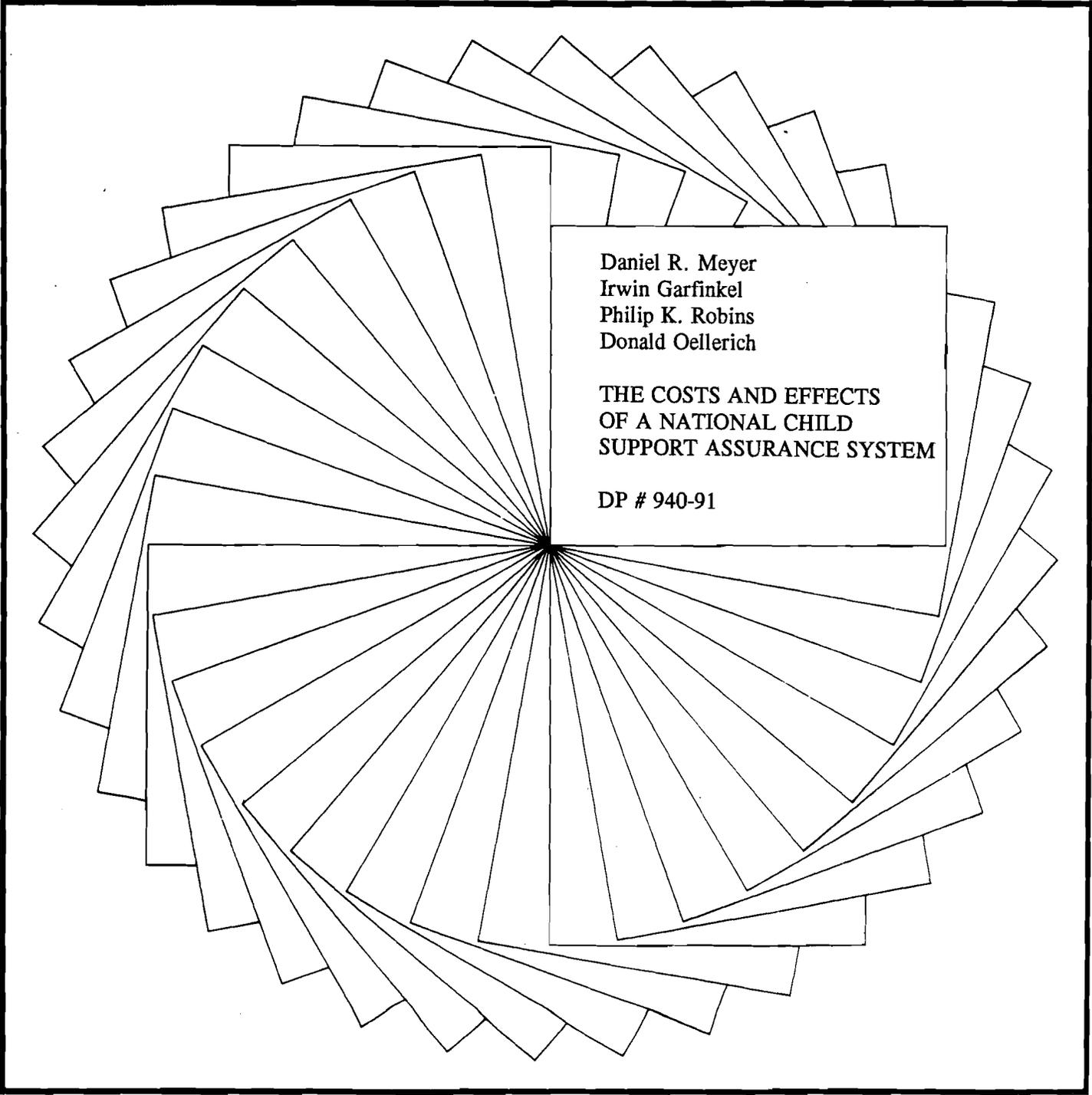




# Institute for Research on Poverty

## Discussion Papers



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THE COSTS AND EFFECTS  
OF A NATIONAL CHILD  
SUPPORT ASSURANCE SYSTEM

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NATIONAL CHILD SUPPORT ASSURANCE SYSTEM**

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## **Abstract**

In an attempt to reduce poverty among female-headed families, major policy changes have recently occurred that increase the amount of support noncustodial parents provide to their children. This paper summarizes the effects of some of these changes, and then uses microsimulation analysis to estimate the likely effects of a variation on the Child Support Assurance System (CSAS) proposed by Garfinkel and Melli as an alternative to the child support system currently used. Based on the philosophy that all parents are obligated to share their income with their children, the CSAS calls for a uniform percentage standard to establish the amount of child support awards, an immediate withholding of child support payments from the income of noncustodial parents, and an assured child support benefit paid to all eligible families. The authors find that by implementing the CSAS, much more private child support could be collected and the incomes of poor custodial parents could increase considerably. As a result, there would be a decrease in the number of custodial-parent families in poverty and in welfare use. Achieving this reduction in poverty and welfare use, however, is not estimated to cost a great deal and may not increase dependency on public transfers.

## **THE COSTS AND EFFECTS OF A NATIONAL CHILD SUPPORT ASSURANCE SYSTEM**

### **INTRODUCTION**

For a variety of reasons, concern about the well-being of single-parent families, particularly female-headed families, has grown substantially in the last ten years. First, the proportion of children living in female-headed families has dramatically increased.<sup>1</sup> Second, female-headed families are the poorest of all major demographic groups.<sup>2</sup> Third, there is growing evidence that the children of female-headed families are worse off on a number of factors than the children of two-parent families.<sup>3</sup>

The growth, poverty, and adverse impacts on children of female-headed families have all contributed to a renewed interest by public policymakers in developing ways of assisting this group. Both the welfare system and the system that determines and collects child support are being increasingly scrutinized to determine their impacts on female-headed families.

The major welfare program for single-parent families is the Aid to Families with Dependent Children (AFDC). This program has been criticized because it is often thought that it encourages women to become dependent on the government rather than assisting them in becoming self-sufficient (see Murray, 1984). Although ideas for reforming welfare continue to be proposed and sometimes implemented (most recently the 1988 Family Support Act), a new consensus seems to be emerging that policymakers must look for ways to improve the economic status of single mothers using means other than the present welfare system (see Garfinkel and McLanahan, 1986; Hopkins, 1987; or Ellwood, 1988).

In addition to recent welfare reform initiatives, a second area of government policy receiving attention is the attempt to reduce poverty among female-headed families by increasing the amount of child support they receive. Major policy changes have recently occurred that increase the amount of

support noncustodial parents provide to their children. This paper summarizes the effects of some of these recent changes and uses microsimulation analysis to estimate the likely effects of a national Child Support Assurance System (CSAS), a proposed alternative to the current child support system.

We begin by summarizing in Section I the current child support system; in Section II the features of the CSAS are reviewed; Section III describes the data and the microsimulation model; and Section IV outlines the estimated effects of the CSAS on child support collections, poverty, labor supply, AFDC reciprocity, and government costs.

## **I. THE CURRENT CHILD SUPPORT SYSTEM**

Under the current child support system, if the parents of a child do not live together, that child is potentially eligible to receive child support from the noncustodial parent. If the custodial parent wants support from the noncustodial parent and cannot obtain it using informal means, the custodial parent can seek the assistance of a family court. Until recently, the courts had total authority in deciding on a case-by-case basis whether support is to be paid, the amount of support, and the mechanisms to ensure payment; furthermore, states have traditionally established their own laws regulating the family; thus, the treatment of child support has varied a great deal not only from individual to individual, but also from state to state.

One of the reasons single-parent families have so much economic difficulty is that the existing child support system does not provide a great deal of economic support for custodial families. Many eligible families do not have child support awards: according to the 1988 Current Population Survey-Child Support Supplement (CPS-CSS), in 1987 only 51.3 percent of women eligible for child support had awards (U.S. Bureau of the Census, 1990). The percentage of women with child support awards varies dramatically by marital status: about 80 percent of women who are divorced or remarried have

a child support award, compared with only 55 percent who are separated and only 20 percent who have never been married. There are also major differences by race: 69 percent of eligible white women have awards but only 36 percent of eligible black women do. Women over 30 years of age, women with more education, and women with three or fewer children are most likely to have awards.<sup>4</sup>

The amount of child support awarded varies greatly, too. Table 1 shows that in 1987 over 49 percent of all women eligible for child support did not have an award, 9 percent had awards between \$1 and \$1200, and another 18 percent had awards between \$1200 and \$2400. Less than 24 percent of the women eligible for child support had awards greater than \$2400, and the figures for never-married or separated women and blacks were even lower. Child support awards declined between 1979 and 1985 in real terms for a variety of reasons: the failure to update awards to keep pace with inflation, the rising earnings of women relative to men, and the changing demographic composition of those with awards (i.e., more never-married and fewer divorced women now receive awards) (Robins, 1987; Robins, 1989; and Garfinkel, Oellerich, and Robins, 1990).

Women who have awards do not always receive what is due. The 1988 CPS-CSS reports that 24 percent who were supposed to receive child support in 1987 did not receive any, and another 25 percent received less than what was due. Only 51 percent of the women awarded support received the full amount due. And even these figures tend to overstate the help that child support provides, because the support that some women receive is sporadic, increasing their economic insecurity.

The current private child support system, then, can fail in providing adequate support to custodial families at three stages. First, a child support obligation (i.e., an award) may not be established. Second, the amount of the obligation may not be large enough to have a significant effect on economic well-being. Third, even for the families with an adequate award, the child support may not be collected.

TABLE 1

Child Support Awards in 1987  
to All Women Eligible for Child Support

	<u>Percentage of Cases with Annual Awards of:</u>			
	\$0	\$1-1200	\$1200-2400	\$2400+
All cases	49.5	9.5	17.5	23.6
By marital status				
Never-married	84.2	7.0	5.4	3.3
Remarried	31.3	10.8	26.7	31.2
Divorced	29.4	10.2	23.3	37.0
Separated	54.6	10.3	12.9	22.2
By race				
White	40.2	9.3	20.8	29.7
Black	71.3	10.1	9.8	8.8
Other	50.2	7.5	14.8	27.5

Source: 1988 Current Population Survey-Child Support Supplement (CPS-CSS).

Note: Rows may not add to 100.0 because of rounding.

As the problems of single-parent families have received increasing attention, legislation addressing each of these three stages of the child support process has been implemented.

The first significant national legislation attempting to increase the number of custodial families with awards was the establishment in 1975 of the Child Support Enforcement (CSE) Program, Part D of Title IV (IV-D) of the Social Security Act. The CSE legislation required each state to establish a program that would assist custodial parents in establishing paternity, locating absent parents, and establishing and enforcing child support awards. The 1984 Child Support Amendments went even further, requiring states to expedite the process of obtaining support orders. And in an attempt to increase the number of awards to never-married women, states were also required to extend the period during which paternity action could be initiated to a child's eighteenth birthday.

Laws governing the establishment of paternity have also changed in many states. Whereas courts used to admit evidence from blood tests in paternity cases only if the test indicated that the putative father could not possibly be the biological father, during the late 1970s and early 1980s most states directed courts to admit evidence from blood tests on the probability that the putative father could be the biological father. The 1988 Family Support Act contains several other provisions intended to improve the establishment of paternity and thus increase the number of custodial parents with awards.

Changes have also been implemented in the way award amounts are set. The 1984 Child Support Enforcement Amendments required states to develop guidelines for establishing child support awards; the Family Support Act goes even further, requiring that guidelines be presumptive (i.e., guidelines are to be followed unless a judge makes a written finding that they are inappropriate).

Legislation aimed at increasing collections has also been implemented. The Child Support Enforcement Amendments required states to withhold child support payments from the income of a noncustodial parent if he or she was delinquent in payment by one month or more. The Family

Support Act strengthens the withholding provision by requiring (by 1994) that income be automatically withheld in all new child support cases.

But establishing awards and enforcing collections are only part of a broadly defined child support system. Custodial parents without support or with inadequate support can seek public support for their children through AFDC. Early in the history of the AFDC program, some realized that many of the recipients of public support had absent parents who could have been able to provide support for their children. In 1950, Congress required state welfare agencies to notify law enforcement officials when a child receiving AFDC had been deserted or abandoned. Efforts to collect child support from the noncustodial parents of AFDC recipients increased dramatically with the 1975 Child Support Enforcement Program when, as a condition of their grant, AFDC recipients were required to cooperate with the IV-D agency as it attempted to locate absent parents, obtain (or increase) child support awards, and ensure that amounts due were collected. In 1984, an incentive for custodial parents to cooperate with the IV-D agency was provided: AFDC recipients were allowed to keep the first \$50 of monthly child support payments (the "disregard").

In summary, the child support system has historically been riddled with problems. In addition to not providing adequate economic support, it has been inequitable (women in similar circumstances are treated very differently) and expensive (a large number of parents have to be dealt with individually). Recent legislation attempts to redress some of these problems, but may not go far enough. In this paper, a variation on an alternative approach--a national Child Support Assurance System--is proposed, and its simulated effects on the economic well-being of custodial families are evaluated.

## II. THE PROPOSED CHILD SUPPORT ASSURANCE SYSTEM

As an alternative to the current system of child support, Garfinkel and Melli (1982) proposed a Child Support Assurance System (CSAS).

The CSAS has three major elements:

1. a uniform percentage standard for establishing child support obligations;
2. immediate withholding of the child support obligation from wages and other sources of income of the noncustodial parent; and
3. an assured or minimum-guaranteed child support benefit for each family.<sup>5</sup>

The CSAS is based on the philosophy that all parents--custodial and noncustodial--are obligated to share their income with their children. In a major shift from the approach under AFDC, the state would primarily enforce the responsibility of parents to provide for their own children, rather than provide an alternative means of support. The assured benefit serves as a backup for private support rather than as a substitute. In so doing, it is closer to social insurance than to welfare. The CSAS is also markedly different from AFDC in that under AFDC, income from sources other than AFDC is subjected to a high marginal tax rate (as legislated, 100 percent of unearned income is taxed, and 100 percent of all earnings after one year is taxed); the CSAS, in contrast, has a much lower marginal tax rate, and thus can be expected to encourage work.

The three elements of the CSAS could take a variety of forms. The particular CSAS that we test has the following features:

1. Child support awards are set using the Wisconsin percent-of-income standard: awards are based only on the number of children and on the income of the noncustodial parent. For one child, the award is 17 percent of the first \$75,000 of noncustodial income; for two children it is 25 percent, then 29 percent, 31 percent, and 34 percent for three, four, and five or more children, respectively. The award is issued as a percentage of income, rather than as a flat dollar amount, and thus changes automatically with changes in noncustodial income.

2. Three potential levels of assured benefits, with the first child entitling the custodial parent to either \$1000, \$2000, or \$3000 annually, are presented. In each plan the benefit increases by \$1000 for the second child, \$1000 for the third, \$500 for the fourth, and \$500 for the fifth child.<sup>6</sup>
3. The assured benefit is available only to those with child support awards.
4. The difference between the assured benefit and the amount of child support paid by the noncustodial parent is subject to federal income tax. All custodial parents with child support awards are eligible for the assured benefit, regardless of income.<sup>7</sup>
5. We assume that AFDC would tax the assured benefit at the rate of 100 percent. As a result, there would be no financial advantage to a custodial parent if he or she received both AFDC and the assured benefit.

Since Garfinkel and Melli proposed the CSAS, several of its elements have become law. The Family Support Act of 1988 requires a standard for determining obligations (although it does not require that the standard be based on a percentage of the noncustodial parent's income), and, beginning in 1994, requires immediate withholding of child support for all new cases. The assured benefit has not been implemented, although New York is currently field-testing a program similar to an assured benefit.

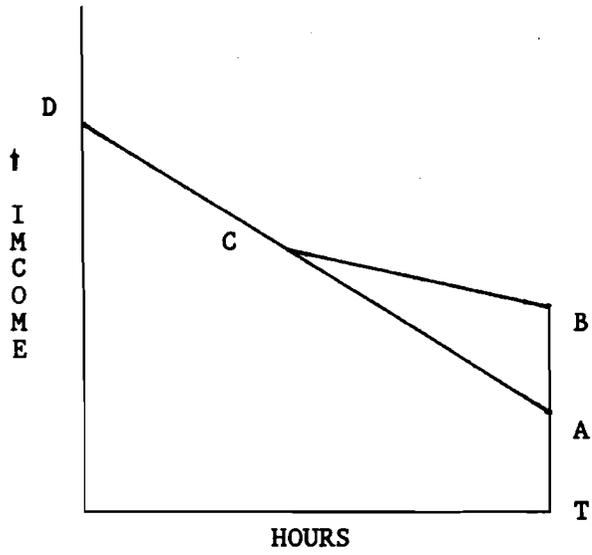
If fully implemented, the CSAS should have the following effects: the uniform standard should increase the dollar amounts of awards (Garfinkel, Oellerich, and Robins, 1990); immediate withholding should increase the percentage of awards collected (Garfinkel and Klawitter, 1989); and poverty among custodial-parent families should decrease through increased private child support and the assured benefit. The CSAS should also increase the number of families with child support awards, particularly if the assured benefit is available only to those with awards.

The CSAS should also decrease AFDC reciprocity. The traditional model of the welfare-reciprocity decision has come from economics and is an extension of the static theory of labor supply, which holds that individuals consider the amount of income and leisure they would receive from all possible hours of work and select the amount of work that maximizes their utility, given budget and time constraints. The welfare-reciprocity decision is typically seen as made by the individual

simultaneously with the labor supply decision. Single women with children are assumed to consider two potential alternatives, AFDC reciprocity and nonreciprocity, and then select the option that provides the highest utility. The model can become complex, particularly if women are assumed to consider discounted lifetime benefits under each option or to make decisions about marriage, fertility, welfare reciprocity, and labor force participation simultaneously. The complexity is further heightened by considering food stamps and Medicaid.

The static theory of labor supply also provides predictions about the effect of the CSAS on welfare reciprocity and on labor supply. In the absence of welfare, any increase in unearned income will decrease labor supply, partly because individuals could achieve the same total income as before while working fewer hours. Graham and Beller (1989) find that child support reduces the number of hours an individual works, but not by as much as other types of unearned income and not by as much as AFDC. So we would expect decreases in labor supply for nonrecipients of AFDC.

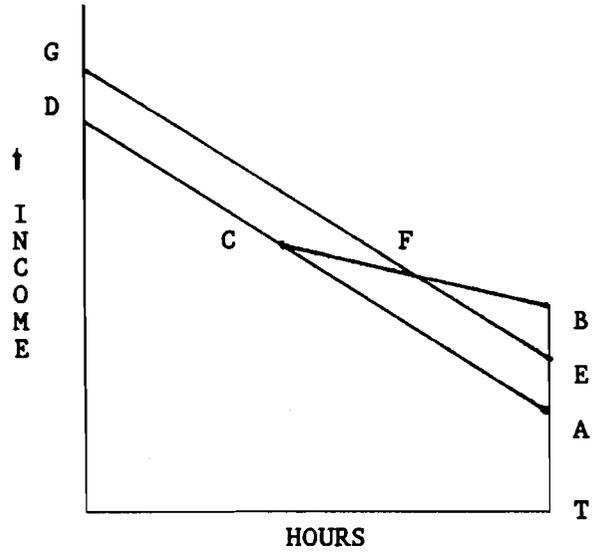
But how does an increase in child support affect the number of hours worked for AFDC recipients or the reciprocity decision itself? In Figure 1, the traditional representation of the AFDC reciprocity decision, the amount of income received if an individual is not receiving welfare and not working is TA, the amount of unearned, nonwelfare income. If this individual remains a nonrecipient and increases the number of hours she works (decreases leisure), she moves along line ACD, which has a slope equal to (the negative of) her net wage. The amount of income she would receive from welfare if she did not work is TB, and her net wage under welfare is the slope of the line BC. Point C is the breakeven point--the income at which she is no longer eligible for welfare.<sup>8</sup> Her indifference curves (reflecting her tastes) could be drawn, and the point of tangency would determine the number of hours she would work and whether she chooses AFDC reciprocity.<sup>9</sup>



Leisure →  
← Work

FIGURE 1

AFDC Budget Lines



Leisure →  
← Work

FIGURE 2

AFDC and CSAS  
Budget Lines

The assured benefit for this individual is graphed in Figure 2. The amount of the assured benefit (net of income taxes on the public portion of the assured benefit) for this woman is TE and is assumed to be less than the welfare guarantee (TB). Her net wage under the CSAS--the (negative of the) slope of line EFG--is the same as her net wage under no program and is substantially higher than her net wage under welfare. The woman graphed in Figure 2 is subject to the kinked budget line BFG. We assume she will choose either segment BF (and thus be an AFDC recipient) or segment FG (and thus be a CSAS recipient), because income would be lower on the other segments. Some women will not be eligible for the assured benefit (because they do not have a child support award) and others who are eligible will choose not to receive it (the amount of private child support will be greater than the assured benefit). Hence, there is no unambiguous prediction for the change in labor supply for women receiving AFDC; they could either decrease or make no change in their labor supply and remain on AFDC, or they could leave AFDC and increase their labor supply.

AFDC reciprocity could thus be decreased for four reasons. First, for some women, the combination of private child support and unearned income may provide more income than welfare, and thus they will choose to leave welfare. Second, the minimum benefit may be greater than the AFDC maximum in some states, and women residing in those states, if they have awards, will choose to leave AFDC, although they may not work. Third, the minimum benefit may provide enough support so that when it is combined with earnings, a woman is able to leave AFDC. The fourth possibility affects preferences rather than the budget constraint; there may eventually be a change in community values that has a feedback effect: dependence on child support rather than AFDC may become the norm for single parents, and this may further decrease welfare reciprocity (Garfinkel, Manski, and Michalopoulos, 1990).

Although the direction of most of the effects of the CSAS is clear (increased number of awards, increased award levels, increased collections, increased incomes for custodial families,

decreased welfare reciprocity, decreased labor supply for nonwelfare custodial families), their magnitude is not, nor are there any a priori predictions about overall labor supply or program costs.<sup>10</sup>

Some previous research has been completed on the possible effects of various versions of a CSAS. A simulation of the effects of a CSAS in Wisconsin found that if there is a "medium" increase in awards and collections, an assured benefit of \$3000 may save money (\$20 million) because increased collections from the noncustodial parents of AFDC recipients would offset part of the costs of AFDC (Garfinkel, Robins, Wong, and Meyer, 1990). Welfare reciprocity is predicted to decrease by 3 percent, the poverty gap for custodial families is predicted to decrease by 16 percent, and the labor supply of custodial families is predicted to decrease by 2 percent.<sup>11</sup> Larger effects on AFDC participation would result if a wage subsidy of \$1 an hour were added. These results, however, are for a CSAS that includes a surtax on the assured benefit to keep the costs low.

Lerman (1989) tests a simulation model that examines four different national child support systems: the Wisconsin CSAS with an assured benefit of \$3000 a year for the first child and a surtax on custodial-parent income; a lower assured benefit of \$1080 a year; a low assured benefit (\$1080) that is available to all custodial mothers, not just those with awards; and a low assured-benefit plan (\$1080) available to all that also includes a tax credit of \$1080 a year for a family of three that would replace the \$2000 personal exemption for children. He does not simulate increases in the percentage with awards or the percentage collected, and does not allow a labor supply response. He finds that the four plans are estimated to cost from \$1.1 billion (Wisconsin plan) to \$3.6 billion (low assured benefit available to all), to reduce the poverty gap by 2 percent to 45 percent (low assured benefit available to all with the change in the tax credit), and to reduce AFDC caseloads by about 4 percent (low benefit restricted to those with awards), 12 percent (Wisconsin plan), or 30 percent (low assured benefit with tax credit).

Although they do not simulate an assured benefit, Oellerich, Garfinkel, and Robins (1989) provide simulation estimates of the effects of the collection-side reforms of a national CSAS. They find that implementing the Wisconsin standard without changing award or collection rates would decrease AFDC caseloads by 2.5 percent to 2.7 percent, decrease the poverty gap by 7 percent, and increase custodial income by about 9 percent.

Robins (1986) also examined the effects of increased child support collections on AFDC participation and poverty and concluded that the full enforcement of child support obligations for all families would have little effect on AFDC participation and would decrease the poverty rate of custodial families by only 3 percentage points over the child support system that was in effect in 1981. The award levels used in the Robins analysis were those in effect prior to the 1984 Child Support Amendments.

These four simulation models provide some predictions about the effect of a national CSAS. In general, low decreases in AFDC participation would be expected unless the program is available to all custodial parents (regardless of whether they have an award) or unless significant increases can be made in award rates, award levels, and collection levels. A national CSAS could be expected to have a significant effect on the poverty gap because of sizeable increases in the incomes of custodial parents. Finally, a national CSAS may not cost a great deal if more child support can be collected from the absent parents of AFDC recipients.

The previous studies have several limitations. First, the Lerman (1989) analysis does not allow for a labor supply response, and we would expect some change in hours of work in response to increased child support or to an assured benefit. In addition, Lerman's model does not allow for increases in the percentage of custodial parents with awards nor for increases in award levels, both of which are likely results of some of the provisions of the Family Support Act. Second, the results for Wisconsin reported in Garfinkel, Robins, Wong, and Meyer (1990) cannot be generalized to the

effects of a national CSAS, primarily because Wisconsin has higher AFDC benefits, fewer minorities, and a higher rate of private child support collection than other states. Finally, some current proposals involve a non-income-tested assured benefit (no custodial surtax), and estimates for the results of this type of assured benefit are needed.

### **III. SIMULATING THE EFFECTS OF A NATIONAL CHILD SUPPORT ASSURANCE SYSTEM**

#### Data

To perform the microsimulation, a data source is needed that provides information on all those who will be eligible for the CSAS. The 1986 CPS-CSS, while not perfect,<sup>12</sup> is a national data set that provides the most complete and current information available on most of those eligible for the CSAS. It includes demographic information on custodial parents (age, race, education, etc.); their children (number, age of the youngest, etc.); income and labor force information (annual earnings, the amounts of welfare reported, the number of weeks worked in 1985, and the number of hours per week usually worked); and information on the existence and the amount of a child support award, and the amount paid. All women who are eligible for child support (including remarried women) are included, for a total of 3631 cases.<sup>13</sup>

#### Model

The simulation analysis requires estimating the amount of private child support each woman may receive, estimating the amount of AFDC received (since reciprocity is underreported),<sup>14</sup> and estimating a labor supply and welfare-reciprocity response to the CSAS.

Estimates of the amount of private child support each woman may receive depend on the existence of an award, the level of that award, and the percentage of the award collected. Because cases must have awards to receive the assured benefit, and because of legislation, already enacted, improving the establishment of paternity and making the having of an award more worthwhile, we estimate that the percentage of cases with awards will increase. To do this, we first divide every case into a portion that we assume has a child support award and a portion that does not, based on a logit equation. In the "medium improvement" scenario we present, we increase the probability of an award to half the distance between the current percentage and 100 percent.<sup>15</sup> (Appendix A shows the results of the equation that estimates the initial award status.)

To determine the level of an award, we assume that the Wisconsin standard is used, which is based on the number of children and the income of only the noncustodial parent. Unfortunately, the CPS-CSS does not report the incomes of noncustodial parents, so we use estimating procedures developed by Oellerich (1984). These procedures estimate the mean annual income of noncustodial parents as \$20,379 in 1985 dollars.<sup>16</sup> The income of the noncustodial parent and the number of children are then used to determine the award amount.

Given the existence and the amount of a child support award, the percentage collected must still be estimated. Again we estimate the current percentage collected for every case and increase this by various levels. Appendices B and C show the results of the equations that estimate the percentage collected and the current amount of child support received, respectively.

A second series of intermediate steps is required to estimate the amount of AFDC received, since AFDC is significantly underreported in the CPS-CSS. Our basic approach is to ignore the amount of AFDC reported and to use the maximum amount of AFDC available for each family (based on state of residence and family size) and an estimated tax rate on earnings (based on Fraker,

Moffitt, and Wolf, 1985)<sup>17</sup> to determine if each family is income-eligible.<sup>18</sup> An AFDC benefit is then imputed to each recipient based on the maximum and the estimated tax rate.<sup>19</sup>

This approach yields 2.7 million AFDC recipients and total AFDC payments of \$10.0 billion, figures somewhat lower than those given in the administrative records because all AFDC recipients are not in the CPS-CSS.<sup>20</sup>

The third part of the simulation model predicts welfare reciprocity and labor force behavior after the CSAS is implemented. The static theory of labor supply (outlined above) suggests that women choose the number of hours they will work and choose to receive AFDC, the assured benefit, or neither, based on the alternative that provides the highest utility. The labor supply response model used in this paper is based on the general theoretical approach developed by Burtless and Hausman (1978). It specifies a budget constraint, calculates utility on each segment of the budget constraint, and then assumes that custodial parents select the number of hours that provides the highest utility. The form of the utility function that we use to derive the estimates of the effects of the CSAS is the augmented Stone-Geary direct utility function used by Garfinkel, Robins, Wong, and Meyer (1990) and is given as follows:

$$U(C, H) = (1-\beta) \ln\left(\frac{C}{m} - \delta\right) + \beta \ln\left(\alpha - \frac{H}{r}\right)$$

where  $C$  = annual consumption of market goods,

$H$  = annual hours of work,

$\beta$  = marginal propensity to consume leisure ( $1 - \beta$  = marginal propensity to consume market goods),

$\delta$  = subsistence consumption,

$\alpha$  = total time available for work,

$m, r$  = indexes that normalize  $C$  and  $H$  in accordance with the size and composition of the household.

Directly estimating the parameters of this utility function is beyond the scope of the present paper. Therefore, we draw on results from the existing labor supply literature. For our baseline estimates of the effects of our proposed CSAS, we use the results obtained by Johnson and Pencavel (1984) in their analysis of the labor supply response to the Seattle and Denver Income Maintenance Experiments (SIME-DIME). In particular, we assume  $\beta = .128$ ,  $\delta = -2,776$ ,  $\alpha = 2,151$ ,  $m = 1 - .401 \ln(1 + K)$  (K being the number of children in the family under the age of 18), and  $r = 1 - .071P$  (P being 1 if there are preschool-age children in the family, 0 otherwise). Hence, the total income elasticity estimated in the Johnson-Pencavel study is  $-.128$  and the uncompensated wage elasticity is  $.303 - .128(n + 2,776m)/wH = .303$ , evaluated at the means of our analysis sample. Because these parameter estimates are based on one particular study, we later discuss the sensitivity of our results to alternative parameter values.<sup>21</sup>

The utility function above is used to estimate the effects of the CSAS. Using existing data, a family's preprogram labor supply, welfare position, an error term that could represent taste for work,<sup>22</sup> a net wage, and an amount of unearned income on each budget segment are defined. Appendix D shows the results of the equation estimates of the gross wages for nonworking women, based on background characteristics. Net wages are determined by adjusting gross wages for income taxes, payroll taxes, and implicit taxes on earnings for AFDC recipients.<sup>23</sup>

Given current net wages and unearned income and predictions for changes in unearned income, we can estimate optimal hours and utility on each budget segment. The segment with the highest utility level then determines the woman's postprogram labor supply and program participation status.

In summary, the model simulates the amount of child support women would receive and their program participation and labor supply responses to the implementation of the CSAS. By aggregating these individual responses, we can estimate the total costs, decreases in AFDC reciprocity, effects on

poverty and income, and effects on labor supply. By varying our assumptions, we can determine the robustness of our estimates.

Although the simulation provides some interesting information about the magnitude of some of the costs and benefits of our CSAS, a few words of caution are in order. To conduct the simulations, a number of simplifications have been made. First, food stamps and Medicaid are ignored, which leads to an overestimate of the number of women who will leave AFDC; on the other hand, the Earned Income Tax Credit is also ignored, which leads to an underestimate of the number of women who would leave AFDC. Other simplifications include not accounting for state income taxes, assuming constant marginal taxes, treating what we believe are part-year AFDC recipients in a conservative manner, and ignoring administrative costs. In addition, potential "macro" or "community" effects of changing norms are ignored. We have also ignored the effects of the CSAS on noncustodial parents: if they change their labor supply, this would affect tax revenues and total program costs. Finally, we have not accounted for the absence of custodial fathers in the CPS-CSS, a group that may receive a substantial portion of assured benefit funds.<sup>24</sup>

#### **IV. RESULTS AND DISCUSSION**

The simulation provides estimates of the effects of our proposed CSAS on child support collections, the incomes of custodial parents, labor supply, AFDC reciprocity, and costs. We discuss each of these effects in turn.

We examine four different scenarios: (1) the current child support situation; (2) a scenario in which there is no improvement in the percentage of cases with awards or the percentage collected, but all awards are set according to the Wisconsin standard; (3) a "medium improvement" scenario, in which awards are set according to the Wisconsin standard and award and collection rates are

increased by half the distance between the current percentage and 100 percent; and (4) a scenario in which all cases are given awards, all awards are set according to the Wisconsin standard, and all award amounts are collected. We believe some increases in awards and collections will occur because the provisions of the 1984 Child Support Amendments and the 1988 Family Support Act are intended to generate increases in child support obligations and improvements in collections. The second scenario, where all awards are based on the Wisconsin standard, could be implemented for new CSAS cases if updated awards were made a condition of eligibility, and if mechanisms recently implemented to update awards are effective. The medium improvement can be interpreted as a level of improvement that could be expected in perhaps 15 to 20 years. The perfect system is the upper bound and would not be achieved even in the long run.

### Child Support Collections

Table 2 shows the estimated amount of private child support collected under the four scenarios. Under the current system, \$6.9 billion is paid, \$6.1 billion to parents not receiving AFDC and \$840 million to parents receiving AFDC. Of this \$840 million, \$475 million passes through to the recipients as a result of the \$50 a month disregard; the remainder goes to offset AFDC costs. The bottom row shows that \$28.0 billion--a threefold increase over the current system--would be collected in a "perfect" system in which all women had awards that were based on the Wisconsin standard and the full amount was collected.

Rows 2 and 3 show differing levels of improvement. The second row shows that implementing the Wisconsin standard only (i.e., the same number of cases have awards and the same percentage of what is due is collected) would increase collections from \$6.9 billion to \$10.6 billion (an increase of 54 percent), an estimate very close to that reported in Garfinkel, Oellerich, and Robins (1990). We do not know the level of improvement that could be expected in the future, so the

TABLE 2

## Summary of Private Child Support Collections

Scenario	Child Support Collected from the Noncustodial Parents of Those Originally Receiving AFDC	Child Support Collected from the Noncustodial Parents of Those Not Receiving AFDC	Total Child Support Collected
(1) Current child support system	\$0.840	\$6.055	\$6.895
(2) Percentage standard	1.134 (35.0%)	9.454 (56.1%)	10.588 (53.6%)
(3) Medium improvement in awards and collections	2.952 (251.4%)	15.208 (151.2%)	18.160 (163.4%)
(4) Perfect awards and collections	5.597 (566.3%)	22.396 (270.0%)	27.993 (306.0%)

Source: Microsimulation results based on the 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

Notes: All figures are in billions of dollars. Parentheses show percentage increase over current. Of the \$840 million originally collected from the partners of women receiving AFDC, \$475 million went to AFDC families through the \$50 a month disregard; the remainder went to offset AFDC costs.

third row shows results that may be possible (total collections of \$18.2 billion), calculated by giving each custodial family an award amount consistent with the Wisconsin standard and then increasing the likelihood of awards and the percentage collected by half the distance from the current situation to a "perfect" scenario.

The simulation results indicate that there is a significant potential for increasing the amount collected from the noncustodial parents of both AFDC and non-AFDC families. According to our estimates, we currently collect only 15 percent of the potential for AFDC families, compared with 27 percent of the potential for non-AFDC families.

#### Effects on Poverty and Income

Table 3 shows the effects of the CSAS on poverty and the income of custodial families. As expected, increasing the amount of the assured benefit or increasing the amount of private child support decreases the poverty gap for custodial-parent families. An assured benefit of \$3000 and medium improvements in awards and collections have a significant effect on the poverty gap for custodial-parent families, decreasing it by 24 percent. A perfect system would do much better, decreasing the poverty gap by 39 percent, but a significant amount of poverty would still remain, in part reflecting the low AFDC benefit levels in many states and the lack of earning power of many noncustodial parents. The poverty gap decreases at a faster rate than the percentage of people in poverty, suggesting that although child support can increase the incomes of the poorest custodial parents, it does not increase them by enough to lift the parents out of poverty. Although child support can improve the economic well-being of custodial families, even if the system was "perfect" it would lift only 20 percent of poor custodial families out of poverty.

TABLE 3

Effects of the CSAS on Poverty and Income  
of Custodial Families under Four Scenarios

Scenario	Current Poverty Gap (\$Billions)	Millions of People in Poverty	Average Family Income (\$Thousands)	Average Dependency Percentage <sup>a</sup>
Scenario	Percentage Decrease in Poverty Gap	Percentage Decrease in Number in Poverty	After CSAS Average Income (\$Thousands)	After CSAS Average Dependency Percentage
Current child support system	11.5	10.3	19.3	23.3
(1) Current child support system				
Assured benefit \$0	0	0	19.3	24.1
Assured benefit \$1000	2	1	19.3	24.4
Assured benefit \$2000	5	3	19.5	25.1
Assured benefit \$3000	9	6	19.8	26.4
(2) Percentage standard implemented				
Assured benefit \$0	2	2	19.6	23.9
Assured benefit \$1000	3	2	19.7	23.9
Assured benefit \$2000	5	4	19.8	24.1
Assured benefit \$3000	9	6	20.0	24.9
(3) Medium improvements in awards and collections				
Assured benefit \$0	12	7	20.4	22.2
Assured benefit \$1000	13	8	20.4	22.1
Assured benefit \$2000	17	9	20.5	22.1
Assured benefit \$3000	24	13	20.7	22.3
(4) Perfect awards and collections				
Assured benefit \$0	24	13	21.3	19.9
Assured benefit \$1000	25	14	21.3	19.8
Assured benefit \$2000	30	16	21.4	19.5
Assured benefit \$3000	39	20	21.7	19.0

Source: Microsimulation results based on the 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

<sup>a</sup> "Average Dependency Percentage" is the average percentage of income that comes from either the public portion of AFDC benefits or the public portion of the assured benefit.

Average incomes under the CSAS increase slightly. Although many middle- and upper income women decrease earnings when they receive increased child support, this is more than offset by increased child support, the assured benefit, and poorer women who increase earnings. The final column shows the "dependency percentage"--the average percentage of income that comes from either the publicly financed portion of AFDC or the publicly financed part of the assured benefit. While there are a few cases where dependency actually decreases as the assured benefit level increases, there is, for the most part, little change in the dependency percentages. This column demonstrates that the CSAS is not likely to bring about dramatic increases in dependency, as might have been feared.

#### Effects on Labor Supply

Table 4 shows the labor supply responses of custodial families to the introduction of the CSAS. Increased child support decreases the hours worked of AFDC nonrecipients, but not by a large amount (only 6 percent even under a perfect scenario). The CSAS increases the hours worked of AFDC recipients because some women combine child support (or the assured benefit) with increased earnings to leave AFDC. Although the average number of additional hours AFDC mothers work is fairly small, it is substantial in percentage terms: under medium improvements, a benefit of \$3000 increases average hours by 50 percent. For custodial parents as a group, there is very little aggregate labor supply response, ranging from a decrease of 3 percent to an increase of 2 percent, depending on the assumptions about awards and collections.

#### Effects on AFDC Reciprocity

Table 5 shows the effects of the CSAS on the AFDC participation-decision. The first column shows the percentage of AFDC cases with child support awards (currently estimated to be

TABLE 4

**Labor Supply Response of Custodial Families  
to the CSAS under Four Scenarios**

Scenario	<u>Original AFDC Families</u>		<u>Original Non-AFDC Families</u>		<u>All Custodial Families</u>	
	Predicted Hours	Percentage Change	Predicted Hours	Percentage Change	Predicted Hours	Percentage Change
(1) Current child support system						
Assured benefit \$0	317	0	1534	0	1121	0
Assured benefit \$1000	328	4	1532	0	1124	0
Assured benefit \$2000	361	14	1525	-1	1130	1
Assured benefit \$3000	392	24	1515	-1	1134	1
(2) Percentage standard implemented						
Assured benefit \$0	324	2	1518	-1	1113	-1
Assured benefit \$1000	335	6	1518	-1	1117	0
Assured benefit \$2000	364	15	1516	-1	1125	0
Assured benefit \$3000	395	25	1508	-2	1130	1
(3) Medium improvement in awards and collections						
Assured benefit \$0	324	10	1488	-3	1101	-2
Assured benefit \$1000	335	14	1487	-3	1105	-1
Assured benefit \$2000	364	28	1485	-3	1119	0
Assured benefit \$3000	395	50	1479	-4	1138	2
(4) Perfect awards and collections						
Assured benefit \$0	384	21	1452	-5	1090	-3
Assured benefit \$1000	391	24	1452	-5	1092	-3
Assured benefit \$2000	446	41	1450	-6	1110	-1
Assured benefit \$3000	549	74	1445	-6	1141	2

Source: Microsimulation results based on the 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

TABLE 5

Effects of the CSAS on the AFDC  
Participation-Decision under Four Scenarios

Scenario	Percentage with Awards (1)	Percentage of Cases with Awards			Percentage of All Leaving AFDC (6)
		Still on AFDC (2)	Exit Due to Private Chld Supt (3)	Exit Due to Assured Benefit (4)	
(1) Current child support system	31				
Assured benefit \$0		99	0	0	0
Assured benefit \$1000		92	0	2	3
Assured benefit \$2000		75	0	9	8
Assured benefit \$3000		57	0	23	13
(2) Percentage standard implemented	31				
Assured benefit \$0		93	2	0	2
Assured benefit \$1000		88	2	1	4
Assured benefit \$2000		73	2	8	9
Assured benefit \$3000		53	2	23	14
(3) Medium improvements in awards and collections	66				
Assured benefit \$0		87	4	0	9
Assured benefit \$1000		82	4	2	12
Assured benefit \$2000		70	4	8	20
Assured benefit \$3000		52	4	22	32
(4) Perfect awards and collections	100				
Assured benefit \$0		81	7	0	19
Assured benefit \$1000		78	7	2	22
Assured benefit \$2000		67	7	8	33
Assured benefit \$3000		50	7	21	50

Source: Microsimulation results based on the 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

Notes: Total AFDC families: 2.7 million. Column 6 = column 1 \* (100 - column 2), but because of rounding may differ slightly.

31 percent). Columns 2 through 5 show the distribution of these cases after the introduction of the CSAS. Families that continue to receive AFDC are shown in column 2; families that exit are shown in columns 3 through 5. We assign a reason for an AFDC exit through a hierarchical system: first we check if the amount of private child support (plus the current amount of unearned income) is greater than the AFDC maximum (column 3); then we check if the amount of the assured benefit (plus the current amount of unearned income) is greater than the AFDC maximum (column 4). All remaining exits are labeled as leaving through earnings (column 5).<sup>25</sup>

Panel 1 shows results if the CSAS is implemented without any changes in private child support. The largest assured benefit enables 43 percent of those with awards (13 percent of the entire caseload) to leave AFDC; slightly more leave because the assured benefit is greater than AFDC than because earnings increase. If we could achieve perfect awards and collections (panel 4), the highest assured benefit would induce 50 percent of the caseload to exit. Medium improvements in awards and collections (panel 3) combined with the highest assured benefit have a significant effect on caseloads, enabling 32 percent of families to exit.

Column 3 shows that increased child support alone does not have a large effect on AFDC caseloads: even under the perfect scenario, only 7 percent of AFDC cases leave because the amount of private child support is greater than that of AFDC. The assured benefit has a much larger effect (column 4), enabling between 21 and 23 percent of those with awards to exit under the highest assured benefit in any scenario. These two effects occur even if there is no change in labor supply. Women with awards who are allowed to exit owing to increased earnings (column 5) constitute up to 22 percent of those who are predicted to exit AFDC.

As expected, the number of cases leaving AFDC increases when awards and collections increase. With an assured benefit of \$3000, exits are predicted to increase from 13 percent to 50 percent if the child support system moves from its current status to perfect awards and collections.

This table indicates that increasing the number of families with child support awards is much more important than increasing the percentage collected in enabling women to exit from AFDC. Because columns 2 through 5 are based only on families with child support awards, moving down the panels shows the effects of increasing collections. If there is a \$3000 assured benefit, and private child support collections go from the current system to "perfect," the percentage of those with awards who stay on AFDC decreases only from 57 percent to 50 percent. Thus, increasing the percentage collected has only a small effect on AFDC use.

#### Costs and Components of Costs

Table 6 reveals that estimates of the costs of the CSAS are very sensitive to assumptions about the rate of improvements in awards and collections. If an assured benefit of \$3000 was instituted without any improvements in awards or collections, we estimate a cost of \$4.2 billion; if the private child support system worked perfectly, the same assured benefit would actually save \$0.7 billion. The medium improvement scenario shows that an assured benefit could be instituted that would cost very little: an assured benefit of \$2000, for example, is predicted to save \$0.5 billion.

Columns 2 through 8 show the components of cost: column 2 is the amount of public support for the assured benefits; column 3 shows the change in federal income tax revenue if the difference between the amount of the assured benefit and the amount of private child support collected was taxable; column 4 shows decreases in federal income taxes collected when high-income custodial parents work less; column 5 shows the amount of AFDC savings that results from increased collections from the noncustodial parents of those who remain on AFDC; and columns 6 through 8 show the amount of AFDC savings for those who exit AFDC. The total dollar amount of the assured benefit program (column 2) increases as the assured benefit increases. But, as one sees moving down the panels, the total dollar amount decreases or stays fairly constant when private child support is

TABLE 6  
Components of Costs  
of the CSAS under Four Scenarios

Scenario	Net Cost (1)	Public Sup. for Assured Benefits (2)	Income Taxes on Assured Benefits (3)	Other Tax Revenue Changes (4)	Amount of AFDC Savings from Parents			
					Still on AFDC (5)	Exiting Due to Increased Child Sup (6)	Exiting Due to Assured Benefits (7)	Exiting Due to Increased Earnings (8)
(1) Current child support system								
Assured benefit \$0	0	0	0	0	0	0	0	0
Assured benefit \$1000	448	625	83	-6	0	0	16	84
Assured benefit \$2000	1759	2480	371	-31	0	0	93	288
Assured benefit \$3000	4239	5891	955	-79	0	0	307	469
(2) Percentage standard implemented								
Assured benefit \$0	-144	0	0	-135	229	4	0	46
Assured benefit \$1000	-47	197	18	-136	215	4	14	129
Assured benefit \$2000	552	1115	128	-144	188	4	92	295
Assured benefit \$3000	2166	3440	462	-170	149	4	308	521
(3) Medium improvements in awards and collections								
Assured benefit \$0	-1156	0	0	-335	1170	64	0	257
Assured benefit \$1000	-1043	228	17	-336	1125	64	50	351
Assured benefit \$2000	-519	1193	91	-337	994	64	241	659
Assured benefit \$3000	920	3600	304	-351	786	64	726	1151
(4) Perfect awards and collections								
Assured benefit \$0	-2775	0	0	-575	2521	225	0	604
Assured benefit \$1000	-2667	199	13	-576	2460	225	78	666
Assured benefit \$2000	-2157	1210	82	-576	2238	225	377	1021
Assured benefit \$3000	-749	3737	244	-588	1782	229	1102	1717

Source: Microsimulation results based on the 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

Notes: All figures in millions of dollars. Net cost (1) = (2) - (3) - (4) - (5) - (6) - (7) - (8).

increased, since increased private child support decreases the need for the assured benefit. A major component of savings is the increased collection of child support from those who remain on AFDC (column 5); in fact, for an assured benefit of \$0 in the medium improvements scenario, the increased collection of child support from those who remain on AFDC is the largest component of savings. Table 2 showed that there is great potential in increased collections from the noncustodial parents of AFDC recipients; in Table 6 these increased collections are translated into savings because collections offset AFDC costs on a dollar-for-dollar basis after the first \$50 collected each month. The effect on federal tax revenues is a combination of columns 3 (increases due to taxing the publicly supported part of the assured benefit) and 4 (decreases, because increased child support to upper-income women decreases their labor supply and thus decreases their tax liability which outweighs any increased taxes paid from those women earning more).

#### Sensitivity to Assumptions about Labor Supply

The Johnson-Pencavel labor supply elasticities we use in this paper (see p. 17) are well within the range estimated in the literature (Killingsworth, 1983, or Burtless, 1986). The effect of including a labor supply response can be seen from some of the earlier tables. In Table 5, the labor supply response is highlighted in column 5 (those who leave AFDC through increased earnings). This column shows that if there is an assured benefit of \$3000, a labor supply response causes about an additional 20 percent of the caseload with awards to leave AFDC. Table 6 also provides information about costs in the absence of a labor supply response (seen by deleting columns 4 and 8). Under the medium scenario, incorporating a labor supply response actually increases costs if there is no assured benefit, since the decreased tax revenues that result from the decreased hours of high-income women more than offset the reduced AFDC expenditures from recipients who exit via earnings. For higher levels of the assured benefit, labor supply changes generate decreased costs. Thus, if we do not

include a labor supply response, we estimate fewer women leaving AFDC, but we do not show large differences in costs.

Table 7 shows baseline estimates of the effects of the CSAS if labor supply elasticities different from those of Johnson and Pencavel are used. Recall that Johnson and Pencavel's estimates assume a total income elasticity of  $-.128$  and an uncompensated wage elasticity of  $.303$ . Results if these elasticities were  $-.5$  and  $.5$ , respectively, are shown in the second panel; both show similar results for AFDC decreases and poverty gap decreases. The third column shows that because there is a stronger income effect, non-AFDC women show a larger decrease in their hours worked. These decreased hours directly translate into decreased tax revenues, which could increase the cost of the CSAS by about \$1.0 billion.

## CONCLUSIONS

The simulation results presented in this paper suggest that a Child Support Assurance System (CSAS) could significantly increase child support collections and the incomes of poor custodial parents. The labor supply of custodial parents would not change much, but AFDC women would dramatically increase their hours of work, and many of them would leave AFDC. Achieving such a major reduction in poverty and welfare reciprocity, however, is not estimated to cost a great deal; in fact, if collections increase enough, the CSAS may actually save money.

Surprisingly, if we achieve a "medium" level of improvements in awards and collections, then a reduction in the poverty gap, the number of families in poverty, and welfare use will occur without any perceivable change in the dependency on public transfers. A national CSAS may therefore be a desirable income security policy, providing significant benefits for a very poor group without costing much in public dollars or increased dependency.

TABLE 7

Comparative Results Using Johnson-Pencavel Labor Supply Elasticities  
and Higher Elasticities under One Scenario

	Percentage Change in Number of AFDC Cases	Percentage Decrease in Poverty Gap	Percentage Change in Labor Supply (All Families)	Net Cost (\$Millions)
<u>Johnson-Pencavel elasticities</u>				
Medium improvements in awards and collections				
Assured benefit \$0	9	12	-2	-1156
Assured benefit \$1000	12	13	-1	-1043
Assured benefit \$2000	20	17	0	-520
Assured benefit \$3000	32	24	2	919
<u>Higher elasticities</u>				
Medium improvement in awards and collections				
Assured benefit \$0	9	11	-9	-96
Assured benefit \$1000	12	12	-9	10
Assured benefit \$2000	19	15	-8	588
Assured benefit \$3000	29	21	-7	2093

Source: Microsimulation results based on the 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

## APPENDIX A

Equation Estimates of the  
Probability of Having a Child Support Award

	Black	Hispanic	White
Intercept	-0.515	-0.490	0.315
Noncustodial income (\$1000s)	0.041*	0.049*	0.032**
Separated	-1.256**	-1.705**	-0.999**
Never-married	-1.723**	-2.051**	-2.212**
Northeast	-0.338	-0.249	-0.115
South	0.446	0.034	-0.231
West	0.507	0.429	0.023
N	830	301	2500
Log likelihood	-446.63	-150.96	-1418.7
Percentage with awards	29	36	63

Source: 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

Notes: "Black" refers to non-Hispanic blacks, "white" to non-Hispanic whites and non-Hispanic others. These results are from a maximum-likelihood logit estimation. The dependent variable is one if a positive amount of child support was due in 1985, and zero otherwise.

\*\* Significant at the .01 level.

\* Significant at the .05 level.

## APPENDIX B

Equation Estimates of the  
Percentage of the Obligation Collected

	Black	Hispanic	White
Intercept	0.268	0.601**	0.289**
Noncustodial income (\$1000s)	0.007	0.001	0.011**
Separated	0.026	0.137	0.161**
Never-married	0.095	0.389*	0.057
Northeast	0.264*	-0.088	0.101**
South	0.114	-0.085	0.027
West	-0.022	-0.247	-0.059*
N	238	108	1542
R-squared	0.01	0.07	0.06
Mean percentage collected	0.527	0.531	0.622

Source: 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

Notes: "Black" refers to non-Hispanic blacks, "white" to non-Hispanic whites and non-Hispanic others. These results are from an ordinary least squares estimation on all cases with awards. The dependent variable is "Child Support Received in 1985" divided by "Child Support Due in 1985."

\*\* Significant at the .01 level.

\* Significant at the .05 level.

## APPENDIX C

Equation Estimates of the  
Amount of Child Support Currently Received

	Black	Hispanic	White
Intercept	73.310	313.825	-337.532**
Noncustodial income (\$1000s)	63.379*	72.488*	82.597**
Separated	303.750	1250.740*	336.152**
Never-married	10.647	499.555	466.044
Northeast	705.084	-372.911	270.611**
South	257.513	-792.917	13.688
West	-197.922	-607.697	-106.536*
N	237	109	1545
R-squared	0.08	0.10	0.10
Mean amount received	1384	1196	1758

Source: 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

Notes: "Black" refers to non-Hispanic blacks, "white" to non-Hispanic whites and non-Hispanic others. These results are from an ordinary least squares equation on all cases with awards. The dependent variable is "Child Support Received in 1985."

\*\* Significant at the .01 level.

\* Significant at the .05 level.

## APPENDIX D

Equation Estimates  
of Gross Wages for Nonworking Women

	Logwage Equation			Participation Equation		
	Black	Hispanic	White	Black	Hispanic	White
INTERCEPT	0.4683	-0.9083	-0.4111	1.3389	-0.9248	0.9597
SEP	-0.1057	-	0.0804	-0.0599	-	0.0367
DIV	0.1098	-	0.1712 **	0.3438	-	0.1808*
DIVSEP	-	-0.0132	-	-	0.4351	-
NVMD	-0.2462*	-0.0822	-0.0994	-0.2618	-0.2664	-0.2021
AGE	0.0219	0.0848	0.0432	-0.1115*	0.0634	-0.0364
AGE*AGE	-0.0004	-0.0010	-0.0012**	0.0007	-0.0019	-0.0003
NO H.S.	0.0622	-0.5325	-0.3725*	0.0379	-0.1144	-0.3631*
SOME H.S.	-0.0554	-0.0090	-0.3583**	-0.0157	-0.1656	-0.3476**
SOME COLL+	0.2578**	0.1931	-0.0333	0.1527	-0.0531	-0.0700
AGE*ED	0.0021	0.0008	0.0041 **	0.0055**	0.0038*	0.0034**
NO CENTRAL	-0.2193*	0.3532	-0.0879	-0.2022	0.5273	0.0606
SOUTH	-0.2379*	0.4071	0.0728	0.2621	1.1250**	0.2370*
WEST	-0.0706	0.4689	0.0000	0.2391	0.8276**	0.1160
SMSA	0.0958	0.2774	0.1980**	0.0739	-0.0031	0.0304
CENTCITY	-0.0674	0.0207	-0.0656	-0.1738	-	-0.0926
N KIDS LT 6	-0.0845	0.1784	-0.2149**	-0.2782**	-0.6188**	-0.2943**
PRICO	-	-0.0885	-	-	-0.8167	-
MEX	-	-0.1972	-	-	-0.4143	-
OTHER INCOME	-	-	-	0.0007	-0.0039	-0.0071**
RHO	-	-	0.9000	-	-	-
LAMBDA	0.5438	0.4679	-	-	-	-
N (total)	802	291	2463	-	-	-
N (with wages)	510	155	1920	-	-	-
Log likelihood	-	-	-3371.1	-456.02	-139.73	-
R-squared	0.28	0.19	-	-	-	-
Mean log wage	1.6431	1.6783	1.7693	-	-	-

Source: 1986 Current Population Survey-Child Support Supplement (CPS-CSS).

Notes: Log wages for blacks and Hispanics estimated with Heckman correction for sample selection bias; log wages for whites estimated with maximum-likelihood procedures allowing for sample selection bias.

**Notes**

1. Whereas only one out of twelve American children lived in a female-headed family in 1960, by 1983 the ratio had risen to more than one in five, and recent estimates are that over one-half of all children born today will spend some time in a female-headed family (Garfinkel and McLanahan, 1986).
2. Over 40 percent of all women heading families with children are poor, and nearly 60 percent of all children in female-headed families are poor, even after considering welfare income (Garfinkel and McLanahan, 1986).
3. Children of female-headed families are less likely to graduate from high school (Featherman and Hauser, 1978), are likely to earn lower wages (Hill et al., 1985), and are more likely to receive welfare and to form one-parent families themselves (McLanahan, 1988).
4. These figures are based on responses to the following question: "Were child support payments agreed to or awarded?" The survey also asks: "During calendar year 1987, were you or your child(ren) supposed to receive any child support payments?" Some women answered "yes" to the first question but "no" to the second; for the simulation analysis in this paper, we use responses to the second question to define women with awards.
5. A proposal in Wisconsin included a fourth element, a wage subsidy (see Garfinkel, Robins, Wong, and Meyer, 1990).
6. The assured benefit in the \$1000 plan does not exceed the AFDC maximum benefit for one child in any state; for two through five children, however, AFDC maximums are less than the assured benefit in two through nine states, depending on family size. The highest guarantee is greater than AFDC benefits in 21 to 26 states, depending on family size. When AFDC is less than the assured benefit, a family is assumed to participate in AFDC only if there is not a child support award.
7. The proposed Wisconsin assured benefit was available only for those with incomes somewhat less than the median income; a surtax on custodial income of 17 to 34 percent also targeted the benefits to lower-income custodial families.
8. If Medicaid were included, there would be a large break (notch) in the budget line at the breakeven point; going off welfare at this point would mean a large decrease in income (assuming no extension of Medicaid benefits). Thus, ignoring Medicaid means we overestimate the ability of child support and an assured benefit to decrease welfare reciprocity; however, to the extent that child support reforms require noncustodial parents to provide comparable health insurance for their children, this bias is decreased.
9. Because the budget set is nonconvex, individuals could be indifferent between reciprocity and nonreciprocity; that is, they could have an indifference curve that is tangent to both BC and CD.
10. Although total collections are expected to increase, the percentage paid may actually decrease. If more noncustodial parents begin to be assigned a child support award and cannot (or do not) pay, the percentage paid could decrease.
11. The CSAS simulated in Wisconsin included a wage subsidy and taxed back the difference between the assured benefit and the amount of private child support. Table 5, row 4, on p. 24 of Garfinkel,

Robins, Wong, and Meyer (1990), provides the results for an assured benefit of \$3000 without a wage subsidy; these are the results described here.

12. For a more complete description of the CPS-CSS, see Robins (1987). The CPS-CSS has four major problems. First, not all those eligible for child support (and thus those eligible for the CSAS) are included. For example, custodial fathers and custodial parents younger than 18 are not included. (The omission of younger custodial parents has been corrected in the 1988 CPS-CSS). Women who have only been married once and are currently married, but who were single parents prior to the marriage, are also not included. Second, no information is gathered on the noncustodial parent. Third, self-reports of welfare reciprocity are used, and AFDC reciprocity is significantly underreported, making identification of recipients and estimation of welfare savings difficult. Finally, only annual data are reported, creating problems in identifying those eligible for the CSAS for only part of the year and those who are part-year AFDC recipients.

13. Because the CPS-CSS may have incorrectly identified grandmothers as child-support eligible (see Robins, 1987), only women younger than 60 were used in the simulation.

14. The total amount of AFDC reported in the CPS is only 76 percent of the amount of AFDC dollars going to recipients, according to administrative records (U.S. Bureau of the Census, 1990).

15. An alternate approach would accept the information provided by each woman on whether or not there was an award, and then increase the percentage with awards by randomly selecting cases without awards. Our approach is consistent with the idea that each case, being part of a sample, "represents" many cases like it. What we have done is similar to dividing each case into 100 families and then giving, say, 67 of these families an award and 33 families no award.

16. Estimates vary greatly by race and reciprocity status: the noncustodial parents of whites are estimated to have annual incomes of \$23,581, blacks \$12,396, AFDC recipients \$11,444, and nonrecipients \$23,707.

17. Unfortunately, Fraker et al. do not estimate a rate for each state. We impute a rate to states that do not have a 1984 estimate by using 1982 estimates when available and, for some small states, using the rates of other states in the same region when other estimates are not available.

18. Problems arise in three different types of cases. First, some women (less than 5 percent of the AFDC caseload) report AFDC and are income-eligible, but under our utility formulation (see below), they do not reach maximum utility under AFDC but under nonreciprocity. These women are constrained to remain on AFDC under all scenarios. Second, some women report AFDC but are not income-eligible. These women could be part-year recipients, could be full-year recipients who appear ineligible because our estimated tax rates are wrong, could have misreported other income, or could have married before March 1986 so that the 1985 income figures include the new spouse's income when it may not have been available to the woman. Women who have remarried and who are income-eligible if their spouse's income is ignored are assumed to be recipients. All other women in this category (less than 7 percent of the caseload) have been constrained to remain on AFDC, another conservative assumption. Third, some women appear to be income-eligible for AFDC but do not report receiving AFDC. For these women, we check their utility on AFDC and their utility off AFDC and make them AFDC recipients only if their utility on AFDC is higher than their utility off AFDC. Essentially we are assuming these women

did not report being a recipient. Our assumptions should have the effect of underestimating the number of AFDC recipients who will leave AFDC, and thus underestimating the benefits of the CSAS.

19. Women who are income-ineligible but reported being a recipient are given the amount reported in the CPS-CSS.

20. The total amount of AFDC reported in our sample is \$7.33 billion. We know, however, that only 76 percent of AFDC is reported; thus the \$7.33 billion reported could be equivalent to  $\$7.33/.76$ , or about the \$10.0 billion that we simulate here. Our approach thus appears to rectify the problem of underreporting.

We have, however, not dealt with the problem of CSAS-eligible cases systematically missing from the CPS-CSS. After subtracting the cases eligible for AFDC who are not eligible for the CSAS (those eligible through the incapacitation of a parent or the death of a parent), the total amount of AFDC reported by administrative records in 1985 is \$12.7 billion. We ignore this extra \$2.7 billion of AFDC benefits, which is equivalent to assuming that none of these people leave AFDC or collect additional child support from their partners.

21. Because no research has been done on the labor supply of remarried women, we are not sure if their labor supply responses are more like married women or like single women. We use the parameters for single heads of households for all women. Varying the elasticities helps mitigate any errors that might occur if remarried women respond differently than single women.

22. As Moffitt (1986) and Hausman (1985) have noted, the error term can generally be thought of as representing a combination of measurement error, optimization error, and unmeasured heterogeneity. In our application, it may also represent differences between the sample used by Johnson-Pencavel (SIME-DIME) and this sample. For purposes of this paper, however, the error term is assumed to arise only because of unmeasured heterogeneity, since we assume that observed hours of work are equal to the optimal hours of work, and participation and labor supply decisions are based on utility maximization.

23. We used the 1985 schedule for federal income taxes, assuming that all income except AFDC and child support was taxable and that women used either the "unmarried head of household" or "married, filing jointly" status with only the standard deduction and exemptions for all members of the family. To simplify the model, we assume that the current marginal tax rate applies to all levels of hours. For simplicity we ignore state income taxes.

24. Unfortunately, identifying custodial fathers of child-support eligible children is difficult. If we add the male custodial fathers in Wisconsin, and adjust their weight so that they total an estimate of the number of custodial fathers nationally, costs increase but there is little effect on the estimates of the percentage reductions in the poverty gap or the AFDC caseload. For example, the "medium" improvement scenario with an assured benefit of \$2000 shows additional costs of \$0.5 billion when men are included; the additional costs for an assured benefit of \$3000 are \$1.1 billion (compare with Table 6).

25. "Exit due to increased earnings" is the residual category; some women in the first two categories ("exit owing to child support" and "exit owing to the assured benefit") also increase their earnings.

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