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Who Are the Ineligible EITC Recipients?

Abstract - *The IRS estimates that more than 20 percent of Earned Income Tax Credit (EITC) payments are made in error. By matching the Current Population Survey (CPS) to tax return data, this paper finds that a large portion of the overpayments went to families with children. Depending on the exact measure used, only 11 to 13 percent of EITC recipients lacked children in their household at the time they received the EITC. While some of these erroneous payments to households with children are received by households with incomes above EITC eligibility levels, many of these ineligible families with children are likely to be quite similar to eligible EITC families.*

INTRODUCTION

This year, 19 million families are expected to receive the Earned Income Tax Credit (EITC) at a total cost to the federal government of $30 billion (Committee on Ways and Means, 1998; Office of Management and Budget, 2000). The cost of the EITC is now more than total federal and state spending on Temporary Assistance for Needy Families (TANF). Research on the EITC suggests that the program succeeds in transferring income to needy families while maintaining low administrative costs, encouraging the labor force participation of single parents, and having little or no impact on hours conditional on working.[1]

Research has also shown, however, that many EITC recipients are ineligible for the credit. Tabulations from the 1985 and 1988 IRS Taxpayer Compliance Measurement Program (TCMP) surveys first presented by Holtzblatt (1991) and Scholz (1990) found that one–third of EITC recipients were not eligible for the credit, primarily because they did not have eligible children. More recent estimates from tax year 1994 returns suggest that 21 percent of EITC dollars are currently being paid in error, including payments to ineligible taxpay-

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[1] On administrative costs see U.S. General Accounting Office (1995) and Scholz (1997). On labor force participation see Dickert, Hauser, and Scholz (1995), Eissa and Liebman (1996), Meyer and Rosenbaum (1999), and Ellwood (2000). On hours worked see Triest (1996), Holtzblatt, McCubbin, and Gillette (1994), Dickert, Hauser, and Scholz (1995), Eissa and Liebman (1996), Eissa and Hoynes (1998), and Meyer and Rosenbaum (1999).

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ers and overpayments to eligible taxpayers.[2] In comparison, quality control data suggest an overpayment rate of 6 percent for Aid to Families with Dependent Children (AFDC).[3]

Given the excess burdens involved in income transfers, a program that transfers one–fifth of its dollars to the wrong population could be prohibitively expensive.[4] However, it is far from certain that these overpayments are reaching families that are very different from the eligible families. IRS rules regarding filing status and the claiming of children are complicated, and it is possible that many ineligible EITC recipients are making innocent errors in claiming the EITC.

In order to determine what share of EITC payments are erroneously going to families without children and the characteristics of these ineligible families this paper uses an exact match of the March 1991 Current Population Survey (CPS) to information from the 1990 tax returns of CPS adults. This match makes it possible to estimate the number of taxpayers who claimed the EITC but did not have any children living with them. In addition to providing an independent assessment of the extent and nature of the largest part of the EITC compliance problem, this analysis yields two other benefits that go beyond what can be learned from IRS compliance studies.[5] First, it directly answers an important policy question: what share of EITC dollars are reaching households with children? For many purposes this is a more relevant number than the noncompliance rate, and it is a number that is not available from the government studies. Second, the analysis provides a much richer description of the demographic characteristics of both eligible and ineligible EITC recipients than is available from tax data alone.

I find that between 11 and 13 percent of all tax year 1990 EITC recipients did not have a child in their CPS household at the time that they received the credit. By further matching back to the March 1990 CPS, I determine that 10 percent of EITC recipients also did not have a child in their household one year before they received the credit, and therefore were very unlikely to have been eligible for the credit. Noncompliance rates appear to be particularly high among males filing as household heads. One–third of male household heads claiming the EITC lacked children in their CPS households.

This paper is organized as follows. The second section describes the evolution of the EITC compliance problem and highlights the key uncertainties about the nature of EITC noncompliance. The third section describes the two data sets em-

[2] See Scholz (1997), U.S. General Accounting Office (1998), and McCubbin (2000). From the 1994 study, Treasury has released figures only on overpayment rates, and not on the number of ineligible taxpayers. However, in the 1988 TCMP data, the percentage of ineligible taxpayers and the overpayment rates were quite similar, suggesting that in 1994 around 20 percent of EITC recipients were ineligible for the credit.

[3] AFDC quality control audits may not be of the same intensity as IRS audits. Evidence of possibly higher AFDC error rates come from the work of Edin (1993), who found that essentially all AFDC recipients in a Chicago housing development had unreported income (although not necessarily enough to make them ineligible for the program), and Hill, Hotz, Mullins, and Scholz (1997), who matched administrative welfare and earnings data for four California counties and found that at least 14 percent of AFDC recipients underreport earnings to the welfare system.

[4] Liebman (1995) provides a simple framework for calculating when it is more efficient to make transfers through the tax system than through the welfare system in light of differing administrative costs, participation rates, and noncompliance rates. The IRS estimates a noncompliance rate of 16 percent for the overall tax system (Internal Revenue Service 1996), so the estimated EITC overpayment rates are not that far above the overall noncompliance rate.

[5] The analysis reported in this paper was completed well before the data from the 1994 compliance study were available, at a time when it was unclear how much of an EITC compliance problem remained after the elimination of the support test in 1990.

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ployed in the match and the imputation methods used. The fourth section presents results on how many EITC taxpayers lack children in their CPS households and subfamilies and describes the characteristics of the childless EITC recipients. The fifth section discusses the implications of the results for the design of transfer programs for low income families. The sixth section concludes.

THE EVOLUTION OF THE EITC COMPLIANCE PROBLEM

In the decade since the EITC compliance problem was first recognized, there have been important changes in the EITC that have altered the nature of the compliance problem. The large expansions of the credit, legislated in 1990 and 1993, have increased the return to erroneously claiming the credit; modifications of eligibility rules have simplified enforcement; and the IRS has taken important steps to reduce EITC errors and fraud.

In tax year 1988, a taxpayer was entitled to claim the Earned Income Tax Credit if he or she met three requirements. First, the taxpayer must have had earned income (wage and salary income plus business and farm self–employment income) above $0 and below $18,576, as well as adjusted gross income below $18,576. Second, the taxpayer must have had a child living with him or her for more than half of the year.[6] Third, the taxpayer was required to use a filing status of married filing jointly, head of household, or surviving spouse.

Married taxpayers were generally required to claim their children as dependents in order to be eligible for the EITC.[7] Thus the taxpayer must have provided at least half the cost of supporting the child. The head of household and surviving spouse filing statuses require that the taxpayer provide half the cost of keeping up a home for the child.[8] Therefore, a support test applied for all EITC claimants. AFDC income is counted as support provided by the state, not the taxpayer. This means that a taxpayer who received $8,000 in AFDC benefits and $6,000 in earnings would have failed the support test and would not have been eligible to receive the EITC.

Estimates from the 1988 TCMP imply that one–third of the 10.4 million taxpayers claiming the EITC in that year were not eligible for the credit (see Table 1).[9] The 3.4 million ineligible taxpayers received $1.9 billion of the $5.6 billion spent on the EITC. Forty percent of head of household filers claiming the EITC were not entitled to the credit, compared with 21 percent of married filers. These head of household returns accounted for almost three–quarters of the taxpayers who had their EITC claims disallowed. Table 2 displays a tabulation of the filing status claimed by the taxpayer versus the filing status determined by the IRS auditor for all returns on which an EITC claim was disallowed. The table shows that most of

[6] Under pre–1991 EITC rules, a child was the taxpayer's son, daughter, stepchild, legally adopted child, or descendent of the taxpayer's child. In addition, married taxpayers could claim foster children who under IRS rules are children "you cared for as you would your own child." However, the foster child (which for married taxpayers includes grandchildren) had to live with the taxpayer for the full year.

[7] Married taxpayers were entitled to claim the EITC without claiming a dependent exemption if the taxpayer's spouse was not the child's parent and the child's other parent was allowed to claim the exemption under a divorce agreement.

[8] Surviving spouses also had to be able to claim their children as dependents in order to claim the EITC, as well as meeting a household maintenance test.

[9] The Taxpayer Compliance Measurement Program samples roughly 50,000 individual tax returns every three years. IRS auditors conduct line by line audits of the sampled tax returns to assist the IRS in designing methods for predicting which tax returns are efficient to audit. The 1991 TCMP was canceled due to budget cutbacks. Tax returns were selected for the 1994 TCMP, but the audits never occurred first due to budget cutbacks and then due to Congressional opposition to the "audits from hell."

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TABLE 1
EITC AUDIT STATUS OF ALL TAX RETURNS IN 1988 TCMP

Audit Status	Number of Returns	Total Amount of EITC Claimed (billions of dollars)
All tax returns	104,319,102 (100.0 %)	5.627 (100.0 %)
EITC not claimed	93,822,851 (89.9 %)	0.000 (0.0 %)
EITC established	95,467 (0.1 %)	0.000 (0.0 %)
EITC claimed	10,400,784 (10.0 %)	5.627 (100.0 %)
EITC not adjusted	5,600,237 (53.8 %)	3.056 (54.3 %)
EITC increased	428,040 (4.1 %)	0.172 (3.1 %)
EITC decreased	1,016,412 (9.8 %)	0.544 (9.7 %)
EITC disallowed	3,356,095 (32.2 %)	1.855 (33.0 %)

Source: 1988 TCMP.
Note: "EITC established" are tax returns not claiming the EITC that are eligible for the EITC.

TABLE 2
RETURNS WITH EITC DISALLOWED IN 1988 TCMP
FILING STATUS CLAIMED VERSUS FILING STATUS EXAM

	Filing Status (exam)					
Filing Status (claimed)	Single	Married Joint	Married Separate	Head of Household	Qualifying Widow	All
Single	262	0	0	0	0	262
Married joint	29,638	797,187	28,418	796	0	856,039
Married separate	18,263	0	0	0	0	18,263
Head of household	1,959,836	0	363,590	143,262	0	2,466,688
Qualifying widow	0	0	0	14,506	337	14,843
All	2,007,999	797,187	392,008	158,564	337	3,356,095

Source: 1988 TCMP.

the head of household filers in this population should have filed as single because they had all of their dependent child claims disallowed. The filing status of married taxpayers who had their EITC claim disallowed was usually not changed by the TCMP auditor because losing dependent child exemptions does not affect a taxpayer's eligibility for the married filing status.[10]

The TCMP computer file does not explain why EITC claims were disallowed. However, it does include information on income, filing status, and dependent child exemptions both as claimed by the taxpayer and as revealed in the audit. In most cases, the disallowal of all dependent exemptions would mean that the taxpayer was not entitled to claim the EITC.[11] Table 3 uses the available evidence in the 1988

[10] The TCMP dropped from the sample non–married filers who in response to the audit opted to file as married. From the 1994 IRS study we know that such filers are rare.

[11] A taxpayer could have legitimately claimed the EITC without claiming a dependent child if the taxpayer had given up the dependent exemption in a divorce agreement.

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TABLE 3
TAX RETURNS WITH EITC DISALLOWED IN 1988 TCMP
REASONS WHY EITC CLAIM WAS DISALLOWED

	Number of Returns	Amount of EITC Claimed (billions of dollars)
No dependents and improper filing status, income eligible	1,925,104 (57.4 %)	1.126 (60.7 %)
No dependents only	376,832 (11.2 %)	0.201 (10.8 %)
Improper filing status only	435,910 (13.0 %)	0.264 (14.2 %)
AGI above $18,576 or earned income above $18,576, filing status and dependents eligible	386,471 (11.5 %)	0.157 (8.5 %)
Negative or zero earnings filing status and dependents eligible	16,550 (0.5 %)	0.011 (0.6 %)
(No dependents or improper filing status) and (AGI above $18,576 or earned income above $18,576)	66,113 (2.0 %)	0.027 (1.5 %)
Cannot explain why EITC was disallowed	149,415 (4.5 %)	0.069 (3.7 %)
Total returns with EITC disallowed	3,356,395 (100.0 %)	1.855 (100.0 %)

Source: 1988 TCMP.

TCMP to explain why EITC claims were disallowed. Eighty–two percent of taxpayers whose EITC claims were disallowed were determined by the auditor either not to have any dependent children or not to be eligible to use a filing status entitling the taxpayer to the EITC (or both). Only 11.5 percent had income exceeding the maximum levels for EITC eligibility but were otherwise eligible. Less than 1 percent lacked positive earned income. Two percent had both excessive income and either no dependent or an improper filing status. Four percent of the disallowed EITC claims do not fit into any of these categories.

The basic TCMP data suggest that most noncompliance on EITC tax returns involves the reporting of dependent children. Most of the disallowed EITC claimants had income levels that would have made them eligible for the credit. However, these basic data are open to a number of interpretations.

First, it is possible that the TCMP does not accurately measure noncompliance. A Government Accounting Office (GAO) study of erroneous dependent claims tried to examine the original audit sheets of 958 tax returns that were coded in the 1988 TCMP computer file as having the number of dependents altered due to the audit. The GAO found that 180 of the audit sheets were missing, 51 had been miscoded on the computer file, and 85 contained dependent exemptions that were disallowed by default because the taxpayer never responded to the audit request (U.S. General Accounting Office, 1993). In addition to doubts about data quality, TCMP–based estimates of EITC noncompliance are likely to be biased due to the limits of what auditors can learn in an audit. On the one hand, TCMP audits generally occur two to three years after a tax return is filed and some low income taxpayers who provided more than half the support for a child may not be able to document the support a few years later. This would imply that the TCMP has overestimated the number of noncompliant EITC tax returns. On the other hand, auditors are unlikely to un-

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cover all taxpayer fraud (Graetz and Wilde, 1985), so the TCMP may undercount the number of ineligible EITC recipients.[12, 13]

Second, it is possible that most of the ineligible 1988 EITC claimants failed the support test, but were otherwise eligible for the credit. If this were the case, then, *ceteris paribus*, current rates of EITC noncompliance would be much lower than 1988 rates because under post–1990 rules, the support test no longer applies. From the TCMP computer file it is usually impossible to determine the reason that a taxpayer's dependent child claim was disallowed. However, the original audit sheets do contain an explanation for why the claim was disallowed. While I was unable to obtain access to the audit sheets, the GAO study mentioned above examined 554 TCMP audit sheets from tax returns that had one or more dependent child claims disallowed. If the GAO sample were representative of all returns with disallowed dependent exemptions, then roughly one–third of the GAO sample would be tax returns that claimed the EITC. The GAO study estimated that if the post–1990 EITC rules had been in effect in 1988 then 890,000 of the 4 million tax returns represented in their survey would have failed the support test and been ineligible to claim a dependent child while still being eligible for the EITC.[14] Extrapolating to the entire population of 6.21 million returns with disallowed dependents implies that 1.38 million EITC tax returns would have been ineligible for the credit under the 1988 rules, but eligible under the post–1990 rules. Thus, this small GAO sample suggests that the support test accounted for 59 percent of the 2.3 million EITC tax returns on which all dependent claims were disallowed and 41 percent of all disallowed EITC returns.[15]

Third, it is possible that ineligible EITC taxpayers did not have children living with them. One way in which this could occur is if noncustodial parents claimed their children. Since 1985, the custodial parent has been entitled to claim the dependent child exemption so long as both parents combined paid more than half the child's support. Only if the custodial parent releases his or her right to the exemption (or did so under a pre–1985 divorce or separation agreement) may the noncustodial parent legally claim the exemption. Noncustodial parents are required to claim the children as dependents living away from home. In the TCMP, less than half of 1 percent of ineligible EITC returns contained claims for children living away from home. However, the IRS auditors whom I interviewed suggested that noncustodial parents are savvy enough to re-

[12] Two IRS auditors whom I interviewed told me that it is very difficult to catch a taxpayer who hides AFDC income, since the auditor generally cannot obtain information from the state on benefits paid (Liebman, 1994).

[13] Another complaint about using TCMP estimates to measure EITC noncompliance comes from Greenstein (1995). He argues that not all taxpayers who erroneously claim the EITC receive the EITC, since the IRS manages to catch some erroneous claims before mailing out refund checks. Greenstein's point is more relevant for recent years when the IRS has begun using computerized matches of social security numbers before sending out refunds than it is for the 1980s, when it was often many months after a refund check was mailed out that the IRS discovered that the return was suspect.

[14] The GAO sample represents only 4 million of the 6.21 million tax returns with disallowed dependent exemptions. The sample does not represent the entire tax–filing population because some audit sheets could not be found and because discrepancies were found between some of the audit sheets and the TCMP computer file.

[15] The GAO report estimated that 57 percent of returns that failed the support test failed for not providing half the support, while 43 percent failed for not keeping adequate records. According to the auditors whom I interviewed, a taxpayer's dependent claim is often disallowed for not keeping adequate records when the auditor suspects but cannot prove that welfare income exists, but can show that spending is greater than reported income. This implies that it is likely that many of the taxpayers whose claims were disqualified for insufficient documentation in fact did not meet the support test.

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alize that claiming a child living away from home without providing the required paperwork would attract IRS attention, so that noncustodial parents may claim their children as living at home. Another way in which taxpayers without children might claim a dependent child is to invent a fictional one. The strongest evidence for this possibility is that in 1987, the first year in which taxpayers were required to list social security numbers of dependents on their tax returns, 7 million fewer dependent children were claimed than in the previous year (Szilagyi, 1991). Further evidence that nonexistent children may have been claimed comes from the 1988 TCMP. In 1988, taxpayers were required to list on their tax returns the social security numbers of all dependents who were at least five years old. On tax returns where the TCMP auditor disallowed an EITC claim, 39 percent of the disallowed dependent child claims were dependents for whom the taxpayer checked the box stating that the child was under five and did not provide a social security number—possibly because the children did not exist.

As was alluded to above, the 1990 legislation simplified EITC rules by removing the support test and replacing it with a residency test and an adjusted gross income (AGI) tiebreaker. The EITC residency test requires that the child live with the taxpayer for more than six months during the year (12 months for a foster child). The AGI tiebreaker rules state that if a child could potentially be claimed by two taxpayers, only the person with the higher adjusted gross income is eligible to take the credit.

While eliminating the support test may have made some previously ineligible taxpayers eligible for the credit, it has also created a new source of errors. The 1994 IRS compliance study found an overall overclaim rate of 21 percent, substantially lower than the 35 percent rate for 1988. EITC claims by taxpayers without children continued to be a problem with 39 percent of EITC overclaims due to taxpayers claiming children who did not meet the residence test. However, an additional 18 percent of overclaims were due to the failure to correctly follow the new AGI–tiebreaker rules (GAO, 1998).

In addition, the 1994 study identified a large source of errors that had not been nearly as important in the 1980s—married taxpayers who by law are supposed to file married returns but do not. Thirty–one percent of EITC overclaims were due to these filing status errors, which occur among separated couples who have not obtained a legal separation agreement or among couples who are living together but erroneously file separate returns with the filing status of single or head of household (perhaps deliberately avoiding EITC marriage penalties).[16] When these separate returns are combined into a joint return, the income rises, usually reducing the amount of the EITC the household receives or eliminating eligibility altogether.

Over this period, the IRS adopted a number of new enforcement procedures, including verifying the social security numbers of children claimed on tax returns before making payments. At first glance, it might appear that these enforcement efforts have been highly successful because the overpayment rate has fallen by roughly one–third. However, such a judgement is complicated by the removal of the support test that may have simply redefined many previously ineligible taxpayers as eligible taxpayers. Indeed, the

[16] It seems likely that most of these errors involve married spouses who are separated from each other because the IRS study found that the appropriate post–audit filing status for most of these households was married filing separately, not married filing jointly. While technically ineligible for the EITC, some of these separated households may be very similar to the eligible single parent households that the EITC aims to transfers money to.

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GAO study discussed above indicated that the support test may have been responsible for 41 percent of ineligible EITC claims in 1988. This would imply that removing the support test directly reduced the level of EITC noncompliance to around 20 percent, raising the possibility that recent enforcement initiatives have had no effect.

While it is impossible to be certain, it seems likely that recent IRS efforts have indeed had a substantial impact. First, as discussed above, errors associated with the AGI tiebreaker have likely replaced some of the support test errors. Second, there is good reason to expect that in the absence of new IRS efforts, the error rate would have increased dramatically. The results of Liebman (1995), which used the 1985 and 1988 TCMPs to study how EITC noncompliance responded to the 1987 expansion of the EITC, indicate that a 45 percent increase in the EITC increased the noncompliance rate by 14 percent. It is highly speculative to extrapolate from these results to the most recent EITC expansions. Nonetheless, between 1990 and 1994 the real value of the EITC more than doubled, raising the payoff to erroneous claims. Thus, we might have predicted an increase in noncompliance of 33 percent from this increase. So even if we assumed that elimination of the support test directly reduced the noncompliance rate to 21 percent, the expansion in the generosity of the credit would have raised the noncompliance rate to 28 percent. If recent reforms have reduced the rate of noncompliance back to 21 percent, then they have eliminated one–quarter of EITC noncompliance. If the impact of eliminating the support test was less than assumed here, the impact of IRS efforts may have been even greater.

DATA AND IMPUTATION METHODOLOGY

To produce an alternative measure of EITC noncompliance, I became a special sworn Census Bureau employee and used a data set which matched the March 1991 CPS to tax return data.[17] These data allowed me to estimate the percentage of taxpayers who were likely to have claimed the EITC on their 1990 tax returns (the returns most taxpayers filed in April, 1991) who told the Current Population Survey that they did not have a child living with them in March 1991. Since the 1990 EITC rules were identical to those for 1988 (except that the credit amounts were adjusted for inflation), this provides a comparable estimate of the number of EITC claimants who wrongly claimed to have a dependent child when they did not have a child living with them. Since the support test is no longer a requirement for claiming the EITC and has been replaced by a residency test, the number of EITC claimants who do not have a child residing with them is also a relevant number for thinking about the current magnitude of child–related EITC noncompliance.

The March, 1991 CPS contains information on 158,477 individuals, of whom 121,320 were adults (age 15 and over) and were asked for their social security number during the CPS interview (see Table 4). The CPS obtained social security numbers for 87 percent of the adults in the sample. Of the adults providing social security numbers, 77 percent matched tax returns in the IRS's Individual Master File, which contains selected information on every tax return filed for tax year 1990. The taxpayers who have valid social security numbers but do not match to tax returns are considered nonfilers.

[17] In order to protect census respondents, U.S. law does not permit the Census Bureau to share with the IRS micro data in which individuals can be identified. Therefore, research matching census micro data with tax return data can only be done by Census Bureau personnel.

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TABLE 4
DETAILS OF 1991 CPS —1990 IMF MATCH

	Unweighted Number of Observations	Weighted Number of Observations
Individuals in the March 1991 CPS	158,477	248,807,213
Children (age less than 15)	37,157	55,347,888
Adults (age 15 and above)	121,320	193,459,325
Adults without valid SSN	15,803	25,155,698
Adults with valid SSN	105,517	168,303,627
Filers (adults matching to a tax return)	81,620	130,118,292
Nonfilers (adults not matching to a tax return)	23,897	38,185,335

Source: Author's calculations from March 1991 CPS —1990 IMF match.

The IRS Individual Master File (IMF) contains information from every tax return filed during the year. Unfortunately, the 1990 IMF extract created for the match does not record whether or not the taxpayer claimed the earned income tax credit. However, it does contain the number of dependent children claimed (separately for children claimed as living at home and for children living away from home), adjusted gross income, wage and salary income, and a total income variable that can be combined with schedule C and schedule F indicators to calculate self–employment income.[18]

I assume that a taxpayer claims the EITC if the taxpayer both has income qualifying him or her for the EITC and claims a dependent child living at home. I have tested my methodology for identifying EITC returns using the 1990 Statistics of Income (SOI) sample of tax returns. The SOI sample contains all of the variables that I use to predict whether a taxpayer claims the EITC as well as the actual amount of EITC that the taxpayer claimed. I find that my methodology successfully identifies 95 percent of tax returns that claim the EITC and that only 2 percent of the taxpayers whom I predict to claim the EITC did not claim it.[19] Thus, the measurement error introduced by not having a direct measure of EITC claims could at most bias my estimates of improper claims upward by 2 percentage points (if 100 percent of the people claiming dependent children living at home but not claiming the EITC did not have children at home). Most likely, the impact of this measurement error is negligible. For example, if improper child claims were twice as high among the people whom I wrongly predict to claim the EITC as among true claimers, my overall estimate of wrong claims would be biased upwards by less than three–tenths of a percentage point.

[18] The total income variable is the sum of wage and salary, total interest (taxable and tax exempt), taxable dividends, alimony received, business income, farm income, pensions and annuities, net rents, royalties, estates, trusts, unemployment compensation, and social security benefits. The file contains separate items for the amount of wage and salary income, interest income, rent and royalty income, and social security income. For tax returns that contained a schedule C, a schedule F, or a schedule SE, I define self–employment income as the difference between total income and the sum of the separately listed components of income. To the extent that these self–employed taxpayers have alimony, pension, or unemployment compensation income, my measure of self–employment income is incorrect.

[19] Three–fourths of the EITC claims that I miss are head of household filers who do not claim a dependent child. If I include all head of household filers with appropriate income in my sample of EITC filers, then my sample would include 99 percent of all EITC claims. However, 6 percent of my sample would be taxpayers who did not claim the EITC.

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In order to account for the 13 percent of CPS sample members who did not provide a valid social security number (SSN) to the CPS and therefore could not be matched to a tax return, I estimated the probability of supplying a social security number to the CPS conditional on the individual's observed CPS characteristics and then reweighted the complete–data part of the sample by the inverse of this probability. I used the method of moments to produce standard errors that incorporate the extra uncertainty that the reweighting procedure introduced into the estimates.[20]

Even after accounting for nonmatches, the CPS–IMF sample has fewer EITC recipients than would be expected based on IRS Statistics of Income data. The last two rows of Table 5 show the weighted number of EITC returns from the CPS–IMF match and from SOI by filing status. The total number of EITC returns in the CPS–IMF match is about 12 percent too low, and most of the discrepancy is a shortage of head of household returns.[21] There are a number of possible explanations for why the number of EITC tax returns filed by the entire March 1991 CPS sample is less than the number that were actually filed for 1990. First, it is possible that the CPS undercounts low income families with children. Second, it is possible that some people file more than one tax return or file

TABLE 5
ESTIMATES OF THE PERCENT OF EITC CLAIMANTS IN THE CPS–IMF MATCH WITH CHILDREN PRESENT

	Married Joint	Female Head of Households	Male Head of Households	Total
Percent with no child in March, 1991 CPS household	9.0 (0.4)	11.2 (0.6)	33.2 (1.8)	13.2 (0.4)
Percent with no child in March, 1991 CPS subfamily	11.3 (0.4)	15.7 (0.7)	45.9 (1.9)	17.8 (0.4)
Percent with no child in the March, 1991 CPS household and no child in March, 1990 household	8.7 (0.8)	6.8 (0.9)	25.4 (3.3)	10.1 (0.6)
Percent with no child in the March, 1991 household or multiple tax returns in household and more dependents claimed on tax returns than there are children in CPS household	13.7 (0.5)	19.9 (0.8)	53.2 (2.0)	21.4 (4.9)
Percent with no child and no adult child in the 1991 CPS household	7.1 (0.7)	9.2 (0.5)	32.3 (1.8)	11.3 (0.3)
Weighted number of EITC claimants in CPS–IMF match (millions)	4.739	4.754	1.452	10.978
Number of EITC claimants in Statistics of Income estimates (millions)	4.539	7.944		12.540

Source: Author's calculations from the CPS–IRS match. Standard errors in parentheses.

[20] An earlier version of this paper available in Liebman (1996) compares the estimates from the reweighting procedure with those from two multiple imputation techniques, and presents the full details of all three methods. The results were extremely similar across the three procedures.

[21] About one–fifth of the undercounting is attributable to my method of identifying EITC returns. In the SOI sample, my method identifies 12.2 million EITC returns while there are in fact 12.5 million.

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without a proper social security number. Third, it could be that people who do not give their SSN to the CPS are more likely to file head of household tax returns than the prediction equations indicate. Whatever the cause, my inability to match the aggregate totals implies that my results are only representative of the 88 percent of EITC claims that are accounted for in the entire CPS sample including imputations.

THE NUMBER OF CHILDLESS EITC RECIPIENTS

Basic Results

Using the CPS–IMF match, I estimate the proportion of tax returns predicted to claim the EITC in which the taxpayer was in a CPS household that did not contain any children. In my methodology, a child must be below 19 (below 24 if a full time student) but does not have to be the child (or even a relative) of the taxpayer in the CPS household who claimed the EITC.[22] This is a lower bound estimate of the amount of noncompliance since there are a number of reasons (most importantly the AGI–tiebreaker) why a taxpayer with a child in the household may not be entitled to claim that child for the purposes of the EITC. I also estimate the number of EITC claimants who do not have a child in their CPS subfamily.[23] This alternative estimate gives an indication of families in which the choice of which adult claims the child for EITC purposes may be ambiguous.[24]

The first two rows of Table 5 show the percentage of (predicted) 1990 EITC tax returns by gender and filing status where there was no child in the CPS household or subfamily. Nine percent of couples filing married joint tax returns claiming the EITC did not have a child in their CPS household. This estimate has a standard error of 0.4. An additional 2.3 percent contained a child in the household but not in the taxpayers' subfamily. For female head of household returns, the numbers are similar to those for married joint returns. There were 11.2 percent who had no child in their household (with a standard error of 0.6), while an additional 4.5 percent had no child in their subfamily. For male household heads, the numbers are much larger; 33.2 percent of male household heads claiming the EITC did not have a child in their CPS household, and an additional 12.7 percent did not have a child in their subfamily. Among all EITC tax returns, 13.2 percent did not have a child in the CPS household and 17.8 percent did not have one in the subfamily.

Further Estimates

These results indicate that at the time EITC taxpayers receive their tax refunds, a sizable portion do not have children living in their households. While this fact may itself be of policy relevance since the EITC aims to raise the living standards of families with children, it is not necessarily a good estimate of the number of EITC taxpayers who are noncompliant due to

[22] Currently a child must be under 19, under 24 and a full–time student, or permanently or totally disabled to be an EITC qualifying child. However, under 1990 rules some older children could have qualified their parents for the EITC. In the next subsection, I explore the possibility that taxpayers are claiming adult children in order to claim the EITC.

[23] I include the primary family (excluding any subfamilies that belong to it) as a subfamily. Thus, in this portion of the analysis a child will qualify only one of the household's subfamilies for the credit.

[24] There are two main cases in which children in different subfamilies might entitle a taxpayer to the EITC. First, in a multigenerational family a grandparent who was in a different Census subfamily could be eligible to claim the child for the EITC. Second, under the foster child rules (which in this period only apply to married taxpayers), a taxpayer can claim a child for the EITC if the child lives with the taxpayer for the entire year and if the taxpayer treats the child as if it were the taxpayer's own child.

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claiming children who do not live with them. On the one hand the estimate is too low since the requirements for being a qualifying child are stronger than simply residing in the same household or even the same subfamily. On the other hand, the estimates could overstate noncompliance to the extent that there are changes in household composition between the tax year and the time of the CPS survey. In addition, it is possible that adult children may have qualified some taxpayers for the credit whom I categorize as ineligible. To investigate these considerations, I perform three additional calculations. First, when possible, I match EITC taxpayers who lack a child in the March, 1991 CPS back to the March, 1990 CPS. It is unlikely that a taxpayer would lack a child in both of the CPS surveys and still have had a child who met the six month residency requirement for claiming the EITC.[25] Second, I calculate the number of EITC taxpayers who lived in households where more than one tax return was filed and where the total number of dependent children claimed on all the tax returns exceeded the number of children present in the CPS household. Third, I calculate a lower bound on the percentage of ineligible EITC recipients by counting some taxpayers with adult children in their households as eligible for the credit.

There were 1,010 observations in the March, 1991 CPS who were predicted to claim the EITC, but did not have a child in their household. In theory, roughly half of them (those with months–in–sample greater than four) can be matched to observations for the same individual in the March, 1990 CPS. In fact, I was able to match only 60 percent of the potentially matchable individuals to individuals in the March, 1990 CPS.[26]

Since sample attrition in the CPS is not random (Welch, 1991), I estimated a logit regression to obtain the conditional probability that someone with given characteristics who was a March, 1991 CPS adult and in his or her last four months in the sample would also be present in the March, 1990 CPS. I then reweighted the 1991 observations that matched back to 1990 by the inverse of the probability that they were in both samples.

In the third row of Table 5, I present estimates from this procedure. Of the tax returns claiming the EITC for 1990, 10.1 percent were filed by taxpayers who lacked children in both their March, 1990 and March, 1991 households. Thus my estimate of noncompliance is 25 percent lower when I use this more restrictive measure. Female household heads show a much lower noncompliance rate with this measure—6.8 percent rather than 11.3.

One reason that my basic estimates of noncompliance might be too low is that the same CPS child could be claimed by more than one taxpayer. Therefore, I estimate the percentage of households with EITC returns in which more than one return claimed dependent children living at home and the number of children in the household was less than the total number claimed on all the tax returns filed by the household. For this estimate, I used

[25] While family dynamics are often complicated, in order for my methodology to miss a child who qualifies the taxpayer for the EITC, the child would have to make two moves between March, 1990 and March, 1991—a first move into the household after March, 1990 and a second move out of the household more than six months later but before March, 1991. Even if this possible measurement error makes my estimates less than ideal measures of EITC noncompliance, the estimates are still relevant for the question of whether EITC payments are reaching households that have children living in them at the time the payments are made.

[26] Within households, I first matched individuals in the March, 1991 household to individuals who were one year younger, of the same gender, and on the same CPS line number in the March 1990 household. If no match was found, I then dropped the line number requirement. If there was still no match, I matched the March, 1991 individual to an (unmatched) individual in the March, 1990 household of the same gender who was either the same age as the March, 1991 individual or two years younger.

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only households in which all adults supplied a social security number to the CPS. Of the 59,929 households in the March 1991 CPS, 49,878 contained social security numbers for all adults. The percentage of EITC tax returns in this subsample that were in households that lacked children was 12.8 percent compared to 13.2 percent for the entire sample, so these households seem to be reasonably representative of all households. Of the EITC tax returns in this subsample, 32 percent were in households in which more than one tax return was filed. In roughly 40 percent of the EITC households in which more than one tax return was filed, more children were claimed on the tax returns than were present in the household. Thus, the total percentage of EITC tax returns that were in households with no children or that were in households in which multiple tax returns were filed that claimed dependent children and in which the total number of children claimed on tax returns exceeded the number of children present in the household in March, 1991 was 21.4 percent (row 4 of Table 5). The rate for married tax returns was 13.7 percent, the rate for returns filed by female household heads was 19.9 percent, and the rate for male household heads was 53.2 percent. While it is of course possible that the tax return in the household claiming the EITC was in fact eligible to claim the children while the other tax returns were not, these estimates suggest at the very least that there is sizable overreporting of dependents on tax returns filed by EITC households, if not necessarily on EITC returns.[27]

Under pre–1991 EITC rules, there was no age restriction on children claimed for the EITC. However, married taxpayers generally had to claim their child as a dependent to receive the child and the rules for dependent children do contain age restrictions. Moreover, since all of the children in my EITC sample were also claimed as dependents, the age requirements for dependent children apply even for the head of household returns. Under the requirements for claiming dependent children, the child must be under 19 (or under 24 if a full–time student) or the child's gross–income must be under a certain limit ($2,100 in 1990). To eliminate households containing an adult child with income below $2,100 from my estimates of EITC noncompliance, I identified taxpayers with an adult child in the household (using the CPS parent pointer variable). If the adult child either did not file a tax return or filed one with AGI below $2,100, then I assumed the taxpayer could claim the child as a dependent and qualify for the EITC. For adult children who did not give social security numbers to the CPS, I used their total CPS income as a proxy for gross income. Since I do not impose the support test or the joint return test, this measure overestimates the number of EITC eligible households. Accounting for adult children lowers the estimates of EITC noncompliance for married taxpayers and female household heads by nearly 20 percent. However, it lowers the estimates of EITC noncompliance for male household heads by only 3 percent (row 5 of Table 5).

Demographic Characteristics of Eligible and Ineligible EITC Recipients

Past descriptions of the characteristics of EITC recipients have either had to make due with the limited information available in samples of tax returns or to impute EITC recipiency based on survey informa-

[27] There is another source of child–related EITC noncompliance that is not picked up in these estimates. Even when each child is only claimed once, if there are multiple tax returns filed by adults in the household, the wrong taxpayer (the one with the lower AGI) could erroneously claim the child in order to receive the EITC.

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tion.[28] The estimates presented here are likely to give a much more accurate picture of who received the EITC in tax year 1990 and allow us to examine how the characteristics of eligible and ineligible EITC recipients differ. Tables 6 and 7 present demographic and economic characteristics of taxpayers who were predicted (based upon information from their tax returns) to claim the EITC in 1990. Table 6 contains information on taxpayers who had a child in their March, 1991 CPS household, while Table 7 presents information on taxpayers who did not have a child in their household. The tables also present separate characteristics by filing status and gender (the demographic characteristics of the married taxpayers are the average of the characteristics of the two spouses).

Table 6 shows that 50 percent of eligible 1990 EITC taxpayers are married, while 30 percent are formerly married, and 20 percent have never been married. A little more than half are white, a quarter are black, and 18 percent are Hispanic. Of eligible EITC recipients, 74 percent have a high school education or less; 44 percent live in the South; and 36 percent live in a central city. Fifty–eight percent work 1,500 hours or more, though this average is brought down by married couples in which one spouse does not work. Sixteen percent of eligible EITC tax returns are filed by individuals in households that receive welfare income during the year and 26 percent are in households receiving food stamps.

Compared with eligible taxpayers, ineligible EITC recipients are less likely to be currently married and are more likely to have never been married. Ineligible taxpayers are also more likely to be black, to have less than high school education, to live in the South, and to be at least 30 years of age. Ineligible taxpayers are much less likely to live in a household that received public assistance (3 percent), food stamps (8 percent), or Medicaid (11 percent) during the previous year. This is further evidence that no child was living with the taxpayer during the previous year and that the discrepancy between the number of children claimed on the tax return and the number present in the CPS household is not caused by CPS measurement error.

The marital status tabulations in Table 7 indicate that a substantial percentage of taxpayers who filed head of household returns reported to the CPS that they were in fact married. This is consistent with the results of the 1994 IRS compliance study that found that many married taxpayers erroneously used a non–married filing status.

IS THE EITC AN EFFECTIVE WAY TO TRANSFER INCOME?

The estimates in this paper indicate that in 1990, between 11 percent and 13 percent of EITC recipients did not have a child living with them at the time they received the credit. Thus it seems likely that almost 90 percent of EITC dollars are reaching families with children.[29]

However, some of these families appear to have incomes above the intended range. Relatively few EITC taxpayers under report income, but because households often contain more than one tax–filing unit, the income measured on a tax return may not correspond well to the total resources of the household. More than one–third of EITC recipients in the 1990 data live in households with multiple

[28] Scholz (1994) matched the 1990 SIPP to a file that allowed him to determine which Survey of Income and Program Participation (SIPP) individuals filed tax returns. He presents the characteristics of people who are predicted based on SIPP information to be eligible for the EITC and who file a tax return. He also presents characteristics of people who told the SIPP that they received the EITC but who do not appear to be eligible for the credit based upon other SIPP information.

[29] If the noncustodial parents who are erroneously receiving the EITC make income transfers to their children, the percentage of EITC dollars reaching families with children could be even higher.

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TABLE 6
DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS OF TAXPAYERS PREDICTED TO CLAIM THE 1990 EITC WHO HAVE CHILDREN IN THEIR MARCH 1991 CPS HOUSEHOLD

	Tax Return Filing Status			
	Married	Male Household Head	Female Household Head	All
Marital status				
Married	92.1	35.6	15.5	52.3
Widowed	0.7	2.4	5.1	3.0
Divorced	0.9	20.9	35.7	18.2
Separated	3.5	9.2	13.5	8.5
Never married	2.8	31.8	30.3	17.9
Race				
Non–hispanic white	66.1	34.6	46.2	54.0
Non–hispanic black	9.1	35.7	37.6	24.5
Hispanic	19.8	26.9	13.8	17.9
Non–hispanic other	4.9	2.8	2.4	3.6
Education				
Less than high school	33.2	39.2	24.5	30.0
High school	42.4	41.0	46.9	44.2
More than high school	16.3	14.7	23.2	19.2
College degree	5.1	3.0	3.4	4.1
More than college	3.0	2.1	1.9	2.4
Geographical region				
Northeast	13.1	14.7	16.5	14.8
Midwest	19.7	14.6	23.3	20.7
South	44.0	46.3	43.6	44.0
West	23.2	24.5	16.6	20.4
Central city				
In central city	27.1	43.7	44.1	36.2
Balance of MSA	37.1	31.5	33.5	35.0
Not in MSA	35.8	24.8	22.4	28.8
Farm				
Farm	3.3	0.8	0.5	1.8
Non–Farm	96.7	99.2	99.5	98.2
Age				
14 < age < 20	1.9	4.1	2.7	2.5
19 < age < 25	13.0	15.5	13.2	13.4
24 < age < 30	20.1	24.9	19.7	20.5
29 < age < 40	34.6	32.0	40.2	36.8
39 < age < 50	19.7	16.3	17.6	18.4
49 < age < 65	9.6	6.9	6.3	7.9
age > 64	1.0	0.4	0.3	0.6
Hours worked last year				
0	22.0	5.7	6.7	13.5
0 < hours < 500	9.2	5.6	8.1	8.3
500 < hours < 1000	8.5	5.0	9.2	8.5
1000 < hours < 1500	9.8	13.7	14.0	12.1
1500 < hours < 2000	11.7	15.7	18.1	14.9
2000 < hours < 2500	28.7	45.1	39.8	35.3
2500 < hours < 3000	5.4	5.1	2.6	4.1
hours > = 3000	4.8	4.0	1.5	3.2
Migration status				
Same house last year	73.8	65.6	71.5	71.9
Diff. house last year	26.2	34.4	28.5	28.1

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TABLE 6 (continued)
DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS OF TAXPAYERS PREDICTED TO CLAIM THE 1990 EITC WHO HAVE CHILDREN IN THEIR MARCH 1991 CPS HOUSEHOLD

	Tax Return Filing Status			
	Married	Male Household Head	Female Household Head	All
Labor force status				
Working	61.3	74.5	75.4	68.5
With job not working	2.4	2.4	3.6	2.9
Unemployed looking	7.2	9.2	6.6	7.1
Unemployed on layoff	1.7	4.2	1.1	1.7
Not in labor force	27.4	9.7	14.2	19.7
Income on tax return				
Phase–in	25.8	35.7	38.3	32.3
Flat	15.2	16.0	20.7	17.7
Phase–out	58.9	48.3	40.9	49.9
HH public assistance				
Yes	11.2	20.0	19.8	15.9
No	88.8	80.0	80.2	84.1
HH public assistance mean for PA>0	$3185	$2868	$2707	$2878
HH food stamps				
Yes	22.0	25.7	27.5	24.8
No	78.0	74.3	72.5	75.2
HH food stamps mean for FS>0	$1593	$1686	$2514	$1631
HH medicaid				
Yes	20.6	29.4	29.3	25.4
No	79.4	70.6	70.7	74.6
Weighted number of tax returns	4,240,106	1,008,069	4,087,243	9,355,391
Unweighted observations	4978	603	2552	8146

Source: Author's calculations from match of March, 1991 CPS to 1990 IMF.
Note: The weights for the married tax returns are split between the two spouses.

adults filing separate tax returns, and many live in households with total incomes above the EITC maximum. Moreover, data from the 1994 IRS compliance study indicate that errors associated with the AGI tiebreaker and with married taxpayers wrongly splitting their incomes among two non–married returns are responsible for almost half of EITC overclaims, accounting for about 10 percent of EITC dollars.[30]

The difficulties that arise in verifying the residency of children claimed on tax returns and the imprecise measure of household resources provided by a tax return are two drawbacks to using the tax system to transfer income in low–income families. In contrast, traditional welfare programs employ caseworkers to verify eligibility and often use more comprehensive measures of household resources in determining eligibility. However, the

[30] It is likely that a substantial share of the married taxpayers who filed non–married returns involve cases in which the spouses are separated and therefore that the incomes on the two returns are not accruing to a single household.

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TABLE 7
DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS OF TAXPAYERS PREDICTED TO CLAIM THE 1990 EITC WHO HAVE NO CHILDREN IN THEIR MARCH 1991 CPS HOUSEHOLD

	Tax Return Filing Status			
	Married	Male Household Head	Female Household Head	All
Marital status				
Married	71.3	14.1	19.2	32.7
Widowed	0.1	2.0	14.2	6.7
Divorced	4.4	21.7	35.3	21.4
Separated	11.7	14.7	7.9	11.2
Never married	11.7	47.5	23.4	28.0
Race				
Non–hispanic white	55.7	23.8	42.3	40.3
Non–hispanic black	13.7	52.0	45.5	38.1
Hispanic	27.7	22.2	10.6	19.5
Non–hispanic other	2.8	2.1	1.6	2.1
Education				
Less than high school	46.6	41.5	36.1	40.9
High school	35.7	36.4	38.4	37.0
More than high school	11.2	14.8	20.1	15.8
College degree	4.3	5.1	3.2	4.2
More than college	2.2	2.1	2.1	2.2
Geographical region				
Northeast	12.9	11.5	18.3	14.5
Midwest	16.0	21.7	15.3	17.6
South	41.7	49.4	54.8	49.2
West	29.4	17.4	11.6	18.7
Central city				
In central city	26.8	46.1	44.1	39.4
Balance of MSA	44.0	29.8	32.9	35.2
Not in MSA	29.2	24.0	23.0	25.4
Farm				
Farm	4.2	2.5	0.4	2.2
Non–Farm	95.8	97.5	99.6	97.8
Age				
14 < age < 20	0.5	2.3	0.2	1.0
19 < age < 25	3.6	15.6	7.9	9.2
24 < age < 30	12.2	20.5	11.5	14.7
29 < age < 40	24.1	38.4	21.6	27.9
39 < age < 50	20.9	11.0	28.1	20.3
49 < age < 65	29.8	10.6	27.4	22.5
age > 64	8.8	1.6	3.3	4.4
Hours worked last year				
0	26.9	5.6	5.1	11.9
0 < hours < 500	6.7	3.4	4.2	4.7
500 < hours < 1000	7.8	7.7	8.8	8.1
1000 < hours < 1500	9.2	12.6	12.1	11.5
1500 < hours < 2000	14.0	18.5	21.0	18.0
2000 < hours < 2500	24.1	43.8	43.6	37.8
2500 < hours < 3000	6.3	5.6	2.5	4.7
hours > = 3000	5.1	2.8	2.6	3.4
Migration status				
Same house last year	75.9	69.0	75.3	73.4
Diff. house last year	24.1	31.0	24.7	26.6

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TABLE 7 (continued)
DEMOGRAPHIC AND ECONOMIC CHARACTERISTICS OF TAXPAYERS PREDICTED TO CLAIM THE 1990 EITC WHO HAVE NO CHILDREN IN THEIR MARCH 1991 CPS HOUSEHOLD

	Tax Return Filing Status			
	Married	Male Household Head	Female Household Head	All
Labor force status				
Working	59.2	69.7	84.3	71.9
With job not working	3.3	3.8	1.9	2.9
Unemployed looking	9.3	9.2	4.4	7.4
Unemployed on layoff	1.0	6.2	0.9	2.7
Not in labor force	27.2	11.1	8.4	15.0
Income on tax return				
Phase–in	33.8	36.3	31.1	33.6
Flat	20.5	18.0	19.7	19.3
Phase–out	45.7	45.7	49.1	47.2
HH public assistance				
Yes	2.3	3.8	3.1	3.1
No	97.7	96.2	96.9	96.9
HH public assistance mean for PA>0	$2152	$1588	$2083	$1881
HH food stamps				
Yes	8.1	8.6	6.4	7.6
No	91.9	91.4	93.6	92.4
HH food stamps mean for FS>0	$1134	$718	$862	$888
HH medicaid				
Yes	13.2	11.3	8.1	10.7
No	86.8	88.7	91.9	89.3
Weighted number of tax returns	419,902	482,713	518,785	1,430,718
Unweighted observations	402.5	273	328	1010

Source: Author's calculations from match of March, 1991 CPS to 1990 IMF.
Note: The weights for the married tax returns are split between the two taxpayers.

greater accuracy of the welfare system comes at a cost. Administrative costs of AFDC were 16 percent of benefits paid in 1996 (Committee on Ways and Means, 1998),[31] while administrative costs for the EITC, although hard to isolate from the rest of the IRS budget, appear to be less than 3 percent of total credits received by taxpayers, probably substantially less.[32]

Moreover, the welfare system is generally thought to impose a greater burden on beneficiaries than the tax system, both because the time cost of regular meetings with a case worker is larger than the marginal cost of adding an additional form to one's tax return[33] and because of the stigma associated with welfare receipt. These cost differentials are likely to be part

[31] To the extent that AFDC administrative dollars are spent on services beyond eligibility verification and benefit payments, the administrative costs of the two programs are not directly comparable.
[32] This number is based on Scholz (1997). See Liebman (1998) for a discussion.
[33] According to Scholz (1997), most EITC recipients would file a tax return even in the absence of the EITC.

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of the reason that take–up rates appear to be higher for the EITC than for traditional welfare programs.[34] Moreover, even within the EITC itself it is clear that recent efforts at improving compliance have increased administrative costs and have likely discouraged some eligible recipients from applying for the program.

Is it more cost–effective to administer payments to low–income working families through the tax system with low administrative costs and high error rates or through the welfare system with high administrative costs and lower error rates?[35] The answer depends heavily on how dollars transferred to ineligible taxpayers are valued.

With an overpayment rate of 21 percent and administrative costs of 3 percent, every dollar that is transferred to an eligible EITC recipient leads to 27 cents of payments to ineligible taxpayers (.21/.79) and administrative costs of 4 cents (.03 x 1.27).[36] In contrast, if it were possible to administer the EITC through the welfare system with an overpayment rate of 6 percent and administrative costs of 16 percent, then every dollar that was transferred to eligible recipients would lead to 6 cents in payments to ineligible taxpayers (.06/.94) and administrative costs of 17 cents (.16 x 1.06).[37]

If both the administrative costs and the transfers to ineligible taxpayers are treated as having zero value, then administering the program through the welfare system is cheaper; transfering one dollar to an eligible taxpayer costs $1.23 cents through the welfare system and $1.31 through the tax system.[38] However, if many EITC errors are inadvertent and involve payments to low–income families with children we may want to place some value on the transfers to ineligible taxpayers, perhaps assigning them the same social welfare weight as a dollar given to the average taxpayer. In that case the dollars that go to the ineligible taxpayer are not a cost (though the transfer does still require administrative costs) and transferring one dollar to an eligible taxpayer costs $1.17 through the welfare system and $1.04 through the tax system.[39]

CONCLUSION

The IRS estimates that more than 20 percent of EITC payments are made in error. However, by matching the CPS to tax return data, this paper finds that a large portion of the overpayments went to families with children. Depending on the exact measure used, only 11 to 13 percent of EITC recipients lacked children in

[34] Scholz (1994) shows, using a variety of data sets and methodologies, that between 80 and 86 percent of EITC–eligible taxpayers receive the EITC. In comparison, Blank and Ruggles (1993) estimate that AFDC–eligible families received 75 percent of the total dollars to which these families are entitled.

[35] Holtzblatt and Liebman (1999) discuss the UK's recent conversion from a welfare–based system of in–work benefits to a tax–based system.

[36] There is also excess burden from raising the revenue, but in this simple example it is simply proportional to the direct costs and does not affect the comparison.

[37] As I discussed in footnote 3, there are reasons to suspect that AFDC noncompliance rates are higher than the official quality control estimates.

[38] Placing a low or even negative weight on the dollars transferred to ineligible recipients could be justified if their activity may encourage others to evade taxes or is simply distasteful. Liebman (1995) finds that improper claiming of children rose after the 1986 expansion of the EITC, indicating that at least some ineligible EITC recipients are responding to the economic incentive to wrongly claim children.

[39] This analysis ignores the different participation rates of the two programs. If the social welfare value of dollars to eligible taxpayers is high, the tax system could be preferable even at a higher cost because it manages to reach a higher percentage of its intended beneficiaries. Liebman (1995) contains a more elaborate analysis of this issue that includes differential participation rates.

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their household at the time they received the EITC. While some of these erroneous payments to households with children are going to households with multiple adults and combined incomes that exceed that of the typical EITC family, many of these ineligible families with children are likely to be quite similar to eligible EITC families.

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REFERENCES

Blank, Rebecca M., and Patricia Ruggles.
"When do Women Use AFDC & Food Stamps? The Dynamics of Eligibility vs. Participation." NBER Working Paper No. 4429. Cambridge, MA: National Bureau of Economic Research, 1993.

Committee on Ways and Means.
1998 Green Book. Washington, D.C.: Government Printing Office, 1998.

Dickert, Stacy, Scott Hauser, and John K. Scholz.
"The Earned Income Tax Credit and Transfer Programs: A Study of Labor Market and Program Participation." *Tax Policy and the Economy* 9 (1995): 1–50.

Edin, Kathryn.
There's a Lot of Month Left at the End of the Money: How Welfare Recipients Make Ends Meet in Chicago. New York: Garland Publishing, 1993.

Eissa, Nada, and Hilary Hoynes.
"The Earned Income Tax Credit and the Labor Supply of Married Couples." NBER Working Paper No. 6856. Cambridge, MA: National Bureau of Economic Research, 1998.

Eissa, Nada, and Jeffrey B. Liebman.
"Labor Supply Response to the Earned Income Tax Credit." *Quarterly Journal of Economics* 111 No. 2 (May, 1996): 606–37.

Ellwood, David T.
"The Impact of the EITC on Work and Marriage." *National Tax Journal* 53 No. 4, Part 2 (December, 2000): 1063–1106.

Graetz, Michael J., and Louis L. Wilde.
"The Economics of Tax Compliance: Fact and Fantasy." *National Tax Journal* 38 No. 3 (September, 1985): 355–63.

Greenstein, Robert.
"The Earned Income Tax Credit: A Target for Budget Cuts." Washington, D.C.: Center on Budget and Policy Priorities, 1995.

Hill, Carolyn J., V. Joseph Hotz, Charles H. Mullin, and John Karl Scholz.
"EITC Eligibility, Participation and Compliance Rates for AFDC Households: Evidence from the California Caseload." Draft Report. University of Chicago, 1997.

Holtzblatt, Janet.
"Administering Refundable Tax Credits: Lessons from the EITC Experience." In *Proceedings of the Eighty–Fourth Annual Conference on Taxation,* 180–5. Washington, D.C.: National Tax Association, 1991.

Holtzblatt, Janet, and Jeffrey B. Liebman.
"The EITC Abroad." In *Proceedings of the Ninety-First Annual Conference on Taxation,* 198–207. Washington, D.C.: National Tax Association, 1999.

Holtzblatt, Janet, Janet McCubbin, and Robert Gillette.
"Promoting Work Through the EITC." Washington, D.C.: U.S. Department of Treasury, June, 1994.

National Tax Journal
Vol. 53 no. 4 Part 2 (December 2000) pp. 1165-1186

Internal Revenue Service.
Federal Compliance Research: Individual Income Tax Gap Estimates for 1985, 1988, 1992. Washington, D.C.: U.S. Department of the Treasury, 1996.

Liebman, Jeffrey B.
Interview with Kevin Belanger and Sean Schomer. 9 a.m., September, 6, 1994. 18 Tremont Street, Boston.

Liebman, Jeffrey B.
"Noncompliance and the Earned Income Tax Credit: Taxpayer Error or Taxpayer Fraud?" Harvard University. 1995.

Liebman, Jeffrey B.
The Impact of the Earned Income Tax Credit on Labor Supply and Taxpayer Compliance. Harvard University. Ph.D. Thesis, 1996.

Liebman, Jeffrey. B.
"The Impact of the Earned Income Tax Credit on Incentives and Income Distribution." *Tax Policy and the Economy* 12 (1998): 83–118.

McCubbin, Janet.
"Noncompliance and the Optimal Design of the Earned Income Tax Credit," *National Tax Journal* 53 No. 4, Part 2 (December, 2000): 1135–1164.

Meyer, Bruce D., and Dan T. Rosenbaum.
"Welfare, the Earned Income Tax Credit, and the Labor Supply of Single Mothers." NBER Working Paper No. 7363.Cambridge, MA: National Bureau of Economic Research, 1999.

Office of Management and Budget.
Budget of the United States Government, Fiscal Year 2001. Washington, DC: U.S. Government Printing Office, 2000.

Scholz, John K.
"The Participation Rate of the Earned Income Tax Credit." Institute for Research on Poverty Discussion Paper 928–90. Madison, WI: University of Wisconsin–Madison, 1990.

Scholz, John K.
"The Earned Income Tax Credit: Participation, Compliance, and Antipoverty Effectiveness." *National Tax Journal* 48 No. 1 (March, 1994): 63–85.

Scholz, John K.
Testimony before U.S. House of Representatives, Committee on Ways and Means. Washington, D.C., 1997.

Szilagyi, John.
"Where Some of Those Dependents Went." In *1990 Research Conference Report: How Do We Affect Taxpayer Behavior,* 162–3. Washington, D.C.: Internal Revenue Service, March, 1991.

Triest, Robert K.
"The Efficiency Cost of Increased Progressivity." In *Tax Progressivity and Income Inequality*, edited by Joel Slemrod, 137–69. Cambridge, UK: Cambridge University Press, 1996.

U.S. General Accounting Office.
Tax Administration, Erroneous Dependent and Filing Status Claims. GAO/GGD-93-60, Washington, D.C., March, 1993.

U.S. General Accounting Office.
Earned Income Credit, Noncompliance and Potential Eligibility Revisions, Statement of Lynda D. Willis. GAO/T-GGD-95-179, Washington, D.C., June, 1995.

U.S. General Accounting Office.
Earned Income Tax Credit: IRS' Tax Year 1994 Compliance Study and Recent Efforts to Reduce Compliance. GAO/GGD-98-150, Washington, D.C., June, 1998.

Welch, Finis.
"Matching the Current Population Surveys." *Stata Technical Bulletin* 12 (1991): 7–11.

National Tax Journal
Vol. 53 no. 4 Part 2 (December 2000) pp. 1165-1186