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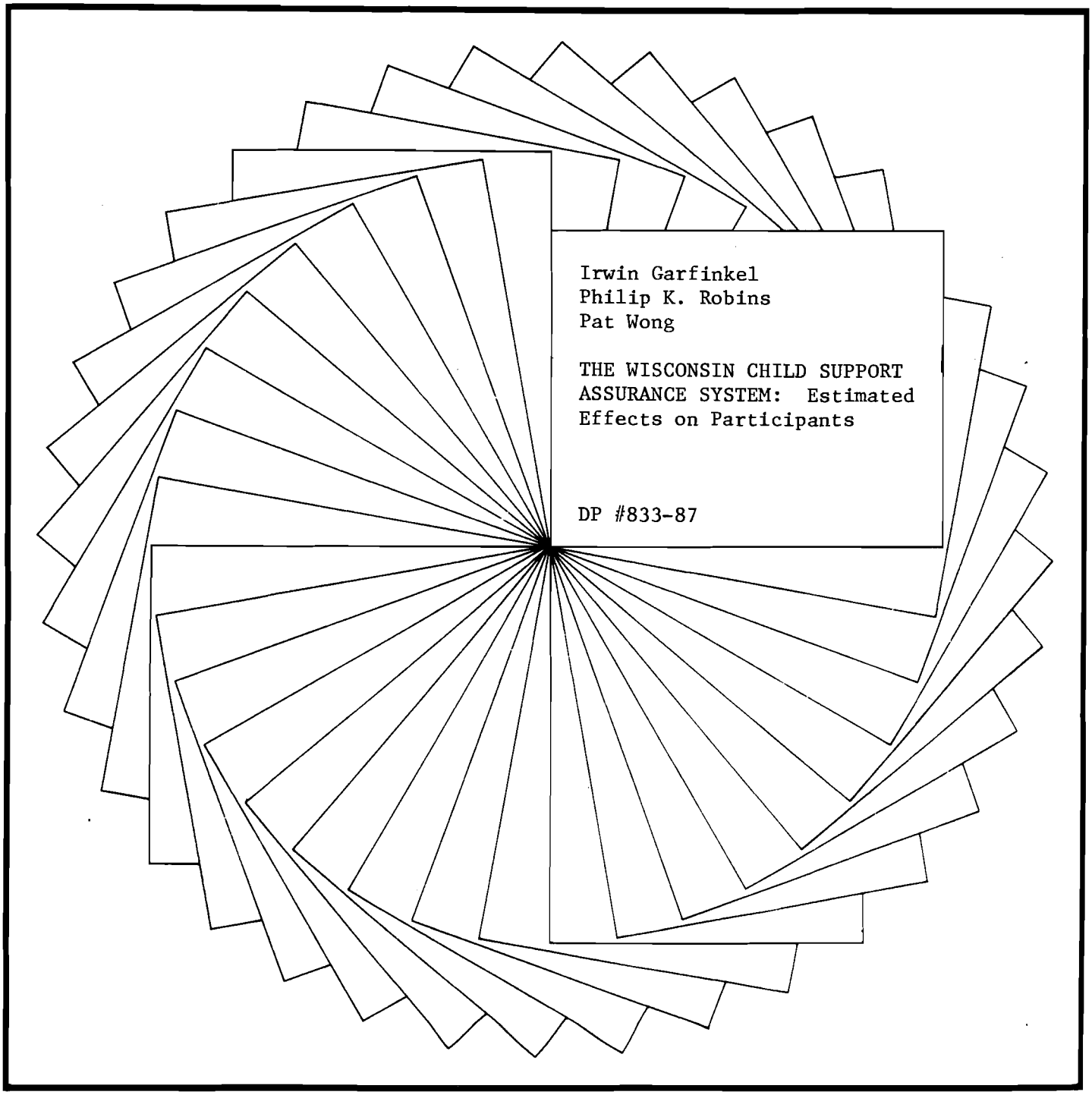

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The Wisconsin Child Support Assurance System:

Estimated Effects on Participants

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Abstract

The economic impact of a child support reform is simulated with microdata on custodial families in Wisconsin. The reform includes a uniform child support standard, automatic wage withholding, a minimum child support benefit, and a wage subsidy for eligible families. The simulation incorporates a model of the labor supply decision representing the custodial parent's choice of whether to participate in the reform or in the current AFDC system. The results suggest that the reform can significantly reduce poverty as well as welfare caseloads. Depending on the increase in private child support collections, the reform may incur little or no additional cost to taxpayers.

The Wisconsin Child Support Assurance System: Estimated Effects on Participants

1. INTRODUCTION

Reform of the nation's welfare system has been at the top of the political agenda for more than two decades. During the late 1960s and early 1970s, a significant portion of this attention was devoted to the working poor, particularly those in two-parent families. In recent years, however, poverty has become increasingly concentrated in single-parent families, and as a result attention has turned to this group.[1]

Virtually all children in poor single-parent families have an absent parent.[2] Because of this, most of the recent state and federal legislation directed toward single-parent families has been in the area of child support enforcement. The purpose of such legislation has been to attempt to shift some of the financial burden of the support of young children from the government to the absent parent. The first major piece of legislation in this area was in 1975, when Congress established the Child Support Enforcement Program as Part D of Title IV (IV-D) of the Social Security Act. The IV-D legislation requires each state to develop a child support enforcement program that provides services for establishing paternity, locating absent parents, establishing child support obligations, and enforcing such obligations. The states are required to provide these services to all AFDC families and to non-AFDC families who request such services. In addition, to facilitate interstate collections, a federal parent locator service was established with access to federal data files on individuals, including Social Security

Administration earnings records and Internal Revenue Service tax records. Under current AFDC regulations, in order to receive welfare benefits families must assign their child support rights to the IV-D agency, which in turn pursues collection. The families are allowed to keep the first fifty dollars of child support collected each month on their behalf, but the remainder is used to reduce welfare benefits on a dollar-for-dollar basis.

Since 1975, there have been several additional pieces of legislation aimed at improving the child support collection process. The most important are the 1984 Child Support Enforcement Amendments, which, among other things, authorize mandatory wage withholding of child support in cases where the absent parent is delinquent (by one month or more) in making child support payments. The government's active intervention in child support enforcement in recent years signals a new direction in social policy in the U.S. that policymakers hope will contribute to the alleviation of poverty among members of this important (and growing) demographic subgroup.

Although child support enforcement has considerable appeal as an antipoverty device, recent research suggests that the current federal approach may fall far short of its intended objectives. Results presented in Oellerich and Garfinkel (1983) and Robins (1986), for example, show that in the existing legal environment, child support enforcement is not likely to have any discernible effect on poverty or welfare dependency. The primary reasons for this pessimistic outlook are low child support award amounts and lack of any earnings incentives under the current collection process. As Robins (1986, pp. 785-786) notes, the

average child support award amount nationwide for AFDC recipients in 1981 was $180 per month, while the average AFDC benefit was $282 per month and the average poverty-level income was $650 per month. These figures suggest that current child support enforcement procedures simply will not be able to generate enough increase in income to cause many families to escape welfare dependence or poverty. Hence, for this approach to be successful, higher award amounts and/or other sources of income (principally earnings) appear necessary.

In recognition of these facts, the state of Wisconsin has gone considerably beyond the federal legislation in an attempt to increase the antipoverty effectiveness of child support enforcement. Together with researchers at the Institute for Research on Poverty at the University of Wisconsin-Madison, they have developed a four-component Child Support Assurance System (CSAS) to address the inadequacies and inequities of the current system. The four components of the CSAS as it is presently structured are (1) a uniform percentage standard for establishing child support obligations,[3] (2) immediate withholding of the child support obligation from wages and other sources of income,[4] (3) an assured or minimum guaranteed child support benefit for each family,[5] and (4) an hourly wage subsidy to encourage work by the custodial parent and to help defray the costs of employment.

The first two components of the CSAS (the percentage-of-income standard and immediate wage withholding) are scheduled to become state law on July 1, 1987. However, because of the potentially high costs of the last two components of the CSAS (the assured benefit and the wage subsidy), the state has decided first to field test them in several counties in

order to determine their cost effectiveness and administrative feasibility.[6] Although the pilot tests will not use a randomized experimental design, a systematic evaluation is planned. The evaluation will use data to be collected from several sources (including personal interviews and administrative records) in both pilot counties and selected "control" counties.[7]

The purpose of this paper is to provide estimates of the expected effects of the Wisconsin CSAS on the custodial family.[8] The estimates are derived from a simulation model that incorporates labor supply response estimates from the Seattle-Denver Income Maintenance Experiments. Predictions are made of the effects of the CSAS on labor supply, program participation, and costs at the statewide level. These predictions are intended to serve as benchmark estimates of the expected effects of the pilot demonstrations.

In this paper, Section 2 describes the CSAS and compares it to the current welfare system, Section 3 presents the simulation model, Section 4 presents the simulation results, and Section 5 gives an overview of the main findings and discusses policy implications.

2. THE WISCONSIN CSAS AND THE EXISTING AFDC PROGRAM

The Wisconsin CSAS is being introduced into an environment in which the AFDC program currently exists. The choice of program in which to participate will be purely voluntary. In order to predict the labor supply and program participation decisions under the new system, it is necessary to characterize all of the program options available to a family. When the CSAS is instituted, a family will have essentially four

options: AFDC, CSAS, CSAS plus AFDC, or none. From an analytical perspective, the AFDC-plus-CSAS option is equivalent to the pure AFDC option; this third option is therefore ignored in the ensuing discussion.

If the family opts for the AFDC program, its benefits are determined according to the following formula:[9]

$$(1) \quad AFDC = \begin{cases} G_A - t_A WH - CS_H + DEFRA & \text{if } WH < (G_A - CS_H + DEFRA)/t_A \\ 0 & \text{if } WH \geq (G_A - CS_H + DEFRA)/t_A \end{cases}$$

where AFDC = the AFDC benefit,

G_A = the AFDC guarantee,

t_A = the AFDC tax rate,[10]

W = the custodial parent's wage rate,

H = hours of work,

CS_H = custodial parent's child support received from the absent parent,

DEFRA = the $50 monthly set-aside of private child support,

$(G_A - CS_H + DEFRA)/t_A$ = the break-even level of the AFDC program.

The break-even level of the AFDC program is the level of earnings at which the AFDC benefit equals zero. CS_H represents child support received from the absent parent, either through voluntary payments or through the wage-withholding system operating in the state. The statutory wage-withholding amount equals $t_H E_H$, where t_H is the fraction of earnings E_H dictated by the uniform percentage standard. Under the

Wisconsin AFDC program, CS_H (after the $50 set-aside) is taxed at the rate of 100%, just as is other nonwage income.

The Wisconsin CSAS to be field tested has the following features. For incomes up to one-half the maximum for eligibility (termed the income cap), the custodial parent is eligible for a wage subsidy of $1.00 per hour.[11] The income of the custodial parent (unsubsidized earnings plus nonwage income) is taxed at the same rate as the uniform percentage standard applied to the absent parent's income (.17 if there is one child, .25 if there are two, etc.).[12] For incomes above half the income cap, the wage subsidy is taxed at such a rate that when total income reaches the cap, the family is no longer eligible for a subsidy.[13] If the family opts for the CSAS instead of the AFDC program, it will receive benefits according to the following formula:

$$(2) \quad CS_T = \begin{cases} G_C + (1-t_C W)H - CS_H & \text{if } Y < 1/2\ Y_C \\ G_C^* + (1-t_C W - t_W W)H - CS_H & \text{if } 1/2\ Y_C < Y < Y_C \\ 0 & \text{if } Y > Y_C \end{cases}$$

where CS_T = the total child support benefit,

G_C = the child support guarantee or assured benefit,

t_C = the custodial parent tax rate,

Y = total family income,

Y_C = the income cap,[14]

t_W = the tax rate that must be applied to the unsubsidized wage to phase out the total CS_T benefit at Y_C,

G_C^* = virtual nonwage income associated with the second segment of the budget line.[15]

Like the AFDC program, the CSAS only pays benefits in excess of the amount of child support received through wage withholding. In other words, like AFDC, it taxes CS_H at the rate of 100%.[16] Examination of equation (2) indicates that the CSAS can be characterized by a budget line with a convex kink at $1/2Y_C$ and a nonconvex kink at Y_C.[17]

The AFDC and CSAS budget lines are depicted in Figure 1. In this diagram it is assumed that the child support guarantee (TB) falls between the AFDC guarantee (TC) and the wage-withholding amount (TA). It is also assumed that the child support tax rate, t_C, is less than the effective AFDC tax rate, t_A (which, according to Fraker, Moffitt, and Wolf, 1985, it is in Wisconsin). The line represented by AFMG is the budget line for families who do not participate in either the AFDC program or the CSAS. Assuming no positive taxes, the slope of this line is -W, where W is the hourly wage rate of the custodial parent.[18] The line represented by BJKMG is the budget line for families who participate in the CSAS. This line has a convex kink at K, and a nonconvex kink at M.[19] The slope of the segment BJK is $-[1+W(1-t_C)]$ and the slope of segment KM is $-[1+W(1-t_C-t_W)]$. Hence, along segment BJK the net wage exceeds the gross wage, while along segment KM the net wage is less than the gross wage.[20] Finally, the line given by CJF is the budget line for families who participate in the AFDC program, where point F is the break-even level of the AFDC program. The slope of CJF is $-W(1-t_A)$.

Families faced with all three program options (no program, AFDC program, or CSAS) are subject to the kinked budget line CJKMG. In the absence of stigma, no family would voluntarily choose to be on the budget segments below the kinked line (such as BJ or JF), because family income

would be lower. Hence, given the family's preference structure (as reflected in its indifference curves), it will choose to be on one of the segments CJ, JK, KM, or MG. If it chooses CJ, it will opt for the AFDC program. If it chooses JK or KM it will opt for the CSAS.[21]

3. SIMULATING THE LABOR SUPPLY RESPONSE TO THE CSAS

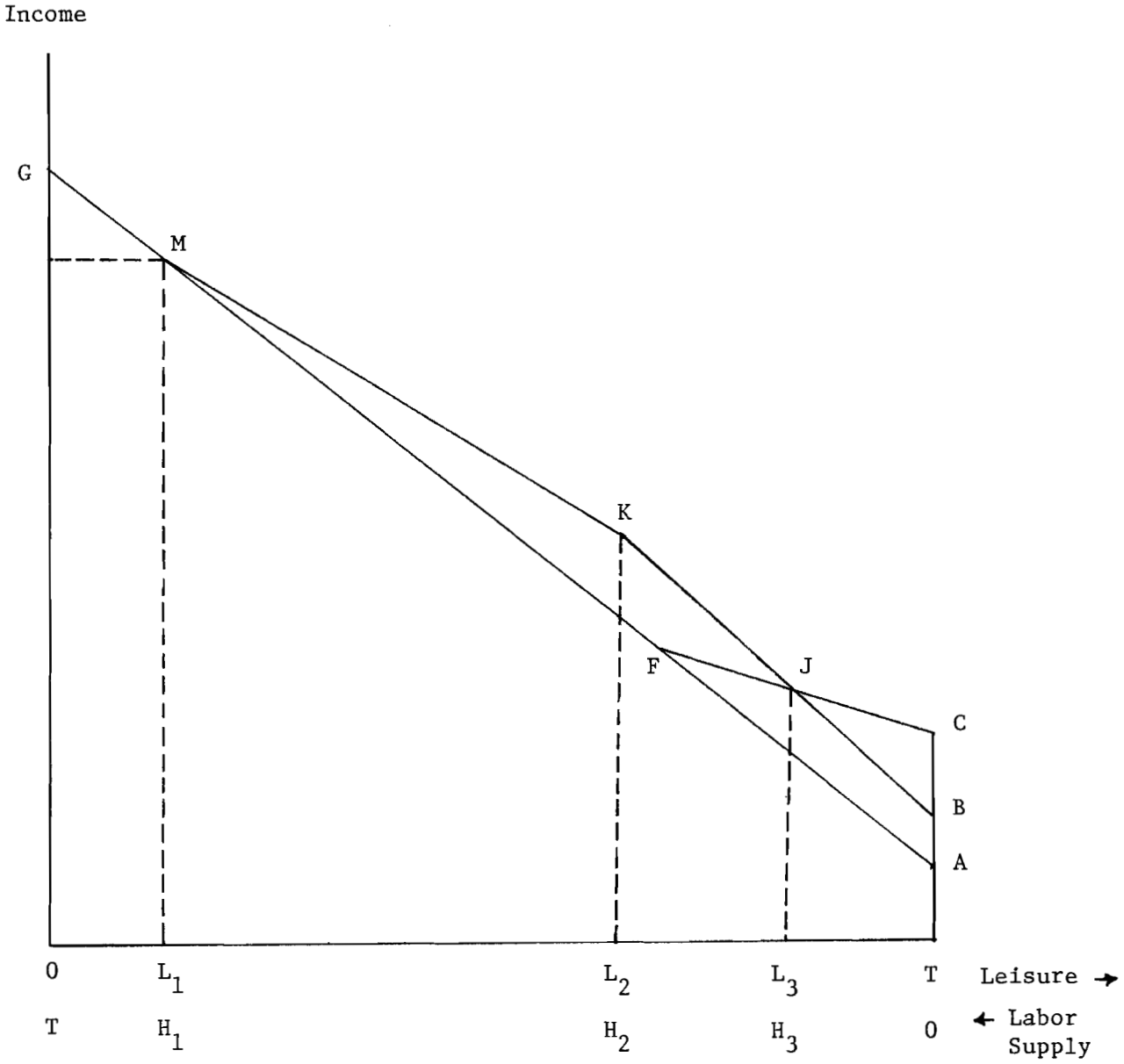
A. The Labor Supply Response Model

In order to simulate the work response to the CSAS, it is necessary to specify a response model. The characterization of the AFDC and CSAS programs just described provides a useful framework for a labor supply response model based on the assumption of utility maximization. Referring again to Figure 1, if leisure is chosen to be less than L_1, or equivalently if labor supply is chosen to be greater than H_1, the family's choice is not to participate in either the CSAS or AFDC program. If leisure falls between L_1 and L_3, or equivalently if labor supply is between H_1 and H_3, the family chooses to participate in the CSAS. Note that to the right of point F the family would still be eligible for AFDC benefits, but because of the high tax rate under AFDC, the family chooses the CSAS. (In reality, the family could receive benefits from both programs.) Finally, if leisure is greater than L_3, or equivalently if labor supply is less than H_3, the family chooses to participate in the AFDC program.

The analysis of Figure 1 suggests that variables determining preferences (shapes of indifference curves) and parameters of the AFDC and CSAS programs (G_A, t_A, G_C, t_C, and the size of the wage subsidy) will

Figure 1

AFDC and CSAS Budget Lines



Legend

TA = child support withholding amount
TB = CSAS guarantee amount
TC = AFDC guarantee amount

determine labor supply and, hence, program participation.[22] Extending the analysis of Burtless and Hausman (1978) to a four-segment budget line, we can write the indirect utility function as $V_i(w_i, n_i)$, where V is utility, w_i is the net wage rate along budget segment i, and n_i is net nonwage (or virtual) income along budget segment i. Under the assumption of utility maximization, the program participation and labor supply decisions can be written as follows:

$$V^* = \text{Max}(V_1, V_2, V_3, V_4)$$

$$(3) \quad H = \begin{cases} f[W(1-t_A), G_A] & \text{if } V^* = V_1 \\ f[1+W(1-t_C), G_C] & \text{if } V^* = V_2 \\ f[1+W(1-t_C-t_W), G_C^*] & \text{if } V^* = V_3 \\ f(W, CS_H) & \text{if } V^* = V_4 \end{cases}$$

After specifying either the indirect utility function or the labor supply function, program participation and labor supply can be predicted in an environment in which both the AFDC program and the CSAS are options available to a family.

This theoretical framework suggests how the CSAS would be expected to influence labor supply and welfare participation decisions. In general, the effects will depend on the family's current AFDC status and its specific economic circumstances. To make the predictions, it is necessary to compare the indirect utility levels under the various program options. If utility is unambiguously increased for a specific program option, then

the family becomes more likely to select that option. The family also becomes more likely to have labor supply and family income associated with that option.

Examination of equation (3) indicates that the net wage rate and net nonwage income are the two variables that affect utility in each state. Because $\partial V/\partial w_i > 0$ and $\partial V/\partial n_i > 0$, any program that increases either or both of these variables will raise the probability that this option will be selected.

In the absence of the CSAS, the net wage rate is lower under AFDC but net nonwage income is higher (assuming $G_A > CS_H$). Hence, assuming rational economic behavior, the choice of AFDC or no AFDC will depend on the parameters of the indirect utility function and the size of the differences in the net wage rate and nonwage income between the two options.

Given the family's original decision to participate in AFDC (which we assume is exogenous), it is straightforward to predict the effects of the introduction of the CSAS into that environment.[23] If the family is currently receiving AFDC, then it can be shown that the CSAS will unambiguously increase the probability that labor supply will rise.[24] If the family is not currently receiving AFDC, then the CSAS will unambiguously increase the probability that labor supply will fall among those whose incomes are beyond the wage subsidy range, and have indeterminate effect on families in the wage subsidy range.[25] In both cases, a number of families will choose to participate in the CSAS.[26] Hence, AFDC costs will unambiguously fall, although net public benefits (AFDC plus CSAS) may either rise or fall, depending on the parameters of the CSAS and the size of the labor supply response.[27]

Putting the above model into practice to predict the effects of the CSAS requires empirically based estimates of the indirect utility function or the labor supply function. Rather than derive such estimates directly, we draw on results from the existing labor supply literature. For purposes of this study, 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). The direct utility function estimated in their study is of the Stone-Geary form and can be written as follows:[28]

$$(4) \quad U(C, H) = .872\ln(C/m + 2776) + .128\ln(2151-H/r),$$

where C = annual consumption of market goods,

H = annual hours of work,

m = 1 - .401ln(1+K), K being the number of children in the family under 18,

r = 1 - .071P, P being 1 if there are preschool age children in the family, 0 otherwise.

Maximization of equation (4) subject to the budget constraint C = n + wH yields the following labor supply function:

$$(5) \quad H = 1876r - (.128n - 355m)/w.$$

Substituting this function into the direct utility function yields the indirect utility function:

$$(6) \quad V(w, n) = .872 * \ln[(.872n+1876rw+355m)/m+2776] + .128 * \ln[275+(.128n-355m)/rw].$$

Equations (4), (5), and (6) are used to generate the predicted effects of the CSAS. The procedure for generating the predictions is as follows. Using existing data from the state of Wisconsin (see the next section), a family's preprogram labor supply and welfare position are defined. Because a person's current observed labor supply will not, in general, be consistent with the utility-maximizing labor supply implied by equation (5), an error term (representing tastes) is appended to equation (5) to make the observed hours of work equal to the optimal hours of work.[29] After defining the preprogram budget position of the family, it is assumed that the CSAS is instituted. Under the CSAS, the family is subject to the kinked budget line in Figure 1. Along each of the four segments of this line, the level of utility is calculated using the appropriate values of w, n, m, r, and the selected error term.[30] The highest utility level defines the family's postprogram labor supply and program participation status.

B. Data and Calculation of Budget Variables

The simulations are performed using a combination of two Wisconsin data files for the year 1985. The survey of Wisconsin Children, Income, and Program Participation (CHIPPS) contains basic demographic and economic information for a sample of families who were eligible for the CSAS in 1985.[31] For purposes of this study, however, the CHIPPS file has three important drawbacks: (1) the sample contains only 259 nonwelfare families and even fewer welfare families; (2) the welfare information in this file is reported in annual terms, whereas the AFDC program uses a monthly accounting period; (3) the file lacks information on the income

of absent parents, which is needed to calculate child support payment amounts for use in the simulations.

To circumvent the first two problems, we supplement the CHIPPS file with data from the Wisconsin Computer Reporting Network (CRN), the state's administrative information system containing monthly extracts of all current AFDC cases. The CRN file has a more limited set of economic and demographic data than the CHIPPS file, but is adequate for our purposes. A 7% random sample of the March 1985 CRN file is selected, yielding a total of 4,633 CSAS-eligible cases currently receiving AFDC. This sample is combined with the 259 nonwelfare cases from CHIPPS for a final sample of 4,992 cases for use in the simulations. All cases are weighted to reflect the CSAS-eligible population in Wisconsin in 1985.[32] All data are converted to annual terms.

To deal with the third problem, we make use of two national data sets, the 1979 Child Support Supplement of the Current Population Survey and the 1976 Survey of Income and Education. A three-step procedure is adopted to estimate child support payment amounts by the absent parent. First, estimates are made of the absent parent's income. Second, based on these estimates of income, the amount of the child support obligation is calculated using the Wisconsin uniform percentage standard. Third, based on the calculated obligation and estimates of the percentage that will actually be paid, a child support payment amount is derived.[33]

One of the critical features of the CSAS is the amount of the child support guarantee or assurance level. As indicated in note 5, the most likely level to be included in the field test is $3,000. Because of the possible sensitivity of the estimates of labor supply response, cost, and

program participation to the size of the child support guarantee level, we present results for four feasible amounts: $2,000, $2,500, $3,000, and $3,500.[34]

4. SIMULATION RESULTS

A. Program Participation

Table 1 presents our estimates of the distribution of families (and average benefit levels) along the budget line in Figure 1 before and after the CSAS is implemented. It should be noted that based on our assumption of the improvement in the procedures for establishing child support awards, some families will not be eligible for the CSAS because they will not have an award. In Table 1, these families are reported separately in the first column if they are on AFDC; otherwise they are reported as part of the group of families receiving no public subsidy in the next to last column. Hence, of the 67,642 families receiving AFDC benefits before implementation of the CSAS, 21,257 (or 31 percent) will not be eligible for the CSAS because they do not have a formal child support obligation.[35] It should also be noted in Table 1 that a sizable fraction of families participating in the CSAS will not be eligible for a wage subsidy (because they don't work), but will choose the CSAS over AFDC despite AFDC's higher guarantee level because they have substantial income from sources other than the custodial parent's earnings (primarily stepparent income) that is taxed at a much lower rate than under the AFDC program.

Before implementation of the CSAS, our data indicate that about 46% of all custodial families in Wisconsin participate in the AFDC program.

Table 1

Distribution of Custodial Families before and after Implementation of the CSAS*

	On AFDC		On CSAS				No Public Subsidy	All Families
	Not Eligible for CSAS	Eligible for CSAS	Nonworkers	Wage Subsidy Range	Kink Point	Tax-Back Range		
Before CSAS	67,642 ($5,263)	—	—	—	—	—	79,386 ($0)	147,028 ($2,421)
After CSAS Guarantee Level								
$2,000	21,257 ($5,897)	38,073 ($4,740)	8,484 ($254)	4,983 ($1,502)	7,292 ($1,725)	9,621 ($1,272)	57,318 ($0)	147,028 ($2,340)
$2,500	21,257 ($5,897)	37,123 ($4,830)	13,030 ($348)	5,913 ($1,683)	7,849 ($1,841)	9,602 ($1,359)	51,164 ($0)	147,028 ($2,393)
$3,000	21,257 ($5,987)	36,046 ($4,720)	18,161 ($397)	6,360 ($2,165)	9,906 ($2,312)	9,643 ($1,578)	45,367 ($0)	147,028 ($2,451)
$3,500	21,257 ($5,987)	31,165 ($ 4,755)	18,251 ($441)	11,104 ($2,629)	12,715 ($2,804)	9,521 ($1,959)	42,684 ($0)	147,028 ($2,525)

*Assumes medium improvement in child support award and collection rates. Average benefits in parentheses.

When the CSAS is implemented, many of these families are predicted to opt for the new program. As the CSAS guarantee increases, the number opting for the new program increases, as expected. In addition, many families not participating in AFDC also choose to participate in the CSAS. For the lowest CSAS guarantee level ($2,000 per year), we estimate that 40% of the families will participate in AFDC while 21% of the families will participate in the CSAS. Hence, the AFDC participation rate is predicted to decline by 6 percentage points (a 13% decline) and the total number of families receiving a public subsidy is predicted to increase by 15 percentage points (a one-third increase). As we will see, the CSAS has the effect of moving families toward the center portion of the budget line, and for many families this substantially increases labor supply and family income.

For the highest CSAS guarantee level ($3,500 per year), the AFDC participation rate is predicted to be 36% (a fall of 22%) and the total number of families receiving a public subsidy is predicted to be 71% (a rise of 31%). Interestingly, calculated over the entire population, the average benefit level remains about the same (between $2,300 and $2,500), implying that the CSAS will not lead to any significant increases in public expenditures, even though it reduces an increase in the number of families receiving a public subsidy. As we shall see below, this is because estimated increases in private child support payments offset the increases in public benefits.

B. Labor Supply Response

Table 2 presents the estimated labor supply responses to the CSAS by preprogram AFDC status. As indicated earlier, conventional labor supply

Table 2

Average Labor Supply Response to the CSAS by Preprogram AFDC Status*

	Welfare Status before CSAS		
	AFDC Families	Non-AFDC Families	All Families
Number of Families	67,642	79,386	147,028
Number with a Child Support Award	46,385	62,989	109,374
Average Annual Hours of Work before CSAS	110	1,339	774

CSAS Guarantee Level	Average Change in Hours of Work	Percentage Change	Average Change in Hours of Work	Percentage Change	Average Change in Hours of Work	Percentage Change
$2,000	138	125	-104	-8	+7	0.8
$2,500	144	131	-107	-8	+8	1.0
$3,000	205	186	-109	-8	+35	4.5
$3,500	353	321	-110	-8	+103	13.2

*Assuming medium improvement in award and collection. Averages are for custodial parents with child support award.

theory predicts that the CSAS will induce an increase in labor supply for AFDC families and a decrease in labor supply for all but a few non-AFDC families. The net effect on all families is uncertain and depends on the distribution of families along the preprogram budget line.

As Table 2 shows, labor supply is predicted to increase substantially for families on AFDC before the CSAS is implemented. Furthermore, the positive labor supply responses get larger as the CSAS guarantee level increases. The more positive labor supply response occurs because the programs with higher guarantee levels have a lower labor supply crossover point (point J in Figure 1) and hence will induce greater participation in the program.

For families not on AFDC prior to the CSAS, labor supply is predicted to decrease, as expected. On net, however, each program is predicted to have a positive effect on the labor supply of the custodial parent.

Perhaps the most surprising result is that, under the low-guarantee program, average labor supply increases by just under 1%, while under the high-guarantee program, average labor supply increases by just over 13%. Ordinarily, labor supply would be expected to decrease in response to an increase in an income guarantee. In this case, however, an increase in the CSAS guarantee leads to an increase in labor supply because CSAS becomes more competitive with AFDC, thereby drawing more women into the labor force.

C. Program Costs

An important consideration in determining the political feasibility of the CSAS is the cost of the program in comparison to current welfare

program costs. Table 3 delineates the various sources of program costs. Net program costs consist of AFDC expenditures plus CSAS expenditures plus any lost positive tax revenue after the CSAS is implemented[36] minus AFDC expenditures prior to the CSAS. A crucial factor determining net costs of the CSAS is the additional child support collected under the new system. These additional collections directly offset costs of the AFDC program on a dollar-for-dollar basis. Table 3 shows the assumed child support collections under the new and old systems.

Given our medium assumptions regarding child support collections under the new system, Table 3 indicates that the CSAS will not have an appreciable effect on public spending. Under the low-guarantee program there is a net savings of $11 million, while under the high-guarantee program there is a net cost of $9 million.

Given the sensitivity of program costs to the assumed improvement in award and collection rates, it is instructive to present estimates of program costs under various other assumptions. Estimates of net program costs under conditions ranging from no improvement to perfect improvement are presented in Table 4.[37] Under the worst possible situation (no improvement), the low-guarantee program is estimated to cost about $28 million (or about 8%) more than the current system, while the high-guarantee program is estimated to cost about $45 million (or about 13%) more than the current system. Under perfect improvement (that is, all families have an award and all child support is collected), the low-guarantee program is estimated to save about $68 million (a 19% savings), while the high-guarantee program is estimated to save about $50 million

Table 3

Sources of Net Program Costs*

CSAS Guarantee Level	Before CSAS		After CSAS				Net Costs
	Child Support Collected (1)	Net AFDC Expenditures (2)	Child Support Collected (3)	Net AFDC Expenditures (4)	CSAS Expenditures (5)	Tax Loss Due to Earnings Response (6)	(4)+(5)+(6)-(2)
$2,000	$163	$356	$370	$275	$59	$11	$-11
$2,500	163	356	370	258	82	11	-5
$3,000	163	356	370	235	110	12	1
$3,500	163	356	370	205	148	12	9

*Assuming medium improvements in award and collection rates. Figures in millions of 1985 dollars.

Table 4

Net Program Costs under Various Assumptions Regarding Child Support Award and Collection Rates*

	CSAS Guarantee Level			
	$2,000	$2,500	$3,000	$3,500
Current Award and Collection Rates	28	32	38	45
Low Improvement in Award and Collection Rates	- 9	-14	-20	-28
Medium Improvement in Award Rate				
Low Improvement in Collection Rate	6	11	17	25
Medium Improvement in Collection Rate	-11	- 5	1	9
High Improvement in Collection Rate	-14	-11	- 8	1
High Improvement in Award and Collect Rates	-20	-16	-11	-4
Perfect Award and Collection Rates	-68	-64	-59	-50

*Amounts are in millions of 1985 dollars.

(a 14% savings). In terms of private child support collection, the no-improvement scenario implies collecting 46% of all payments owed, the perfect improvement scenario collects 100%, while the medium improvement reported in the other tables represents 75% collected.

D. Effects on Family Income, Poverty, and Government Dependency

The results just presented suggest that the CSAS will extend public benefits to a larger segment of the population than the current welfare system. Under the assumption of medium improvement in awards and collections, however, the program is not expected to lead to additional public spending, and there will be a net increase in the labor supply of the population.

Table 5 presents the predicted effects of the CSAS on family income, poverty, and government dependency. Under the low-guarantee CSAS, family income is predicted to increase by almost 8% on average, despite a 3% decline in average earnings[38] and a 23% decline in AFDC benefits. The increased income results entirely from an increase in private child support payments and benefits received from the CSAS. Under the high-guarantee CSAS, family income increases by about 10% over the current system.

The higher family income leads to a reduction in poverty among custodial families. Under the low-guarantee CSAS, the poverty rate is reduced by about 4 percentage points (an 8% reduction) and the poverty gap is reduced by almost 26%. Under the high-guarantee CSAS, the poverty rate is reduced by 7 percentage points (a 13% reduction) and the poverty gap is reduced by almost one-third.

Table 5

Effects of the CSAS on Family Income, Poverty, and Government Dependency*

	Before	$2,000	$2,500	$3,000	$3,500
Average Earnings**	$ 6,507	$ 6,317	$ 6,311	$ 6,366	$ 6,492
Average Public Benefits					
AFDC	2,421	1,876	1,755	1,598	1,394
CSAS	0	404	557	748	1,007
Private Child Support	877	2,517	2,517	2,517	2,517
Other Income	6,840	6,840	6,840	6,840	6,840
Total Family Income	$16,648	$17,955	$17,982	$18,070	$18,251
Poverty Rate	52%	48%	48%	47%	45%
Poverty Gap ($millions)	$292	$217	$215	$209	$197
Percent of Families Receiving AFDC Benefits	46%	41%	40%	39%	36%
Percent of Families Receiving AFDC or CSAS Benefits	46%	61%	65%	69%	71%
Dependency Ratio***	40%	33%	33%	33%	32%

*Assuming medium improvement in award and collection rates. The table includes all custodial families in Wisconsin, regardless of whether a formal child support award exists.

**Does not include wage subsidy. Wage subsidy is included under CSAS benefits.

***The ratio of public benefits to total family income, averaged over all families.

As indicated earlier, implementation of the CSAS is expected to increase the percentage of families receiving public support from 46% to between 61% and 71%. However, the results in Table 5 indicate that dependence on public support would actually decline under the CSAS. Under the current system, the average dependency ratio (the average ratio of public benefits to family income) is estimated to be 40%. Under the CSAS, the dependency ratio is predicted to fall to about 33%. The lower dependency ratio results from an increase in private child support and an increase in labor supply and earnings by many families currently receiving welfare benefits.

5. CONCLUSIONS

The state of Wisconsin is embarking on a new approach to increase economic self-sufficiency among families in which one parent is absent from the household. Currently, a large number of such families are on welfare and more than half are poor by official standards. The new approach, the Child Support Assurance System, is designed to provide work incentives for low-income families and to guarantee that children receive the financial support they are entitled to as a result of a marital dissolution and subsequent exit of a primary earner from the household. The CSAS is being field tested in several counties in Wisconsin in order to determine its administrative feasibility and cost effectiveness.

The purpose of this paper has been to provide estimates of the expected effects of the CSAS on participants. Although a formal evaluation will be performed with survey data to be collected from families in pilot sites and selected "control" sites, such data will not be

available for quite some time, and estimates of the expected effects of the program are needed now. Hence, for present purposes we rely on economic theory and results from earlier social experiments to provide a benchmark set of estimates of the effects of the CSAS.

The results of our analysis suggest that the CSAS will lead to a net increase in labor supply among custodial parents and a significant decrease in dependence on government support. Furthermore, the additional income resulting from the program will generate a sizable decrease in poverty, although it should be noted that a significant amount of poverty would still remain. Based on our best estimates of the degree to which improvements will be made in the procedures for awarding and collecting child support, we estimate that the CSAS will not lead to any significant increase in public spending. Overall, our results suggest that the CSAS should contribute significantly toward relieving many of the economic pressures facing families having only one parent in the household.

Notes

[1]In 1982, 48% of single-parent families were poor, compared with 10% of other types of families. Single-parent families constitute about one-fifth of all families in the U.S. and the majority (55%) of all poor families (U.S. House of Representatives, 1983; U.S. Department of Health and Human Services, 1983).

[2]Only about 2% of the mothers in the Aid to Families with Dependent Children (AFDC) program are widows; the rest are either divorced, separated, or never married. Never-married mothers (frequently teenagers) compose about one-half of the AFDC caseload.

[3]Beginning July 1, 1987, Wisconsin state law will require courts to establish child support obligations on the basis of a fixed percentage of noncustodial parent income. The percentages vary with family size: 17% for one child, 25% for two children, 29% for three children, 31% for four children, and 34% for five or more children. As Garfinkel and Oellerich (1986) show, these percentages generally lead to much higher award amounts than are produced under the current system.

[4]The Wisconsin withholding provision differs from the federal legislation in that wage withholding is automatically implemented, regardless of the delinquency status of the noncustodial parent.

[5]A citizen advisory committee appointed to help in development of the CSAS has recommended that the guaranteed child support amount be set at $3,000 per year for one child, and should increase with family size in the same manner as AFDC benefit levels. When the noncustodial parent's child support payment is below the assured level, the custodial parent is

subject to a custodial parent tax up to the assured level. Any difference between the assured level and the sum of contributions from both parents is supplemented by the state.

[6]The plan is to conduct pilot tests in at least four Wisconsin counties.

[7]For a description of the evaluation design, see Garfinkel, Robins, and Seltzer (1986).

[8]The CSAS is also expected to have effects on the absent parent, but we do not consider those effects in this paper. The evaluation is being designed to measure such effects, however.

[9]This formula ignores two factors. First, under current law, there is a $50 set-aside for child-support payments. Second, all income other than the custodial parent's earnings and child support (including stepparent earnings) is taxed at the rate of 100%. Including these sources of income in the formula essentially involves a redefinition of the AFDC guarantee to represent the AFDC guarantee plus the set-aside minus the other income. For simplicity, we do not include these additional terms in the formula; as indicated later, however, the CSAS imposes only a very small tax on other sources of income, in contrast to AFDC, so for families with a significant amount of this other income (for example, remarried women with a working husband), the CSAS becomes a very attractive alternative to welfare.

[10]Currently, the statutory tax rate under the AFDC program is 67% during the first four months on the program with earnings and 100% thereafter. Below, when we characterize the program for purposes of predicting behavioral response, we use the effective rather than the statutory tax rate for Wisconsin. The effective tax rate we use is .68, which

is taken from Fraker, Moffitt, and Wolf (1985). This is their estimate of the effective Wisconsin AFDC tax rate for 1982 after the first four months on the program with earnings.

[11]This is the value of the subsidy for a family with one child. For families with two or more children, the subsidy is $1.75 per hour. The exact value of the subsidy to be implemented is currently under discussion and may differ from the one considered here.

[12]If the custodial parent tax rate were applied to subsidized rather than unsubsidized earnings, the value of the subsidy would be reduced somewhat.

[13]The range of income over which the wage subsidy is taxed may exceed full-time work for many low-income custodial parents. For example, for a single mother with a wage of $3.50 per hour who is eligible for a child support guarantee of $3,000 per year, the tax-back range begins at 33 hours per week.

[14]Under the current structure of the program and for simulation purposes, Y_C represents the official state median income less $2,000. For a family with one child, the official state median income is $17,328, for two children it is $21,372, and for 3 children it is $25,452.

[15]Virtual income is the intercept of the second segment of the budget line when projected to zero hours of work (see Burtless and Hausman, 1978). It may be noted that this segment of the budget line may be written in an alternative form in which the benefit at 1/2 Y_C appears explicitly. However, the form given directly relates to the method used in the simulations to calculate t_W (the tax rate that must be applied to phase out the benefit).

[16]However, as indicated earlier, unlike AFDC it only taxes stepparent income and nonwage income other than child support at the rate t_C.

[17]For a discussion of convex and nonconvex budget lines see Burtless and Hausman (1978) and Moffitt (1986).

[18]In generating our predictions of the effects of the CSAS, tax rates from both the federal income tax and the social security payroll tax are used in defining net wage rates and nonwage income under the no-program budget line. However, the Wisconsin state income tax is ignored. It should also be noted that the results presented in this paper take account of changes in tax liabilities resulting from the labor supply response to the CSAS.

[19]Explicit analytical solutions for points J and K as well as the value of t_W necessary to phase the program out at point M and virtual income along segment KM are presented in Garfinkel, Robins, and Seltzer (1986).

[20]Along both segments BK and KM, the net wage exceeds the net wage under the AFDC program. Coupled with the fact that the CSAS guarantee is less than the AFDC guarantee, this yields a theoretical prediction that the CSAS will create work incentives for families currently receiving AFDC benefits.

[21]Because of the convex kink at K, there will be a significant number of families opting for this point. In our simulations, we report the number of people predicted to be at this point.

[22]Because two segments of the budget line in Figure 1 are nonconvex, it is theoretically possible that the family will be indifferent between AFDC and CSAS and between CSAS and neither program. Also, as indicated

earlier, the convexity at point K will tend to generate a mass point at this position.

[23]For a full analysis of the separate effects of each component of the CSAS (wage withholding, the CSAS guarantee, and the wage subsidy), see Garfinkel, Robins, and Seltzer (1986).

[24]Because the CSAS break-even level is higher than the AFDC break-even level, utility will generally be higher in the non-AFDC state. Hence, the family will be more likely to move to the budget segment with higher labor supply.

[25]For non-AFDC families to the right of point M but to the left of point K in Figure 1, labor supply will unambiguously decrease because of reinforcing income and substitution effects. For non-AFDC families to the right of point K, the effect on labor supply is uncertain because of offsetting income and substitution effects. Of course, most families to the left of point M will not respond to the program because utility would be lower.

[26]As indicated earlier, because of the convexity of the budget line at point K (in Figure 1), families will tend to bunch at this point. The amount of the bunching that occurs will depend on the tax rate, t_W (which determines the slope of segment KM). The higher t_W, the greater the bunching at this point.

[27]It is important to note that with the CSAS as an option, the number of families receiving government aid will almost certainly increase. However, the degree of dependence (as measured by the proportion of family income that is government support) may actually decline because so many more families will be working and total family incomes will be higher.

[28]Johnson and Pencavel specify a dynamic utility model and obtain both short- and long-run parameter estimates. We use their long-run parameter estimates for purposes of predicting the effects of the CSAS.

[29]This procedure causes problems for nonworkers (noninterior solutions) because they are not generally on the margin of going to work. Hence, optimal hours of work for these persons will be negative even though observed hours of work are zero. To deal with this problem empirically, we assume that the error term appended to equation (5) is distributed normally with a mean of zero and a standard deviation of 990 hours per year (this standard deviation is taken from Keeley et al., 1978, as Johnson and Pencavel do not present such an estimate in their study). Then an error term is randomly selected from a truncated normal distribution to ensure that the optimal hours of work are less than or equal to zero.

[30]Wage rates are not available for custodial parents who are not employed. We predict wage rates for these persons on the basis of their age, education, and race. Separate estimates are developed for AFDC and non-AFDC individuals.

[31]To be eligible for the CSAS, there must be a living noncustodial parent, the child must reside with a parent or other relative, the noncustodial parent's obligation must be established by a Wisconsin court order, and the child must be under 18 years of age.

[32]For a discussion of how the weights are derived, see Garfinkel, Robins, and Seltzer (1986).

[33]When characterizing the preprogram situation, award and payment rates are assumed to be the same as those in the CPS data. When predicting the effects of the CSAS, improvements in current award and

collection procedures are assumed (due to the immediate wage withholding provision). Three improvements in awards and collections are considered; one characterized as low improvement, one as medium, one as high. In this paper, we present the results only for the case of medium improvement, which, based on our knowledge of the way the program will operate, seems reasonable to us. For results obtained under the other assumptions, see Robins, Garfinkel, and Seltzer (1986).

[34]The results are also sensitive to the size of the wage subsidy. For results under wage subsidy schemes other than the one considered here, see Robins, Garinkel, and Seltzer (1986).

[35]It is quite likely that the CSAS will induce some custodial parents to seek an award where otherwise they might not. These are to be distinguished from improvements in awards that are the result of changes in judiciary procedures. Our estimate of the improvement in the award rate includes both sources. In the formal evaluation of the CSAS, we will attempt to identify each source separately.

[36]There may be a loss in positive tax revenue even though labor supply increases because of a reduction in earnings among higher income families that more than offsets an increase in earnings among lower-income families.

[37]For award rates, low improvement is assumed to be a 50% increase over currently prevailing levels for never-married and separated custodial parents and a 25% increase for divorced and remarried custodial parents. Medium improvement is a 75% and 27.5% increase, respectively, for the two groups, and high improvement is a 100% and 30% increase. For collection rates, current proportion of award collected is regressed

against family income. The resulting estimates are .39 for the intercept and .14 per $1,000 income. In the low-improvement scenario, the intercept is increased to 0.5, medium improvement to 0.6, and high improvement to 0.7. For a discussion of the methodology used to derive the improvement rates, see Garfinkel, Robins, and Seltzer (1986).

[38]Average earnings fall even though average labor supply increases, because the persons reducing labor supply have generally higher wage rates than the persons increasing labor supply.

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