# Child care: arrangements and costs

*Employed mothers most often use relatives to care for their children, according to data from the National Longitudinal Surveys; weekly expenditures for care vary by family income*

Jonathan R. Veum
and
Philip M. Gleason

Child care has become an important public policy issue in the United States. The attention drawn to child care stems primarily from the changing employment and demographic patterns of women. In 1970, 28.7 percent of mothers with children under age 6 were in the labor force; by 1990, this percentage had doubled, reaching 58.2 percent.[1]

The composition of families also has changed significantly over the past 20 years. In particular, among families with children, the number of single mothers has grown in importance. Between 1970 and 1988, families headed by women increased from 10.6 percent to 16.3 percent of all families. Two reasons are given for this increase: (1) the percentage of women age 18 and older who were divorced but had not remarried increased from 3.9 percent in 1970 to 8.8 percent in 1988, and (2) the frequency of births to unwed mothers increased from 10.7 percent of total births in 1970 to 24.5 percent in 1987.[2]

Because of these major social changes, the government's role in subsidizing child care has been expanding. The U.S. Department of Labor estimated that the Federal Government spent nearly $7 billion on child-care assistance programs in 1988,[3] in addition to the amount spent by State and local governments. The Child-care and Development Block Grant[4] will expand the role of both State and Federal Governments in the provision of child care.

This article discusses a number of issues related to child care in the United States. In particular, the types of child-care arrangements used, and factors that determine the type of arrangement, such as the child's age, the mother's marital status, and the net income of the child's family are analyzed. The expenditures for child care by different population groups are also examined, as well as the degree to which child-care concerns limit the employment opportunities of the mother.

Jonathan R. Veum is an economist and Philip M. Gleason is a former intern in the Office of Economic Research, Bureau of Labor Statistics.

## Background on surveys

The data used in this article are from two sources within the National Longitudinal Surveys of Labor Market Experience (NLS). Sponsored by the Bureau of Labor Statistics, the NLS is an ongoing longitudinal study, which examines the labor market experiences of Americans. Data from the 1988 National Longitudinal Survey of Youth (Youth Survey) as well as the 1983 National Longitudinal Survey of Young Women (Young Women Survey) are used here.[5] The Youth Survey provides information on a sample of 6,283 young women and 6,403 young men who were 14 to 22 years old in 1979 and who have been interviewed annually since 1979. In 1988, the sample, which includes an overrepresentation of blacks, Hispanics, and economically disadvantaged whites, had 10,466 respondents.

The Young Women Survey obtains information from regular interviews of a cohort of women who were 14 to 24 years old in 1968.[6] The original sample, in which there was an overrepresentation of blacks, included 5,553 young

women; in 1983, 68.7 percent of them were still being interviewed.[7]

The 1988 Youth Survey and the 1983 Young Women Survey are used here because both asked the female participants a variety of questions about child care, including the type of arrangement used, its cost, and the number of hours per week it is used. Questions as to how child-care problems have affected the careers of mothers also were asked.

The major advantage of using both the 1988 Youth Survey and the 1983 Young Women Survey is that, together, they allow us to examine a wide age range of mothers, as the youth cohort was aged 23 to 31 in 1988 and the young women cohort was aged 29 to 39 in 1983. In this report, women from the Youth Survey are referred to as "younger mothers" and women from the Young Women Survey will be referred to as "older mothers."[8]

There are a number of differences between the two sets of survey questions. For example, in the 1983 Young Women Survey, respondents were allowed to specify more than one type of primary child-care arrangement, whereas in the 1988 Youth Survey, respondents were allowed to report only one type of primary child-care arrangement. Also, the reference period for the child-care questions in the 1988 Youth Survey is the previous 4 weeks, whereas the reference period for the 1983 Young Women Survey is the previous year. Also, it is important to note that older mothers are more likely than younger mothers to have older children, who require different child-care arrangements and expenditures on child care.

## Child-care arrangements

The most common form of child care is provided by relatives, with more than 40 percent of 23- to 39-year-old mothers relying on a relative to take care of their child while they work. Younger mothers often depend on the child's father (11.3 percent) or a relative (28.8 percent) for child-care. Older mothers commonly rely on the child's father (14.1 percent) and the child's siblings (8.8 percent) for care.[9] (See table 1.)

About 22.3 percent of younger mothers and 24 percent of older mothers rely on persons other than relatives for child care. This type of arrangement includes care by inhome sitters as well as care in other private homes, often referred to as family day-care homes.

Child-care centers have continued to grow in importance, as 18.1 percent of younger mothers and 10.6 percent of older mothers enroll their youngest child in either a day-care center or a nursery school. Respondents to the 1983 Young Women Survey who used child-care centers were asked whether the centers they used were public or private. The data indicate that only 1.7 percent of all of the older working mothers used publicly run centers. This figure should not be interpreted as indicating the extent of the government's involvement in providing child care, because it does not account for other ways in which the government provides help, for example, through income tax credits given to parents for child-care expenses.

A large percentage of children of older women care for themselves (24.6 percent). Many of these children probably attend school, although the exact percentage cannot be determined, because "school" is excluded as a child-care arrangement for the older mothers.

*By age of child.* The age of the youngest child has a bearing on the type of child-care arrangements used by both younger and older mothers.[10] There are two noteworthy child-care patterns which are common to both groups of women. Child-care centers are used more frequently for 2- to 4-year-old children than for infants (27.6 percent versus 15.1 percent for younger mothers and 22.6 percent versus 3.7 percent for older mothers).[11] Also, it is more common for other persons to provide care for infants than for children 2 to 4 years old. This difference in care for infants and 2- to 4-year-olds may be related to parental preference and to the fact that many child-care centers do not accept children under age 3, or accept them only at a higher fee.[12]

There are some notable differences in the child-care arrangements between younger and older women. While relatives frequently provide child care for both younger and older

Table 1. **Child care arrangement for youngest children of women in the National Longitudinal Survey**

| Provider | Percent of children cared for | |
|---|---|---|
| | Youth Survey (Women ages 23–31)[1] | Young Women Survey (Women ages 29–39)[2] |
| Father | 11.3 | 14.1 |
| Siblings | 1.1 | 8.8 |
| Other relative | 28.8 | 18.0 |
| Other person | 22.3 | 24.0 |
| Child-care center | 18.1 | 10.6 |
| Mother cares for child at work | 3.0 | 4.2 |
| Child cares for self | 1.9 | 24.6 |
| Other | 13.5 | 12.1 |

[1] Data are from the 1988 National Longitudinal Survey of Youth.

[2] Data are from the 1983 National Longitudinal Survey of Young Women. In the survey, respondents were allowed to choose more than one type of arrangement. Thus, percentages total more than 100 percent.

women, care by a child's siblings is more common among older women, with 10.8 percent of children 5 years and older being cared for by a brother or sister, compared with only 2.3 percent for younger women. Older women frequently use persons other than relatives (in-home sitters and family day care homes), with the rate of use being substantially higher for these women compared with young mothers at each of the children's age levels. In particular, older women appear to rely heavily on persons other than relatives for child care in the youngest age category, as 58.2 percent of these mothers claimed to use this form of child care for their infants.

The percentage of younger women who use child-care centers for their infants (15.1 percent) is almost three times that for older women (3.7 percent)—a striking difference. More than 8 percent of older women care for their children under 5 years old while working, while fewer than 4 percent of younger women do so.

*By family income and marital status.* Family income is defined as the earnings of the child's parents who are currently living in the household. There are a number of interesting findings. First, women in families with income levels above $50,000 (in 1988 dollars) are less likely than those in lower income families to have their children cared for by "other relatives." This probably occurs because care by relatives, such as the child's grandparents, is relatively less expensive than other forms of child care.

Second, women in families with incomes of $25,000 or more would most likely use persons other than relatives as caregivers. Thus, it appears that as income rises, care by in-home sitters and in other private homes is an affordable option.

Third, the use of child-care centers by mothers appears to be directly related to family income. Families in the highest income category are more likely to use child-care centers than are families in the other income ranges. (See table 3.) As income increases, the use of public child-care centers declines while the use of private centers rises.[13] Hence, these results indicate that upper income families can more easily afford private centers while poorer families are more likely to use public centers, as might be expected. The following tabulation provides a breakdown of child-care center usage by family income and public/private distribution for older mothers:

| *Family income (1988 dollars)* | *Type of child-care center* | |
|---|---|---|
| | *Public* | *Private* |
| To $14,999 | 2.1 | 3.1 |
| $15,000-$24,999 | 2.2 | 4.1 |
| $25,000-$49,999 | 1.8 | 7.9 |
| $50,000 and over | 1.0 | 16.0 |

A higher percentage of older married (spouse present) mothers (18.3 percent) receive child-care help from the child's father than do younger married mothers (14.7 percent). However, younger single women are more apt to depend on the child's father to provide care than are older single women.

Younger single women turn to other relatives (37.9 percent) and child-care centers (20.1 percent) more often than do married women. Older single women do not use child-care centers as often as do married women, but tend to rely more

Table 2. **Child-care arrangement for youngest children of women in the National Longitudinal Survey, by age of child**

| Provider | Percent of children cared for: Youth Survey (Women ages 23–31)[1] | | | Percent of children cared for: Young Women Survey (Women ages 29–39)[2] | | |
|---|---|---|---|---|---|---|
| | Children from birth to 1 year | Children ages 2 to 4 | Children ages 5 and over | Children from birth to 1 year | Children ages 2 to 4 | Children ages 5 and over |
| Father | 12.8 | 12.2 | 9.4 | 15.6 | 16.1 | 13.5 |
| Sibling | 0.0 | .6 | 2.3 | .8 | 2.7 | 10.8 |
| Other relative | 30.0 | 26.1 | 30.3 | 29.7 | 15.9 | 15.9 |
| Other person | 32.8 | 24.5 | 13.0 | 58.2 | 43.7 | 17.2 |
| Child-care center | 15.1 | 27.6 | 10.7 | 3.7 | 22.6 | 7.7 |
| Mother cares for child at work | 3.2 | 3.5 | 2.4 | 8.6 | 8.3 | 3.0 |
| Child cares for self | .0 | .0 | 5.2 | .0 | .1 | 32.3 |
| Other | 6.0 | 5.6 | 26.5 | .0 | 2.0 | 15.3 |

[1] Data are from the 1988 National Longitudinal Survey of Youth.

[2] Data are from the 1983 National Longitudinal Survey of Young Women. In the survey, respondents were allowed to choose from more than one type of arrangement. Thus, percentages total more than 100 percent.

Table 3. **Child-care arrangement for youngest children of women in the National Longitudinal Survey, by family income**

| Provider | Percent of children cared for: Youth Survey (Women ages 23–31)[1] — Family income (1988 dollars) | | | | Percent of children cared for: Young Women Survey (Women ages 29–39)[2] — Family income (1988 dollars) | | | |
|---|---|---|---|---|---|---|---|---|
| | $0–$14,999 | $15,000–$24,999 | $25,000–$49,999 | $50,000 and over | $0–$14,999 | $15,000–$24,999 | $25,000–$49,999 | $50,000 and over |
| Father | 11.7 | 15.3 | 12.0 | 4.0 | 11.6 | 13.9 | 16.9 | 13.8 |
| Sibling | 2.3 | .8 | 1.0 | .0 | 8.7 | 8.7 | 9.8 | 7.5 |
| Other relative | 33.1 | 26.1 | 29.1 | 16.3 | 25.8 | 28.0 | 14.9 | 8.7 |
| Other person | 21.0 | 19.8 | 22.1 | 33.1 | 18.2 | 17.6 | 29.0 | 30.4 |
| Child-care center | 14.7 | 18.1 | 19.9 | 10.7 | 5.2 | 6.3 | 9.7 | 17.0 |
| Mother cares for child at work | 4.1 | 4.1 | 1.9 | 4.3 | 5.2 | 5.4 | 2.1 | 6.3 |
| Child cares for self | 3.2 | 2.2 | 1.1 | 1.6 | 30.2 | 23.3 | 21.8 | 23.6 |
| Other | 9.8 | 13.5 | 12.8 | 19.9 | 10.1 | 9.4 | 11.4 | 7.7 |

[1] Data are from the 1988 National Longitudinal Survey of Youth.

[2] Data are from the 1983 National Longitudinal Survey of Young Women. In the survey, respondents were allowed to choose from more than one type of arrangement. Thus, percentages total more than 100 percent.

on relatives (25 percent) or to let the child care for himself or herself (35.2 percent). (See table 4.)

## Child-care expenditures

In addition to information about the child-care arrangements used in families, the National Longitudinal Surveys also include information on child-care expenditures and the average number of hours of child care used per week. Child-care expenditures reflect the amount spent on the care of all children within the family. The averages are calculated only for those families who actually used child care and who spent money on child-care services. (See table 5.)

Average weekly expenditures on child care are about $60 for younger women and $45 for older women (in 1988 dollars). However, younger women utilize child-care services an average of 39.4 hours a week, compared with 24.7 hours a week for older women. Therefore, the hourly expenditures are larger for older women, who spend $1.80 per hour as opposed to $1.56 for younger women. These differences in expenditures may be partially attributed to the fact that older women generally have higher incomes than do younger women. Also, the variation in family structure between the two groups might be responsible for differences in the number of hours and payment per hour. Older women tend to have more children, and older children, than do young women. Because these children are older, and spend more time in school, the need for child care decreases. They may also have older siblings to provide care. Yet, older women have more children for whom to pay the costs of care, which may result in their expenditures per hour on all children being slightly greater than the expenditures of young women.

The data indicate that there is a difference in the average weekly and hourly expenditures for married and single women. Among young women, those who are married pay $64.36 per week and $1.67 per hour, and those who are single pay $55.11 per week and $1.27 per hour. Among older women, those who are married pay $46.58 per week and $1.87 per hour, while single mothers pay $36.61 per week and $1.54 per hour. This difference between married and single mothers can probably be attributed to the type of arrangement used. Single women rely on relatives (who may charge a nominal fee) more often than do married women. (See table 4.) Because relatives can provide a relatively inexpensive form of child care, single women pay less, on average, for child care.

The data also suggest that child-care expenditures and hourly usage are related to family income. For both married and single women, it appears that those with net family incomes of $50,000 or more use child care for more hours than do other women. There appears to be a direct relationship between the income level of a family and their child-care expenditures (both weekly and hourly) for both younger and older women.[14]

## Constraints on women's employment

Thus far, arrangements for the care of the child have been the prime consideration. Yet, an important related issue to consider in determining the seriousness of child-care problems is the extent to which these problems affect the employment and career opportunities of women.

Frequently, the suggestion is made that inadequate child-care provisions may hinder the careers of women in a number of ways. For instance, a mother may be forced to be late to, or be absent from, work because of child-care problems, which could delay advancement on the job or even cause loss of a job. Anticipation of such problems may prevent a woman from accepting a career-oriented job and lead her to search for jobs in which there is more tolerance of tardiness and absenteeism, even though they are low paying and offer little chance for promotion.[15] The inability to find suitable child-care arrangements may even prevent a woman from searching for a job.[16]

The National Longitudinal Surveys provide information that directly relates to whether the employment and career progress of American women is being constrained by lack of adequate child care. Women who are currently employed are asked whether or not they have been absent from work during a specified period of time because of child-care problems. It is important to note the difference in the way the question was posed in the two surveys. In the 1983 Young Women Survey, a respondent was asked if she had missed any work within the previous year because of child-care problems. In the 1988 Youth Survey, the respondent was asked if she or her husband had missed any work within the previous 4 weeks because of child-care problems.

Because of differences in the question, there are differences in the results. While only 3.6 percent of the respondents (or their spouses) missed work over the previous 4 weeks in the 1988 survey, 21.7 percent answered the question affirmatively in 1983.[17] (See table 6.)

Examining both groups of women, it is difficult to make any generalizations regarding the relationship between lost work and the age of the youngest child. Surprisingly, older married mothers are more likely to be absent from work than are single mothers. Married mothers may have more flexible working arrangements than have single mothers, which allow them to take time off from work to deal with child-care problems.

Among older women, there appears to be a positive relationship between net family income and lost work due to child-care problems. While the 1983 Youth Survey shows that 16.3 percent of mothers with net family incomes below $15,000 were absent from work within the last year because of child-care problems, 27.7 percent of mothers with family incomes above $50,000 also lost work. In contrast, for younger women, there is no clear relationship between family income and lost work caused by child-care problems.

This finding that women in relatively higher-income families are more likely to miss work has a number of possible implications. First, because most women in high-income families are married (spouse present), they may have less attachment to their own jobs, and with their husband's income, they can "afford" time off from work in order to handle child-care problems. Second, this result could also be interpreted as suggesting that child-care does not really constrain the employment and career progress of women. Third, the measure used here—the percentage of women who have missed time from work because of child-care problems—may not be a very good indicator of the existence of child-care constraints on women's career advancement.

Table 4. **Child-care arrangement for youngest children of women in the National Longitudinal Survey, by marital status**

| Provider | Percent of children cared for | | | |
|---|---|---|---|---|
| | Youth Survey (Women ages 23–31)[1] | | Young Women Survey (Women ages 29–39)[2] | |
| | Married, spouse present | Other | Married, spouse present | Other |
| Father | 14.7 | 4.3 | 18.3 | 0.9 |
| Sibling | .8 | 1.6 | 8.2 | 10.7 |
| Other relative | 24.1 | 37.9 | 15.9 | 25.0 |
| Other person | 24.0 | 18.9 | 24.3 | 23.3 |
| Child-care center | 17.2 | 20.1 | 11.8 | 7.0 |
| Mother cares for child at work | 3.4 | 2.3 | 4.6 | 3.2 |
| Child cares for self | 1.3 | 3.1 | 21.3 | 35.2 |
| Other | 14.3 | 11.8 | 13.6 | 6.9 |

[1] Data are from the 1988 National Longitudinal Survey of Youth.

[2] Data are from the 1983 National Longitudinal Survey of Young Women. In the survey, respondents were allowed to choose from more than one type of arrangement. Thus, percentages total more than 100 percent.

Table 5. **Weekly and hourly expenditures on child care and the number of hours per week used by women in the National Longitudinal Survey who use paid child care**

| Provider | Youth Survey (Women ages 23–31)[1] | | | Young Women Survey (Women ages 29–39)[2] | | |
|---|---|---|---|---|---|---|
| | Average weekly expenditures (1988 dollars) | Average number of hours per week | Average hourly expenditures (1988 dollars) | Average weekly expenditures (1988 dollars) | Average number of hours per week | Average hourly expenditures (1988 dollars) |
| Total | 61.51 | 39.38 | 1.56 | 44.46 | 24.69 | 1.80 |
| Age of youngest child: | | | | | | |
| Birth to 1 year | 59.51 | 43.73 | 1.36 | 63.48 | 35.55 | 1.79 |
| 2–4 years | 71.46 | 40.19 | 1.78 | 52.59 | 34.28 | 1.53 |
| 5 years and over | 49.03 | 35.42 | 1.38 | 37.63 | 20.46 | 1.84 |
| Marital status: | | | | | | |
| Married, spouse present | 64.36 | 38.54 | 1.67 | 46.58 | 24.97 | 1.87 |
| Other | 55.11 | 41.03 | 1.34 | 36.61 | 23.79 | 1.54 |
| Net family income (in 1988 dollars): | | | | | | |
| $0–$14,999 | 44.11 | 39.69 | 1.11 | 32.84 | 23.05 | 1.42 |
| $15,000–$24,999 | 43.11 | 40.31 | 1.07 | 42.08 | 23.76 | 1.77 |
| $25,000–$49,999 | 66.12 | 38.17 | 1.73 | 44.28 | 24.38 | 1.82 |
| $50,000 and more | 83.99 | 44.06 | 1.91 | 53.33 | 28.33 | 1.88 |

[1] Data are from the 1988 National Longitudinal Survey of Youth.

[2] Data are from the 1983 National Longitudinal Survey of Young Women.

Because of this third possibility, it may be useful to examine the extent to which child-care responsibilities adversely affect the career progress of women. The Youth Survey asks a question dealing with whether a woman has left the labor force because of child-care problems.[18] (See table 6.)

The 1988 survey data indicate that 2.3 percent of all 23- to 31-year-old working mothers had some period within the past year when they were out of the labor force because of child-care problems. These employment gaps are more common for women with infants, who have a spouse present in the household, and whose family income is low. While 4.2 percent of women in families earning less than $15,000 had an employment gap within the past year that was attributed to child-care problems, only 0.3 percent of women in families with incomes of $50,000 or more had such a gap. Although employment gaps tend to lead to low income (as opposed to low income leading to employment gaps), these figures do suggest that young women lose employment because they cannot find satisfactory child care.

IN THIS ARTICLE, the National Longitudinal Surveys are used to examine child-care problems in the United States. The data indicate that children are cared for in three major types of arrangements: by relatives, by other persons, and in child-care centers. Among these, the most common form is care by relatives, with about 2 of every 5 children whose mother works receiving care in this way. Husbands are a frequent child-care provider for married women. Young and single women often use relatives to provide care, while older married women often use the child's siblings to provide care.

A factor related to the type of arrangement used is the age of the child. While care in child-care centers is infrequent among infants, it is relatively common among children 2 to 4 years old. Once a child reaches 6 years, child-care arrangements are less necessary, as most children attend school at this age.

Family income also is related to child-care arrangements. Relatively low-income families are more likely to depend on relatives outside the immediate family for care. High-income families are more likely to use child-care centers than are low-income families. Also high-income families are more likely to use private child-care centers while low-income families are more likely to use public centers.

Average weekly expenditures on child care range from about $45 for older mothers to almost $60 for younger mothers (in 1988 dollars). This amount varies widely with family income level, as higher-income families tend to spend more on child care than do lower-income families.

Finally, it is difficult to determine the extent to which child care affects the career advance-

Table 6. **Child-care related constraints on women's employment**

| Characteristics | Youth Survey: Mother (23–31) or spouse lost work within last 4 weeks because of child-care problems | Young Women Survey: Mother (29–39) lost work within last year because of child-care problems | Youth Survey: Mother (23–31) dropped out of labor force because of child-care problems |
|---|---|---|---|
| Total | 3.7 | 21.7 | 2.3 |
| Age of youngest child: | | | |
| Birth to 1 year | 5.3 | 18.4 | 3.0 |
| 2–4 years | 2.8 | 27.0 | 2.0 |
| 5 years and over | 3.4 | 20.4 | 2.0 |
| Marital status: | | | |
| Married, spouse present | 3.7 | 27.8 | 2.5 |
| Other | 3.6 | 18.1 | 1.9 |
| Net family income (in 1988 dollars): | | | |
| $0–$14,999 | 3.7 | 16.3 | 4.2 |
| $15,000–$24,999 | 3.4 | 18.6 | 2.6 |
| $25,000–$49,999 | 3.1 | 24.6 | 1.6 |
| $50,000 and more | 4.7 | 27.7 | .3 |

SOURCE: National Longitudinal Surveys of Youth and Young Women Cohorts.

ment of mothers. Evidence for women 29 to 39 years old suggests that those in high-income families are more likely to take time off from work to handle child-care problems. However, findings from the Youth Survey imply that women in low-income families are more likely to have gaps in employment because they cannot find adequate child-care arrangements. Further research into the relationship between employment and child-care problems would be helpful in understanding the child-care situation in the United States. □

## Footnotes

ACKNOWLEDGMENT: The authors would like to acknowledge the contributions of Karima Nagi and David Schaffner of the Center for Human Resource Research who created the tables used in this article.

[1] March 1990 Current Population Survey, unpublished tabulations (Bureau of Labor Statistics).

[2] These numbers are taken from the 1980 and 1990 *Statistical Abstract of the United States* (Bureau of the Census).

[3] U.S. Department of Labor, *Child-care: A Workforce Issue*, Report of the Secretary's Task Force, 1988.

[4] Signed into law in November 1990. The grant provides additional money to the States to increase the availability, improve the quality, and reduce child-care costs.

[5] See Marilyn Manser and others, "National Longitudinal Survey: development and uses," *Monthly Labor Review*, July 1990, pp. 32–37.

[6] The Young Women Survey was taken in 1968–73, 1975, 1977, 1978, 1980, 1982, 1983, 1985, 1987, and 1988.

[7] In all of the computations in this report, weights are used to adjust for the different sampling rates and nonresponse rates, so that the tabulations are representative of the age groups studied.

[8] This is somewhat confusing, because the cohorts are not mutually exclusive and women from the Young Women Survey are referred to here as "older." However, most of these women are older relative to the youth cohort.

[9] The 1988 Youth Survey contains information on the child-care arrangements for children other than the youngest in the household. Child-care arrangements for all children are similar to the arrangements for the youngest child alone among 23- to 31-year-old mothers.

[10] Because table 2 uses cross-sectional rather than time series data and because it may be true that women whose child is at least 5 years old are systematically different from those whose youngest child is less than age 5, care should be taken in interpreting this information. It should not be interpreted as how the child-care arrangements for a given child can be expected to change as he or she ages. Also, because the age of the child is not completely controlled for in this table, there is probably some bias in determining how the age of the mother affects caring for a child of a given age. The children of older women are more likely to be near the top of any age interval. This problem is the most severe for the interval of age 5 and older because there is no upper limit. Children of the younger women are likely to be 5 or 6 years old, while many of the older women's children are in their teens.

[11] All inferences drawn here are statistically significant. Standard errors are available from the authors upon request.

[12] See General Accounting Office, *Child-care: Employee Assistance for Private Sector and Federal Employers*, Report to Congressional Requesters, February 1986.

[13] A public/private distinction is not made in the Youth Survey.

[14] However, low income families actually spend a larger percentage of their income on child care than do wealthier families. Sandra Hofferth, in "Child-care in the U.S."

(Statement before the Select Committee on Children, Youth, and Families, July 1, 1987), finds that among families in which the youngest child is under age 5, those whose income level falls below the poverty level spend 22.6 percent on child-care, while those whose income level is above the poverty line have child-care expenditures that account for 8.8 percent of their income.

[15] In dual labor market theory, these jobs are referred to as secondary sector jobs, and once workers find themselves in such a job, they find it difficult to obtain a primary sector job. For a review of the dual labor market literature, see Glen Cain, "The Challenge of Segmented Labor Market Theory to Orthodox Economic Theory," *Journal of Economic Literature*, December 1976, pp. 1215–57.

[16] Research on this issue has shown that women do feel constrained in their employment prospects by child-care responsibilities. See Karen Mason, "The Perceived Impact of Child-care Costs on Women's Labor Supply and Fertility," conference paper presented at The Population Association of America, April 1987; Harriet Presser and Wendy Baldwin, "Child-care as a Constraint on Employment: Prevalence, Correlates, and Bearing on the Work and Family Nexus," *American Journal of Sociology*, Vol. 85, 1980, pp. 1202–13; and David Blau and Phil Robins, "Fertility, Employment, and Child-care Costs: A Dynamic Analysis," conference paper presented at The Population Association of America, April 1986.

17 The figures in table 6 reflect the judgment of the respondents as to what constitutes a "child-care problem" that is serious enough to prevent them from working.

18 For an analysis of the relationship between labor force nonparticipation and child-care problems, see Peter Cattan, "Child-care problems: an obstacle to work," pp. 3–9.

---

**More on wage rigidity**

Efficiency wage theory has been both severely criticized and staunchly defended in recent years. Most of the criticisms have been aimed at demonstrating that there are superior ways of handling the shirking problem that are more likely to emerge in a market setting. For example, it has been argued that each worker should be willing to post a bond that would be forfeited if he or she was detected shirking. All that would be needed to guarantee that the worker would not shirk would be a sufficiently high bond; unemployment would no longer be needed as a discipline device. Alternatively, the worker could pay an "entrance fee" when initially hired. Competition among workers for the jobs would then increase the fee until all involuntary unemployment disappeared. The fear of losing your job and having to pay another entrance fee would then be sufficient to keep workers from shirking.

— Carl Davidson
*Recent Developments in the Theory of Involuntary Unemployment*
(Kalamazoo, MI, W. E. Upjohn Institute for Employment Research, 1990), p. 134.

---