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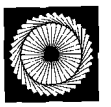

Focus

Volume 15

Number 3

Winter 1993–1994

ISSN: 0195–5705

Tax policy and the working poor: The Earned Income Tax Credit

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The Clinton administration has articulated four broad themes that will guide welfare reform: make work pay, strengthen child support enforcement, increase access to education and training, and design policies so that welfare does not last forever. Although the agenda has been set, efforts at reforming the welfare system have been largely overshadowed by debates over deficit reduction, the North American Free Trade Agreement, and health care reform. Still, the August 1993 budget bill—the Omnibus Budget Reconciliation Act of 1993 (OBRA93)—largely achieved the first of the four themes of welfare reform as described by President Clinton in his first State of the Union Address: "The new direction I propose will make this solemn, simple commitment: by expanding the refundable earned income tax credit, we will make history; we will reward the work of millions of working poor Americans by realizing the principle that if you work 40 hours a week and you've got a child in the house, you will no longer be in poverty."[1]

By the time the OBRA93 earned income tax credit (EITC) expansion is fully phased in, the credit will be

the largest cash or near-cash program directed toward low-income households. In fiscal year 1998 the EITC is expected to cost the federal government $24.5 billion, $7 billion of which is the result of the OBRA93 expansion. In contrast, the federal share of the AFDC program is expected to be $16 billion in 1998. Despite the large size of the program, relatively little has been written about it. This essay examines how the EITC works and discusses several design issues that will become increasingly important as the EITC is expanded.[2] If it is to be the cornerstone of public policy initiatives to support the working poor, it is important that those who are eligible for the credit receive it, that those who are ineligible do not obtain it, and that the design of the program holds to a minimum perverse behavioral incentives.

What is the EITC?

As its name suggests, the EITC is a credit on the federal income tax available to working poor families with children. In 1993 the credit equaled 18.5 percent of earned income (wages, salaries, self-employment income, and farm income) for taxpayers with one child, up to an earned income of $7,750; hence, the maximum benefit is $1,434 (18.5 percent of $7,750) for families with one child. Because benefits increase with earned income (up to a certain point), the EITC seems to encourage work and therefore is a popular antipoverty program. Taxpayers with one child and incomes above $7,750 but below $12,200 receive the maximum benefit. Taxpayers with one child whose incomes exceed $12,200 are in the phase-out range of the credit: their $1,434 credit is reduced by 13.2 cents for every dollar of income earned over and above $12,200. Taxpayers with two or more children are entitled to a slightly higher credit ($1,511, or 19.5 percent of $7,750), taxpayers with a child under one are entitled to a supplemental credit of up to $388, and taxpayers paying for health insurance for a child are eligible for a supplemental health insurance credit of up to $465. Unlike most credits and deductions in the federal individual income tax system, the EITC is refundable—that is, if the amount of the credit exceeds what the taxpayer owes, he or she receives a payment from the U.S. Treasury for the difference.

The EITC was adopted in 1975 and was originally promoted as a way to relieve the burden of the social security payroll tax on low-wage working parents.[3] The original EITC equaled 10 percent of earnings up to a maximum credit of $400 for taxpayers with children, and was phased out at a rate of 10 cents per dollar of earnings (or adjusted gross income, whichever was higher) for incomes between $4,000 and $8,000. The EITC has been increased many times since 1975, though the largest changes occurred in 1990 and 1993. In 1996, when the OBRA93 changes are fully phased in, the credit rate will be 40 percent of earnings for families with two or more children and 34 percent for families with one child, and will for the first time provide a 7.65 percent credit to childless taxpayers with low incomes. The maximum credit (in 1994 dollars) for taxpayers with two or more children will be $3,370; for taxpayers with one child, $2,040; and for taxpayers with no children, $306. EITC parameters are summarized in Table 1.

Does the EITC reach those it is intended to help?

A family receives the EITC by filing a tax return.[4] Many low-income families are not legally required to file returns. A married couple with two children, for example, was required to file a tax return in 1992 only if the couple had income above $10,600, though with an income of this amount, the couple would be entitled to a refundable credit of $1,384. If the EITC is to be successful at meeting the objective of "making work pay," families or taxpayers who are eligible for the credit should receive it.

It is difficult to estimate the percentage of EITC-eligible taxpayers who receive the credit—the EITC participation rate. Household surveys generally collect the information needed to determine eligibility but do not provide information on EITC recipiency. Tax data are best for estimating EITC recipiency, but not all households file tax returns and tax data do not provide demographic characteristics, so they are unsuited for estimating EITC eligibility. In an earlier study I pieced together disparate sources of EITC data and estimated that the EITC participation rate was 70 percent in 1984, which means that roughly 1.65 million eligible taxpayers failed to receive the credit because they did not file tax returns.[5] The EITC, however, has changed significantly since 1984.

To update participation rate figures I used unique data that allowed me to determine EITC eligibility and EITC recipiency in the same data set: specifically, I used data from the 1990 Survey of Income and Program Participation (SIPP) matched by social security number to selected items from individual income tax returns.[6] To calculate participation rates, I first determined the number of taxpayers eligible for the EITC by simulating the 1990 EITC statutes for each respondent in the Survey of Income and Program Participation. The major factors determining EITC eligibility in 1990 were (1) supporting a child,[7] (2) having earned income between $1 and $20,264,[8] and (3) having less than $20,264 of adjusted gross income.

Using data from SIPP, I found that 9.6 to 10.3 million taxpayers were eligible for the EITC in 1990, where the

Table 1
EITC Parameters under Law Prior to OBRA93 and under OBRA93, Selected Years

		Flat Range			Phase-out Range	
	Credit Rate	Beginning Income	Ending Income	Max. Credit	Phase-out Rate	Income Cutoff
Prior Law						
1993 (1993 $)						
1 qualified child	18.5%	$7,750	$12,200	$1,434	13.21%	$23,050
2+ qualified children	19.5	7,750	12,200	1,511	13.93	23,050
Young child[a]	5	7,750	12,200	388	3.57	23,050
Health credit[b]	6	7,750	12,200	465	4.285	23,050
1994 and after						
1 qualified child	23	7,990	12,680	1,838	16.43	23,760
2+ qualified children	25	7,990	12,680	1,998	17.86	23,760
Young child[a]	5	7,990	12,680	400	3.67	23,760
Health credit[b]	6	7,990	12,680	479	4.285	23,760
Omnibus Budget Reconciliation Act of 1993 (OBRA93)						
1994						
1 child	26.3	7,750	11,000	2,038	15.98	23,760
2+ children	30.0	8,425	11,000	2,528	17.68	25,300
No qualifying child[c]	7.65	4,000	5,000	306	7.65	9,000
1995						
1 child	34.0	6,000	11,000	2,040	15.98	23,760
2+ children	36.0	8,425	11,000	3,033	20.22	26,000
No qualifying child[c]	7.65	4,000	5,000	306	7.65	9,000
1996 and beyond						
1 child	34.0	6,000	11,000	2,040	15.98	23,760
2+ children	40.0	8,425	11,000	3,370	21.06	27,000
No qualifying child[c]	7.65	4,000	5,000	306	7.65	9,000

Source: Figures for the August 1993 budget agreement (OBRA93) were kindly provided by Janet Holtzblatt at the Office of Tax Analysis, U.S. Department of Treasury. The other figures are from U.S. House of Representatives, Committee on Ways and Means, *1993 Green Book* (Washington, D.C.: U.S. GPO, 1993).

Note: Figures for 1994 and beyond are in 1994 dollars.

[a]The young child (or "wee tots") credit was for taxpayers who had a child under the age of one in the tax year and incomes in the ranges designated in the table.

[b]The supplemental health insurance credit goes to taxpayers with incomes in the range designated in the table who paid health insurance premiums that include coverage for one or more qualifying children. The taxpayer cannot take advantage of the supplemental health insurance credit on expenses used for the medical expense deduction or health insurance deduction for the self-employed (and vice versa).

[c]The taxpayer must be between the ages of 25 and 65.

variation in the range comes from variations in alternative ways of modeling statutory provisions of the tax code.[9] These results are consistent with those of Thomas Gabe, who used CPS data and found that 10.7 million taxpayers were eligible for the credit in 1991.[10] The *Green Book* shows that the number of taxpayers filing for the credit was projected to increase by 8.7 percent from 1990 to 1991 (presumably due to the weak economy).[11] Applying this rate of increase to my 1990 figures indicates that 10.4 to 11.2 million would have been eligible in 1991, which brackets Gabe's estimate.

The participation rate is the percentage of the eligible taxpayers who receive the credit. As I mentioned earlier, in 1990 the IRS calculated and paid the EITC to all taxpayers who appeared eligible on the basis of their tax form, regardless of whether they claimed the credit.[12] Thus, the most straightforward way of calculating participation is to determine what percentage of eligible households filed tax returns. For the total sample (not conditioning on EITC eligibility) I find that 78.0 percent of the sample filed tax returns: in most cases I determine that the taxpayer filed from observing

the tax return.[13] Another 18.3 percent of the sample did not file a return—that is, they provided a validated social security number and were not matched to a tax return, or they did not have a validated social security number but reported in a special SIPP tax topical module that they did not file. The remaining 3.7 percent of households did not provide a valid social security number and did not respond to the tax topical module. It is impossible to determine whether these households filed.

Depending on variations in modeling the statutory tax provisions and the treatment of the "unknown filers," I estimate that 80.5 percent to 86.4 percent of EITC-eligible taxpayers filed tax returns in 1990 and hence received the credit, either because they claimed it on the tax form or because the IRS intervened and computed and paid the credit to the taxpayer. These estimates imply that 1.3 million (13.6 percent) to 2.0 million (19.5 percent) taxpayers eligible for the credit failed to receive it.

The EITC participation rate is considerably higher than rates in other programs directed toward the low-income population. Rebecca Blank and Patricia Ruggles, for example, calculate AFDC participation rates of 62 to 72 percent and food stamp participation rates of 54 to 66 percent, using data from the 1986 and 1987 panels of the SIPP.[14]

A number of factors presumably contribute to the high EITC participation rate. Little or no stigma is associated with the EITC, whereas stigma associated with transfer programs such as AFDC and food stamps may discourage participation in those programs.[15] In addition, transfer program recipients are perhaps less likely to know about or take advantage of programs they may be eligible for: they are, on average, less educated and may be more dysfunctional than EITC-eligible taxpayers, who must work to receive the credit.

As part of the Omnibus Budget Reconciliation Act of 1990 a two-page form (Schedule EIC) was added to the tax return. Until the middle of 1992, the IRS continued to compute and award the EITC to taxpayers who appeared eligible but did not claim the credit, even when schedule EIC was not included with the return. In the middle of the 1992 filing season the IRS discovered that many of the EITC awards made when they intervened were incorrect. Hence they changed their policy so that the first page of Schedule EIC must be completed before the IRS will compute the credit and make an award.[16] The EITC participation rate will be lower in 1993 than it was in 1990 if eligible taxpayers who fail to claim the credit do not respond to the IRS notification that encourages them to file an amended return. At the same time, it seems likely that the 1990 and 1993 increases in the EITC will result in more eligible taxpayers receiving the credit, since the larger the credit, the more likely the taxpayer is to file.

Who are the eligible nonparticipants?

In recent years there has been a considerable amount of EITC outreach.[17] Examining factors systematically correlated with nonparticipation by eligible households may help increase the effectiveness of EITC outreach efforts and provide insight into why some eligible households fail to claim the credit.

There are a number of reasons why eligible taxpayers may not file tax returns to receive the EITC. A taxpayer who has illegally failed to file in previous years or has cheated on previous returns may rationally choose not to enter the IRS system. Taxpayers may also view the inconvenience of filing a return as being greater than the potential EITC benefit. Finally, EITC outreach efforts are predicated on the belief that low-income taxpayers are not aware of the credit, and hence information barriers keep eligible taxpayers from receiving the credit.

In a statistical analysis of EITC participation, I examined a number of factors that are related to different explanations for nonparticipation. For example, fewer information-matching requirements exist for self-employment income, so taxpayers have greater discretion over reporting such income. Thus, if a large percentage of total income comes from self-employment, the taxpayer may be less likely to file a return, even if eligible for the EITC. At the same time, I expect those with more wage income or who work more hours to be more likely to file for the credit. For the latter effect I examined a number of labor market variables.

I expect that the larger the potential EITC payment, the more likely the taxpayer will participate. I also think it is possible that taxpayers who live in a state without a state income tax may be less likely to receive the credit when eligible because low-income households may be less likely to file a federal return when they do not need to file a state return.[18] For similar reasons I suspect taxpayers who live in states with state-level EITCs will be more likely to file a federal return if they can also file a state return to possibly get an additional credit.[19] In the statistical analysis I also included a broad range of economic and demographic characteristics.

My results suggest that higher-income EITC-eligible taxpayers are more likely to receive the credit. As expected, the greater the percentage of earnings consisting of self-employment income, the less likely the taxpayer is to file a return; the larger the potential EITC payment, the more likely the taxpayer is to file; and EITC-eligible taxpayers residing in states without state income taxes are less likely than those who must also pay state taxes to file a federal return.

A large number of taxpayer characteristics are significantly correlated with nonparticipation. These include receiving income from public assistance (AFDC and

General Assistance), having a larger family, being unmarried, being male, and being of Spanish origin. Surprisingly, once a variety of income sources, labor market status, and demographic variables are controlled for, nonparticipation increases with education, so that taxpayers with college degrees are less likely to participate than those without high school diplomas. Among the occupational categories, those working in such private-household occupations as launderers, cooks, and housekeepers, as well as child care workers, equipment cleaners, and laborers, are significantly less likely to receive the credit than those in other occupations. In some of these jobs payments may be made "off the books" or income may be unreported self-employment income. Moreover, employers may be failing to withhold social security taxes and state income and federal income taxes. To the extent that EITC nonparticipants are aware of the EITC, some may prefer not to participate, rather than to formalize an informal working arrangement. This barrier may be a major hurdle to outreach efforts to boost EITC participation among eligibles.

A number of the results of the statistical analysis suggest that the benefit of the EITC may not be worth more than the costs of preparing a tax return when the taxpayer is entitled to a smaller credit, when the reporting of self-employment income may cause scrutiny of previous returns, and when the taxpayer does not also need to prepare a state return. Workers in household services may choose not to file tax returns because they and their employers do not pay the social security payroll tax. It is unlikely that informational barriers are the only explanation of nonparticipation when college-educated taxpayers are significantly less likely to receive the credit than taxpayers with less education. Some nonparticipation appears to be driven by voluntary or rational decisions and hence is unlikely to be affected by outreach.

How well targeted is the EITC?

Table 2 presents evidence on the "target efficiency" of the EITC prior to, and the changed EITC resulting from, OBRA93, once the new law is fully phased in. Under both policies more taxpayers with incomes above the poverty line than below the poverty line are eligible to receive EITC payments, but because of the progressive benefit structure of the EITC, roughly half the credit payments go to households with incomes below the poverty line. The new law increases substantially the credit payments going to taxpayers with incomes above the poverty line, primarily as a consequence of extending the break-even level of income to $27,000 from $23,760 for taxpayers with two or more children. It increases by over 33 percent the number of taxpayers with incomes below the poverty line who will be eligible for the EITC, primarily as a consequence of extending the credit to low-income, childless taxpayers between the ages of 25 and 65. Under current law roughly $5.6 billion of total EITC payments help close the "poverty gap"—the difference between total cash income and the poverty line.[20] Under the new law $6.4 billion of EITC payments close the poverty gap. However, because the new law sharply increases overall expenditures on the credit, one measure of target efficiency—the fraction of total EITC payments that directly reduce the poverty gap—falls to 36 percent from 47 percent.

Table 2
Antipoverty Effectiveness of the EITC under the Law Prior to OBRA93 and under OBRA93 When Fully Phased In by 1996

	Prior Law	OBRA93
EITC-eligible taxpayers with incomes above the poverty line (millions)	6.211	7.582
EITC payments to these households (millions $)	6,224	8,994
EITC-eligible taxpayers with incomes below the poverty line (millions)	4.084	5.451
EITC payments to these households (millions $)	5,820	9,020
Pre-EITC poverty gap (millions $)[a]	20,156	23,982
Post-EITC poverty gap (millions $)	14,544	17,574
Number of households taken out of poverty by the EITC (millions)	0.909	1.380

Source: 1990 Survey of Income and Program Participation.

Notes: All dollar amounts are given in 1994 dollars. SIPP data for 1990 are converted to 1994 dollars assuming a 3 percent rate of inflation.

Prior law calls for a 23 (25) percent EITC subsidy for one (two) children households with earned income under $7,990 in 1994. The maximum credit of $1,838 ($1,998) prevails for earned income between $7,990 and $12,680. The credit is phased out at a rate of 16.43 (17.86) percent for incomes between $12,680 and $23,760.

OBRA93 (see Table 1) adds a 7.65 percent credit for childless taxpayers between the ages 25 and 65 with earned income below $4,000, a 34.0 percent credit for one-child taxpayers with earned income below $6,000, and a 40.0 percent credit for taxpayers with two or more children with earned income below $8,425. The flat range of the schedule stops at $5,000 for childless taxpayers and $11,000 for taxpayers with one or more children. The phase-out rates are 7.65 percent, 15.98 percent, and 21.06 percent, so the credit is fully phased out at $9,000, $23,760, and $27,000.

[a]The poverty gap is defined as the difference between cash income (the sum of earnings, dividends, interest, social security, public assistance, SSI, veterans payments, pensions, unemployment, and alimony) and the poverty line.

Design concerns

Compliance

In past years a large number of ineligible taxpayers claimed the EITC, according to unpublished data from the IRS's Taxpayer Compliance Measurement Program (TCMP).[21] In 1988 10.4 million taxpayers claimed the EITC, whereas the TCMP for that year estimates that only 7.1 million were entitled to the credit, indicating that over 30 percent of EITC claimants were ineligible. Of the $5.6 billion in EITC claims, the 1988 TCMP estimates that nearly $2 billion (33.6 percent) were claimed inappropriately. A General Accounting Office official recently testified that "the credit has been the source of more taxpayer mistakes than any other individual income tax provision."[22] Holtzblatt provides information from the 1985 TCMP concerning reasons for disallowance of the EITC[23] (similar explanations are not available for 1988). Over half the returns were disqualified because the child exemption was disallowed, and over half the disqualified claimants had the filing status changed from one that entitled the taxpayer to the EITC (married filing jointly, head of household, or surviving spouse) to one that did not qualify the taxpayer (married filing separately, or single).[24] Thirty percent of the claimants were disqualified because they misreported earnings or AGI.

The perception of widespread noncompliance was an important issue surrounding the 1990 changes in the credit. Information from the 1985 TCMP showed that many of the ineligible taxpayers who received the credit failed the support test—the restriction that the taxpayer had to provide over half the support for the child who made them eligible for the EITC (see note 7). Items that were counted as support for the child but not provided by the taxpayer included AFDC, child support, and public housing benefits. If the value of these items exceeded the taxpayer's income (defined to include the implicit rental value of owner-occupied housing), the taxpayer would not meet the support test and hence would be ineligible for the EITC. Although taxpayers could learn these details by reading the rules accompanying the 1040 form and supplemental publications (such as the 32-page IRS Publication 596), it may be unreasonable to expect them to be cognizant of these subtleties when preparing their taxes.

Because of the difficulties of linking the support test to EITC eligibility and the resulting noncompliance associated with the test, Congress eliminated the test in 1990 and replaced it with the restriction that a "qualifying" child must live with the taxpayer more than half the year. This statutory change eliminated one of the largest sources of noncompliance.

As mentioned earlier, the 1990 budget legislation also added a new two-page form—Schedule EIC—the first page of which taxpayers are now required to complete in order to receive the credit. Page 1 of the form states the rules governing EITC eligibility, including the requirement that a child must be in residence more than six months (all year if a foster child); gathers information (including social security numbers) on the two youngest children because the credit varies depending on whether the taxpayer has one or two (or more) children; and gathers information on nontaxable earned income (see note 8). The second page of the form walks the taxpayer through the basic EITC benefit calculation, the health insurance credit, and the credit for a child born in the tax year. The latter two credits added considerable complexity to the EITC and hence were eliminated in OBRA93.

Schedule EIC is controversial. The General Accounting Office has recommended that Schedules 1040 and 1040A be modified to collect the supplemental information needed to eliminate Schedule EIC. Doing so would give the IRS the information necessary to calculate and pay the credit to eligible taxpayers who file a return but fail to claim the credit. The IRS opposes this change. The proposed modifications of Form 1040 and 1040A would require all taxpayers to give the birth date of their dependents and indicate whether each dependent is a student or disabled.[25] In addition there is a tension between the residency-based test that defines a qualifying child for the purposes of the EITC and the definition of a dependent, which must satisfy the support test. Mingling the two concepts in the exemption section of the tax forms may prove confusing to taxpayers, and additional space would need to be created so taxpayers could claim up to two nondependent qualifying children. Finally, worksheets would need to be added to the tax forms to include the nontaxable earned income items in calculations for the EITC (see note 8), though the GAO suggests that fewer than 3 percent of all taxpayers report such income.

As the law currently stands there are differences in the definitions of a dependent child and a qualifying child, nontaxable items are included in earned income for the purposes of the EITC, and age restrictions are placed on the qualifying children. As long as these features of the EITC exist, it makes sense to have Schedule EIC. The schedule, in as simple a way as possible, clarifies the statutory provisions governing EITC eligibility. Only the first page needs to be completed. Moreover, eliminating the schedule without any corresponding statutory changes would impose additional burdens on all taxpayers who are not eligible for the EITC. A preferred alternative, discussed below, would eliminate the differences between statutes governing EITC eligibility and other aspects of the tax code. Doing this would simplify burdens on taxpayers, eliminate Schedule EIC, and allow the IRS to again calculate and pay the credit to eligible taxpayers who file returns but fail to claim the credit.

Advance payments

Since 1979, a portion of the basic EITC (the credit for one-child families) could be received by taxpayers in advance during the year from their employers.[26] The employee triggers advance payments by filing IRS Form W-5, "Earned Income Credit Advanced Payment Certificate," with the employer. This form certifies that the taxpayer expects to be eligible for the EITC, has a qualifying child, and has not (and his or her partner has not) filed a W-5 with other employers. Upon receipt of the form the employer is required to include the advance payment in the employee's paycheck. Employers determine the advance payment from tables supplied by the IRS and pay it out of employer and employee social security taxes, so employers are not out-of-pocket any expenses. At the end of the year, advance EITC payments are reported to employees on their W-2, and they must file income tax returns. Advance payments in excess of the credit to which the employee is entitled are treated as a tax liability and must be paid back to the IRS by the employee.

The GAO reported that in 1989 fewer than one-half of one percent of EITC-eligible taxpayers (40,000 families) took advantage of the advance-payment option.[27] In addition, almost half of those who received advance payments failed to file tax returns, despite the requirement that all advance-payment recipients do so. Usage of the advance-payment option does not appear to have increased since 1989.

There is no empirical evidence about why the advance-payment option is infrequently utilized. Taxpayers may prefer receiving EITC payments annually in a lump sum. Eligible taxpayers may not be aware of the advance-payment option or may worry about imposing burdens on their employers.

Congress has taken steps to increase awareness of the advance-payment option. Beginning this year, the IRS is required to notify taxpayers who receive the EITC as a lump sum about the availability of the advance-payment option. Beyond this, it is not clear whether additional steps should be taken. One might think that an incremental benefit received throughout the year would provide a better work incentive for households with incomes in the subsidy range of the credit and provide assistance at the time the participant is more likely to need it. However, the advance-payment option has existed for over ten years, so if there is strong demand for the option, it is surprising that it is not more widely used.

My view is that increasing the awareness of the advance-payment option, as the IRS is now required to do, is useful. Beyond this, the low use of the option suggests that it is not a critical public policy issue except, perhaps, for households making the transition from welfare to work. Michael Wiseman presents a careful comparison of the monthly income a Wisconsin family would receive on welfare compared to after-tax income from a 30-hour-per-week minimum wage job.[28] The month-by-month pattern of income is revealing. Because earnings do not immediately lead to a reduction in AFDC benefits, after-tax incomes of newly working households are higher than the incomes of those on welfare. After several months, however, the combination of AFDC benefit reductions and tax payments makes the incomes of employed households fall below the basic AFDC grant. Hence, there is a concern that once this reduction occurs, households may return to welfare. Wiseman shows that if the EITC is received incrementally through advance payments, employment income is higher in every period, which presumably increases the attractiveness of work over welfare. This logic has prompted Michigan, for example, to apply for a waiver for a welfare demonstration that focuses on administering the EITC advance payment through the AFDC and

FOCUS is a Newsletter put out three times a year by the

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Focus is free of charge, although contributions to the U.W. Foundation–IRP Fund sent to the above address in support of *Focus* are encouraged.

Edited by E. Uhr.

food stamp delivery system. Efforts at increasing usage of the advance-payment option should focus on the population making the transition from welfare to work.

Future incentives for manipulation of reported income

Until 1994, the subsidy rate of the EITC was roughly the same as the combined employee and employer share of the payroll tax.[29] As long as the payroll tax and EITC subsidy are about the same, taxpayers are unlikely to overstate their income in order to increase their EITC. It is difficult to successfully misreport wage and salary income to the IRS, as extensive information-matching procedures are in place whereby employers report to the IRS wages and salaries paid to employees. Taxpayers with incomes below the level that would maximize their EITC could fabricate self-employment income. Doing so would increase the taxpayer's EITC but would obligate the taxpayer to pay social security taxes on the self-employment income, eliminating any advantage to falsely reporting income.

With the sharp increase in the EITC, there are now stronger incentives to manipulate income. A taxpayer who does not work and has two children could receive a payment from the IRS of $3,370 in 1996 (in 1994 dollars) by reporting self-employment income of $8,425 ($8,425 x .40). Doing so would require the taxpayer to pay $1,289 ($8,425 x .153) in social security taxes, leaving a net benefit to the transaction of over $2,000. The IRS is not well-equipped to uncover overreporting of incomes, and the payoffs to monitoring compliance in this area are certainly small relative to other areas of compliance. Of course, the taxpayer's claims need not be illegal. Two families could care for each other's children or watch each other's houses. They could exchange payments of $8,425 for doing so and both receive a net benefit of more than $2,000 if neither had any other sources of taxable income.

It is, of course, not yet clear how people will respond to these incentives to manipulate income, as there is no comparable situation in the tax code. My guess is that over time taxpayers and/or paid tax preparers will begin to take advantage of the incentive to overstate income in the subsidy range of the credit. The IRS will surely monitor closely the amount of income reported by low-income taxpayers that occurs in forms not subject to information-matching procedures (i.e., income from self-employment or income from items mentioned in note 8). An increase in the proportion of income occurring in these forms will be an early signal that a problem may be developing. My fear is that a couple of well-publicized cases of taxpayers reporting fictitious income or paying each other for work like "watching houses" may undermine public and congressional support for the EITC. As discussed below, a solution would be to restrict the expanded EITC to income reported on W-2s (and only allow an EITC equivalent to the employer and employee share of payroll taxes for other sources of income), though that would create an inequity between low-income wage earners and self-employed households.

Labor market incentives

Several studies have addressed concerns about the possible negative consequences the EITC might have on labor supply.[30] The EITC has different labor supply effects depending on whether the taxpayer's income is in the subsidy, flat, or phase-out range of the credit. The subsidy range of the credit increases the worker's marginal return to labor. For households not working, it is hoped that the wage subsidy provided by the EITC will encourage work. For taxpayers with incomes in the subsidy range, the wage subsidy is thought to encourage work. At the same time, the income supplement provided by the EITC is thought to decrease a recipient's labor supply because more money in hand means that he or she may choose to work less. The net effect is ambiguous. Households in the flat range of the credit receive the maximum EITC payment and no marginal subsidy for increased work, so these households have no incentive to increase their hours of work, and the EITC supplement provides incentives to work less. In the phase-out range, the EITC is reduced as additional income is earned, which is akin to an additional tax on earnings. Thus the additional tax and the additional income both encourage workers to decrease their hours of work. These effects prompt the concern that if a disproportionate fraction of the EITC population is in the flat and phase-out ranges of the credit, increases in the EITC could lead to a net reduction in the labor supplied by low-income workers.

Table 3 uses data from the 1990 SIPP to examine the labor market incentives of the EITC. It shows that OBRA93 increases by 42 percent the number of EITC recipients who are in the subsidy range of the credit, primarily by extending the credit to taxpayers between the ages of 25 and 65 without children. At the same time, the new changes almost double payments to households with incomes in the phase-out range of the credit. Twenty-three percent of EITC-eligible taxpayers have incomes that place them in the subsidy range of the credit, where they face positive labor market incentives (if the "earnings effect" outweighs the "income effect"). Sixteen percent of the population receive the maximum credit and 61 percent of the population are in the phase-out range of the credit, where the work disincentives are strongest.

Hoffman and Seidman[31] and the GAO[32] simulate the effects of the EITC on labor supply, using labor supply estimates from studies that examined the Seattle-Denver income maintenance experiments. The GAO estimates that in 1994 under the pre-OBRA93 law (see Table 1) annual hours of work would increase by 6.4 percent (19

Table 3
Labor Market Incentives of the EITC, as Indicated by Payment Levels in Relation to Income

	Prior Law	OBRA93
Number of taxpayers in EITC subsidy range (millions)	2.116	3.005
EITC payments to these households (millions $)	$2,275	$3,161
Number of taxpayers in flat range (millions)	2.223	2.055
EITC payments to these households (millions $)	$4,269	$4,382
Number of taxpayers in phase-out range (millions)	5.955	7.972
EITC payments to these households (millions $)	$5,500	$10,469

Source: 1990 Survey of Income and Program Participation.

Notes: As described in the text, increased income and increased marginal earnings are expected to have opposing effects on labor supply for taxpayers in the subsidy range of the credit. Taxpayers in the flat range or phase-out range of the EITC schedule have an unambiguous incentive to reduce labor market hours. All dollar amounts are given in 1994 dollars. SIPP data for 1990 are converted to 1994 dollars assuming a 3 percent rate of inflation. The figures for number of taxpayers reflect the size of the population in 1990. Budgetary costs and population estimates for later years can be approximated by increasing the figures in the tables by the estimated rate of growth of the EITC-eligible population.

Prior law calls for a 23 (25) percent EITC subsidy for households with one (two) child(ren) with earned income under $7,990 in 1994. The maximum credit of $1,838 ($1,998) prevails for earned income between $7,990 and $12,680. The credit is phased out at a rate of 16.43 (17.86) percent for incomes between $12,680 and $23,760.

For 1996 and beyond (see Table 1), OBRA93 adds a 7.65 percent credit for childless taxpayers between the ages of 25 and 65 with earned income below $4,000, a 34.0 percent credit for one-child taxpayers with earned income below $6,000, and a 40.0 percent credit for taxpayers with two or more children with earned income below $8,425. The flat range of the schedule stops at $5,000 for childless taxpayers and $11,000 for taxpayers with one or more children. The phase-out rates are 7.65 percent, 15.98 percent, and 21.06 percent, so the credit is fully phased out at $9,000, $23,760, and $27,000.

hours a year) for taxpayers in the subsidy range of the credit, fall by 4.6 percent (48 hours a year) for taxpayers with incomes in the stationary range of the credit, and fall by 7.0 percent (70 hours a year) for households in the phase-out range of the credit. The effects are expected to be larger for women in married households, and smaller for single women and men. Both the positive and negative effects are expected to be larger with the OBRA93 EITC increases.

While the GAO report reflects the most careful study of the labor supply effects of the EITC, the results must be interpreted with considerable caution. The Seattle-Denver negative income tax experiments took place in the early 1970s, hence the labor supply estimates are based on behavioral responses that took place more than twenty years ago. In addition, the experiments were different from the EITC. In particular, the experiment emphasized the links between transfer payments, earned income, and the phase-out rate. In contrast, 99.5 percent of EITC recipients receive benefits in a lump sum after filing a tax return. The links between earnings, benefits, and the phase-out are likely to be much less clear to the EITC population.

There are grounds to be concerned about the negative labor market effects of the EITC. Well over half the EITC-eligible population have incomes in the phase-out range of the credit, where incentives to reduce labor supply are strongest. Still, given that the EITC redistributes $27 billion from wealthier households to households with incomes of less than $27,000, its design from the standpoint of labor supply is superior to the alternatives. It provides a positive work incentive for households not working and working only a little. The most severe negative effects are concentrated on taxpayers making more than $11,000 a year, a group that is already working a fairly significant amount and hence may not be greatly affected by the phase out of the credit.

Family structure

One of the least well-understood effects of public policies directed toward low-income households is the effects of programs on family structure.[33] The EITC provides very strong incentives for some taxpayers to marry and others to separate. Consider, for example, a single man with two children and a single woman with two children. Both have incomes of $11,000. By 1996, each will be eligible for an EITC of $3,370. If they marry, their joint income will be $22,000 and they will be eligible for a credit of $1,054. By marrying, their combined EITC falls by almost $5,700, or more than 25 percent of their combined earned income. Similarly, a two-earner couple with four children and with both the husband and wife making $11,000 would increase their combined after-tax incomes by more than $5,700 by separating and maintaining separate households.[34] Thus, it is clear that the EITC creates very large financial incentives for some taxpayers not to marry and for others to separate.

At the same time, the credit increases the incentive for some households to marry. Consider, for example, a single man earning $11,000 and a mother with two children with no earned income. If this pair marries, they will be eligible for an EITC of $3,370. In general, positive incentives to marry are provided to low- or zero-earning taxpayers with children; and positive incentives for separation (or negative incentives for marriage) are provided to couples with children when each has modest earned income.

I know of no empirical evidence that suggests people manipulate their legal living arrangements to respond to these incentives. Still, the incentives are large, particularly in relation to the incomes of the affected taxpayers. From the perspective of social science research, the EITC when fully phased in may provide an opportunity for examining the effects of income transfer policies on the marital status of low-income households. It would be an unfortunate cost of the credit, however, if the incentives discourage people from marriage or encourage families to separate.

Changes to enhance the effectiveness of the EITC

The preceding discussion suggests several changes to the credit that might increase its effectiveness. EITC participation and compliance would be improved if the taxpayer and the IRS could assess EITC eligibility based solely on information provided on Form 1040 or 1040A. To do this without increasing burdens on taxpayers not eligible for the EITC will require several changes. First, nontaxable items such as nontaxable military benefits, housing allowances or rental value of a parsonage for the clergy, and excludable employer-provided dependent-care benefits should be excluded from earned income for the purposes of calculating the EITC. The value of these items cannot be assessed by the IRS except in an audit. Eliminating the nontaxable items would restore the EITC to its original state in 1975, when earned income was limited to items included in the gross income of the taxpayer.

Second, the support-based definition of a dependent should be changed so that it conforms to the residence-based definition of a qualifying child for the purpose of the EITC. The support test is unnecessarily difficult for taxpayers. The GAO estimated that nine million dependency exemptions were erroneously claimed for tax year 1988, primarily because of errors in assessing the support requirement.[35] Changing the support-based definition of dependent to one that relies on residency would significantly simplify the tax system. Senators Moynihan and Packwood introduced legislation to do this in 1993 (S.939).

Third, the age requirements for EITC qualifying children should be eliminated. A taxpayer would list his or her dependents (based, possibly, on either support provided or residency) on the face of the tax return as is currently done. EITC eligibility would then be based on the taxpayer's earned income, adjusted gross income, and number of dependents. This would broaden the scope of the EITC somewhat, by allowing the EITC to be received by the working poor with responsibility for all dependents rather than simply children, but the changes would significantly simplify the tax system for low-income households and allow the IRS to once again compute and pay the credit to eligible taxpayers based on the information provided on the returns.

The IRS, research community, and advocacy groups should ensure, to the extent possible, that EITC-eligible taxpayers are aware of the advance-payment option. Employers are obligated to provide an end-of-year statement about the EITC to employees who did not have income tax withheld during the year. They need not provide this notice to employees who claim exemption from withholding because they had no tax liability in the previous year and expect none in the current year. The latter group is just as likely to benefit from the notice and should receive it. The IRS communicates with millions of nonfilers, who, because of their low incomes, are not likely to owe taxes. Information about the EITC and advance payments should be included in these communications.

Integration of EITC advance payments and the AFDC and food stamp delivery system, such as that proposed by the state of Michigan, holds the greatest promise of making the advance-payment option work best for the population for whom it is most important. The Michigan experiment should be watched closely, and, if successful, implemented on a broader scale.

The EITC provides a number of incentives that many would deem undesirable. These include overstating reported income to the IRS, reducing work effort, and separating or not marrying. If fraudulent reports of income threaten to jeopardize support for the EITC, it would be straightforward to base the expanded credit on wage and salary income, which is accurately reported to and easily verified by the IRS. EITC payments based on other sources of income could be limited to the combined employer and employee payroll tax rate. This change would result in inequity between low-income self-employed households and wage-earning households, but the inequity could be addressed by other provisions in the tax code. Because the EITC is delivered to most taxpayers as a lump-sum payment, I suspect the adverse labor market consequences of the credit are not severe.

Conclusion

The EITC has gone from a program that provided a maximum benefit of $500 as recently as 1984 to one that will provide maximum payments of $3,370 to families with two or more children in 1996. No other program directed toward low-income households has grown nearly as rapidly as the EITC. Its popularity cuts across political ideology. Liberals like the program because it increases the fairness of the tax system by redistributing resources from wealthier to poorer households. Conser-

vatives like the program because benefits are tied to work, so it is consistent with "pro-work" welfare policy. With such a rapid expansion in the credit, however, policymakers, advocacy groups, and analysts will have to pay careful attention to several issues to ensure that the credit serves its intended purposes.

Statutory reforms can improve EITC compliance. Outreach and targeted efforts, such as Michigan's proposed experiment, hold promise for getting advance payments to households making the welfare-to-work transition. More must be learned, however, about the degree to which taxpayers will manipulate reported incomes to receive benefits and the effects of the EITC on labor supply and family structure. ■

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[1]Quoted in Isaac Shapiro and Robert Greenstein, "Making Work Pay: The Unfinished Agenda," Center on Budget and Policy Priorities, Washington, D.C., May 1993, p. 19.

[2]More detailed discussion of many of the issues raised in this essay can be found in my paper "The Earned Income Tax Credit: Participation, Compliance, and Antipoverty Effectiveness," IRP Discussion Paper No. 1020-93, 1993 (forthcoming in the *National Tax Journal),* and in George K. Yin, John Karl Scholz, Jonathan Barry Forman, and Mark J. Mazur, "Improving the Delivery of Benefits to the Working Poor: Proposals to Reform the Earned Income Tax Credit Program," forthcoming in the *American Journal of Tax Policy.* I am grateful to my coauthors for teaching me much about the EITC and to John Coder at the Census Bureau for his invaluable collaboration.

[3]The credit has also been defended as an income security program for low-income families, a work incentive for welfare recipients, a subsidy to take account of the child care and health care needs of children in low-income families, and an efficient mechanism for offsetting the effects of regressive federal tax proposals.

[4]Up through the middle of the tax year 1992, the Internal Revenue Service (IRS) would compute and pay the credit to any taxpayer who filed a return and appeared to be eligible for the credit, even if the taxpayer did not claim the credit on the return. Because of the high error rate in payments made when the IRS intervened, the policy was changed so that taxpayers who appear eligible but do not claim the credit are now notified by letter that they may be eligible for a refundable credit if they file an amended return.

[5]"The Participation Rate of the Earned Income Tax Credit," IRP Discussion Paper No. 928-90, University of Wisconsin–Madison, 1990.

[6]Tax return items were matched to the 1990 SIPP through an arrangement between the Census Bureau and the IRS. Since the data resulting from the SIPP-IRS match are not available for public use, all work relating to the matched data was carried out at the Census Bureau by staff having authorized access to the linked data sets. Unfortunately, the tax return information does not include whether or not the taxpayer claimed or received the EITC.

[7]Rules governing whether or not a taxpayer supports a child are complicated. Janet Holtzblatt states (for rules in effect in 1990): "Single parents had to demonstrate that they provided over half the costs of maintaining a household in which a child resided, while married couples had to show that they provided over half the costs of a supported child. Further, the definition of a qualifying child differs among families on the basis of marital status" ("Administering Refundable Tax Credits: Lessons from the EITC Experience," *National Tax Association–Tax Institute of America Proceedings,* 84th Annual Conference, p. 181). AFDC and child support receipts, for example, are considered support that is not provided by the taxpayer, and hence may make the taxpayer ineligible for the credit. In OBRA90 the rules were simplified so that a qualifying child became any disabled offspring or any child under the age of 19 (or under 24 if a full-time student) who lives in the home for more than half the year.

[8]For the purposes of the EITC, earned income includes not only wage, salary, farm, and self-employment income, but otherwise nontaxable sources such as housing allowances or the rental value of a parsonage for the clergy, excludable employer-provided dependent-care benefits, nontaxable military quarters and subsistence benefits, voluntary salary reduction amounts (e.g., deductions to 401(k) plans), and anything else of value (money, goods, or services) received from someone for services performed even if it is not taxable (IRS Publication 596).

[9]Using as much tax return information as possible, I estimate that 10.1 million taxpayers were eligible for the EITC in 1990.

[10]"The Earned Income Tax Credit (EITC), Current Law, and the Clinton Proposal: Characteristics of Eligible Families," photocopy, Congressional Research Service, Washington, D.C., May 25, 1993.

[11]U.S. House of Representatives, Committee on Ways and Means, *1993 Green Book: Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means* (Washington, D.C.: U.S. GPO, 1993), p. 1058.

[12]The U.S. General Accounting Office reports that in 1991, "...if the taxpayer did not claim the EIC but the tax return information on filing status, dependents, and income appeared to meet the EIC qualifications, the computer would automatically calculate the EIC. A tax examiner would then review the return to determine if there was information that indicated the taxpayer was not entitled to the EIC" ("Tax Administration: IRS' 1992 Filing Season Was Successful but Not without Problems," GAO/GGD-92-132, Washington, D.C., September 1992, p. 5, note 6). The same procedures applied in 1990.

[13]Approximately 1.8% of EITC-eligible taxpayers actually file a tax return using form 1040EZ—a form designed for single taxpayers with no dependents and income from wages and salaries (the taxpayer cannot have more than $400 of interest income, for example)—rather than forms that would allow the IRS to flag the return as being eligible for the credit in the event the taxpayer did not claim it. Because a taxpayer cannot claim a dependency exemption on the 1040EZ, filing such a return would mean that an eligible taxpayer would not receive the credit.

[14]Rebecca M. Blank and Patricia Ruggles, "When Do Women Use AFDC and Food Stamps: The Dynamics of Eligibility versus Participation," photocopy, Northwestern University and the Urban Institute, Washington, D.C., June 1993.

[15]Robert Moffitt, "An Economic Model of Welfare Stigma," *American Economic Review,* 73 (December 1983), 1023–1035.

[16]This change is described in U.S. General Accounting Office, "Tax Administration: IRS' 1992 Filing Season Was Successful but Not without Problems." According to unpublished figures from Sharon Patton at the Returns Processing Division of the IRS, as of June 5, 1993, the IRS had mailed 832,000 EITC notices to potentially eligible taxpayers for the 1992 tax year.

[17]See, for example, Center for Budget and Policy Priorities, "The 1994 Earned Income Credit Campaign Information Kit," CPPP, Washington, D.C.; Greater Milwaukee Committee, "The Milwaukee Earned Income Credit Campaign: Reaching Out to the Poor," Project Report, Milwaukee, July 1990; Congress for Working America, "Making Work Pay: The Milwaukee Earned Income Credit Campaign, 1991–1992," Milwaukee, 1992; and the IRS (Margaret J. Lullo, "Statement of Margaret J. Lullo, Deputy Assistant Commissioner [Taxpayer Services], Internal Revenue Service, before the Subcommittee on Select Revenue Measures and Human Resources, Committee on Ways and Means, U.S. House of Representatives," March 30, 1993).

[18]States that did not tax wages in 1990 included Alaska, Connecticut, Florida, Nevada, New Hampshire, Tennessee, Texas, and Washington (Connecticut now has an income tax). Two additional states that should be included, South Dakota and Wyoming, are aggregated with

more than one other state in the data and hence could not be included with the other no-tax states.

[19]Iowa, Maryland, Rhode Island, Vermont, and Wisconsin had state EITCs in 1990 (Minnesota added one in 1991). Iowa is aggregated with South and North Dakota in the data; Vermont is aggregated with Maine. All these states are included with the state-EITC variable.

[20]This reduction in the poverty gap will not be reflected in official government statistics as the EITC is not included in the most widely publicized income concept used to measure poverty—pretax, posttransfer income.

[21]The TCMP collects a stratified random sample of 50,000 tax returns every three years. Each selected taxpayer undergoes an intensive, comprehensive audit by a specially trained examiner. The audits focus on all items of the tax return. For more details about the TCMP program, see Jeffrey Roth, John Scholz, and Ann Witte, *Taxpayer Compliance: Vol. 1, An Agenda for Research* (Philadelphia: University of Pennsylvania Press, 1989), particularly pp. 65–69.

[22]Jennie S. Stathis, "Statement of Jennie S. Stathis, Director, Tax Policy and Administration Issues, General Government Division, General Accounting Office, before the Subcommittee on Select Revenue Measures and Human Resources, Committee on Ways and Means, U.S. House of Representatives," GAO/T-GGD-93-20, Washington, D.C., March 30, 1993.

[23]Holtzblatt, "Administering Refundable Tax Credits: Lessons from the EITC Experience."

[24]Ibid., p. 184. The categories Holtzblatt presented are not mutually exclusive. For example, 41% of the returns disqualified had both the child exemption disallowed and filing status changed. A taxpayer claiming the EITC who did not meet the support test could have the child exemption disallowed and the filing status changed.

[25]A qualifying child must be under the age of 19, or a student under the age of 24, or a disabled offspring of any age.

[26]Because Congress was concerned about employees receiving too large a credit during the year, beginning in 1994 advance payments are limited to 60% of the base credit. Thus, the most a taxpayer could receive is $23 per week (.60 x 2,040/52).

[27]U.S. General Accounting Office, "Earned Income Tax Credit: Advance Payment Option Is Not Widely Known or Understood by the Public," GAO/GGD-92-26, Washington, D.C., February 1992.

[28]Michael Wiseman, "Welfare Work Incentives in Real Time," paper prepared for the National Commission on Employment Policy, La Follette Institute of Public Affairs, University of Wisconsin–Madison, December 1993.

[29]The combined employer and employee payroll tax is 15.3%. The EITC for a family with one qualifying child was 18.5% in 1993. Under the 1990 EITC changes, however, the credit was to be increased in 1994 to 23% for taxpayers with one child and 25% for taxpayers with two or more children. Under OBRA93 the corresponding rates are 26.3% and 30% (see Table 1).

[30]See, for example, Saul D. Hoffman and Laurence S. Seidman, *The Earned Income Tax Credit: Antipoverty Effectiveness and Labor Market Effects* (Kalamazoo, Mich.: W. E. Upjohn Institute for Employment Research, 1990), Chap. 3; Marvin H. Kosters, "The Earned Income Tax Credit and the Working Poor," *American Enterprise*, May/June, 1993, pp. 65–72; Edgar K. Browning, "Effects of the Earned Income Tax Credit on Income and Welfare," photocopy, Texas A&M University, College Station, 1993; and U.S. General Accounting Office, "Tax Policy: Earned Income Tax Credit: Design and Administration Could Be Improved," GAO/GGD-93-145, Washington, D.C., September 1993.

[31]Hoffman and Seidman, *The Earned Income Tax Credit*, Chap. 3.

[32]U.S. General Accounting Office, "Tax Policy: Earned Income Tax Credit," Chap. 3.

[33]Robert Moffitt, "Incentive Effects of the U.S. Welfare System: A Review," *Journal of Economic Literature*, 30 (March 1992), 1–61.

[34]Separating would also reduce their (small) federal tax liability. If the family owns their home, it is not even clear that they could not continue to live in the same house. One partner would receive the house in the separation agreement. The homeowner could then "rent" a portion of the home to the separated spouse and children.

[35]U.S. General Accounting Office, "Tax Policy: Earned Income Tax Credit."

Microsimulation models for social welfare programs: An evaluation

by Constance F. Citro and Eric A. Hanushek

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A scene in Washington, D.C.—It is mid-1988. In the quarters of the Congressional Budget Office (CBO) at the foot of Capitol Hill, exhausted analysts are working overtime to prepare final estimates of the budgetary and programmatic effects of what will become the Family Support Act (FSA) of 1988. . . . [In] the process of developing the final form of the FSA . . . CBO analysts have prepared cost estimates for half a dozen major bills, each of which contains as many as 50 separate provisions. They have also prepared estimates of which population groups would be affected by the various bills and whether those groups would gain or lose under each proposal, in comparison with alternative proposals and with current law. . . . To prepare their estimates for the FSA, the CBO analysts have called on a wide variety of data sources and data processing tools [including] microsimulation models that process large, nationally representative samples of families as if they were applying to the local welfare office for benefits.

This vignette, from the report of the Committee on National Statistics Panel to Evaluate Microsimulation Models for Social Welfare Programs,[1] could be used, with very few wording changes, to characterize the flurry of activity throughout much of 1993 on the Clinton administration's health care reform initiative. Executive and congressional analysts were working overtime to estimate the costs and likely effects on population subgroups of a variety of proposals, and they were using many different data sources and processing tools, including large, complex microsimulation models. As the administration gears up for an initiative to reform the welfare system, beyond the provisions of the Family Support Act, executive and congressional analysts will similarly be engaged in round-the-clock analysis with the support of several types of policy models. Clearly, a vital concern—but one that is frequently overlooked in the heat of the policy debate—is the quality of these models and the quality of the estimates that they produce.

The use of large-scale models in the policy process is both a relatively recent and a heavily entrenched phenomenon. Since the inception of the U.S. federal system in 1789, decision makers in the executive and legislative branches have sought information to help make choices among alternative public policies. Throughout most of the nation's history, however, the supply of policy information has been limited and the demand for it sporadic and ad hoc in nature.

Beginning in the 1960s, quantum improvements in data sources, socioeconomic research, and computing technology made it possible to supply information of much greater depth and breadth to the policy process. In turn, the activist posture of the federal government during that period both stimulated the production of policy research and analysis and drew on its results. At one end of the process, policy research helped identify problems and move them onto the federal agenda; at the other end, it contributed to an understanding of the successes and failures of enacted programs. At the middle stage of the process in which legislative initiatives are debated, the role of information about the costs and benefits of alternative proposals became institutionalized.

Today, the policy community in Washington takes it for granted that neither the administration nor Congress will consider legislation to alter any of the nation's expenditure programs or the tax code without looking closely at "the numbers." Often, these numbers are the product of team efforts to apply formal computerized modeling techniques and large-scale databases to the task of estimating the impact of alternative policies. The kinds of formal models that are used for policy analysis, defined as the production of estimates of the budget and population impacts of proposed program changes, vary widely. They include large-scale macroeconomic models, single-equation time-series models, cell-based models of population groups, econometric models of individual behavior, and large-scale microsimulation models (see discussion of these model types below, pp. 15–17). Of course these approaches are frequently supplemented, or sometimes supplanted, by a range of less formal means of developing policy estimates.

Despite the widespread use of formal models to provide information to the legislative debate, neither the utility of the models as tools for policy analysis nor the accuracy of the estimates they produce has been subject to much explicit evaluation. Several years ago, the Office of the Assistant Secretary for Planning and Evaluation (ASPE) in the U.S. Department of Health and Human Services and the Food and Nutrition Service (FNS) in the U.S. Department of Agriculture asked the Committee on National Statistics at the National Research Council to convene a panel of experts. They asked that the panel evaluate microsimulation-based policy models, such as TRIM2 (Transfer Income Model 2) and MATH (Micro Analysis of Transfers to Households). ASPE, FNS, and other agencies have used micro-simulation models for many years to estimate the impacts of proposed changes in social welfare programs—including programs for income support for the poor, retirement income support, and provision of health care—and also in tax laws. Models of this class were first developed for policy analysis in the late 1960s but have not been the focus of a major evaluation since a study by the General Accounting Office in 1977.

The panel concluded that, conceptually, micro-simulation models are an invaluable component of the tool kit that policymakers have at their disposal for assessing the effects of different policy alternatives. For the analysis of certain types of policy effects, micro-simulation modeling is unquestionably the best tool to use and has undeniable advantages over alternative methods. The panel found, however, that the existing microsimulation models are far from fulfilling their potential and suffer from problems that deserve much greater attention and resources than have been devoted to them to date. Perhaps the best example is the woeful lack of validation activities and the consequent dire need not only for additional activity in this direction but for systematic validation to be made an ongoing part of the use of microsimulation models.

The panel also concluded that many, if not most, of the considerations involved in assessing the relative strengths of the microsimulation approach and in assessing the defects of existing applications of that approach apply more broadly to other forms of policy analysis. This is not surprising, for microsimulation modeling is just one of many means by which information is provided and used in the policy process. As a result, the panel also made recommendations regarding improvements in the use of information in the policy process in general.

In what follows, we first summarize the panel's findings on this more general theme. We then discuss in more detail the major findings of the panel vis-à-vis microsimulation models.[2]

Improving the tools of policy analysis: Investment priorities

The panel identified two primary deficiencies that demand attention if policy models, of whatever type, are to provide cost-effective information to the legislative debates of the future. The first problem—one of long standing—is the lack of regular and systematic model validation. Ingrained patterns of behavior on the part of decision makers and policy analysts have led to persistent underinvestment in the validation task. The second problem—of more recent origin—is underinvestment and consequent deterioration in the scope and quality of needed input data for policy models.

Given the importance of estimates of the costs and population effects of proposed policy changes, it is essential that the legislative debate have available, in addition to the estimates themselves, an assessment of their quality. Any estimate, whether coming from a rough back-of-the-envelope calculation or produced by one or another type of formal model, will inevitably contain errors and be subject to uncertainty—from sources such as sampling variability, errors in the input data, and errors in the specification of model components. Despite this need, it is rare that questions about the quality of policy estimates are asked by policymakers or that information about quality is provided to the policy debate by others. This state of affairs is no doubt a result of the very difficult problems in determining quality objectively, as well as a result of the time pressures of policy debates. Nevertheless, the panel concluded that it is essential for users and producers of policy information to elevate validation to a priority task. Failure to do so will only lead to a continuation of the wild swings in perceptions of policy successes and failures that come on the heels of expectations falsely based on highly uncertain predictions of their effects. Heads of policy analysis agencies are the logical actors to begin the process of ensuring that information on uncertainty becomes available as a matter of course for the estimates their agencies provide.

Much of the error that arises from policy estimates can be traced to data of poor quality. A disturbing feature of the 1980s was declining federal investment in the production of high-quality, relevant data in many areas of ongoing policy concern. Budget and staff cutbacks, reductions in sample sizes of many surveys, reductions in the publication of tabulations from existing data collections, delays in the revision of key concepts and measurements, and a deterioration in mechanisms for interagency coordination have all occurred. This decline in data availability and quality reduces the value of estimates from microsimulation models and other analysis tools in ways that no statistical technique can correct. The panel therefore urged that this trend be

reversed and that progress on improving data quality in the United States be reestablished.

The value of microsimulation as a policy analysis tool

Microsimulation models have played a prominent role in the production of estimates for proposed changes to social welfare and tax programs for over 20 years.[3] The use of microsimulation techniques for tax policy analysis has its origins in work at the Brookings Institution and the Treasury Department in the early 1960s. Today, the microsimulation model maintained by the Office of Tax Analysis is used routinely and extensively to estimate the revenue effects of proposed changes to the tax code. The first operational social welfare policy model—Reforms in Income Maintenance—was developed for the President's Commission on Income Maintenance in 1968. RIM, which built on the pioneering microsimulation work of Guy Orcutt, was used extensively over the next few years to model alternative welfare reform proposals. ASPE supported the development of a successor to RIM, and this model—TRIM (now in its second generation, TRIM2)—has continued to be used for a wide range of welfare program analyses.

By the mid-1970s, the Congress as well as the executive branch was growing accustomed to requesting and receiving detailed estimates of the budgetary impact and also the anticipated social impact of legislation. In particular, Congress sought information on which groups—the elderly, children, the middle class—would benefit and which would be adversely affected by a program change. The Food Stamp Reform Act of 1977 was a milestone in this regard. Over a two-year span, FNS used the MATH microsimulation model to produce cost and distributional estimates for at least 200 variations of the proposed legislation under consideration by Congress. Subsequently, microsimulation models have played important roles in many key policy debates, including those preceding legislation to change the social security system in the early 1980s and the enactment of the Family Support Act of 1988.

Defined very simply, the microsimulation approach to evaluating alternative legislative proposals involves modeling the impact of government programs at the level at which they are intended to operate. That is, instead of modeling the impact of program changes on aggregates, such as the national economy or demographic subgroups of the population, microsimulation looks at the impact on individual decision units, which may be families in the case of income support programs, hospitals and doctors in the case of health care cost reimbursement programs, or corporations in the case of changes to corporate-based taxes. This modeling approach has two key advantages that are not generally found in other policy analysis methods. First, it permits direct analysis of the complicated programmatic and behavioral interactions that abound in social programs. Second, it permits detailed and flexible analyses of the distributional impacts of policies.

Given the diversity of the populations served by the government programs that are modeled, the complexity of most of those programs, and all of the factors that need to be taken into account in developing an appropriate microlevel comparison of current policy with one or more hypothetical alternatives, microsimulation models inevitably entail a large number of steps. A schematic description of the steps involved is roughly as follows. To begin at the very beginning, a series of operations required to generate either a household survey or an administrative database must be carried out, usually by a separate agency. For example, the Census Bureau collects household survey data and makes a series of adjustments, such as imputations and weighting, which have an impact on the quality and utility of the data for microsimulation purposes. Next, the database is adjusted further by the model developers, who, among other activities, restructure the data in a way more convenient and appropriate for the model at hand and define units appropriately (e.g., define tax and transfer filing units according to program definitions, which may differ from survey definitions of households or families). The data may also need to be "aged," that is, updated to the current or future years.

Following this, a "baseline" data file is created to represent current program rules, which involves adjusting or "calibrating" one or more aspects of the simulation so that the simulated values agree as closely as possible with available control totals—a process that is critical

to the simulation model and involves considerable judgment on the modeler's part. Next, one or more program alternatives must be simulated, such as a change that requires simply resetting a model parameter, or replacing a benefit algorithm with an entirely new one, or inserting a brand-new program into the simulation. If the model takes account of behavioral responses to program changes, the simulation of such responses would then follow. In practice, however, because the complexities of simulating first-round and second-round behavioral responses are an order of magnitude greater than the previous steps, these capabilities are infrequently or only very crudely implemented in today's microsimulation models.

The final step involves tabulating the output for the baseline program and the various simulated alternatives. Typically, the output shows not only the effects on costs and caseloads as a whole, but also "gainers" and "losers" under each alternative compared with the baseline. The latter information is a key element of the output, for a major purpose of microsimulation models is to produce distributional impacts of program changes for subgroups of the population.

After reviewing the history of the uses of these models for policy analysis over the last twenty years, the panel made its first major finding: *The microsimulation modeling approach to estimating the impact of proposed changes in government programs offers important conceptual and operational benefits to the policy process.* Because microsimulation models operate at the level of the individual decision unit—obtaining input from microlevel databases of individual records, mimicking how government programs apply to the individuals described in those records, and maintaining the outputs of simulated variables for current and alternative programs on each of the individual records—they have the capability to respond to important information needs of the policy process:

- First, microsimulation models can simulate the effects of very fine-grained as well as broader policy changes. For example, a microsimulation tax model can estimate the effects of a proposed change to the tax code that applies only to taxpayers with certain kinds or levels of income or expenses, as well as a proposed increase or decrease in tax rates across-the-board.
- Second, microsimulation models can simulate the impact of proposed changes that involve complicated interactions among more than one government program. For example, a microsimulation model of income support programs can simulate the net effect of a proposed change to AFDC that also alters the calculation of food stamp benefits.
- Third, microsimulation models can simulate the effects of proposed changes on subgroups of the population, in addition to aggregate estimates of program costs and caseloads. For example, a microsimulation model of physicians' services can simulate the effects of changes in Medicare fee schedules on different types of medical specialties and geographic areas; or a microsimulation model of health insurance programs can provide detailed distributional information about the effect of changes in insurance coverage and benefits on specific types of families.

Besides offering flexibility in examining alternative programs, microsimulation models—in common with many other modeling techniques—provide a framework that ensures consistency of estimates across a wide range of proposals. In addition, the orientation of microsimulation models to the individual decision unit is conceptually attractive, since it is the individual who makes decisions regarding AFDC participation, labor market search, tax itemization, and so on. The panel concluded that no other type of model can match microsimulation in its potential for flexible, fine-grained analysis of proposed policy changes.

Drawbacks of other types of models for policy analysis

Large-scale macroeconomic models, which are designed to estimate the aggregate effects of policy and program changes, such as the implications of a President's proposed budget for the deficit and for national economic growth, rival microsimulation models in size and complexity. However, these models use entirely different data and modeling techniques, and their outputs are for aggregates alone—they are in no way able to estimate the impact of changes in particular programs on particular groups, such as the effects on the working poor from mandating the AFDC unemployed-parent program in all states.

Simpler macrolevel models, which estimate a single equation on the basis of a few aggregate time series, are often applicable to analyses of particular programs. For example, such a model might estimate growth in AFDC costs and caseloads on the basis of changes in unemployment, inflation, and the average benefit level. However, single-equation time-series models are very limited in scope and do not provide any real capability for analyzing complex program alternatives or for sorting out the detailed effects of program changes.

Cell-based models, which develop estimates for subgroups or "cells" that make up the population of interest (for example, an AFDC model might comprise cells for case type by state), can provide more detailed information on policy effects than macroeconomic models, but they, too, are limited in comparison with micro-simulation models. Cell-based models, whether they contain

only a handful or several thousand cells, make the critical assumption that all elements within a subgroup will behave in the same way. Should a policy change affect members within cells in different ways, or should policymakers want information on different groups, a cell-based model must be rebuilt.

Microeconometric multiple-regression models, which produce estimates of the impact of a set of variables on some aspect of individual economic behavior, resemble microsimulation models in their use of microlevel data and their ability to provide disaggregated as well as aggregated results. For example, regression models of welfare program participation—which might include explanatory variables for family size and type; family income and expected benefit level; age, race, and sex of family head; and other characteristics—can be run on a microlevel database to produce participation probabilities for individual families. In turn, these probabilities can be aggregated for subgroups or for the total population. However, the key variable for analyzing the impact of a proposed program change with such a model, namely, expected benefit level, must be supplied by some other means. Indeed, some microsimulation models use a regression-based approach to determine program participation after they have calculated program eligibility and expected benefits by applying the detailed program operating rules to each family's record.

Barriers to progress in microsimulation modeling

Despite the great value of microsimulation for the evaluation of many policy alternatives, the panel found many barriers to further progress in microsimulation and many deficiencies in the current state of microsimulation modeling. The panel identified six major problem areas: (1) the failure to identify when the gains from additional complexity are outweighed by the cost; (2) the failure to adequately conduct model validation and to quantify uncertainty; (3) serious inadequacies in the databases used in microsimulation models; (4) fundamental deficiencies in the research knowledge base upon which the models are built; (5) questionable adequacy of the computer technology being used; and (6) the costly structure of the microsimulation modeling community.

1. *The capability for additional detailed analysis provided by microsimulation models comes at a price that is rarely calculated.* Although the panel expressed support for the use of microsimulation models for policy analysis, it is important to recognize that the complex nature of such models entails costs. Microsimulation models are highly complex for a number of reasons: they typically require large amounts of data, they must model many complex features of government programs, and they are pressed to provide more and more elaborately detailed information.

Because of their complexity, microsimulation models can be resource-intensive to develop and apply and difficult to understand and evaluate. Moreover, because microsimulation models must usually meld together a variety of data and research results of varying degrees of quality and, in the process, make many unsupported assumptions, there are potentially serious implications for the quality of the resulting estimates. And there are likely to be compounding effects of the errors introduced at each of the many steps in the simulation process.

Indeed, the panel became gravely concerned that the history of microsimulation model development to date has witnessed too many instances in which costs have proved disproportionately large in comparison with benefits. In the panel's view, the tendency to pile complexity upon complexity has all too often led to a situation in which the modeling task (whether it be for development or application) incurs added time and cost; in which it is difficult for the analyst, let alone the decision maker, to evaluate the quality of the output; and in which the model, instead of providing a capability for timely, flexible response to changing policy needs, becomes sluggish and inflexible in operation.

A typical response in the past to the problems posed by the complexity of microsimulation models has been to pare back the capabilities of the model, or to focus new development on the model's "accounting" functions that mimic program rules and leave aside other, more difficult aspects, such as modeling behavioral response. However understandable, these kinds of choices limit the usefulness of the models for policy analysis.

In its review, the panel accorded high priority to identifying strategies with the potential to improve the qual-

ity, flexibility, accessibility, and overall cost-effectiveness of the next generation of microsimulation models without compromising their ability to provide the fine-grained policy information that is their prime reason for being. The panel believes that such strategies exist: for example, new computer technologies are very promising in this regard. An important implication of the panel's recommendations is that policy analysis agencies must be willing, over the next few years, to allocate a higher percentage of available resources to investment in improving microsimulation models rather than to applying them to current policy debates (unless, of course, overall budgets can be increased). As we discuss further below, the panel recommended urgent investments in data, research, and computational inputs to models. Investment is even more urgently needed to evaluate the quality of model outputs and to build capabilities into models that will facilitate systematic validation in the future.

2. *The overall uncertainty of the estimates produced by existing microsimulation models is virtually unknown at this time.* Although in theory the microsimulation models in use today provide better estimates of distributional impacts and at least as good estimates of overall costs and caseloads as other kinds of models, it is not known if this theory is true in fact. There is very little evidence with which to assess the validity of microsimulation model results, that is, how well they compare with actual policy outcomes. In addition, there are almost no measures available of the degree of uncertainty (variability) in the estimates or the major sources of variation. It seems likely, however, that the level of uncertainty, given the large number and varying quality of microsimulation model inputs, is high.

The panel believes that analysts and policymakers can have considerable confidence in the quality of the computer models per se, that is, in the accuracy with which the computer code replicates the model specifications. Microsimulation modelers have long made a practice of devoting time and resources to computer model verification. Another check against egregious errors in the computer code is the long-standing practice of analysts from various agencies, in both Congress and the executive branch, to get together periodically over the course of developing major legislation to compare models' outputs and to search vigorously for explanations of discrepancies.

However, very little systematic study has been conducted of the quality of the estimates produced by microsimulation models during their 20-year history of use in the policy process. The dearth of analysis extends to external validation studies, which compare model output with actual responses to program changes; internal validation studies, which assess the sensitivity of model results to the input data, the specifications for individual modules and their interactions, and other components of the simulation process; and studies that assess the variance of model estimates due to sampling error in the primary database and other sources.

Microsimulation models are not alone in lacking systematic validation of their outputs. As noted above, information about the uncertainty in estimates of the effects of proposed policy changes is largely absent from the policy debate, regardless of what type of modeling tool has been used. The conditional nature of almost all policy analyses makes the task of validation difficult. Most analyses consider a range of policy choices, *none* of which may ultimately be adopted. Therefore, data on actual outcomes are difficult to link directly to the analysts' estimates. The many different factors involved in most policy analyses are also a hindrance to validation, as is the resistance of decision makers to dealing with analytical uncertainties. Given the highly complex nature of microsimulation models, it is perhaps not surprising that the validation literature for their outputs is so scant. Yet the panel believes strongly that the impediments to model evaluation can and must be overcome. Otherwise, policymakers will continue to make decisions based on numbers that may be quite inaccurate, and the agencies that provide support to decision makers will lack information on the most cost-effective ways to invest in improved microsimulation models for the future. Given the high costs of microsimulation model development, it is particularly important to have good information on which to base investment decisions.

As part of its work, the panel undertook an experiment in validating aspects of the TRIM2 model. A 1983 TRIM2 database was used to simulate the AFDC program provisions in 1987; hence, administrative caseload data could be used as measures of truth against which to assess the model's "projections." The experiment also involved a sensitivity analysis: the 1987 caseload projections were made using different aging routines, different routines for allocating yearly data to months, and different input databases (in one instance the standard TRIM2 database from the March Current Population Survey and in another instance a database with adjustments for undercoverage of such population groups as minorities and low-income families). The results of the experiment, which was performed for the panel by staff of the Urban Institute, demonstrated that such a validation exercise is feasible and that much can be learned that is helpful for pinpointing model components that need improvement.

3. *There are serious questions about the adequacy of the data sources used to construct microsimulation model databases.* Much of the computer code and sizable fractions of staff resources for current micro-simulation models are devoted to reprocessing and manipulating available input data, not only to produce databases that are more efficient to process, but also to

try to compensate for deficiencies in data content and quality. Examples of important deficiencies for modeling income support programs include underreporting of income receipt and undercoverage of population subgroups, particularly low-income minorities, in household surveys such as the March Current Population Survey. The Survey of Income and Program Participation (SIPP) was designed to address some of these problems, but it does not currently have a sufficient sample size and is not yet timely enough to be a satisfactory substitute.[4] For data on health care, there are serious gaps, difficulties in linking available data sources together, and problems with timeliness. For data on retirement income and tax policy, impediments to linking survey and administrative data cause serious problems for models. In the panel's view, improvements in data quality, together with a shift in the data production function to place more responsibility for producing useful databases on the originating agencies, rather than the agencies that operate the models, represent high priorities that promise substantial dividends in terms of reduced cost and improved relevance and quality of model estimates. Again, while we here emphasize the linkage of data quality and microsimulation modeling, we should note that all analytical approaches to the development of policy estimates rise and fall with the quality of the data.

4. *There are serious questions about the underlying base of research knowledge that supports the modeling of individual behavior and other model capabilities.* Although predicated on the desirability of simulating individual decisions as they are affected by and affect government programs, current microsimulation models are very limited in this regard. This statement applies not only to models that are avowedly "benefit calculators," such as the administrative records–based models of AFDC and food stamp recipients, but also to models that simulate program effects for the broad population. Except for the basic decision of whether to participate in a new or modified program, the models rarely simulate other behavioral responses, such as the response of income support beneficiaries to work incentives. They also rarely simulate second-round effects of a policy change, such as the impact of raising or lowering health care benefits on consumption of medical services and, consequently, on employment in the health care sector in relation to the rest of the economy.

An important factor in this paucity of behavioral responses in microsimulation models in addition to high cost and complexity is the weakness of the underlying research knowledge base. There are no generally agreed-upon estimates of key behavioral relationships, and the form of the available parameter estimates is often not readily suited to implementation in a microsimulation context. We do not anticipate rapid progress in ameliorating this situation, given constrained budgets for research and aspects of academic research incentives that do not encourage the kinds of research necessary. However, the panel offered a number of recommendations for the agencies to spur the production of policy-relevant research. The panel also recommended practices for model design and development that appear to be most cost-effective for incorporating new research knowledge.

5. *The adequacy of the computer hardware and software technologies used to implement current microsimulation models is questionable.* The major social welfare policy microsimulation models that are widely used today are designed for mainframe, batch-oriented computing environments that represent yesterday's technology and limit the models in important ways. Computing costs for a single simulation run are much lower for today's models than for the models of the 1960s and 1970s. However, other costs, such as the combined staff and computer costs of rewriting portions of the model code (often needed to simulate innovative policy proposals) remain high. The current computing environment for microsimulation modeling discourages experimentation, either substantively or for validation purposes, and puts barriers in the way of direct access by analysts to the models.

Some model developers have explored the potential of microcomputer technology to support more flexible and accessible models with promising results. Other hardware configurations, such as some combination of linked micro and mainframe computers, may also provide improved capabilities. New developments in software, such as graphical user interfaces (characterized by icons, windows, and the use of "point and click" tools that enable users to work more effectively and easily with complex models and data) and computer-assisted tools for design of software, are also very promising. The panel strongly recommended that agencies position themselves to build the next generation of micro-simulation models around new computer hardware and software technologies that can enhance the cost-effectiveness of this important class of policy analysis tools.

6. *The current structure of the microsimulation modeling community is costly.* Several aspects of the interrelationships among the policy analysis agencies that use microsimulation models, their modeling contractors, and academic researchers are troubling. One set of problems stems from the highly decentralized and fragmented nature of policy analysis in the federal government. While having positive features, the involvement of many different agencies frequently imposes costs of duplication of effort and often isolates groups of analysts who could benefit from more communication and exchange of ideas and viewpoints. The panel's suggestions of useful ways to enhance interagency cooperation are oriented to microsimulation, although problems in this area also affect policy analysis based on other types of modeling tools.

Another set of problems stems from the very circumscribed nature of the community that is actively involved in developing and applying microsimulation models. As in the past, there are today a handful of private firms that operate the major microsimulation models for social welfare programs on behalf of their federal agency clients. The agencies, which typically have only a few or no staff who are able to use the models themselves, are very dependent on their contractors for support. In the panel's observation, these firms have performed responsibly and capably in responding to agencies' needs. Nonetheless, the panel believes that it would be beneficial to expand access to and use of the models by agency analysts. It would also be useful to expand access to and use of the models by academic researchers, who in most disciplines have played a relatively minor role heretofore in applying, refining, and evaluating this class of models. Having more people who are knowledgeable about microsimulation models and adept in using them can only help the development of improved models and the vital process of validating model results.

Future directions

In sum, the panel expressed the belief that microsimulation models are important to the policy process and anticipated that the need for the kinds of detailed estimates that they can best generate will only grow in future years. However, because of the lack of evidence to assess the performance of the current models and the limitations of available databases and research knowledge, the panel could not responsibly advocate substantial investments that would expand the capabilities of existing models in any specific direction. The panel strongly supported allocating sufficient resources to the current models to evaluate their capabilities, maintain them, and improve them as appropriate and cost-effective. The validation and maintenance functions, together with incremental improvement, are critical to the ultimate objective of developing a new generation of microsimulation models after investments in data, research, and computing technology have borne fruit. Maintaining a cadre of knowledgeable and experienced users and producers of the current models will enable new models to be built much more expeditiously and efficiently. The panel urged the relevant agencies to make the investments that are required to ensure that a new generation of models is developed in a timely manner to meet the policy needs of the future.

Postscript

Since the panel's report was released in 1991, there have been some encouraging developments. Budgetary constraints have limited the speed and scope of the response to the panel's recommendations on the part of government agencies, but some steps forward have been taken nonetheless. To cite just a few examples, a number of agencies and also academic researchers are moving such models as TRIM2 and MATH to a workstation or personal computer environment.[5] The newly developed health care policy models within the Department of Health and Human Services have been built from the beginning in a personal computer environment. While little progress has been made on the vital issue of developing estimates of uncertainty for outputs from the models, both ASPE and FNS have supported efforts to evaluate and improve the performance of specific model components (e.g., the routines in TRIM2 and MATH that model program participation decisions and that allocate the yearly income amounts in the Current Population Survey to months).

Perhaps most heartening have been initiatives to broaden the community of analysts and researchers who work with microsimulation techniques. The past three meetings of the American Statistical Association have featured sessions devoted to microsimulation, in contrast to a virtual absence of papers on microsimulation modeling in the prior decade. The Washington-based Society of Government Economists held a conference on microsimulation techniques and applications in November 1992 that drew a record attendance of public- and private-sector analysts. The importance of models to the current health care policy debate has not escaped notice, and several forums over the past year have featured reviews of existing health care policy models. ASPE staff held a conference in May 1993 to review recent developments in microsimulation modeling more broadly, and the Australian Bureau of Statistics held a major international conference on microsimulation models in December 1993.

The panel concluded in its report that the policy analysis world needs a "second revolution." The "first revolution" of the past two decades institutionalized the use of detailed estimates of cost and population effects of alternative proposals as part of the legislative process and contributed to the development and widespread application of large computerized models as estimation tools. The second revolution requires significant investments in data, research knowledge, and computing to improve the quality of these models and the estimates they produce. Even more important, the second revolution requires a commitment to model validation. The developments just cited may be straws in the wind that the second revolution is under way. ■

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[1]Copies of the panel's two-volume report, *Improving Information for Social Policy Decisions: The Uses of Microsimulation Modeling*, ed. Constance F. Citro and Eric A. Hanushek (1991), are available from the National Academy Press, 2101 Constitution Ave., N.W., Box 285, Washington, D.C. 20055. Volume I, *Review and Recommendations*, is $35.00; Volume II, *Technical Papers*, is $39.00.

In addition to the chairman, Eric Hanushek, panel members were David M. Betson, University of Notre Dame; Lynne Billard, University of Georgia; Sheldon Danziger, University of Michigan; Eugene P. Ericksen, Temple University; Thomas J. Espenshade, Princeton University; Harvey Galper, KPMG Peat Marwick, Washington, D.C.; Louis Gordon, University of Southern California; Kevin M. Hollenbeck, W. E. Upjohn Institute for Employment Research, Kalamazoo, Mich.; Gordon H. Lewis, Carnegie Mellon University; Robert Moffitt, Brown University; Gail R. Wilensky, Project Hope, Washington, D.C. (served January 1989–January 1990); and Michael C. Wolfson, Statistics Canada.

[2]An earlier version of this summary of the panel's report, by Robert Moffitt, Eric Hanushek, and Constance Citro, appeared in the 1991 *Proceedings of the Social Statistics Section*, American Statistical Association, Alexandria, Va.

[3]To narrow its focus, the panel concentrated on the evaluation of several specific microsimulation models that have been used in policy debates: (1) TRIM2 (Transfer Income Model 2), MATH (Micro Analysis of Transfers to Households), and HITSM (Household Income and Tax Simulation Model), all of which are static models of income support and tax programs; (2) DYNASIM2 (Dynamic Simulation of Income Model 2) and PRISM (Pension and Retirement Income Simulation Model), which are dynamic models of retirement income programs; (3) a submodel added to PRISM to simulate alternatives for financing long-term care of the elderly; (4) the tax policy model maintained by the Office of Tax Analysis; and (5) MRPIS (Multi-Regional Policy Impact Simulation), which is a hybrid income support and tax policy model that uses microsimulation, input-output, and cell-based techniques.

[4]For a discussion of the problems faced by SIPP users, see Constance F. Citro and Graham Kalton, "The Future of the Survey of Income and Program Participation," *Focus* 15:2 (Summer and Fall 1993), pp. 13–20.

[5]IRP researcher John Karl Scholz, for example, is developing a microsimulation model which runs on a personal computer with an interface. It models not only AFDC, SSI, and the Food Stamp program but also the federal income tax and state income taxes.

D. Lee Bawden
1934–1993

D. Lee Bawden, who died August 18, 1993, devoted much of his professional life to the study of poverty and welfare programs. At the time of his death he was director of the Human Resources Policy Center at the Urban Institute.

He was an affiliate of the Institute for Research on Poverty from 1970 to 1977, during his tenure at the University of Wisconsin in both the Agricultural Economics Department and the Economics Department. While at the Institute, he, along with William S. Harrar, carried out the Rural Income Maintenance Experiment, a major social experiment testing the behavioral consequences of a universal, income-conditioned cash transfer program—a negative income tax. Like the New Jersey Income Maintenance Experiment, which preceded it, the Rural Income Maintenance Experiment looked at possible work disincentive effects of a number of guaranteed minimum incomes and tax rates. It focused, however, on farmers and those in towns of fewer than 2500 people, where, at the time, over one-third of the nation's poor resided.

Altogether Bawden wrote more than 70 papers and books evaluating social programs. His most recent include two he edited: *Rethinking Employment Policy*, with Felicity Skidmore (Washington, D.C.: Urban Institute Press, 1989) and *The Social Contract Revisited: Aims and Outcome of President Reagan's Welfare Policy* (Washington, D.C.: Urban Institute Press, 1984).

Notes on Institute researchers

Peter Brandon recently joined the Institute as an Assistant Scientist. His activities include continued research on child care, investigating social indicators of child well-being, and examining predictors of entry onto and exit from welfare rolls.

Martin David was awarded a Fulbright grant to teach at the Business University in Vienna, where he was invited to give lectures on inequality by Professor Christoph Badelt, who is pioneering a program of studies on the delivery and design of social welfare programs. David reports that social welfare policy in Austria is being challenged by problems similar to those in the United States—declining employment, rust-belt industries threatened by reduced trade barriers (within the European market), and pressures arising out of the absorption of large numbers of immigrants from central Europe over the past three years.

David testified before the Committee on Government Operations, June 26, 1992, on the value of using administrative records to serve as a backbone for the information functions of the Census. He served on the National Research Council panel that reviewed the Survey of Income and Program Participation (see *Focus:* 15:2) and the NRC Panel on Confidentiality and Data Access, whose report was published November 15, 1993. Commentary on the report was delivered at the August meetings of the American Statistical Association, and an excellent overview of the issues appears in the *Journal of Official Statistics,* Vol. 9, no. 2. Forthcoming is a report on the NRC Workshop on Statistics on the Not-for-Profit Sector, which David organized and chaired in May 1992.

Adam Gamoran is serving as associate chair of the Department of Sociology, University of Wisconsin–Madison. He is also serving as chair of the Sociology of Education Section of the American Sociological Association. During 1992–93, he was a Fulbright Scholar at the Centre for Educational Sociology, University of Edinburgh.

Linda Gordon was awarded a Vilas Professorship at the University of Wisconsin–Madison. She is now serving as chair of the Humanities Division Executive Committee of the university. She spoke at a conference on women and welfare, sponsored by the U.S. Congress Women's Caucus, October 23, 1993. She has served as a consultant to several public television historical documentaries.

Peter Gottschalk was Visiting Scholar at the Russell Sage Foundation in fall 1993. He presented testimony before the Select Committee on Hunger, U.S. House of Representatives, March 1992, and is on the Advisory Committee on the 1990 Census of the Inter-university Consortium for Political and Social Research.

Robert M. Hauser is a member of the Panel on Poverty Measurement and National Minimum Benefit Levels of the National Research Council, National Academy of Sciences. The report of the panel should be released in mid-1994. He is continuing to analyze trends and differentials in educational transitions among American youth, using a uniform file of children's and household characteristics, 1968–90, which the Institute recently contributed to the Inter-university Consortium for Political and Social Research. Along with **Robert D. Mare,** Hauser has added a 20-minute module to the 1994 General Social Survey of the National Opinion Research Center. It will provide, for the first time, an extensive series of measurements of the socioeconomic characteristics of nonresident kin in a large national sample of Americans. These data will be an important resource for studies of the family origins of economic and social inequality. Hauser is also directing the 1992–93 round of surveys of 10,000 members of the Wisconsin high school graduating class of 1957 and of a sample of their brothers and sisters. These men and women were first interviewed as seniors in 1957 and have subsequently been followed up in fall 1957 (after high school graduation), 1964, and 1975; they are now 53 and 54 years old. Data from the Wisconsin Longitudinal Study will be a valuable public resource for stud-

ies of aging and the life course, intergenerational transfers and relationships, family functioning, social stratification, physical and mental well-being, and mortality.

Robert Haveman was awarded the Harold Lasswell Distinguished Scholar Award by the American Political Science Association in 1992. He was elected executive vice president of the International Institute of Public Finance in August 1993. He attended conferences of the International Institute in Seoul, Korea, in August 1992, where he was a rapporteur, and in Berlin in August 1993. He presented a series of lectures at the State Council of the Government of China, September 1992, and he delivered a public lecture on poverty problems and policy in the United States at Albion College in March 1993. In the past year he has presented papers at the American Economics Association meeting, the Urban Institute Children's Roundtable, the Levy Institute Conference, the Midwest Economics Association meeting, the Notre Dame Conference on Inequality, and the meeting of the Association of Public Policy Analysis and Management. In July 1993 he became chairman of the Department of Economics, University of Wisconsin–Madison.

Karen Holden was appointed associate professor with tenure in the Department of Consumer Science, University of Wisconsin–Madison. She continues her joint appointment in the La Follette Institute of Public Affairs and as graduate chair of the Master's program in the Department of Consumer Science. In May 1993 she was given the Faculty Professional Excellence Award by the Alumni Association, School of Family Resources and Consumer Sciences.

Charles F. Manski was selected to the Commission on Behavioral and Social Sciences and Education, National Research Council. During 1992–93 he was a fellow at the Center for Advanced Studies in the Behavioral Sciences. In 1993 he was named Hilldale Professor at the University of Wisconsin–Madison.

Robert Mare is serving on the National Research Council Panel on Estimation Procedures of the Committee on National Needs for Biomedical and Behavioral Research Personnel.

Sara McLanahan is Professor of Sociology and Public Affairs at Princeton University. She serves on the board of the Population Association of America and on the council of the American Sociological Association, and she is a member of the Committee on Planned Childbearing of the Institute of Medicine, National Academy of Sciences. She chairs the Population Study section of the National Institutes of Health and is a coeditor of the *Journal of Human Resources.*

Marygold Melli was an invited participant in a conference at Wingspread, Racine, Wisconsin, Successful American Families: Challenges and Opportunities, sponsored by the National Forum on the Future of Children and Families, July 1992. She was an invited participant at the Conference on Family Law for the Next Century, sponsored by the Earl Warren Institute at Boalt Hall, the University of California–Berkeley Law School, and the American Bar Association Section of Family Law, December 1992. She helped organize Family Restructuring at the End of the Twentieth Century, a North American conference sponsored by the International Society of Family Law, June 1993. She was also an invited participant at a conference, Violence and the American Family, sponsored by the Commission on Behavioral and Social Sciences and Education of the National Academy of Sciences, May 1993.

Daniel Meyer spent five weeks in Washington in the summer of 1993 working on welfare reform proposals at the Office of the Assistant Secretary for Planning and Evaluation, DHHS. During 1992–93 he made presentations at family impact seminars for legislators in Washington and Madison, Wisconsin.

Robert Moffitt joined the board of overseers of the Panel Study of Income Dynamics in fall 1992. He has been made chair of the Technical Review Committee of the National Longitudinal Survey. He spent three weeks in Paris in fall 1993 as an invited lecturer at the Ecole Normale Supérieure and DELTA/EN5 and is spending the 1993–94 academic year at the University of Michigan.

Owen O'Donnell, from the Centre for Health Economics, University of York, United Kingdom, is visiting IRP and the La Follette Institute of Public Affairs for the academic year 1993–94. During his stay he is teaching health economics and undertaking research into trends in economic inactivity in the United States with **Robert Haveman** and **Barbara Wolfe.**

Craig Olson was appointed Wolfe Professor of Business Research by the School of Business, University of Wisconsin–Madison.

Ann Orloff received a research fellowship from the German Marshall Fund of the United States in 1993; she traveled to Australia and Britain to carry out work on her research project, the gender regimes of the liberal welfare states. In Australia, she gave presentations on gender and social citizenship to about a dozen university audiences, as well as a public lecture, "The Future of U.S. Social Policy," in Melbourne. With Dr. Sheila Shaver, deputy director of the Social Policy Research Centre at the University of New South Wales, and Dr.

Julia O'Connor of the McMaster University Sociology Department, she is working on a book—"States, Market, Families: Gender, Liberalism and Social Policy in Australia, Canada, the United Kingdom, and the United States." She continues to carry out a research project on child support and welfare reform in the United States. Along with historians Barbara Hobson of Stockholm University and Sonya Michel of the University of Illinois, she is editing a new journal, *Social Politics: International Studies in Gender, State and Society.*

Joel Rogers is Director of the Center on Wisconsin Strategy, a member of the Administrative Committee of the Institute for Legal Studies, and a member of the Advisory Committee of the Center for International and Comparative Labor Studies. He received research grants from the Joyce Foundation in 1992 and 1993. He has received a research grant from the Wisconsin Department of Industry, Labor, and Human Relations, for 1993–94.

In April 1993 he testified before the Wisconsin State Assembly on Assembly Bill 324—concerning job relocation assistance for workers displaced by Ringier Company. He presented papers in 1993 at the La Follette Institute 2020 Series, Madison; Industrial Upgrading in Wisconsin, Milwaukee; Kenyon College; the Canada/United States Law Institute Conference, Cleveland; the Center on Education and Work, Madison; the National Bureau of Economic Research conference, Washington, D.C.; the Wisconsin Labor-Management Council, Milwaukee; the Economic Policy Institute, Washington, D.C.; and the Institute for Public Policy Research conference in West Sussex, U.K. He participated in roundtable discussions at the Institute for Policy Studies, Washington, D.C., and at the American Political Science Association annual meeting, Washington, D.C.

Gary Sandefur is Associate Vice Chancellor for Academic Affairs at the University of Wisconsin–Madison. He serves on the editorial board of the *American Sociological Review.*

Nora Cate Schaeffer has returned from her year at the Center for Survey Methods Research at the U.S. Bureau of the Census. She is completing work as a member of the Panel to Evaluate Alternative Census Methods of the Committee on National Statistics, National Research Council. She is on the advisory board for the social, behavioral, and economic sciences of the National Science Foundation.

Marsha Mailick Seltzer was appointed a Vilas Associate by the Graduate School of the University of Wisconsin–Madison for 1993 and 1994. She is secretary and a member of the executive committee of the Academy on Mental Retardation and was named associate editor of the *International Review of Research on Mental Retardation.*

Gene F. Summers received the Rural Sociological Society Certificate of Appreciation in August 1993 for his work in organizing and directing the RSS Task Force on Persistent Rural Poverty. He continues to serve as chair of the Task Force, which has organized several poverty policy education activities, including a 13-state workshop, Pathways from Poverty, held in Memphis, September 20–22, 1993, and a congressional colloquium, held in Washington, D.C., November 8, 1993. He also continues to serve as vice-chair of the National Rural Studies Committee.

Paul Voss is serving on the U.S. Commerce Department's Advisory Committee for the 2000 Census. He continues as a member of the Applied Demography Committee of the Population Association of America and as chair of the State and Local Demography Subcommittee of that parent committee. He is director of the Applied Population Laboratory, University of Wisconsin–Madison/Extension.

Michael Wiseman is a member of the National Advisory Board for the New Hope Project, an earnings subsidy experiment in Milwaukee. He is also a member of the Research Advisory Committee for the California Assistance Payments Demonstration Program. He directs the Milwaukee phase of the Wisconsin KidsCount study for the Wisconsin Council on Children and Families.

Barbara Wolfe has been appointed to the Board on International Health of the Institute of Medicine; the advisory board of the Western Consortium for Public Health; and the Technical Advisory Panel, Project Network Evaluation. With **Robert Moffitt,** she won the John Kendrick Prize in 1992 for their paper "A New Index to Value In-Kind Benefits," in the *Review of Income and Wealth,* 37 (December 1991), 387–408. This year she is directing the Women's Faculty Mentoring Program.

Sixth Luxembourg Income Study Summer Workshop

The Luxembourg Income Study has made comparable several large microdata sets that contain comprehensive measures of income and economic well-being for a set of modern industrialized welfare states. The LIS databank currently covers Australia, Austria, Belgium, Canada, France, Germany, Israel, Italy, Ireland, Poland, the Netherlands, Sweden, the United Kingdom, and the United States from 1980 through 1990. Data for Taiwan, Finland, Spain, and several Eastern European nations, including Hungary and the Czech Republic, are expected to be available by 1994.

The LIS Summer Workshop is a two-week pre- and postdoctoral workshop designed to introduce young scholars in the social sciences (economics, sociology, other) to comparative research in income distribution and social policy using the LIS database. The 1993 workshop attracted 35 attendees from 19 countries. The sixth workshop will be held July 17–29, 1994, in Luxembourg. The cost will be 40,000 Belgian Francs (about $1200), which includes tuition, local travel, and full room and board. International transportation is not included. Students are expected to be subsidized by home countries, national and international research foundations, universities, and other sources, including at least two special scholarships for Eastern European or Russian/CIS scholars sponsored by the Ford Foundation.

The language of instruction will be English. The course of study will include a mix of lectures and assistance and direction using the LIS database to explore a research issue chosen by the participant. Faculty are expected to include Frank Cowell (UK), Peter Gottschalk (US), Richard Hauser (Germany), Stephen Jenkins (UK), Shelly Phipps (Canada), and the entire LIS staff. Several topics to be analyzed in 1994 include income security programs in Eastern Europe, cross-national trends in income inequality from 1980 to 1990, the economics of gender, and comparisons between Asia and the West of income and poverty status.

Additional information, including application forms and brochures, is available from Timothy Smeeding, LIS Project Director (Professor of Economics & Public Administration, 400 Maxwell Hall, Syracuse University, Syracuse, NY 13244, US); Lee Rainwater, LIS Research Director (Sociology, Harvard University, Cambridge, MA 02138, US); or Caroline de Tombeur (LIS at CEPS/INSTEAD, B.P. #65, L-7201 Walferdange, Luxembourg). Applications are due by May 2, 1994.

Small Grants workshop

The Institute and the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, jointly sponsor annual competitions for grants to researchers who wish to do work related to poverty and its amelioration.

A workshop was held at the University of Wisconsin–Madison on September 30–October 1, 1993, during which current recipients of Small Grants (Round XII of the competition) informally described their projects, commentators reacted, and all participated in open discussion. The following projects were presented.

Dwight B. Billings and Kathleen M. Blee, University of Kentucky, "Historical Origins of Chronic Poverty: A Longitudinal Case Study"

Daniela Del Boca, University of Turin, and Christopher J. Flinn, New York University, "Welfare Effects of Lump Sum and Proportionate Child Support Awards"

Barry T. Hirsch and David A. Macpherson, Florida State University, "Racial Composition, Quality Sorting, and the Black-White Wage Gap"

Harry J. Holzer, Michigan State University, "Structural Changes, Employment Outcomes, and Population Adjustments, 1970–1990"

Paul A. Jargowsky, University of Texas at Dallas, "Economic Segregation in U.S. Metropolitan Areas"

Jane E. Miller, Rutgers University, and Sanders Korenman, University of Minnesota, "Poverty, Nutritional Status, and Growth of Children in the U.S."

Pamela J. Smock, Louisiana State University, "Women's Economic Independence in Marriage over the Past Two Decades: Implications for Divorce and Its Economic Consequences"

Comments on these works-in-progress were made by Peter Brandon, Maria Cancian, Aimee Dechter, Linda Gordon, Robert Haveman, Daniel Meyer, Maurice MacDonald, Marsha Mailick Seltzer, Gene Summers, Franklin Wilson, and Michael Wiseman.

IRP contributions to ICPSR

The Institute for Research on Poverty has recently contributed two data sets to the Inter-university Consortium for Political and Social Research (ICPSR). Since 1962, ICPSR has provided a central repository and dissemination service for machine-readable data in the social sciences. Over 360 colleges and universities located in seventeen countries are participating members, making use of the ICPSR services and archives.

1. "The Uniform October CPS Person-Household File, 1968–1990," constructed by Robert M. Hauser, Linda Jordan, and Taissa S. Hauser. This file is an enhanced version of the annual October Current Population Surveys (CPS) from the late 1960s to the present. The October CPS enrollment supplement provides timely information on school enrollment, attendance, and completion for persons between the ages of 3 and 34. Because it includes questions about enrollment in previous years, it provides a measure of high school dropout. Lacking, however, is information on social and economic background of the school-aged population, with the exception of family income.

The enhanced file rectifies this deficiency by matching the children's October CPS records to those of adult household members. The resulting file contains complete demographic, social, and economic characteristics of the householder and the spouse of the householder (if any) in the household in which the school-age individual resides, and it includes as well some other household variables, such as the number of children in the household. Thus it is now possible to specify the age, education, labor force status, and occupation of adults in the household and to link the records of siblings in order to measure the resemblance in educational outcomes within families. This set of repeated cross-section measurements of the schooling process and the factors affecting the risk of school failure is being used to study trends and differentials in social background and school progression. Differences in early school entry, grade progression, high school dropout, and postsecondary school entry among ethnic/racial groups are being analyzed while controlling for family and parental characteristics.

2. "Individual Level Extracts: March CPS, 1968–1992," constructed by Robert Moffitt. The CPS files are organized by household. This file reorganizes the March CPS to provide data on the individuals within the household. It contains multiple records for each family, one for each member of the family between the ages of 16 and 64 in each year. It enables researchers to study trends among individuals of approximately 100 key economic and socioeconomic variables—including earnings and income, labor force participation and employment, and family structure. It has been used to study earnings inequality, rates of AFDC participation, rates of female headship among U.S. women, and men's average earnings and returns to education over the 1980s. It has recently been used to examine trends over a twenty-five-year period in high school dropout rates of single mothers and to track welfare participation rates among single mothers with varying amounts of schooling. The data are used by Peter Brandon in this issue of *Focus* to explore factors affecting the well-being of poor children over a twenty-five-year period.

Information on the immense data resources of the ICPSR Archive can be obtained from ICPSR, the University of Michigan, Institute for Social Research, P.O. Box 1248, Ann Arbor, MI 48106.

The connection between family structure and entitlements affecting poor young children

by Peter Brandon

Peter Brandon is a research scientist at the IRP.

Introduction

Recent census figures show that the poverty rate for children under six is higher than the rate for any other age group in the United States. In 1991 it was double the rate for people aged 65 and over. Further, the numbers for each successive year show that the poverty rate for children under six has progressively worsened. By 1991, for instance, the rate had increased 33 percent over the rate in 1979.[1] These statistics, as well as studies indicating that preschoolers growing up poor are more likely to suffer emotional problems, commit crimes as juveniles, drop out of school, and experience single motherhood as teenagers, have caused much national consternation.[2] The facts have left the nation with a pervasive feeling that poor children are continually losing ground.[3]

Many blame the federal government for the perilous situation now facing poor children under age six. They argue that successive census figures on the poverty rate among children cried out for federal government interventions and that federal inaction has made poor children worse off. Others, while not blaming the federal government, demand immediate national policy responses.[4]

But before the federal government can act to improve the well-being of poor children, it needs to know what to act on. Although difficult to obtain, a dispassionate assessment is needed of what has truly gotten worse for poor children under age six, what has gotten better for them, and what has stayed the same. Additional federal efforts to aid poor children will fail if policymakers are uninformed about (1) the circumstances that make some poor children relatively better off or worse off than other poor children, and (2) indications of how today's poor children fare compared to yesterday's.

A useful step in this direction is to track the extent to which the federal government's major cash and noncash programs cover poor children.[5] Because few benchmarks exist to indicate whether poor children under age six are worse off today than they were in the past, tracing the fraction of poor children under the canopy of federal programs provides valuable information. Moreover, these trend analyses provide some insights into the differing causes of child poverty among mother-only families and two-parent families.[6]

To compare the extent to which cash and noncash benefits have covered poor children, I exploit data collected from the Current Population Survey (CPS). Although there is no single metric to contrast the well-being of children over time, the CPS at least provides a uniform source of data each March to analyze the proportion of poor children under age six (hereafter referred to as poor young children) who have medical coverage and who are dependent on public assistance, food stamps, and publicly subsidized housing.

The sample

To generate time series that show changes in the circumstances of poor young children, I pooled twenty-five years of the March supplements of the Current Population Survey (CPS).[7] For every March, starting in 1968 and ending in 1992, I identified young children who were living with their parents. These parents, aged sixteen or older, had to either head households or head subfamilies within households. To be classified as the head of a household or head of a subfamily within a household, a parent had to have at least one co-residing biological or adopted child younger than six. If the CPS lists a parent as the household head, I know her or his child is a member of the primary family within the household; if the parent is not the household head, but the parent and child live with others, they constitute a subfamily within the household, in which they may or may not be the only family with preschool-aged children.

I include subfamilies because many poor children are not necessarily living alone with their parents. I find that poor young children in mother-only and two-parent families often live in multiple-family households.[8]

The total sample of parents heading families or subfamilies with young children over the twenty-five years was 126,586. The descriptive statistics in Table 1 show that heads of poor families are younger, less educated, predominately female, and more likely than heads of

Table 1
Selected Characteristics of Parents of Poor and Nonpoor Children under Age Six: 1968–1992

Variable	Poor	Nonpoor
Age (years)	28.7	31.9
Number of families per household	1.27	1.05
Received food stamps (%)	37	3
Received welfare (%)	40	2
Race (%)		
Non-Hispanic white	69	89
Black	27	7
Other	4	4
Married (%)	43	93
Female family head (%)	60	9
Completed schooling (years)	10.7	12.9
Number of children under age 6	1.50	1.36
Primary family of household (%)	81	98
Live in central city (%)	35	23
N =	24,445	102,141

Source: Current Population Survey, March Supplements, 1968–1992.

nonpoor families to receive public transfers. These statistics, although aggregates, certainly fail to indicate that the majority of the poor resemble an inner-city "underclass." Most are non-Hispanic white; most do not receive welfare; nearly two-thirds live outside of central cities; and they do not have significantly more preschool-aged children than the nonpoor.[9]

The large sample size makes it possible to identify poor children according to the official measure of poverty, adopted in 1969 (and slightly modified in 1981).[10] With this information on the poverty status of children and an adjusted sampling weight[11] I can analyze trends during the period in program participation among low-income families with children under age six. (Other demographic data, also collected every March, allow me to stratify the time series by the type of family in which the child lived.)[12]

The official measure of poverty is well understood and yields a time series suitable for analyzing changes in the conditions of preschool children living in low-income families.[13] Nevertheless, problems associated with this measure limit the scope of this work. This definition of poverty does not account for local differences in the cost of living, nor does it adjust for receipt of noncash or in-kind benefits, such as medical insurance or public housing. It is simply an arbitrary standard which, when applied to annual pretax income, generates a uniform national poverty line. It does not therefore take into account whether a child lives in a family with income far below the poverty line or just below the poverty line. And it has the added disadvantage of combining into one group those children enduring persistent poverty and those children experiencing transitory poverty. The effects of chronic, long-term poverty on children are more serious and deserve separate study, but this index of poverty prohibits such work.[14]

Apart from the measure of poverty restricting the scope of this study, insufficient numbers of black and white parents with children under six within certain entitlement categories prevent some important racial comparisons. Specifically, too few black mother-only families reporting receipt of food stamps on a year-to-year basis prevents contrasting trends in the proportion of children in those families receiving food stamps with the proportion of white children in mother-only families receiving food stamps. Likewise, too few white two-parent families living in subsidized housing in each year precludes comparing that proportion with the equivalent proportion of black two-parent families living in subsidized housing.[15] Because the small sample sizes would yield unreliable estimates, I do not report any black-white comparisons here, except to note that comparisons of medical coverage[16] reveal that poor young white children living in two-parent families are the most likely group of children to lack medical coverage.

Finally, several time series are restricted because many of the questions on sources of noncash income were only added to the CPS survey after 1980. So, although I am confident that all measures are consistent over the entire twenty-five-year period, errors are possible owing to changes in sampling procedures and variable definitions.[17]

Changes occurring in entitlement coverage

In many respects, today's poor young children face different conditions from those confronted by poor young children twenty-five years ago or even a decade ago. Probably the most dramatic change has been their higher likelihood of living only with their mothers. (Undoubtedly, this change helps explain the high proportion of poor young children living in multiple-family households; see Table 1.)

Table 2 highlights this huge change. The majority of today's poor young children live in mother-only families. The figures for 1968 in Table 2 were reversed by 1992. Back then, about 33 percent of poor young children lived in mother-only families, and 67 percent of them were in two-parent families; in 1992, 62 percent lived in mother-only families and 38 percent were in two-parent families.[18]

Table 2
Percentage of Poor Children under Age Six Living in Mother-Only and Two-Parent Families

Year	Mother-Only	Two-Parent
1968	33.1%	66.9%
1969	34.0	66.0
1970	38.8	61.2
1971	43.8	56.2
1972	45.5	54.5
1973	49.7	50.3
1974	52.6	47.4
1975	46.8	53.2
1976	53.6	46.4
1977	58.8	41.2
1978	54.9	45.1
1979	57.9	42.1
1980	57.6	42.4
1981	54.4	45.6
1982	60.0	40.0
1983	58.3	41.7
1984	56.1	43.9
1985	57.2	42.8
1986	60.5	39.5
1987	64.6	35.4
1988	63.2	36.8
1989	66.9	33.1
1990	62.4	37.6
1991	65.3	34.7
1992	62.0	38.0
N = 24,445		

Source: Current Population Survey, March Supplements, 1968–1992.

Table 3
Percentage of Poor Children under Age Six Covered by Entitlements

	Noncash			Cash
Year	Medical Coverage	Subsidized Housing[a]	Food Stamps	Welfare
1968	--	--	--	25.3%
1969	--	--	--	24.6
1970	--	--	--	32.4
1971	--	--	--	38.2
1972	--	--	--	38.5
1973	--	--	--	43.6
1974	--	--	--	49.5
1975	--	--	--	40.0
1976	--	16.7%	--	40.8
1977	--	20.2	--	50.2
1978	--	18.7	--	45.4
1979	--	21.8	--	44.6
1980	*	22.4	58.5%	46.3
1981	68.9%	22.7	63.0	43.1
1982	70.0	23.9	60.6	43.5
1983	71.7	25.7	59.6	42.4
1984	71.1	25.2	56.5	41.0
1985	71.7	26.0	57.5	38.3
1986	73.3	29.3	58.5	45.7
1987	73.6	28.5	55.7	44.3
1988	72.5	28.1	57.3	45.9
1989	73.6	34.6	58.8	43.0
1990	74.3	31.8	60.0	41.1
1991	76.5	32.7	61.3	43.6
1992	75.6	32.7	64.6	47.4
N =	14,744	3,262	15,754	24,445

Source: Current Population Survey, March Supplements, 1968–1992.
-- Not available.
* Not computed.
[a] For those reporting living in rental housing only and paying for it.

The trend in Table 2 showing that increasing numbers of poor young children live in mother-only families clearly argues for independent analyses based on family structure, since the numbers of poor young children in mother-only families will drive poverty patterns among all children under age six and will affect the locus of policy interventions. Thus, changes in public transfer coverage rates among poor young children are separately reported here for mother-only families and two-parent families.

The importance of separate analyses, based upon poor young children's family structure, is highlighted by Tables 3 and 4. Both report estimates of medical coverage among poor young children.[19] They differ, however, because Table 3 presents estimates for the entire sample, whereas Table 4 displays separate estimates for the sample of children living in mother-only families and those living in two-parent families.

If we only considered estimates from the first column of Table 3, we would conclude that poor young children are faring better, at least with respect to medical coverage. That is, since 1981 fewer poor young children have been without medical coverage. But these estimates are misleading. Table 4 presents the more informative results, which lead to very different conclusions.[20] It demonstrates that the previous estimates on medical coverage were correct only for poor young children in mother-only families. These children have consistently fared better (at least in this domain) than have poor young children in two-parent families.

Moreover, Figure 1 and Table 4 show a widening gap in medical coverage rates between the two groups of poor children. Before 1985 the gap was closing; coverage rates were rising among children in two-parent families and falling among children in mother-only families, but after that year the gap progressively widened. Poor young children in two-parent families in 1992 were nearly three times more likely to have no medical coverage than the comparative group in mother-only families and were worse off than they were in 1985. If one

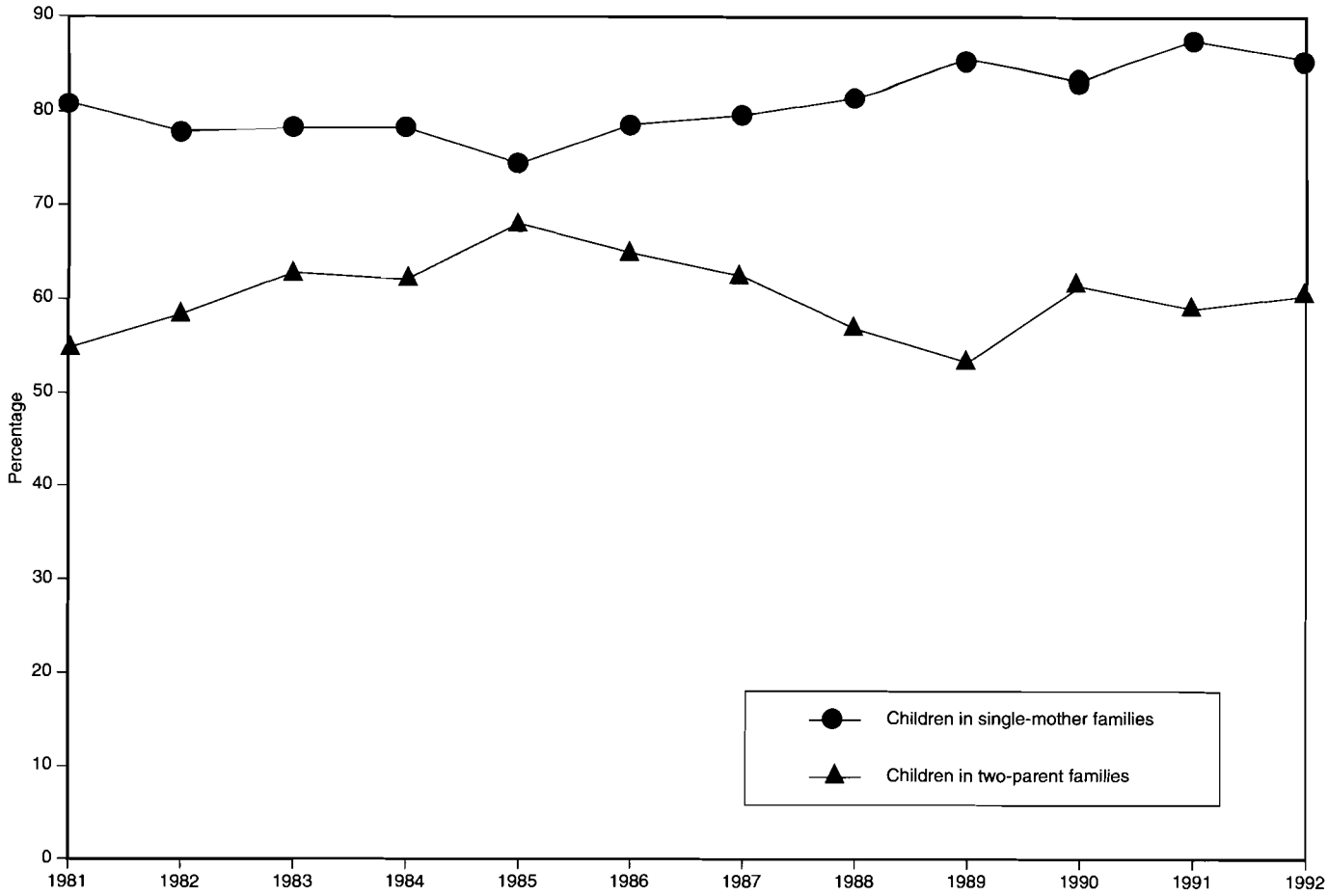

Figure 1. Poor Children under Six with Medical Coverage

estimate that 2.2 million poor children under six lived in two-parent families[21] in 1991 is accurate, this means that about 869,000 of those children lacked medical coverage.

Table 4 reveals another piece of information about welfare receipt that is concealed in column 4 of Table 3.[22] Mother-only households, where the majority of poor young children now live, have become less likely since 1981 to receive welfare. So welfare participation rates among mother-only families have slowly decreased, even though increasing numbers of poor children live in mother-only families. These poor children are, however, much more likely to have mothers who receive welfare than are their counterparts in two-parent families (63.2 percent compared to 18.3 percent).[23]

The time-series findings also show that poor children under age six in mother-only families have become more likely, if they live in rental housing, to live in publicly subsidized housing.[24] In 1992, about 38 percent of poor children under age six lived in mother-only families that received some form of public housing subsidy. In the late seventies, less than 30 percent lived in subsidized housing. In contrast, among poor young children living in two-parent families, only about 23 percent received housing subsidies in 1992. But especially since 1982, they too have become increasingly more likely to reside in publicly subsidized housing.

These estimates underscore the great difficulty in knowing whether the nation's poor children are now better off or worse off. If estimates indicate that more children now live in violent, dysfunctional neighborhoods, then most would think today's children are worse off. Yet, if estimates mean that more children now live in alternatives to inner-city housing projects, then many would say that today's children are better off. Scant data prevent me from analyzing this question further.

The last set of trends, concerning the proportion of young children living in families that receive food stamps, again demonstrates the need to examine mother-only and two-parent families separately.

Table 4
Percentage of Poor Children under Six Covered by Entitlements, by Family Type

	Noncash						Cash	
	Medical Coverage		Subsidized Housing[a]		Food Stamps		Welfare	
Year	Mother-Only	Two-Parent	Mother-Only	Two-Parent	Mother-Only	Two-Parent	Mother-Only	Two-Parent
1968	--	--	--	--	--	--	57.7%	7.8%
1969	--	--	--	--	--	--	55.2	9.7
1970	--	--	--	--	--	--	58.8	12.5
1971	--	--	--	--	--	--	71.1	11.7
1972	--	--	--	--	--	--	73.0	9.9
1973	--	--	--	--	--	--	63.8	15.1
1974	--	--	--	--	--	--	76.4	18.7
1975	--	--	--	--	--	--	72.1	10.2
1976	--	--	21.9%	7.7%	--	--	66.1	11.2
1977	--	--	24.6	14.7	--	--	71.2	21.4
1978	--	--	23.9	13.3	--	--	69.7	17.5
1979	--	--	27.5	11.2	--	--	68.8	10.1
1980	*	*	29.9	9.9	69.3%	48.7%	69.6	15.5
1981	81.0%	54.8%	29.0	13.0	70.7	51.2	66.2	11.4
1982	77.9	58.4	31.1	9.4	72.3	44.9	67.4	8.8
1983	78.3	62.8	30.8	22.2	68.8	47.3	61.6	16.0
1984	78.3	62.1	42.7	11.2	69.0	44.2	66.2	10.4
1985	74.5	68.1	34.0	13.1	60.2	52.3	55.2	11.4
1986	78.7	65.0	36.3	17.6	67.2	42.5	64.0	17.7
1987	79.7	62.4	36.0	15.3	65.6	36.2	61.4	12.5
1988	81.7	56.9	34.5	17.7	65.0	44.5	64.8	13.3
1989	85.5	53.3	44.3	19.8	71.6	36.5	61.8	11.1
1990	83.3	61.5	39.0	15.5	69.8	49.7	61.1	10.7
1991	87.5	59.0	58.0	17.0	70.8	53.3	62.4	12.3
1992	85.4	60.5	38.4	23.3	68.7	58.7	63.2	18.3
N =	8,863	5,881	2,566	696	9,447	6,307	14,018	10,427

Source: Current Population Survey, March Supplements, 1968–1992.
-- Not available.
* Not computed.
[a] For those reporting living in rental housing only and paying for it.

The third column in Table 3 leaves two impressions about food stamp receipt among the families of poor children under age six that are only partially correct. The column indicates that (1) during the 1980s and early 1990s, the majority of poor young children lived in families that received food stamps, and (2) participation rates among these families were steady over this period. But again these impressions are erroneous, because they only represent the dynamics of food stamp participation rates among young children living in mother-only families.

The estimates in Table 4 establish that among poor young children living in mother-only families, food stamp receipt was indeed high and steady over this period. This was not the case for poor children living in two-parent families. There were times during this twelve-year interval when the majority of poor two-parent families were not receiving food stamps. Moreover, from 1984 onward, receipt of food stamps among these families fluctuated greatly.

The trends also suggest a closing of the gap in food stamp coverage between the two groups of children. Since 1989 food stamp coverage rates between the two groups have been converging. Given the consistent rate of food stamp use among mother-only families over this period, the convergence is obviously due to growing use among two-parent low-income families.

Explaining variability and stability in coverage

These results show that the year-to-year oscillations in the proportion of poor young children covered by the three noncash benefits (Food Stamps, Medicaid, and subsidized housing) occur among poor children living in two-parent families, not among poor children living in mother-only families.[25] This point is crucial to understanding patterns of noncash entitlement coverage among poor young children over time.

The forces obscuring the variability in the numbers of poor young children in two-parent families covered under the three noncash benefits are: (1) the gradual increase in the number of children in mother-only families, and (2) the persistently high level of poverty among young children in mother-only families, thereby sustaining their high rates of coverage.[26] Until family structure is taken into account (Table 4), these forces swamp periodic swings in noncash benefit coverage rates among poor young children in two-parent families.

Moreover, these same two forces are responsible for the stubbornly high and yet stable estimates of entitlement coverage among poor young children in mother-only families. With economic prosperity during the 1960s, the poverty rate among children fell overall, but the numbers of poor children in mother-only families remained steady. Then, in the 1970s and 1980s, the proportion of children who were poor and in mother-only families significantly increased and continued to increase regardless of the performance of the U.S. economy.

Thus a major reason why entitlement coverage rates are unwaveringly high and uniform over time among poor children in mother-only families is that these families' livelihoods are not tied to the workings of the U.S. economy. The means of maintaining this insulation from market forces must have been through detachment from the labor market. Table 5 confirms that, indeed, this is what happened.

Table 5 shows that, on average over the last 25 years, between 60 and 65 percent of poor single mothers with young children have remained detached from the labor force. The other 35 to 40 percent of single mothers were either working[27] or looking for work over this period.

The detachment of single mothers from the labor market is understandable. Basically they have had only two choices: work for low wages, usually with few medical benefits, or receive welfare, accompanied by food stamps and Medicaid. As Table 5 displays, most opted for the latter choice. Moreover, even if wages grew moderately, without additional enhancements to family income, like regular child support payments or low-cost child care, juggling work and family demands would have been difficult.[28]

While separation from the labor market has contributed to high and uniform entitlement coverage among poor young children in mother-only families, just the opposite holds for poor children living in two-parent families. Table 5 shows that poor two-parent families stay attached to the labor market, thereby making them vulnerable to its performance. In economic downturns, when jobs are scarce and wages are stagnant, the number of children in two-parent families in poverty rises; ergo, entitlement coverage rates for poor young children in two-parent families rise as well (not shown in table). Thus, variability in noncash entitlement coverage rates for these children is linked to their families' sustaining levels of earnings high enough to enable them to forgo means-tested public transfers.

Hence, maintaining earnings high enough to combat poverty is the issue confronting these two-parent families, not protracted unemployment. Table 5 shows that, in contrast to single mothers, the majority of poor two-parent families are working families or families seeking work. The table also indicates that a sizable minority of these families report that both parents work, and a smaller group state that one parent is employed and the spouse is presently unemployed.[29] Only a small group of these low-income two-parent families say that both parents are detached from the labor market, though that number holds steady at around 10 percent.[30]

Conclusion

Federal government interventions aimed at improving the well-being of poor children under age six need clear targets. One way to sight those targets is to gauge the extent to which the existing safety net of entitlements covers all poor young children. Results here show that the current patchwork of entitlements inadequately protects poor children in two-parent families, chiefly because their parents work. Thus, even though these parents work, they and their children remain poor and subject to uncertainties, such as no medical coverage.

One way of raising a substantial portion of the nation's poor young children out of poverty, therefore, is through policies that reward the efforts of two-parent families. Ensuring that working-poor two-parent families who are eligible for the Earned Income Tax Credit (EITC) receive it is as important as an effort to expand the credit, which acts as a wage increase. (See Karl Scholz's article in this issue on the EITC.) Other policy efforts deserving serious debate include expanding medical coverage to protect working-poor two-parent families, not just the poor on welfare; revising the rules governing the dependent care tax credit, while expanding child care subsidies for low-income families; and raising the minimum wage.[31] Finally, providing incentives to low-wage workers for additional training, especially given the concern over skill depletion in sectors of the U.S. economy, is worth serious consideration.

Reducing poverty among children under age six is a costly proposition. But properly targeted policies are a wise investment if the costs of breakups in two-parent homes due to financial pressures are reduced, and the costs to society due to young poor children lacking health care are avoided. ■

Table 5
Attachment to the Labor Force among Parents of Poor Children under Age Six, by Family Type

	Poor Mother-Only Families			Poor Two-Parent Families[a]				
	Employed	Unemployed	NILF	Both Employed	One Employed/ Other Unemployed	One Employed/ Other NILF	One Unemployed/ Other NILF	Both NILF
1968	29.8%	5.2%	64.9%	15.8%	4.5%	70.3%	4.0%	4.7%
1969	34.4	3.6	61.9	16.0	5.2	68.2	2.9	7.7
1970	28.7	7.4	63.9	14.6	5.7	66.4	6.8	6.0
1971	20.8	7.4	71.8	14.9	6.1	60.6	6.1	11.8
1972	24.5	7.6	67.9	16.9	4.6	65.2	5.5	7.0
1973	22.7	9.2	68.1	16.1	5.6	60.3	8.1	9.8
1974	28.0	3.3	68.6	14.9	5.8	58.3	7.4	13.2
1975	24.6	9.9	65.5	12.2	9.3	58.3	8.6	10.5
1976	25.0	10.0	65.0	14.6	8.2	54.7	9.9	10.7
1977	20.0	14.3	65.7	16.7	5.4	50.0	13.4	12.1
1978	26.0	10.9	63.0	18.0	7.9	53.2	9.8	10.0
1979	29.3	10.7	60.0	19.5	5.8	54.9	9.1	9.4
1980	26.0	11.3	62.7	15.7	4.3	52.0	12.3	12.5
1981	25.2	10.8	63.9	17.3	7.3	52.7	11.0	9.8
1982	24.9	14.4	60.7	19.8	8.8	46.7	14.9	6.3
1983	22.9	16.2	60.9	15.2	8.9	49.0	14.8	8.4
1984	22.2	16.7	61.1	19.4	7.6	49.0	12.1	9.6
1985	26.2	13.9	59.8	19.0	6.0	48.1	14.4	10.0
1986	23.8	17.3	58.9	18.3	8.4	46.3	15.4	9.9
1987	27.7	14.2	58.1	19.6	9.1	47.9	10.5	10.3
1988	23.7	11.4	64.9	18.8	8.5	47.2	11.0	12.2
1989	30.0	12.8	57.1	21.5	9.5	51.8	4.9	10.9
1990	30.7	11.9	57.4	20.2	9.0	51.5	7.2	10.8
1991	29.2	10.7	60.0	17.3	8.8	53.0	8.5	10.8
1992	27.6	10.3	62.1	15.3	8.6	48.7	13.2	11.8
N =			14,018					10,427

Source: Current Population Survey, March Supplements, 1968–1972.

Note: NILF = Not in labor force.

[a]The category consisting of both parents being unemployed is very small and was omitted from this table.

[1]See National Center for Children in Poverty, *Five Million Children: 1993 Update* (New York: Columbia University, School of Public Health, 1993); U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 175, *Money Income of Households, Families, and Persons in the United States: 1991* (Washington, D.C.: U.S. GPO, 1992).

[2]Sara McLanahan and Karen Booth, "Mother-Only Families: Problems, Prospects, and Politics," *Journal of Marriage and the Family*, 51 (August 1989), 557–580, available as IRP Reprint No. 611.

[3]For a listing of recent efforts reporting on the status of children, see footnote 1 in Robert Haveman and Barbara Wolfe, "Children's Prospects and Children's Policy," *Journal of Economic Perspectives*, 7 (Fall 1993), 153–174, available as IRP Reprint No. 698.

[4]See National Commission on Children, *Beyond Rhetoric: A New American Agenda for Children and Families* (Washington, D.C.: U.S. GPO, 1991).

[5]The programs examined are public assistance, which includes Aid to Families with Dependent Children (AFDC) and General Assistance (GA); Food Stamps; Medicaid; and subsidized housing. Each is a major program. In 1992, for instance, recipients of AFDC numbered 13.6 million; of Food Stamps, 25.4 million. The number of recipients of Medicaid in fiscal year 1991 was over 27 million, and the number of households that are expected to have received federal housing assistance in 1993 totals 5.7 million. See U.S. House of Representatives, Committee on Ways and Means, *1993 Green Book: Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means* (Washington, D.C: U.S. GPO, 1993).

[6]The author thanks Robert Hauser for his helpful criticisms, Jay Dixon for assistance with the CPS data, and participants of an IRP seminar for comments.

[7]For a description of the CPS, see U.S. Bureau of the Census, *The Current Population Survey: Design and Methodology*, Technical Paper 40 (Washington, D.C.: U.S. GPO, 1978).

[8]Ancillary analyses of these data show that over the last ten years about 45% of poor young children in mother-only families lived in multiple-family households. For poor young children in two-parent families, about 10 to 15% lived in multiple-family households.

[9]See *The Urban Underclass*, ed. Christopher Jencks and Paul E. Peterson (Washington, D.C.: Brookings Institution, 1991).

[10]In the CPS data, a modified index provides a range of income cutoffs or "poverty thresholds" adjusted to take into account family size, number of children, and age of the family householder or unrelated individual. The poverty cutoffs are updated every year to reflect changes in the Consumer Price Index. For a detailed explanation of the poverty definition, see U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 166, *Money Income and Poverty Status in the United States: 1988* (Washington, D.C.: U.S. GPO, 1989).

[11]To generate a set of statistics that validly describes conditions facing children, without possessing data on each individual child, I use the following procedure: I take each parent's supplemental weight (this is a number attached to each person record in the CPS for the purpose of producing "supplemental" estimates on family characteristics) and multiply it by the number of children under age six within their family. This calculation produces a new weight reflecting the number of children under age six within the family. Estimates produced using this new weight reflect the conditions that the children face.

[12]Single-parent family types include children living in father-only, mother-only, and relative-only families. The CPS sample provides reliable estimates of poverty only for children living in the dominant form of single-parent families—single-mother families.

[13]These estimates are for related children and do not reflect data on unrelated or foster children. See National Center for Children in Poverty, *Five Million Children: 1993 Update.*

[14]See Patricia Ruggles, *Drawing the Line: Alternative Poverty Measures and Their Implications for Public Policy* (Washington, D.C.: Urban Institute Press, 1990); A. B. Atkinson, "On the Measurement of Poverty," *Econometrica*, 55 (1987), 749–764. A panel of the Committee on National Statistics of the National Academy of Sciences has been studying statistical issues in the measurement of poverty and will release its report late in 1994 (see Robert Haveman, "Changing the Poverty Measure: Pitfalls and Potential Gains," *Focus* 14:3 [Winter 1992–93], 24–29).

[15]Black-white comparisons are possible by aggregating data over several years. For the period 1976–83, 18.9% of poor children in white mother-only families lived in publicly subsidized housing; the percentage increased to 32.4 in the period 1984–92. Poor young children in white two-parent families reflected very little change, from 11.3% to 14.9%. Over the earlier time span, 40.2% of children in black mother-only families lived in subsidized housing, and this grew to 48.6% in the more recent period. The percentage of children in subsidized housing in black two-parent families actually dropped, from 28.5% in 1976–83 to 24.7% in 1984–92. The most striking result is that the percentage of children in white mother-only families who lived in publicly subsidized housing nearly doubled over this time span.

[16]Available upon request from the author.

[17]A notable example is the revision of income questions in 1980, which allowed 46 separate types of income other than earnings to be identified. Until then, these 46 income types were combined into eight original income types prior to imputation for missing responses. For a description of the change, see U.S. Bureau of the Census, *Current Population Survey, March 1988 Tape Technical Documentation* (Washington, D.C.: U.S. GPO, 1989).

[18]For a discussion of problems surrounding mother-only families, see Irwin Garfinkel and Sara S. McLanahan, *Single Mothers and Their Children: A New American Dilemma* (Washington, D.C.: Urban Institute Press, 1986); Donald J. Hernandez with David E. Myers, *America's Children: Resources from Family, Government, and the Economy* (The Population of the United States in the 1980s: A Census Monograph Series) (New York: Russell Sage Foundation, 1993).

[19]Children classified as having medical coverage are those whose parents reported having public or private health care coverage. Thus, they had Medicare or Medicaid coverage, military health care coverage, or private coverage, bought privately or provided by employers or unions. The analyses also identify those children covered by health insurance even when their parents may not have it.

[20]The results on health insurance coverage reflect coverage over the previous calendar year. The estimates are inaccurate if respondents gained or lost their health insurance coverage by the time of the survey.

[21]See National Center for Children in Poverty, *Five Million Children: 1993 Update.*

[22]Welfare here consists of Aid to Families with Dependent Children and General Assistance.

[23]For more discussion on these trends in welfare participation among mother-only families, see Robert Moffitt, "Incentive Effects of the U.S. Welfare System: A Review," *Journal of Economic Literature*, 30 (March 1992), 1–61, available as IRP Reprint No. 668; Peter Brandon, "Trends over Time in the Educational Attainments of Single Mothers," *Focus* 15:2 (Summer and Fall 1993), 26–34.

[24]Two questions deal with public and low-cost housing on the March CPS supplement questionnaire. These questions differ from other questions covering noncash benefits because they establish current recipiency status in March of the current year rather than recipiency during the previous year. Heads of households or subfamilies who own homes, who are buying homes, or who pay no cash for housing are excluded from the analyses. Thus, the subsample comprises those respondents renting housing.

[25]For welfare, the only cash benefit examined, the decline in coverage rates among families with poor children under age six is not linked to changes in the distribution of children's poverty among mother-only and two-parent families. Very few two-parent families receive welfare. (See Anne E. Winkler, "AFDC-UP, Two-Parent Families, and the Family Support Act of 1988: Evidence from the 1990 CPS and the 1987 NSFH," IRP Discussion Paper No. 1013-93, 1993.) The downward trend in welfare participation is related to policy changes in the AFDC program and real benefit levels slowly eroding over time, providing an incentive for some single-mothers to take low-wage jobs.

[26]Mary Jo Bane and David T. Ellwood, "One Fifth of the Nation's Children: Why Are They Poor?" *Science*, September 8, 1989, pp. 1047–1053.

[27]Working could mean either part-time or full-time work.

[28]Several scholars have written about the conflict that single mothers face between parenting and working. See Irwin Garfinkel, "The Role of Child Support Insurance in Antipoverty Policy," *Annals of the American Academy of Political and Social Science*, 479 (May 1985), 119–131. For a discussion of child care in single-parent families, see David T. Ellwood, *Poor Support: Poverty in the American Family* (New York: Basic Books, 1988), pp. 176–178.

[29]Table 5 has one omitted category for two-parent families: those in which both parents are unemployed. The percentage of two-parent families reporting that both parents were unemployed was minute, but it too reflects fluctuations in the business cycle. (Over the years, the CPS has altered its measure of employment status. I take account of these changes to ensure comparability of estimates across all years.)

[30]For a discussion of poverty rates in two-parent families, see David T. Ellwood, *Poor Support*, pp. 83–87.

[31]The true impact of increases in the minimum wage on different types of workers is controversial. See Lawrence Katz and Alan Krueger, "The Effect of the Minimum Wage on the Fast-Food Industry," *Industrial and Labor Relations Review*, 46 (October 1992), 6–21, available as IRP Reprint No. 674.

Economists at Wisconsin: 1892–1992

Robert J. Lampman, Emeritus Professor of Economics at the University of Wisconsin–Madison, has assembled a centennial volume chronicling the tumultuous history of the UW Economics Department. Lampman has been affiliated with the department for over fifty years—as an undergraduate, graduate student, and professor. It was he who was the guiding spirit behind the establishment of the IRP at Madison in 1966.

The story includes the early years of foment under Richard T. Ely, when university areas of study—economics, commerce, civil polity, history, political science—were merging, shifting, and disappearing. Ely himself was accused of being an anarchist. (His acquittal by the Board of Regents resulted in their statement on academic freedom, later enshrined in a tablet on campus: "Whatever may be the limitations which trammel inquiry elsewhere, we believe the great state University of Wisconsin should ever encourage that continual and fearless sifting and winnowing by which alone the truth can be found.")

There were as well heady years, when institutionalism flourished under John R. Commons, of whom it is said that he contributed in one way or another to virtually all the social and labor legislation that has been enacted in the twentieth century. There were fat years and lean years, years of advancement in research and years dominated by petty squabbling.

All the while a steady stream of students came under the Wisconsin influence, received their degrees, and moved on to expand and alter the approaches to economics they had learned.

Lampman's 362-page volume contains, in addition to the narrative history, excerpts from the writings of important participants in the story, and tables providing budgets, enrollments, courses, faculty, and degrees conferred. The illustrations of bewhiskered men and university events enable us to see what has changed and what has not in the course of one hundred years.

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Auditing for discrimination

When a black or Hispanic is treated worse than a white in comparable circumstances, how can we be sure that the differential treatment is due to race or ethnicity rather than other factors? The technique of auditing for discrimination was developed to help answer this question.

Much of the work on auditing for discrimination has been undertaken by the Urban Institute, which has recently published *Clear and Convincing Evidence: Measurement of Discrimination in America*, edited by Michael Fix and Raymond J. Struyk (Washington, D.C.: Urban Institute Press, 1993). This important book describes the technique of auditing, reviews the auditing evidence on differential treatment in housing and employment, and discusses the methodological issues raised in using auditing evidence on differential treatment to measure discrimination in a statistically reliable sense. The technique of auditing is particularly valuable in detecting the more subtle forms of discrimination that have evolved since the civil rights revolution of the 1960s.

The concept of auditing is straightforward. Two individuals (auditors or testers) are matched for all relevant personal characteristics other than the one presumed to lead to discrimination (race, ethnicity, gender). They then apply for a job or housing unit, or begin to negotiate for some other good or service. The results they achieve and the treatment they receive are observed, documented, and analyzed for evidence of discrimination.

Auditing is used for both enforcement and research. Enforcement auditing, typically called testing, is designed to provide legal evidence of discrimination. One such test can be sufficient, although the results of several tests are normally produced as evidence. Research auditing is designed to measure the extent of discrimination in a market. In a world where random events are mixed up with systematic factors in determining how otherwise similar persons of different races are treated in the same circumstances, the systematic factors measure discrimination. Disentangling the systematic from the random requires a large number of audits to produce statistically reliable results.

But, as *Clear and Convincing Evidence* shows, the problem is more complex than numbers alone, because "unequal treatment of equals on the basis of race" leads to at least four statistically different definitions of discrimination. Each definition requires a different statistical analysis to correctly disentangle random from systematic factors.

Research audit studies to date indicate substantial discrimination against blacks and Hispanics, both in the U.S. housing market and in hiring for entry-level jobs, whichever statistical definition is used.

The housing evidence, which is based on a large nationally representative audit study, documents that blacks are discriminated against about half the time they try to rent an apartment or buy a house. The chances are only slightly better for Hispanics.

The employment picture is less clear because research audits for employment discrimination have been done in only a few cities. Results to date suggest that blacks applying for entry-level jobs may be discriminated against about one-third of the time and Hispanics slightly more.

The audit studies done so far—which include audits for discrimination in mortgage lending—establish the feasibility and advisability of auditing for discrimination in a variety of contexts. Taken as a whole, *Clear and Convincing Evidence* makes a strong case that audits hold the power to clarify the extent of discrimination and that it makes sense to continue to expand their use in both research and enforcement contexts.

Contributing authors include Mark Bendick, Jr., John C. Boger, Roderic V. O. Boggs, Robert D. Butters, Christopher Edley, Jr., George C. Galster, James J. Heckman, Antonia Hernández, Ronald B. Mincy, Robert G. Schwemm, Birgit Seifert, Joseph M. Sellers, Shanna L. Smith, Peter Siegelman, William R. Tisdale, Margery Austin Turner, John Yinger, and Wendy Zimmermann.

CLEAR AND CONVINCING EVIDENCE

edited by

Michael Fix and Raymond J. Struyk

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What happens after foster care? A new investigation

The more foster care is used—and its use is increasing rapidly in every state—the more questions are raised about it. The average estimated monthly number of children in AFDC foster care almost doubled between 1982 and 1992, from 262,000 to 442,600.[1] In 1992 federal foster care expenditures amounted to over $2 billion.[2]

Alarm over the belief that a disproportionate number of former foster children suffered from homelessness, unemployment, and psychiatric problems resulted, in 1986, in the establishment of an Independent Living program, providing federal money to states to assist youth who would eventually be emancipated from the foster care system. Although first indications suggest that the Independent Living program improves the life chances of the over 20,000 foster youth who age out of the system every year, and the program has been made a permanent part of Title IV-E, no long-term studies are available.

A recent review of research on the adult functioning of former foster children (see box) revealed that there has been a dearth of research on the outcomes of foster care over the past thirty years, and that what has been done is for the most part of poor quality. On the other hand, the authors concluded that even the "meager corpus" of research to date provides convincing evidence of the high risk of "rotten outcomes" for former recipients of foster care, including "a failure to meet minimum levels of self-sufficiency (homelessness, welfare dependency, etc.) and acceptable behaviors (criminal activity, drug use, etc.)."[3] The studies reviewed did not provide sufficient data, however, to demonstrate a cause/effect relationship between foster care and poor outcomes. The same factors that precipitate children into foster care may also determine outcomes. Nevertheless, the possibility exists that had they not experienced foster care, the former recipients would be even worse off. What is certain is that foster care is not doing enough to provide satisfactory futures for the children passing through the system.

Even if they were not methodologically flawed,[4] most studies of foster care would be of little value today owing to changes in the foster care system that have occurred over the last twenty years. Among the changes are (1) the passage of the Child Abuse Prevention and Treatment Act (Public Law 93–247) in 1974, which increased dramatically the reported prevalence of child abuse and neglect and thereby put enormous demands on all child welfare services, including foster care; (2) the focus on "permanency planning" in the Adoption Assistance and Child Welfare Act of 1980 (Public Law 96–272), which resulted in efforts at prompt and decisive action to maintain children in their own homes or place them in permanent homes with adoptive parents; and (3) the recent development of paid foster care by relatives—kinship care.

Kinship care has resulted in a drastic and rapid change in the types of settings foster children are likely to grow up in. Although little information is available about kinship care providers, a recent survey comparing them with foster care providers who are not related to the children for which they care found that the kin were more likely to be single parents, to work outside the home, to be older, in worse health, and to move more frequently than nonkin providers. Additionally, kin

ASSESSING THE LONG-TERM EFFECTS OF FOSTER CARE: A RESEARCH SYNTHESIS

by

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IRP Special Report 57
July 1993

$8.00

sought assistance less often from social service providers and continued care longer. On the other hand, they had higher expectations for their foster children's success as adults than did nonrelatives providing foster care.[5] For better or worse, such placements have increased at a rapid rate. Whereas in the early 1980s placements with kin accounted for fewer than 10 percent of foster care placements in such large states as California, Illinois, and New York, by the end of the decade they accounted for about half of all placements.[6]

Improving our knowledge of the post–foster care experiences of young adults who age out of foster care is a necessary first step to improving services for foster children both during and following their stays in care. A project to do just this, "A Longitudinal Study of the Post-Discharge Functioning of Former Foster Children," is now in the planning stages. It is to be carried out by IRP affiliates Mark Courtney and Irving Piliavin. They expect to obtain a sample of approximately 1500 former foster care recipients in several geographic areas and to follow them over a three-year period. The adult experiences to be studied include educational achievements, labor market activities, mental health, criminal activities, marital histories, and living arrangements. Effects of selected attributes and experiences prior to foster care, while in care, and at exit from care will be sorted out.

Data will come from agency records, caseworkers, and series of interviews with sample members. Procedures will be put in place to minimize sample attrition (e.g., financial incentives, informants). Attrition that does occur will be dealt with by analytic techniques.

The results should not only document the adult circumstances of former foster children but also provide insight into the points in their lives when they are likely to fall behind the general population. Are they, owing to their characteristics and experiences (in or prior to foster care), less prepared for the vicissitudes of adult life? Or do they simply suffer from the lack of a stable family to whom they can turn in time of need?

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[1]Toshio Tatara, "U.S. Child Substitute Care Flow Data for FY '92 and Current Trends in the State Child Substitute Care Populations," *VCIS Research Notes* (Voluntary Cooperative Information System), Vol. 9 (1993).

[2]The AFDC foster care program under Title IV-E of the Social Security Act is a permanently authorized entitlement program that provides open-ended matching funds to states for the maintenance payments made for children otherwise eligible for AFDC who receive care in foster care family homes, private nonprofit child care facilities, or public child care institutions housing up to 25 people. States may also claim open-ended federal matching for their child placement services and administrative costs of the program (U.S. House of Representatives, Committee on Ways and Means, *1993 Green Book: Background Material and Data on Programs within the Jurisdiction of the Committee on Ways and Means* [Washington, D.C.: U.S. GPO, 1993], pp. 891, 892, 894).

[3]Thomas P. McDonald, Reva I. Allen, Alex Westerfelt, and Irving Piliavin, *Assessing the Long-Term Effects of Foster Care: A Research Synthesis*, IRP Special Report no. 57 (Madison, Wis.: University of Wisconsin, 1993), p. 129.

[4]Ibid., pp. 19–36.

[5]*1993 Green Book*, p. 936.

[6]Mark E. Courtney, "Factors Associated with the Reunification of Foster Children with Their Families," *Social Service Review*, in press; Robert M. Goerge, "The Reunification Process in Substitute Care," *Social Service Review*, 64 (1990), 422–457; and Fred H. Wulczyn and Robert M. Goerge, "Foster Care in New York and Illinois: The Challenge of Rapid Change," *Social Service Review*, 66 (1992), 278–294.

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