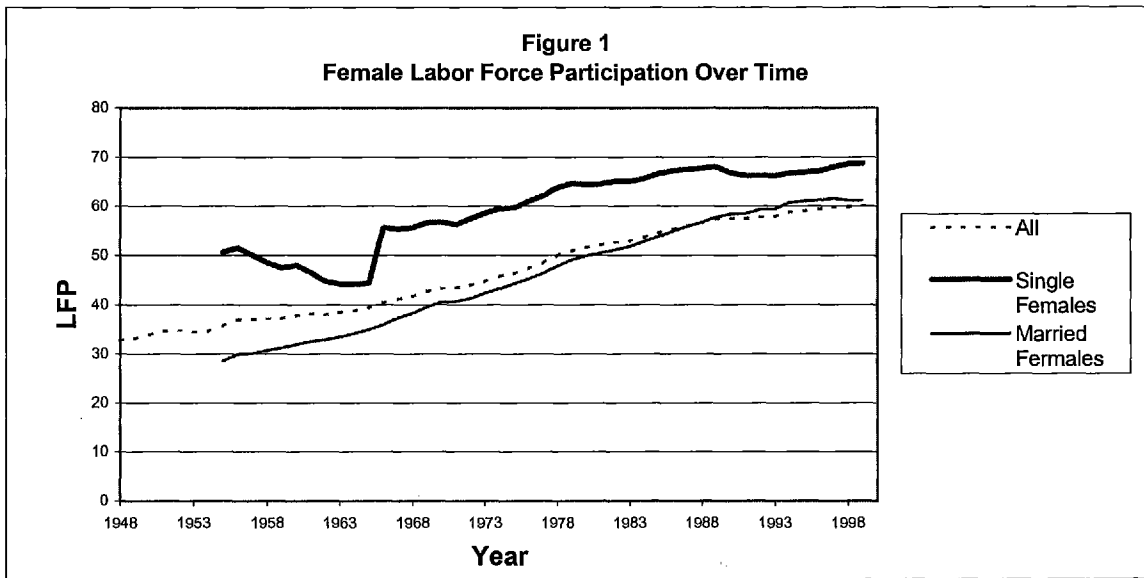
Overall, there is a lack of knowledge about the operation of the child care market affecting low-income families. President Clinton's Council of Economic Advisors (1997) called for more research for this particular group. Much research is ongoing, however, particularly for those families affected by the 1996 federal welfare reform. As a consequence, many research holes will be filled in over the course of the next few years.

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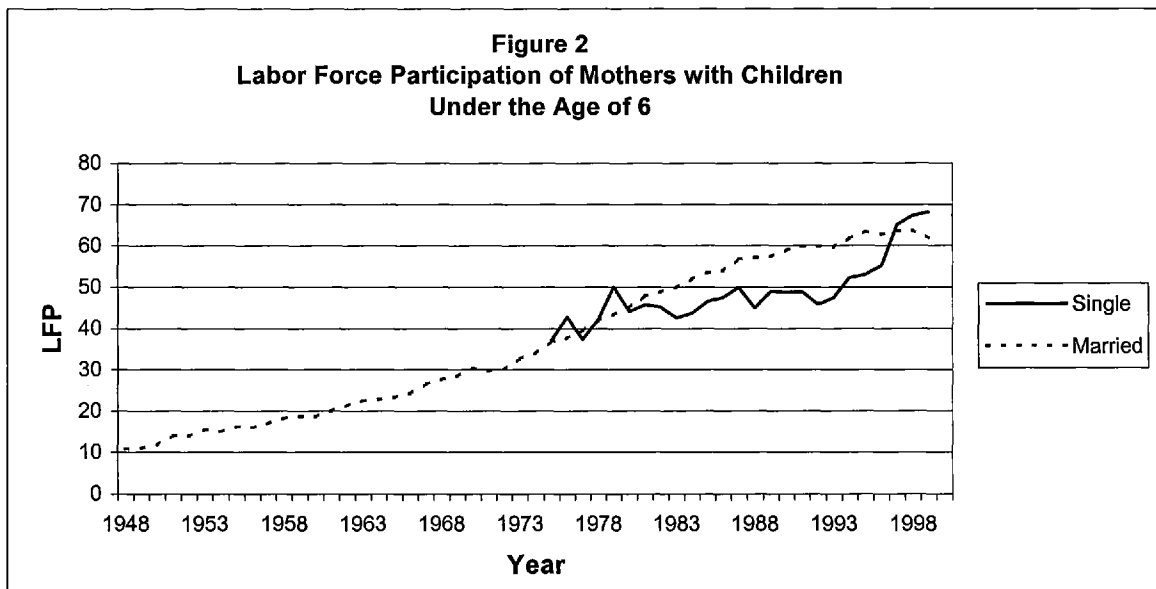
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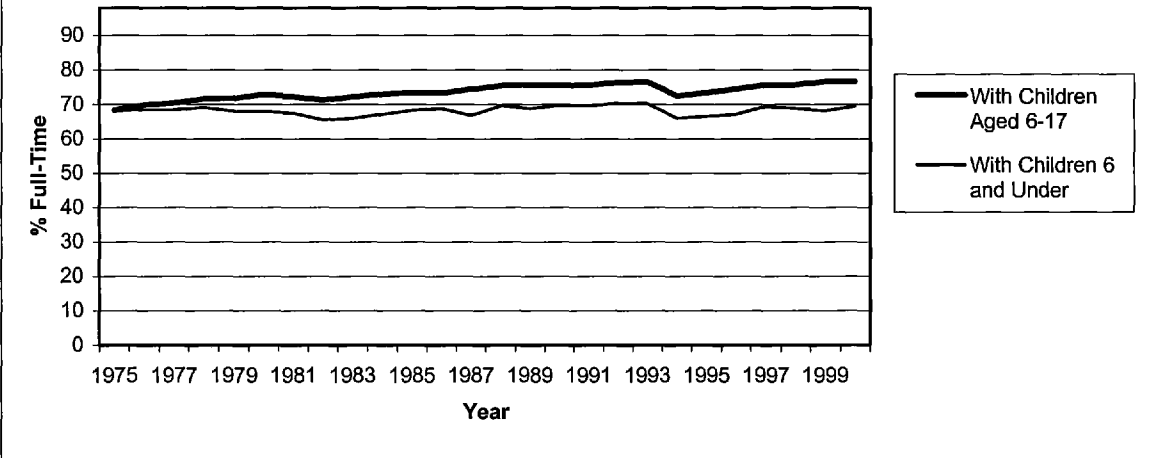


Sources: Handbook of Labor Statistics, U.S./DOL/BLS, June 1985, Bulletin 2217 and U.S. Census Bureau, *Statistical Abstract of the United States: 2000* (Table 645).



Sources: Labor Force Participation Statistics derived from the Current Population Survey, 1948–1987; US/DOL/BLS, August 1988, Bulletin 2307; and the 1993, 1997, and 2000 *U.S. Statistical Abstract of the United States*.

Figure 3
Employed Female: Percentage Full-Time,
by Age of Children



Source: Bureau of Labor Statistics, Current Population Survey, March supplement, 1975 through 2000.

Appendix

The four figures in this appendix show the impact of child care costs on the mother's hours worked. The figures rely on indifference curve analysis. In Figure A1, the initial situation is displayed, with the individual facing indifference curve I_0 and the wage rate shown by the slope of the diagonal portion of the budget constraint (shown by line ABC). The tangency point (given by X_0) of the indifference curve on the budget constraint shows the equilibrium hours worked at H_0 .

I treat child care costs as both variable (as paid by the hour) and quasi-fixed (due to transportation costs and the common minimum weekly child care fee required even for low-hours users of care). The variable cost component to child care costs causes a flattening of the diagonal portion of the budget constraint. The fixed cost component causes a discontinuous shift downward in the budget line. The new budget constraint is given by ADY' for those who work, and point B for those who do not work.

Figure A2 shows the outcome for Person 1, for whom the child care costs cause an increase in hours worked to H_1 . For this person, the income effect dominates the substitution effect (not shown). Figure A3 shows the outcome for Person 2, who reduces hours worked to H_2 . For this person, the substitution effect (driven by the lower effective wage) dominates the income effect. Finally, Person 3 is shown in Figure A4. This person initially worked very few hours, and so the imposition of child care costs causes such a reduction in hours worked that the individual drops out of the labor force.

Figure A1

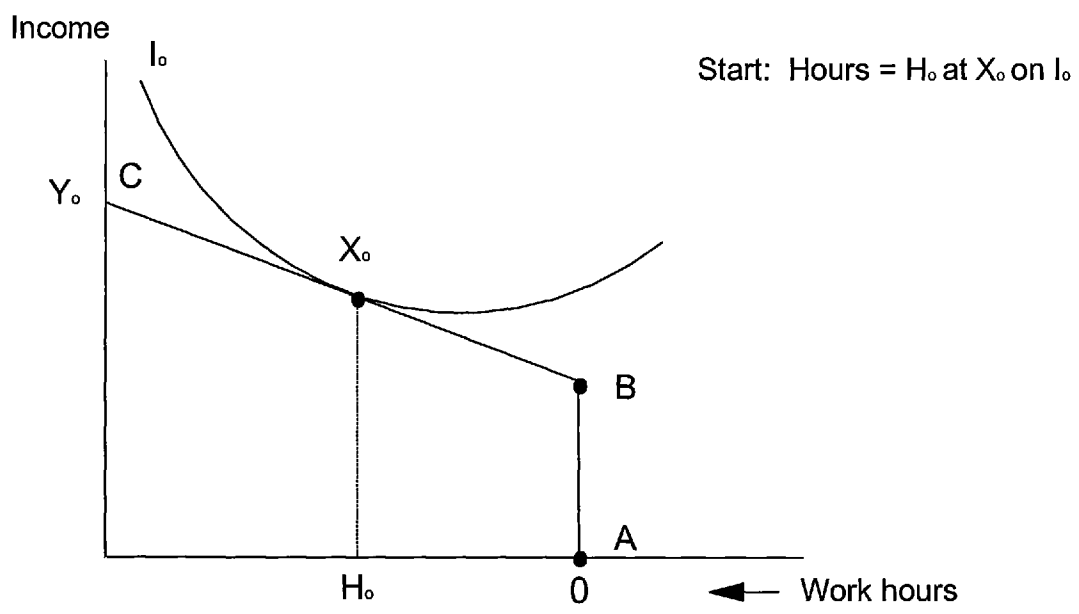


Figure A2: Person 1

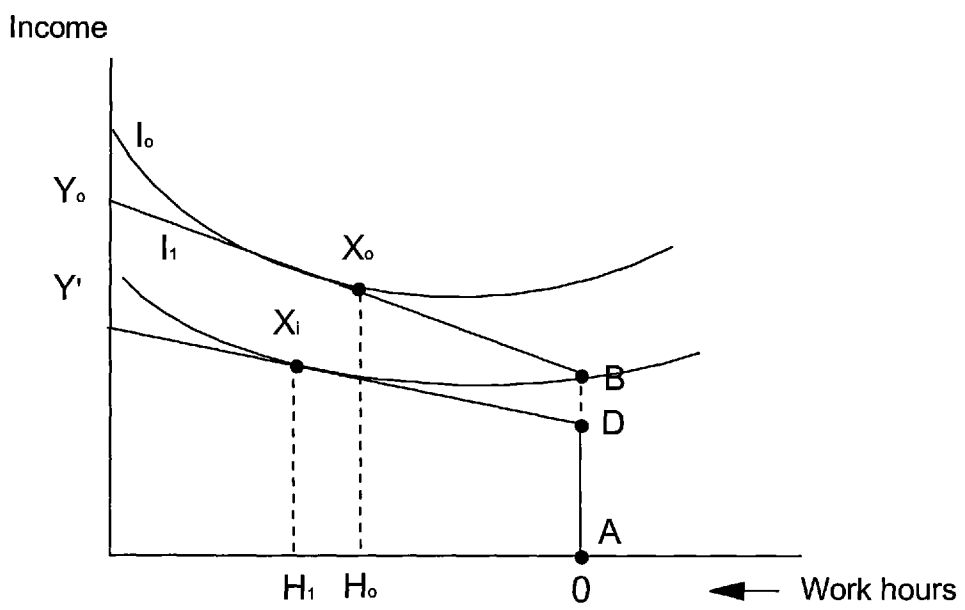


Figure A3: Person 2

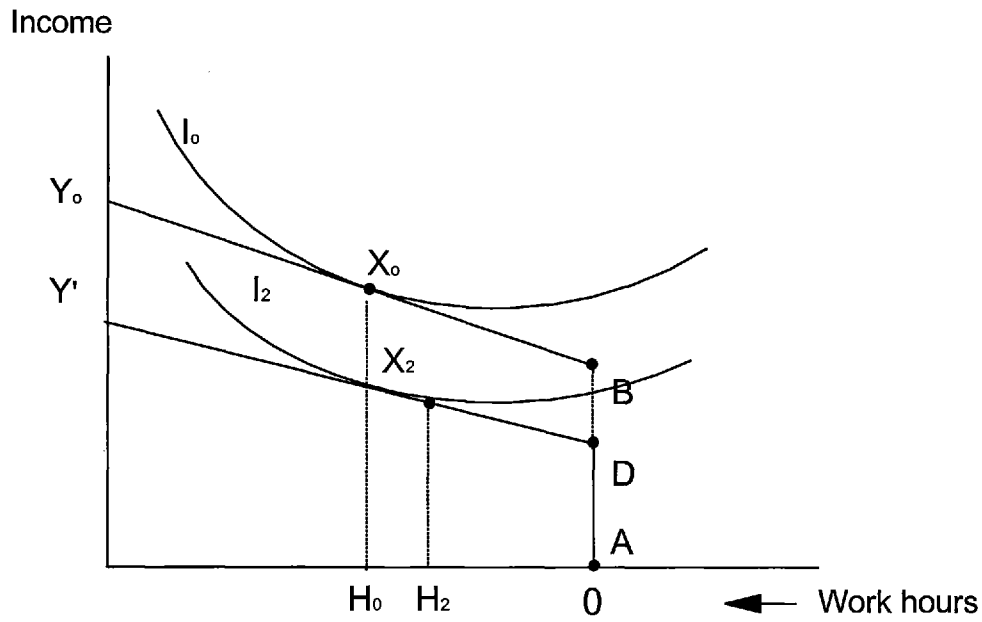


Figure A4: Person 3

