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Living Wage and Earned Income Tax Credit A Comparative Analysis

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Executive Summary

Living wage ordinances have spread rapidly since 1994 when Baltimore opened the modern era of high-wage mandates. As of June 2002, 82 cities had adopted a living wage law in some form. However, the efficiency of these laws is still under scrutiny. If the main goal is to provide additional income to families, are living wage laws the best means to reach that goal? This new research from Dr. Mark Turner (Georgetown University) and Dr. Burt Barnow (Johns Hopkins University) shows that living wage laws are vastly inefficient when compared to localized Earned Income Tax Credit (EITC) programs.

Family Income or Wage Thresholds?

The central question for lawmakers to consider is whether their anti-poverty policies target low-income families or simply cover workers who happen to hold low-wage jobs. This research provides strong evidence that a local EITC targets low-income families, while the living wage approach merely affects low-wage workers regardless of their family income.

The authors compare two types of living wages. One is a broad-based living wage that samples a wide variety of industries and occupations that might be covered by laws with difficult-to-define boundaries. The other type of living wage in this study is the narrowly focused living wage, where specific occupations and industries are known targets of legislation.

The researchers show that both programs are inferior to the EITC at targeting poor and low-income families. A local EITC is far better

targeted, focusing the same amount of money on families with children (the authors focus on the two child family), with eligibility matching the federal EITC guidelines for family size.¹ However, benefits phase-in and phase-out rates do not match the federal program, but are scaled to local benefit levels.

Do Poor Families Qualify?

Less than one percent of the poorest working families in major cities without living wages are eligible for benefits under a narrowly targeted living wage.² Broad-based living wages would benefit just 39 percent of the poorest working families—defined as those with incomes below 60% of the poverty level. Comparatively, 92 percent of the poorest working families meet the EITC eligibility requirements, suggesting that the EITC is a far better targeted program.

Using the fact that eligibility for the federal EITC is phased out at annual incomes of about \$32,000, this can be used as a good proxy to see how well living wage programs are targeted to low-income working families. The authors suggest that localities could adopt their own EITC programs that mimic or piggyback the federal program, with distribution based on federal benefits and eligibility determined by the tax code. A local EITC that piggybacks on its federal counterpart has the same eligibility rules, so we can compare it to the eligibility for different living wage programs.

When grouping all 58 million working families of the sample regardless of income status, only 0.013 percent of this group benefits from a narrow living wage ordinance, while 16 percent are eligible for the EITC. When the group

is restricted to those affected by a narrow living wage, fewer than 30 percent are found to be eligible for the EITC. Even under a broadly focused living wage, where approximately 22 percent of all families are affected, only 30 percent of those families are deemed eligible for the simulated EITC.

Are Eligible Families in Poverty?

Viewed another way, only 12 percent of families affected by a broad living wage are below the poverty level, while only 26 percent of those affected by a narrow living wage are officially in poverty. However, 44 percent of EITC eligible families are below the poverty level. If we are most concerned with helping poor families, EITC programs are shown to be far more efficient in reaching this group.

Either type of living wage, whether broad or narrow, affects a large number of families that are not even “near poverty.” Over seven in ten working families benefiting from living wages have family incomes over 1½ times the poverty level, while only 13 percent of EITC eligible families fall into this category.

In fact, most working families affected by narrow and broad living wages are not even classified as “low-income.” Between 42 and 64 percent of living wage eligible families have incomes above the 20th percentile. Also, between 13 and 25 percent of living wage eligible families have incomes above the 40th percentile, a very large proportion for a program

that is supposed to be directed at the poorest working families. By contrast, 99 percent of families who are eligible for the EITC have incomes *below* the 20th percentile, and 100 percent have incomes below the 40th percentile.

Helping Low-Income Families

This study is the first to examine this question in depth. The results of this study should vault the concept of a local EITC into debates in every municipal entity now considering a living wage. A local EITC is as yet a new phenomenon. Local lawmakers heretofore have been presented with living wage proposals as a “one-size-fits-all” approach to addressing poverty. A local EITC, however, is a viable alternative that promises much greater impact. And it has been done before. In 1999, Montgomery County, Maryland passed the nation’s first local EITC over a typical living wage. Supporters on the city council cited the fact that the intention of a localized EITC was to help families in poverty while not causing a budget increase similar to those that have been cited in many living wage budget studies.

Beyond target efficiency, past research has raised a number of questions about the labor market effects of living wage laws. With limited resources available, local legislators and voters should take notice of the superior efficiency of local EITC programs and work to create laws aimed at helping low-income working families, not just low-wage workers.

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Living Wage and Earned Income Tax Credit: A Comparative Analysis

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I. Introduction

In recent years, a number of communities have adopted “living wage” ordinances that require classes of employers to pay wages ranging from 150 to 300 percent of the federal minimum wage. Living wage ordinances vary considerably across the country in coverage, the wage level mandated, and possible add-ons such as health care coverage mandates.³ What the living wage programs generally have in common are (1) a requirement to pay workers a wage based on the poverty threshold, usually for a family of four, and (2) employers covered by the statute are usually only those who receive contracts from the government or receive some favorable treatment from the government (e.g., a tax abatement or zoning change). As of June 2002, 82 jurisdictions had living wage ordinances. Living wage mandates differ from a traditional minimum wage in that the living wage is, at least theoretically, tied to meeting some standard of living and only applies to employers who receive some benefit from the government.

There are a number of issues of policy interest that can be explored regarding the living wage, and a number of efforts have been undertaken to address these issues. Recent studies have looked at the impact of living wage statutes on employment, the impact on government services, and the effects on uncovered workers.⁴ In this project we compare the *target efficiency* of living wage ordinances with an alternative, the earned income tax credit (EITC), in terms of each strategy’s ability to

help poor and near-poor families and avoid benefiting more affluent families.⁵

Earned Income Tax Credit

The Earned Income Tax Credit (EITC) is a wage subsidy program that began modestly in 1975, but has increased in recent years to be the largest cash-transfer program for nonelderly low-income families.⁶ The program seeks to encourage labor force participation by “making work pay” for potential low-wage workers. The program has increased in generosity since 1975, with the maximum benefit increasing from \$400 in 1975 to \$4,008 in 2001 for a family with two or more children. The size of the benefit varies by the number of children, but the benefits are quite small for families without children. The program plays a significant role in reducing poverty, and it also creates significant work incentives for many low-income workers.

The structure of the EITC is generally straightforward—exceptions occur for situations such as split custody for children and treatment of certain types of self-employment income. In 2001, for a family with two children, the first \$10,000 of earnings entitles the family to a refundable tax credit of 40 percent of earnings for a maximum credit of \$4,008. The credit remains at \$4,008 until earnings reach \$13,100. The credit is then reduced by 21 percent of all earnings above \$13,100 until the credit is phased out entirely at earnings of \$32,121.

The EITC has no direct effect on the number of jobs available in the economy. Instead, it can create employment by inducing

individuals to work who could have remained out of the labor force in the absence of the EITC. For a single-parent family, the labor supply effects of the EITC vary depending on how much the person could have earned without the EITC. For individuals out of the labor force or in the phase-in range (where the wage rate is increased), the higher post-EITC wage rate provides an incentive to work, but the extra income generated by the credit could reduce hours of work; thus, the overall effect of the credit for those with very low earnings is ambiguous.⁷ For individuals who could receive the maximum credit, there is no wage increase for additional hours worked, and economic theory predicts that the extra income from the tax credit could lead to a reduction in hours. For individuals in the phase-out range, where the credit is reduced for each dollar earned, the EITC actually reduces the after-tax wage even though the family still receives some income from the credit; for families in this range, economic theory predicts a decrease in labor supply. Overall, for a single-parent family, economic theory suggests that some individuals could enter the labor market, but some of those already working could be expected to reduce their hours. The situation is more complex for two-parent families, and it is difficult to make predictions on how labor supply will be affected by the EITC.

Caution must be exercised in interpreting the findings. Evaluations of the EITC require strong assumptions about what factors lead to changes in labor market behavior over an extended period where the EITC changes. Studies generally make use of families without children as a “control group” to purge time trends of factors that affect all potential workers. In addition, comparing findings across studies is difficult because the studies vary in terms of the time period studied, the aspects

of the EITC studied, and the estimating methods. Nonetheless, many of the recent studies show a consistent pattern of EITC effects.⁸ The EITC appears to have been effective in increasing labor market participation among single mothers. In addition to increasing labor force participation among the poor, the EITC helps provide income to poor children, and the program is extremely popular across the political spectrum.^{9,10} The major problems with the EITC are that it provides work disincentives to married couples and to some single parents. In addition, the refundable nature of the credit creates potential for fraud.¹¹ Finally, it is important to recognize that unlike public service jobs, the EITC cannot create new jobs. Thus, it is not an appropriate tool to use if the underlying problem is too little aggregate demand.

Research Question

Our research sets aside the issue of employment, cost-shifting, pricing and impacts of the living wage and the EITC and instead focuses on targeting efficiency. Making use of the Current Population Survey (CPS), we estimate how several variations of living wages and local EITC programs compare in terms of targeting the populations most in need and in their ability to not benefit more affluent families. Because there is no national living wage, we develop several alternative living wage proposals and compare them with similar hypothetical local EITC proposals.

II. Data Sources

There are no ideal data sources for our analysis. We decided to use data from the Current Population Survey—Outgoing Rotation (CPS-OR), 1997 through 2000. Our analysis is confined to working families in metropolitan areas with populations of one million or more that did not have a living wage ordinance in effect during the period of analysis. Table 1

lists the metropolitan areas and the dates used in the analysis. These data provide information on the number of working families who would be affected by simulated living wage mandates and eligible for the EITC.

The CPS-OR data are well-suited to profile individuals and families covered by living wage ordinances. The CPS-OR is derived from a nationally representative household survey that is collected monthly. Respondents are asked detailed questions about employment status, hourly wage rates, and demographic characteristics. Precise information on hourly wage rates is needed to assess whether respondents are covered by living wage ordinances. Few other nationally representative data sources provide monthly information on hourly wage rates.¹²

The CPS-OR data are less than ideal to profile families covered by the EITC. EITC coverage is largely determined by the composition of the tax-filing unit and adjusted gross income. The CPS-OR data does not precisely identify the tax-filing unit, but it can be used to identify an often similar unit, the household-family unit. In addition, the CPS-OR includes categorical data on gross family income. The March CPS data is well suited to identify families covered by the EITC. The March CPS data includes detailed information on the tax-filing unit, family income, and adjusted gross income. The March CPS data was not used in this analysis because it does not provide a sufficient number of observations overall or by Metropolitan Statistical Area (MSA) to compare target efficiency with the living wage.

Below we describe the methods used to simulate which working families would be affected by living wage ordinances and EITCs. Eligibility for the simulated EITC mimics the eligibility rules for the federal EITC, while the amount of the simulated EITC benefits are adjusted to equate to the aggregate size of proposed living wage ordinances.

Living Wage Ordinances

Living wage ordinances, based on hourly wage rates, industries, occupations, firm size, government contracting, or government subsidies, are selectively described in Table 2. Baltimore's living wage ordinance, initially passed in December 1994, established a wage mandate at \$8.03 per hour in 2000 and covered firms with government service contracts above \$5,000. Detroit's living wage ordinance, initially passed in November 1998, is indexed to the Federal Poverty Level and includes firms having contracts or subcontracts from the city valued over \$50,000, or who were receiving government assistance valued over \$50,000 annually.¹³ Boston's living wage ordinance, initially passed in July 1997, was \$8.42 per hour in 2000 and includes employees working for firms with contracts valued over \$100,000 and subcontracts valued over \$25,000, made with a for-profit employer of at least 25 employees or a nonprofit employer of at least 100 employees.

In the empirical analysis below, we define living wage coverage in two ways: "Broadly-Defined," based on Detroit's ordinance, and "Narrowly-Defined," based on Boston's ordinance. Living wage levels are simulated at the poverty guideline for a family of four, assuming the respondent works 2,080 hours annually.¹⁴ These simulated living wage levels as seen in Table 3 are \$7.91, \$8.03, \$8.20, and \$8.49 in 1998, 1999, 2000, and 2001, respectively. Respondents are assumed to be bound by the living wage ordinance if their hourly wage rate is greater than the effective minimum wage and less than the following year's living wage ordinance, as well as covered by the living wage ordinance ("Narrowly" or "Broadly-Defined" Ordinance).

Neither the CPS-OR nor any other large national data set include respondents' information on all of the following: (1) hourly wage

rates, (2) demographic information, (3) employers' government contracting status, and (4) whether the firm had received a government subsidy. For example, the Survey of Income and Program Participation, another large national data set, also includes detailed information on workers' hourly rates and demographic characteristics but lacks detailed information about employers and provides substantially fewer observations than the CPS-OR. Moreover, there are no national data sets that provide information on employers' government contracting status or whether an employer received a government subsidy. The CPS-OR provides a sufficient amount of information to predict whether respondents are likely to be affected by living wage ordinances. However, the number of individuals and families estimated to be affected by living wage ordinances may be too high because we are unable to exclude low-wage workers in cities where living wage coverage is based on employer government contracting status or receipt of government subsidy.

The last column in Table 2 describes our methods for mapping each living wage ordinance's specifications to the CPS-OR data. We matched the occupation classification with the closest corresponding variable in the CPS. For jurisdictions in which the living wage ordinance refers generally to contractors, we impute coverage based on the following industries; construction and the service industries: transportation (excluding U.S. Postal workers); communications, utilities, and sanitary services; custodial; protective service; parking; and certain professional and social services. If the law refers more narrowly to service contractors, construction workers are excluded. If the law refers to jurisdictions where businesses receiving financial assistance from the city are covered, virtually any non-government worker can potentially work for a company that is subject to the legislation. Where food service employees

are included, this may include any contract for the preparation and/or provision of food. Where temporary employees are covered, this includes secretary, word processing machine operator, data entry clerk, file clerk, and general clerk. The living wage level data were obtained from a database maintained by the Employment Policies Institute (EPI), and from the Association of Community Organizations for Reform Now (ACORN).

The CPS-OR, collected by the Bureau of the Census, provides hourly wage rates of all non-institutionalized household residents each month. These same data include imprecise categorical information on annual family income. Mapping annual family income from the CPS-OR to more precise measures of annual family income is used to determine whether working families are eligible for EITCs. The distribution of annual family income is described in Appendix C.¹⁵ Similar to more precise measures of annual family income from our data indicate that the average working family income, from 1997-2000, was \$44,829. This compares to a national average working family income of \$57,654.¹⁶

Earned Income Tax Credit

As stated earlier, a problem with the CPS-OR is that it is organized around families rather than tax-filing units. The analysis below assumes the family *is* the tax-filing unit. The federal EITC is based on adjusted gross income, which is annual family income minus some deductions. The CPS-OR, however, does not provide precise data on adjusted gross income. Simulated adjusted gross income was derived by mapping categorical gross family income data in the CPS-OR to gross family income and then to adjusted gross income data in the March CPS.

For the most part, state and local EITCs are based on the federal EITC formula. Eligibility for the simulated EITC is deter-

mined by comparing simulated adjusted gross income to EITC cut-off levels for corresponding family sizes. The amount of EITC benefits are calculated using federal rules and are then rescaled to make it comparable in aggregate size with living wage ordinances—“Broadly-” and “Narrowly-defined” living wage ordinances separately—and then compare target efficiencies. This method of rescaling simulated EITCs allows us to compare the target efficiency of a living wage ordinance to a comparably sized EITC. In other words, our method allows policy makers to understand which and by how much individuals and families would benefit from a living wage ordinance compared to a local EITC that yielded the same increase in wages. In reality, the costs of living wage ordinances are borne by employers and taxpayers, while costs of local EITCs are borne by taxpayers. Our method assumes that taxpayers would bear the equivalent level of expenditures with a local EITC as employers would with a living wage ordinance.

III. Empirical Results

The main goal of this study is to assess the target efficiency of simulated living wage ordinances compared to a local EITC. Target efficiency is defined as the fraction of the target population reached, and the fraction of non-targeted population affected. In this analysis, the target is defined as poor and near-poor working families.

Percentage of Working Families Affected

Of the MSAs in our analytical sample, approximately 26 percent of working families have someone who earns more than the effective minimum wage (higher than the state and federal minimum wage) and less than the simulated living wage (for the following year). As shown in Figure 1, of the 58

million working families, 22 percent, or 12.6 million working families, are estimated to benefit from a broadly-defined living wage ordinance, while only 0.013 percent of working families could benefit from a narrowly-defined living wage ordinance. On the other hand, the simulated EITC assists upwards of 16 percent, or 9.5 million working families.¹⁷

Of the 8,054 families that could benefit from a narrowly-defined living wage ordinance, only 29 percent of these families are eligible for the simulated EITC. Of the 12.6 million families that could benefit from a broadly-defined living wage ordinance, only 30 percent of these families are eligible for the EITC.

Poor and Near-Poor Working Families Affected

Most families that could benefit from living wage ordinances are *not* poor. Only 26 percent of families who benefit from narrowly-defined living wage ordinances are poor (family income is below the poverty level for their respective family size), while only 12 percent of families who could benefit from broadly-defined living wage ordinances live in poor families. In contrast, 44 percent of families that are eligible for EITCs are poor, as seen in Figure 2.

As Figure 3 shows, the EITC is far more efficient at transferring money to poor families than living wage ordinances. Forty-two percent of the families that could benefit from a narrowly-defined living wage ordinance have incomes in the lowest 20th percentile, while 64 percent of families that could benefit from a broadly-defined living wage ordinance have incomes in the lowest 20th percentile. In contrast, 99 percent of families that benefit from EITCs have family incomes in the lowest 20th percentile.

Turning to Figure 4, compared to the EITC, living wage ordinances are less likely to assist low- and middle-income families (those with

family incomes less than the 40th percentile). For example, narrowly- and broadly-defined living wage ordinances miss 13 percent and 25 percent, respectively, of low- and middle-income families that the EITC effectively targets for government assistance.

Living wage ordinances disproportionately benefit families with incomes above 150 percent of the poverty level. Figure 5 shows that 52 percent and 46 percent of working families that benefit from either narrowly- or broadly-defined living wage ordinances, respectively, have family incomes above 150 percent of poverty. In contrast, EITCs have less than 1 percent of families with incomes above 150 percent of the poverty level.

Effect on Family Income

Of the working families affected by a narrowly-defined living wage ordinance, following enactment they are estimated to experience a \$3,419 increase in family income, assuming no disemployment or hours effect. In comparison, a simulated local EITC could increase family incomes by \$5,233, on average.¹⁸ Family composition—family size and number of children—does not influence living wage coverage. On the other hand, EITC benefits increase as the number of children increase.

The empirical evidence above shows, and most policy analysts agree, that the EITC is a well-targeted policy tool because it is means-tested. Using the EITC as a good example of a well-targeted policy tool, we compare living wage ordinances, target efficiency to that of the EITC.

Affected Families by Demographic Characteristics

A further illustration of living wage ordinances' target inefficiency is highlighted when analyzing affected working families by size. For instance, living wage ordinances are significantly more likely to benefit single

adults than EITCs. Figure 6 shows that 4 out of 10 families benefiting from narrowly-defined living wage ordinances are single adults. Only 12.7 percent of families benefiting from a broadly-defined living wage ordinance have more than two family members. In contrast, 28 percent of EITC beneficiaries are single adults while nearly a third have more than two family members.¹⁹

Multivariate Analysis

We used multinomial logit to estimate the influence target efficiency parameters (poverty status and relative family income, separately) would have on the eligibility for simulated living wage ordinances and EITCs. The outcome—eligibility for a living wage and EITC—has four states: (1) not eligible for either, (2) eligible for the living wage, not eligible for the EITC, (3) not eligible for the living wage, eligible for the EITC, and (4) eligible for both. Two sets of estimates are made: the first for narrowly-defined living wage ordinances, the second for broadly-defined ordinances as seen in Tables 5 and 6 respectively. The independent variables of interest are (3) poverty status and relative family income. Poverty status is defined by five dummy variables that categorize working families' incomes relative to the poverty threshold: (1) less than 60%, (2) 60-100%, (3) 100-150%, (4) 150-200%, and (5) 200%+. In separate simulations we include indicator variables for which income group family income falls into: (1) lowest 20th percentile, (2) 20th-40th percentile, (3) 40th-60th percentile, (4) 60th-80th percentile, and (5) 80th-100th percentile.

In addition to using low-income indices as independent factors, these econometric models also control for family and the eldest workers' characteristics. These characteristics include age, gender, race, educational attainment, marital status, and number of children.

Probabilities are estimated for a reference family with the following characteristics: 25-34 years old, male, white, high school degree, never married, 6 percent of workers in state are covered by a union bargaining agreement, and one child.

Similar to the univariate analysis performed above, our multivariate analysis clearly suggests that living wage ordinances are more likely to miss low-income families than simulated EITCs. For example, 92 percent of extremely poor families (less than 60% of poverty) would be eligible for a locally provided EITC (Table 5 and Table 6), while less than 1 percent of these working families would be eligible for a narrowly-defined living wage, and 39 percent would be eligible for the simulated broadly-defined living wage ordinance. Using relative family income as a barometer of target efficiency yields similar results. Less than 1 percent of working families in the lowest 20th percentile would benefit from a narrowly-defined living wage ordinance while 43.9 percent of these same families would be helped by a local EITC.

Moreover, living wage ordinances are more likely to benefit non-poor families. Table 6 shows that a broadly-defined living wage ordinance would benefit 11.2 percent of working families with incomes that exceeded 200 percent of the poverty level while only 0.3 percent of these non-poor working families would benefit from a local EITC. Comparing eligibility by relative family income leads to the same outcome—living wage ordinances all too often miss poor families and mistakenly benefit non-poor families.

These econometric models also show that families with children are less likely to benefit from living wage ordinances, but they are more likely to benefit from EITCs. For example, the presence of children has no effect on the likelihood of being covered by narrowly-defined living wage ordinances, and having

children in the family actually reduces the likelihood of being covered by broadly-defined living wage ordinances. By design and as expected, the EITC is more likely to benefit families with children.

Should Policy Makers Mandate Living Wages or an EITC

Since 1994, community-based organizations and labor unions have successfully lobbied for living wage mandates throughout the country. In one instance, local politicians opted to create local EITCs instead of mandating that firms pay their workers a living wage.²⁰ Here we compare the target efficiency of living wage mandates and local EITCs. We create a simulated EITC that is identical in aggregate size to living wage mandates. Figure 7 shows that EITCs are significantly more likely to help poor families than comparably sized living wage ordinances. Almost a quarter of working families that could benefit from narrowly-defined living wage ordinances are poor. In comparison, a local EITC that redistributed the same amount of money would benefit working families who are nearly twice as likely to be poor (44 percent). Similarly, EITCs are more likely to assist poor families than broadly-defined living wage ordinances. Figure 8 shows that 11 percent of working families who could benefit from broadly-defined living wage ordinances are poor. In contrast, 50 percent more poor working families (15 percent) could benefit if policy makers enacted an EITC instead of a broadly-defined living wage ordinance.

IV. Conclusions

Living wage ordinances reach few poor families compared to EITC programs. Many cities have passed and many more cities are considering living wage mandates to supposedly assist the working poor. In this study we compare the target efficiency of two hypo-

thetical living wage mandates to a hypothetical local (city or county-based) EITC. City mayors and county executives are increasingly proposing local EITCs to living wage mandates, e.g., Montgomery County, Maryland. The empirical evidence presented above and in other studies clearly shows that a simulated local EITC more efficiently targets poor and near-poor families than living wage ordinances. Living wage ordinances are notice-

ably more likely to benefit non-targeted populations—non-poor working families. Unlike the EITC, living wage ordinances are likely to be accompanied by disemployment effects—probably even more severe than that seen in the minimum wage literature. If community organizations and cities really want to improve the financial stability of the working poor, then they should start with the Earned Income Tax Credit.

Endnotes

1. EITC eligibility and benefit levels are partially determined by family size, while living wage coverage does not discriminate based on family size. As a result, a disproportionate number of single adults are estimated to benefit from living wage ordinances. Single adults are individuals 18-years or older who reside in households with no other relatives.
2. In families where no one is employed neither living wage ordinances nor EITCs benefit these families. As a result, the analysis presented in this report is confined to families where at least one family member is employed.
3. The scope of coverage may be defined based on (1) direct city and/or county employees, (2) city or county contractors and/or subcontractors, (3) recipients of city or county economic development assistance/subsidies, (4) contractors of economic development assistance recipients, and/or (5) tenants or leaseholders of economic development assistance recipients. Covered workers may include (1) all workers employed by covered employers, (2) only workers employed on city contracts or assisted projects, or (3) all employees working within the city or county limits. Possible add-ons include health benefits and vacation days and/or sick leave.
4. George Tolley, Peter Bernstein, and Michael Lesage, *Economic Analysis of a Living Wage Ordinance*, (Washington, D.C.: Employment Policies Institute, 1999). David Neumark, "Living Wages: Protection for or Protection from Low-Wage Workers?" *Working Paper 8393* (Cambridge, MA: National Bureau of Economic Research, 2001).
5. We are not arguing here that a living wage ordinance must be targeted to reduce poverty (Thomas McCurdy and Frank McIntyre, *Helping Working-Poor Families: Advantages of Wage-Based Tax Credits Over the EITC and Minimum Wages*, (Washington, D.C.: Employment Policies Institute, mimeo, 2002). Arguments favoring the living wage often focus on the inherent value of work, but living wage opponents often stress the importance of targeting.
6. See Nada Eissa and Hilary Williamson Hoynes, "The Earned Income Tax Credit and the Labor Supply of Married Couples," *Working Paper 6856*, (Cambridge, MA: National Bureau of Economic Research, 1998).
7. For a discussion of how the EITC is expected to affect labor supply, see Ronald G. Ehrenberg and Robert S. Smith, *Modern Labor Economics: Theory and Public Policy*, Seventh Edition, (Addison Wesley Longman, 2000): 213.
8. Recent studies of the effects of the EITC include those of Stacy Dickert-Conlin, Scott Houser, and John Karl Scholz, "The Earned Income Tax Credit and Transfer Programs: A Study of Labor Market and Program Participation," *Tax Policy and the Economy* 9 (1995); Nada Eissa and Jeffrey B. Liebman, "Labor Supply Response to the Earned Income Tax Credit," *Quarterly Journal of Economics* CXI (2) (1996); and Bruce D. Meyer and Dan T. Rosenbaum, "Welfare, the Earned Income Tax Credit, and the Labor Supply of Single Mothers," *Working Paper 7363* (Cambridge, MA: National Bureau of Economic Research, 1999). For a comprehensive review of the EITC literature, see Joseph V. Hotz and John Karl Scholz, "The Earned Income Tax Credit." *Working Paper 8078* (Cambridge, MA: National Bureau of Economic Research, 2001).
9. Robert Greenstein and Isaac Shapiro, *New Research Findings on the Effect of the Earned Income Tax Credit*. (Washington, D.C.: Center on Budget and Policy Priorities, 1998).
10. In addition to its labor supply impacts, Greenstein and Shapiro (1998) note "the EITC lifts substantially more children out of poverty than any other government program or category of programs."
11. Greenstein and Shapiro (1998) acknowledge that the error rates associated with EITC are a concern, but they conclude that recent legislative and administrative actions have led to reductions in the error rate and should lead to further reductions.
12. The Survey of Income and Program Participation (SIPP) can be used to calculate hourly wage rates but sample size is substantially smaller than the CPS. Moreover, the SIPP sample design has changed substantially over time and thus does not provide a consistent sample over time.

13. The living wage ordinance in Detroit is indexed to 100% of the Federal Poverty Level for a family of four if the employer offers benefits and is 125% of the poverty level if the employer offers no benefits.
14. The reference family is composed of two adults and two children.
15. In the CPS-OR, 12.64 percent of families do not report family income, 11.8 percent refused to answer the family income question, 0.77 percent reported that they did not know their family income and 0.06 percent left that answer blank. We adjusted the sample weight to account for families that do not report family income. Here we make the assumption that family income is missing randomly, so excluding these families from the analysis we assume the distribution of family income is unchanged. The adjusted weight equals the CPS sample weight divided by $(1 - 0.1264)$.
16. Median income of families located in metropolitan areas with populations of 1 million or more in 2000, based on data from the March Current Population Survey.
17. These are simulated federal EITC benefits—defined for eligibility and then recalibrated to be comparable to the living wage ordinance.
18. In our simulations we did not limit the maximum EITC benefits to the legislated limits of its current \$4,000. Reallocating living wage benefits via the EITC eligibility rules may therefore increase family incomes in excess of \$4,000. Simulated local EITCs have bigger effects on family income because EITC-eligible working families are poorer than living wage eligible families. Both the simulated EITC and living wage yield the same aggregate expenditures. A broadly-defined living wage ordinance is estimated to have expenditures of \$452,638, while a narrowly-defined living wage ordinance is estimated to have aggregate expenditures of \$88.6 million. In short, the EITC is a better tool for distributing monies to low-income families than living wage ordinances.
19. Our simulations are based on family income derived from the CPS-OR data for heads of household. More precise estimates on the portion of families eligible for the EITC may be derived by using the March Supplement to the CPS.
20. *Washington Post*. “A Decent Wage for Montgomery.” Metro Section, May 23, 2002.

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Appendix A

Selected State Earned Income Tax Credits

State	1997	1998	1999	2000
Massachusetts	10% of federal credit, refundable	10% of federal credit, refundable	10% of federal credit, refundable ¹	10% of federal credit, refundable
Maryland	50% of federal credit, nonrefundable	50% of federal credit, nonrefundable OR 10% of federal credit, refundable	50% of federal credit, nonrefundable OR 10% of federal credit, refundable ²	50% of federal credit, nonrefundable OR 15% of federal credit, refundable

Notes:

1. In 1999, Massachusetts set an increase to 15% of the federal credit to be effective in TY 2001.
 2. Starting in TY 1998, Maryland claimants are able to choose between the two credit methods.
- Source: Nick Johnson, "State Earned Income Tax Credits Statutory History," Center on Budget and Policy Priorities, July 2000.

Appendix B

Variable Names and Definitions

Variable Name	Definition
Demographic Characteristics	
Famsize	Family size
Numkids	Number of children, 0 to 18 years old
Numkid	Number of children, 0 to 18 years old (categorical)
Age	Age of reference individual
Agegp	Age group of reference individual (categorical)
agegp1	1(0) reference individual 16-19 years old
agegp2	1(0) reference individual 20-24 years old
agegp3	1(0) reference individual 25-34 years old
agegp4	1(0) reference individual 35-44 years old
agegp5	1(0) reference individual 45+ years old
sex	Gender of reference individual
female	1(0) reference individual is female
racess	Race/ethnicity of reference individual
racess1	1(0) white, non-Hispanic
racess2	1(0) black, non-Hispanic
racess3	1(0) Hispanic
racess4	1(0) other race/ethnicity
educ	Educational attainment (categorical)
educ1	1(0) did not complete high school
educ2	1(0) high school diploma or GED
educ3	1(0) some postsecondary education, no degree
educ4	1(0) postsecondary education, degree
disable	1(0) physical or mental disability
assthou	1(0) resides in section 8(a) or public housing
region	Region of the country (categorical)
ms1	1(0) married, spouse present
ms2	1(0) separated
ms3	1(0) divorced or widowed
ms4	1(0) never married
marital	Marital status (categorical)
Labor Market Characteristics	
wage	Hourly wage rate (nominal dollars)
rwage	Hourly wage rate (constant 2000 dollars)
hourswk	Total number of hours worked per week
hrswk	Total number of hours worked per week (categorical)
union_c	1(0) union member or covered by union bargaining agreement
union_m	1(0) union member
classwk1	1(0) Employed in federal government
classwk2	1(0) Employed in state government
classwk3	1(0) Employed in local government
classwk4	1(0) Employed in for-profit/private company
classwk5	1(0) Employed in nonprofit/private company/organization
classwk6	1(0) Self-employed
classwk	Class of worker (categorical)
inmaj1	1(0) Employed in agriculture
inmaj2	1(0) Employed in mining/construction/manufacturing
inmaj3	1(0) Employed in retail/wholesale trade
inmaj4	1(0) Employed in service
industry	Major industry (categorical)
occup1	1(0) Professional
occup2	1(0) Sales/Support/Service
occup3	1(0) Skilled
occup4	1(0) Semi-skilled
occup5	1(0) No occupation
occup	Major occupation (categorical)

Appendix B Cont.

Variable Names and Definitions

Family Income	
faminc	Family income (categorical)
ftotval	Family income (continuous)
rfaminc	Family income (constant 2000 dollars)
rftotval	Family income (constant 2000 dollars) (continuous)
Living Wage Ordinance and EITC	
emw	Max. (federal, state minimum wage)
wage_mw	Hourly wage rate relative to effective minimum wage (categorical)
lwage_s	Simulated living wage level (based on poverty guidelines and 2,080 hours worked per year)
rwage_s	Hourly wage rate relative to effective minimum wage and simulated living wage (categorical)
lowage_s	1(0) effective minimum wage <= hourly wage rate < simulated living wage
cover_s1	1(0) covered by narrowly-defined living wage ordinance
cover_s2	1(0) covered by broadly-defined living wage ordinance
FamLW1	1(0) anyone in family covered by a narrowly-defined living wage ordinance
FamLW2	1(0) anyone in family covered by a broadly-defined living wage ordinance
famtot1	Number of family members covered by narrowly-defined living wage ordinance
famad1	Number of adult family members covered by narrowly-defined living wage ordinance
famtot2	Number of family members covered by broadly-defined living wage ordinance
famad2	Number of adult family members covered by broadly-defined living wage ordinance
eitc	1(0) Family received EITC
eitc_ben	Amount of EITC benefits (nominal dollars)
reitc	Amount of EITC benefits (constant 2000 dollars)
ftotvalt	Family income plus EITC benefits (constant 2000 dollars)
faminct	Family income plus EITC benefits (constant 2000 dollars) (categorical)
fincome3	Family income plus EITC benefits (nominal dollars)
difinc3	Percentage change in family income due to EITC (constant 2000 dollars)
tbenEITC	Aggregate transfers - EITC (constant 2000 dollars)
difearn1	Increase in family income attributable to narrowly-defined living wage ordinance (assumption: usual hours worked for 50 weeks) (constant 2000 dollars)
ftotval1	Family income plus narrowly-defined living wage ordinance amount (constant 2000 dollars)
faminc1	Family income plus narrowly-defined living wage ordinance amount (constant 2000 dollars) (categorical)
fincome1	Family income plus narrowly-defined living wage ordinance amount (nominal dollars)
difinc1	Percentage change in family income due to narrowly-defined living wage ordinance (constant 2000 dollars)
tbenLW1	Aggregate transfers - Narrowly-defined living wage ordinance
hhcover1	Proportion of adults in family covered by narrowly-defined living wage ordinance
difearn2	Increase in family income attributable to broadly-defined living wage ordinance (assumption: usual hours worked for 50 weeks) (constant 2000 dollars)
ftotval2	Family income plus broadly-defined living wage ordinance amount (constant 2000 dollars)
faminc2	Family income plus broadly-defined living wage ordinance amount (constant 2000 dollars) (categorical)
fincome2	Family income plus broadly-defined living wage ordinance amount (nominal dollars)
difinc2	Percentage change in family income due to broadly-defined living wage ordinance (constant 2000 dollars)
tbenLW2	Aggregate transfers - broadly-defined living wage ordinance
hhcover2	Proportion of adults in family covered by broadly-defined living wage ordinance
pov_0	Poverty status - Original family income (categorical)
pov_1	Poverty status - Family income plus narrowly-defined living wage (categorical)
pov_2	Poverty status - Family income plus broadly-defined living wage (categorical)
pov_3	Poverty status - Family income plus EITC (categorical)
povlvl	Poverty levels (Census poverty guidelines)
inc1	Max. family income of 20 percentile
inc2	Max. family income of 40 percentile
inc3	Max. family income of 60 percentile
inc4	Max. family income of 80 percentile

Appendix B Cont.

Variable Names and Definitions

lowinc_0	1(0) Original family income <= lowest 20 th percentile
lowinc_1	1(0) Family income plus narrowly-defined living wage <= lowest 20 th percentile
lowinc_2	1(0) Family income plus broadly-defined living wage <= lowest 20 th percentile
lowinc_3	1(0) Family income plus EITC <= lowest 20 th percentile
modinc_0	1(0) Original family income <= lowest 40 th percentile
modinc_1	1(0) Family income plus narrowly-defined living wage <= lowest 40 th percentile
modinc_2	1(0) Family income plus broadly-defined living wage <= lowest 40 th percentile
modinc_3	1(0) Family income plus EITC <= lowest 40 th percentile
LW2EITC1	Total family income upon transferring narrowly-defined living wage to EITC (constant 2000 dollars)
lowinc1	1(0) LW2EITC1 <= lowest 20 percentile of family income
modinc1	1(0) LW2EITC1 <= lowest 40 percentile of family income
pov1	Poverty status - upon transferring narrowly-defined living wage to EITC (constant 2000 dollars)
difinc1_	Percentage change in family income upon transferring narrowly-defined living wage to EITC (constant 2000 dollars)
DIF1	Percentage difference in family income upon transferring narrowly-defined living wage to EITC (constant 2000 dollars)
LW2EITC2	Total family income upon transferring broadly-defined living wage to EITC (constant 2000 dollars)
lowinc2	1(0) LW2EITC2 <= lowest 20 percentile of family income
modinc2	1(0) LW2EITC2 <= lowest 40 percentile of family income
pov2	Poverty status - upon transferring broadly-defined living wage to EITC (constant 2000 dollars)
difinc2_	Percentage change in family income upon transferring broadly-defined living wage to EITC (constant 2000 dollars)
DIF2	Percentage difference in family income upon transferring broadly-defined living wage to EITC (constant 2000 dollars)

Appendix C

Family Income (in Constant 2000 Dollars)

Family Income	Number of Families (in Thousands)	Frequency
Less than \$5,000	1,415	2.43
\$5,000-\$7,499	107	0.18
\$7,500-\$9,999	5,139	8.83
\$10,000-\$12,499	4,172	7.17
\$12,500-\$14,999	213	0.37
\$15,000-\$19,999	384	0.66
\$20,000-\$24,999	4,278	7.35
\$25,000-\$29,999	3,226	5.54
\$30,000-\$34,999	6,859	11.78
\$35,000-\$39,999	10,725	18.43
\$40,000-\$49,999	4,824	8.29
\$50,000-\$59,999	8,645	14.85
\$60,000-\$74,999	3,682	6.33
\$75,000 or More	4,533	7.79
Total	58,204	100
Mean = \$44,829		
Median = \$36,958		

Notes:

- 12.64 percent of families in the CPS-OR do not report family income. 11.8 percent refused to answer the family income question, 0.77 percent reported that they did not know their family income, and 0.06 percent left that answer blank. Increased the sample weight by 12.64 percent to account for families that do not report family income. Here we make the assumption that family income is missing randomly. So, excluding these families from the analysis, we assume the distribution of family income is unchanged.
 - Combined income of all family members during the last 12 months. Includes money from jobs, net income from business, farm or rent, pensions, dividends, interest, social security payments and any other money income received by family members who are 15 years of age or older.
- Source: Current Population Survey - Outgoing Rotation, 1997-2000

Table 1

MSAs with Populations of One Million Before
Enactment of a Living Wage Ordinance.

MSA Name	Period of analysis
Atlanta, GA MSA	All
Bergen-Passaic, NJ PMSA	All
Boston, MA-NJ PMSA	Pre-May 1997
Buffalo-Niagara Falls, NY MSA	Pre-July 1999
Charlotte-Gastonia-Rock Hill, NC-SC MSA	All
Chicago, IL	Pre-July 1998
Cincinnati, OH-KY-IN PMSA	All
Cleveland-Lorain-Elyria- OH PMSA	Pre-June 2000
Columbus, OH MSA	All
Dallas, TX PMSA	All
Denver, CO PMSA	Pre-February 2000
Detroit, MI	Pre-November 1998
Fort Lauderdale, FL PMSA	All
Fort Worth-Arlington, TX PMSA	All
Greensboro-Winston Salem-High Point, NC MSA	All
Hartford, CT MSA	Pre-October 1999
Houston, TX PMSA	All
Indianapolis, IN MSA	All
Kansas City, MO-KS MSA	All
Los Angeles, CA	Pre-March 1997
Memphis, TN-AR-MS MSA	Pre-April 1999
Miami, FL PMSA	Pre-May 1999
Middlesex-Somerset-Hunterdon, NJ PMSA	All
Minneapolis-St. Paul, MN WI MSA	Pre-March 1997
Nassau-Suffolk, NY PMSA	All
New Orleans, LA MSA	All
Newark, NJ PMSA	All
Norfolk, Virginia Beach-Newport News, VA-NC MSA	All
Oakland, CA PMSA	Pre-April 1998
Orange County, CA PMSA	All
Orlando, FL MSA	All
Philadelphia, PA	All
Phoenix-Mesa, AZ MSA	All
Pittsburgh, PA MSA	All
Providence-Fall River-Warwick, RI-MA MSA	All
Riverside-San Bernardino, CA PMSA	All
Rochester, NY MSA	All
Sacramento, CA PMSA	All
St. Louis, MO-IL MSA	Pre-August 2000
Salt Lake City-Ogden, UT MSA	All
San Antonio, TX MSA	Pre-July 1998
San Diego, CA PMSA	All
San Francisco, CA PMSA	Pre-August 2000
San Jose, CA PMSA	Pre-November 1998
Seattle-Bellevue-Everett, WA PMSA	All
Tampa-St. Petersburg-Clearwater, FL MSA	All
Washington, DC-MD-VA-WV PMSA	All

The following MSAs were excluded from the analytical dataset because the main jurisdiction (city or county) had enacted a living wage ordinance prior to January 1997: Baltimore, Milwaukee, New York, and Portland.

Table 2

Selected Living Wage Ordinances

Metropolitan Area	Date Ordinance Enacted	Level of Living Wage	Other Coverage Specifications	Treatment in Study: Industries & Occupations Covered
Baltimore	Dec-94	1996: \$6.10 1997: \$6.60 1998: \$7.10 1999: \$7.90 2000: \$8.03	Service Contracts over \$5,000	Service contractors, including professional contracts for non-professional employees and subcontractors
Boston	Jul-97	\$8.42	Contracts valued over \$100,000 and subcontracts valued over \$25,000, made with a for-profit employer of at least 25 employees or a non-profit employer of at least 100 employees.	Service contractors and subcontractors except those workers employed in public construction work that is subject to the provisions of state law pertaining to wage rates for public works
Detroit	Nov-98	Indexed to Federal Poverty Level, 100% for family of four with benefits OR 125% of Poverty Level without benefits	Contracts and subcontracts valued over \$50,000 and assistance valued over \$50,000 annually	Employers that contract with the city or that receive financial assistance from the city for economic or job growth

Table 3

Simulated Living Wage Levels

Year	Poverty Guideline for Family of Four	Living Wage Levels
1997	\$16,050	\$7.72
1998	\$16,450	\$7.91
1999	\$16,700	\$8.03
2000	\$17,050	\$8.20
2001	\$17,650	\$8.49

Note: Simulated living wage levels were calculated by dividing poverty guideline levels for a family of four by 2080 hours worked per year. Two thousand and eighty hours translates into working 40 hours per week for 52 weeks per year.

Table 4

Simulated Living Wage Coverage

Type of Coverage	Industries & Occupations Covered (treatment in study)	Other Coverage Specifications
Narrow-Coverage	Service contractors and subcontractors except those workers employed in public construction work that is subject to the provisions of state law pertaining to wage rates for public works	Contracts valued over \$100,000 and subcontracts valued over \$25,000, made with a for-profit employer of at least 25 employees or a non-profit employer of at least 100 employees.
Broad-Coverage	Employers that contract with the city or that receive financial assistance from the city for economic or job growth	Contracts and subcontracts valued over \$50,000 and assistance valued over \$50,000 annually

The *Narrow-Coverage* is based on Boston's living wage ordinance and the *Broad-Coverage* is based on Detroit's living wage ordinance.

Table 5

Simulated Effect of Targeting Criteria Status on Living Wage and EITC Eligibility

Poverty Status	Eligibility			
	Neither	Narrowly-Defined Living Wage/Not EITC	Not Narrowly-Defined Living Wage/EITC	Both
Less than 60%	0.081	1.63E-05	0.915	0.004
60-100%	0.191	1.26E-04	0.807	0.001
100%-150%	0.547	3.17E-04	0.452	8.68E-04
150%-200%	0.813	4.14E-04	0.186	3.73E-04
200%+	0.997	2.67E-04	0.002	5.84E-20
Relative Family Income	Neither	Narrowly-Defined Living Wage/Not EITC	Not Narrowly-Defined Living Wage/EITC	Both
Lowest 20 th Percentile	0.560	1.47E-04	0.439	0.001
20 th – 40 th Percentile	0.845	4.34E-04	0.154	2.54E-04
40 th – 60 th Percentile	0.999	2.76E-04	7.47E-24	6.28E-24
60 th – 100 th Percentile	0.999	1.86E-04	8.08E-24	6.68E-24

These probabilities were derived from multinomial logit models evaluated for a reference individual with varying levels of targeting criteria characteristics (poverty status and relative family income, separately). The reference individual has the following characteristics: 25-34 years old, male, white, high school degree, never married, 6 percent of workers in state are covered by a union bargaining agreement, and one child.

Table 6

Simulated Effect of Targeting Criteria on Living Wage and EITC Eligibility

Poverty Status	Eligibility			
	Neither	Broadly-Defined Living Wage/Not EITC	Not Broadly-Defined Living Wage/EITC	Both
Less than 60%	0.057	0.020	0.555	0.367
60-100%	0.133	0.053	0.485	0.329
100%-150%	0.401	0.139	0.314	0.146
150%-200%	0.650	0.162	0.145	0.043
200%+	0.885	0.112	0.002	0.001
Relative Family Income	Neither	Broadly-Defined Living Wage/Not EITC	Not Broadly-Defined Living Wage/EITC	Both
Lowest 20 th Percentile	0.466	0.089	0.271	0.175
20 th – 40 th Percentile	0.707	0.134	0.131	0.028
40 th – 60 th Percentile	0.871	0.129	8.05E-24	8.85E-24
60 th – 100 th Percentile	0.892	0.108	8.83E-24	9.32E-24

These probabilities were derived from multinomial logit models evaluated for a reference individual with varying levels of targeting criteria characteristics (poverty status and relative family income, separately). The reference individual has the following characteristics: 25-34 years old, male, white, high school degree, never married, 6 percent of workers in state are covered by a union bargaining agreement, and one child.

Table 7

Simulated Redistribution of Income

Target Efficiency	Narrowly-Defined		Broadly-Defined	
	Simulated Living Wage	Simulated EITC	Simulated Living Wage	Simulated EITC
Original Poverty Status				
<= 60% of poverty	0.07%	0.35%	11.04%	32.57%
60-100% of poverty	0.06%	0.25%	18.12%	23.76%
100-150% of poverty	0.08%	0.13%	13.29%	22.78%
150-200% of poverty	0.04%	0.06%	6.97%	11.67%
More than 200%	4.32E-03	1.24E-03	1.13%	0.23%
Income Relative to All Working Families	Simulated Living Wage	Simulated EITC	Simulated Living Wage	Simulated EITC
Lowest 20 th Percentile	5.70E-02	1.36E-02	11.82%	14.40%
20 th – 40 th Percentile	1.75E-02	0.03%	3.21%	5.78%
40 th – 60 th Percentile	4.09E-03	0.00%	1.01%	0.00%
60 th – 100 th Percentile	0.00E+00	0.00%	0.60%	0.00%

Simulated living wage = percentage change in family income resulting from a simulated living wage ordinance.

Simulated EITC = percentage change in family income after transferring aggregate living wage expenditures to the simulated EITC. Only for respondents eligible for the simulated EITC.

Figure 1

Percentage of Working Families in Sample Affected by Various Policy Tools

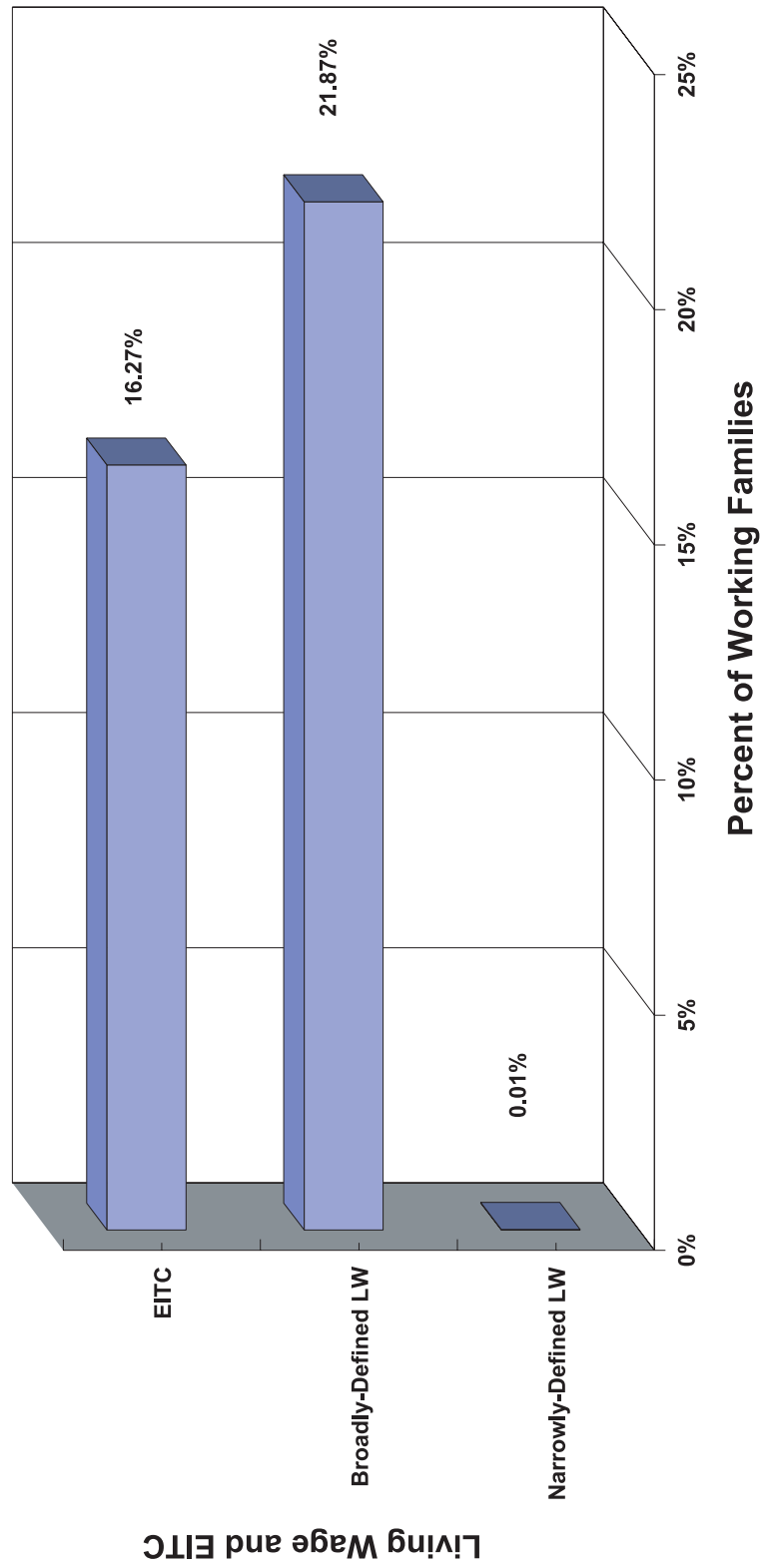


Figure 2

Percentage of Working Families in Poverty Affected by Various Policy Tools

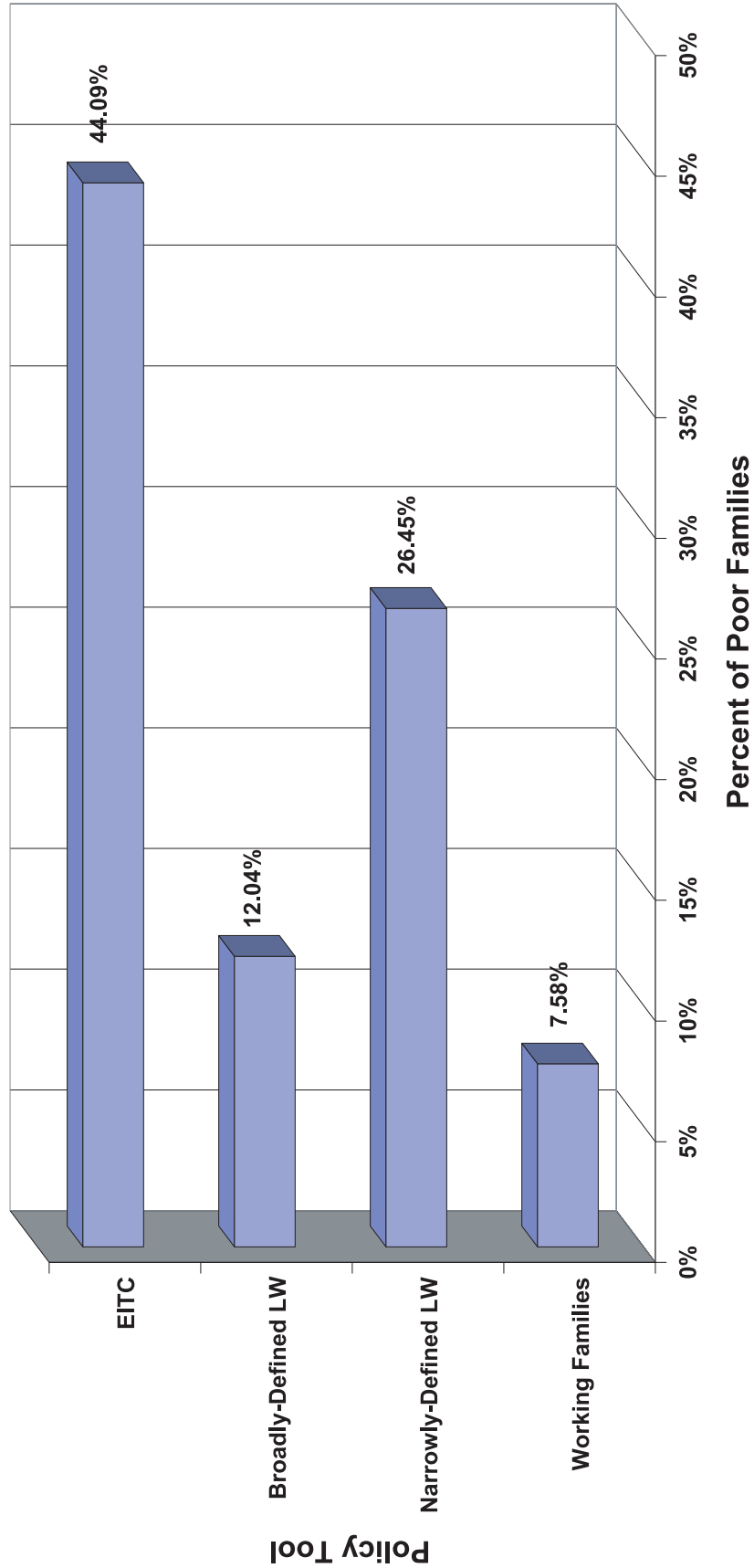


Figure 3

Percentage of Working Families Whose Income is Below the 20th Percentile Affected by Various Policies

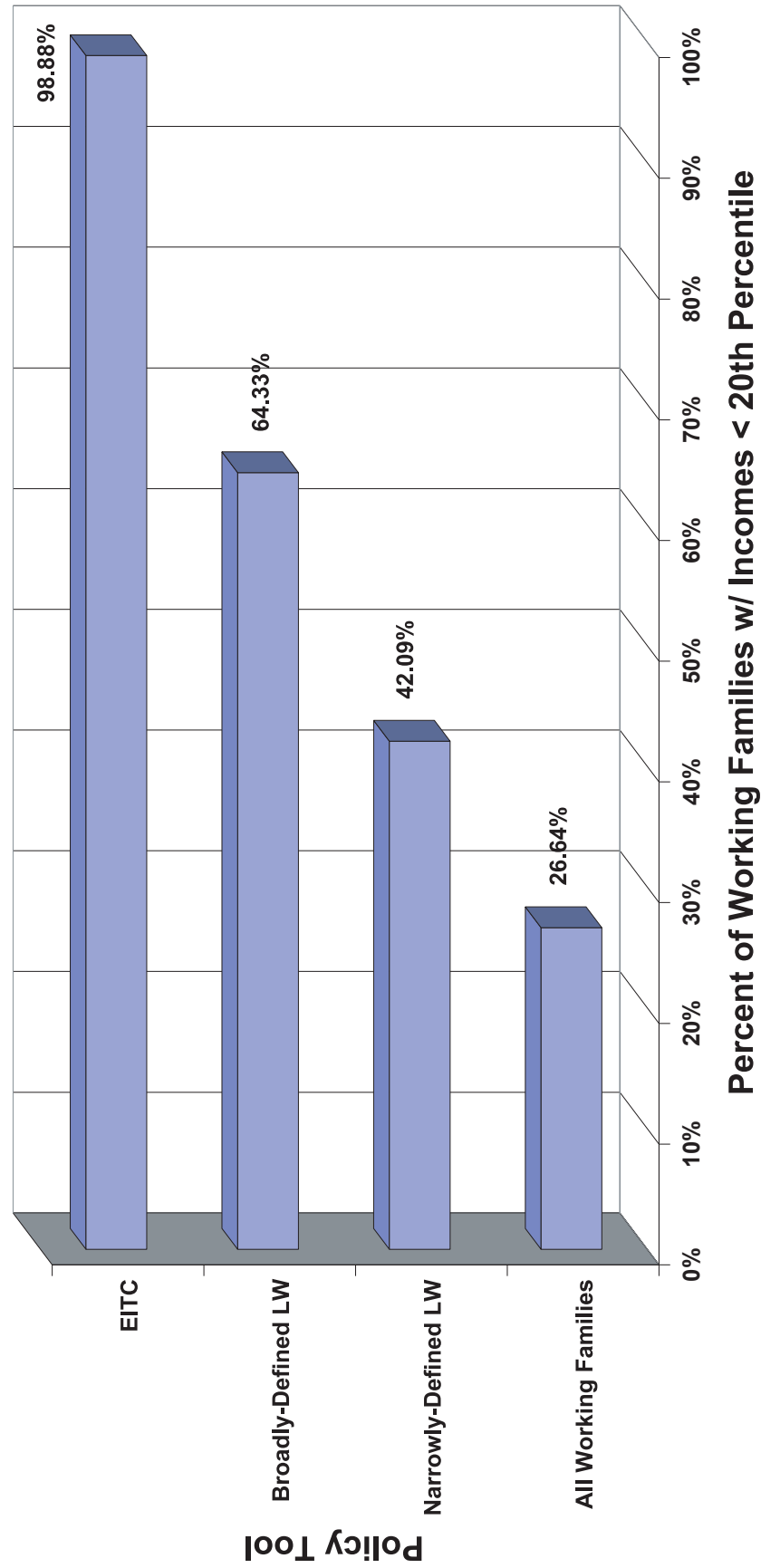


Figure 4

Percentage of Working Families Whose Income is Below the 40th Percentile Affected by Various Policies

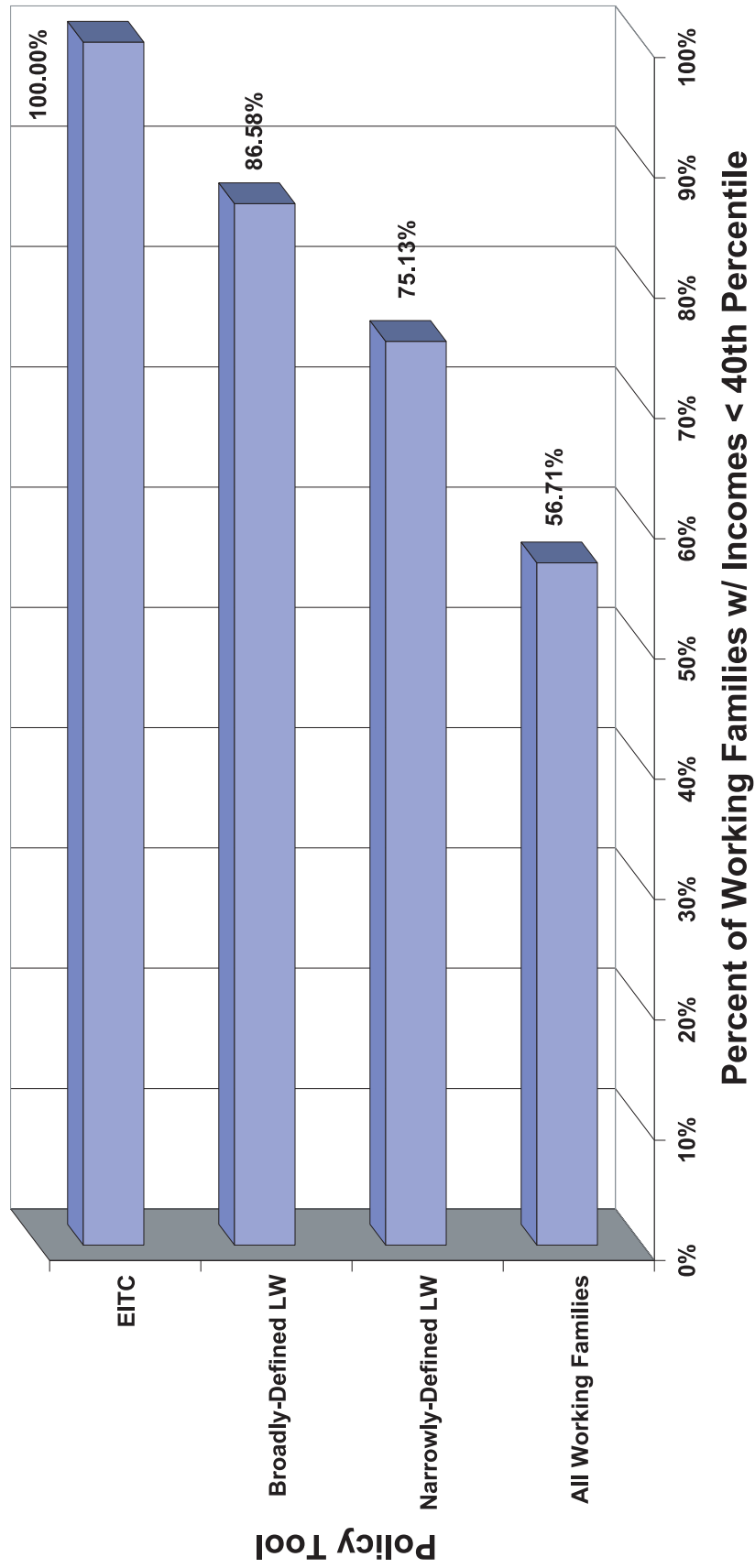


Figure 5

Percent of Working Families Whose Income is 150% and Greater Than the Poverty Level Affected by Various Policies

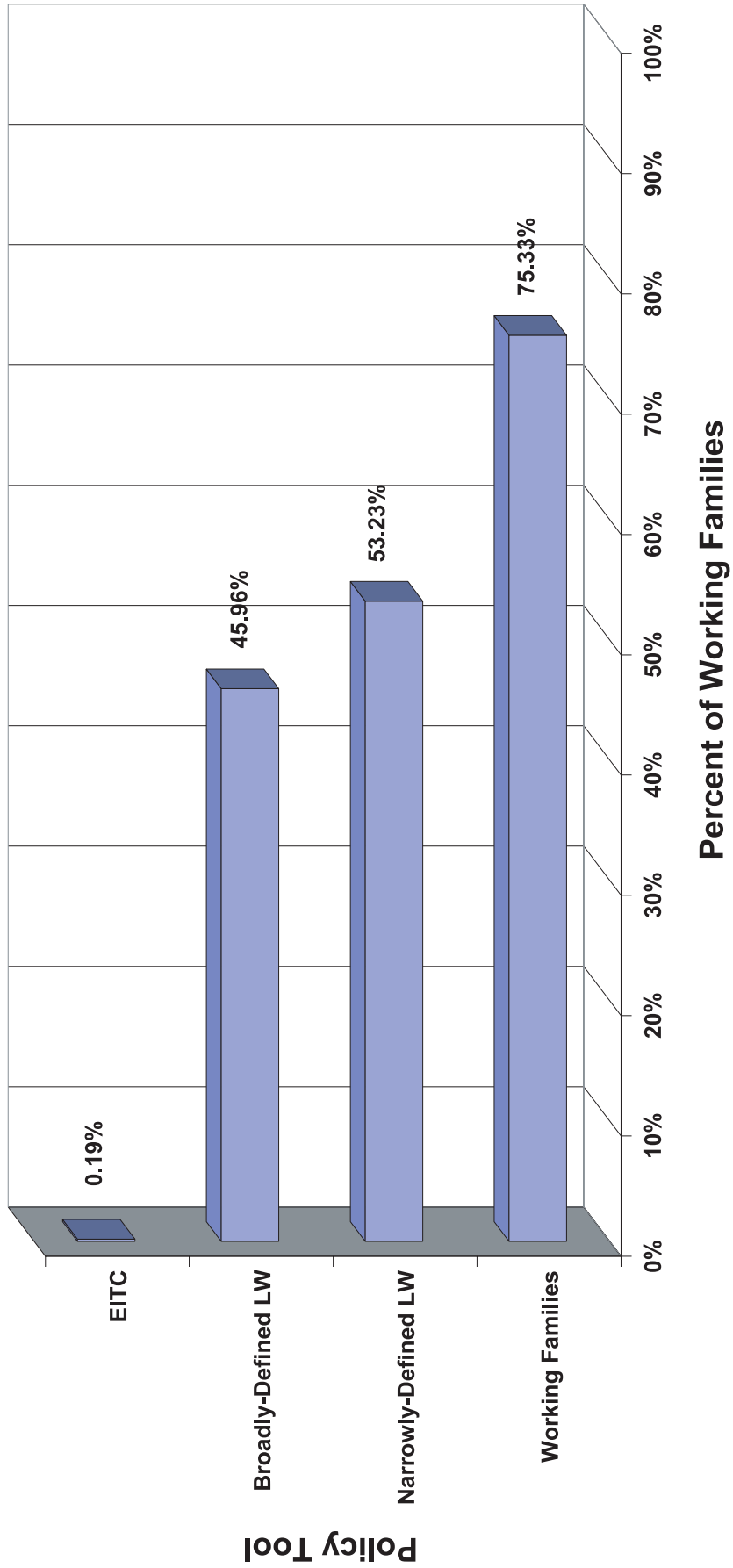


Figure 6

Coverage by Family Size

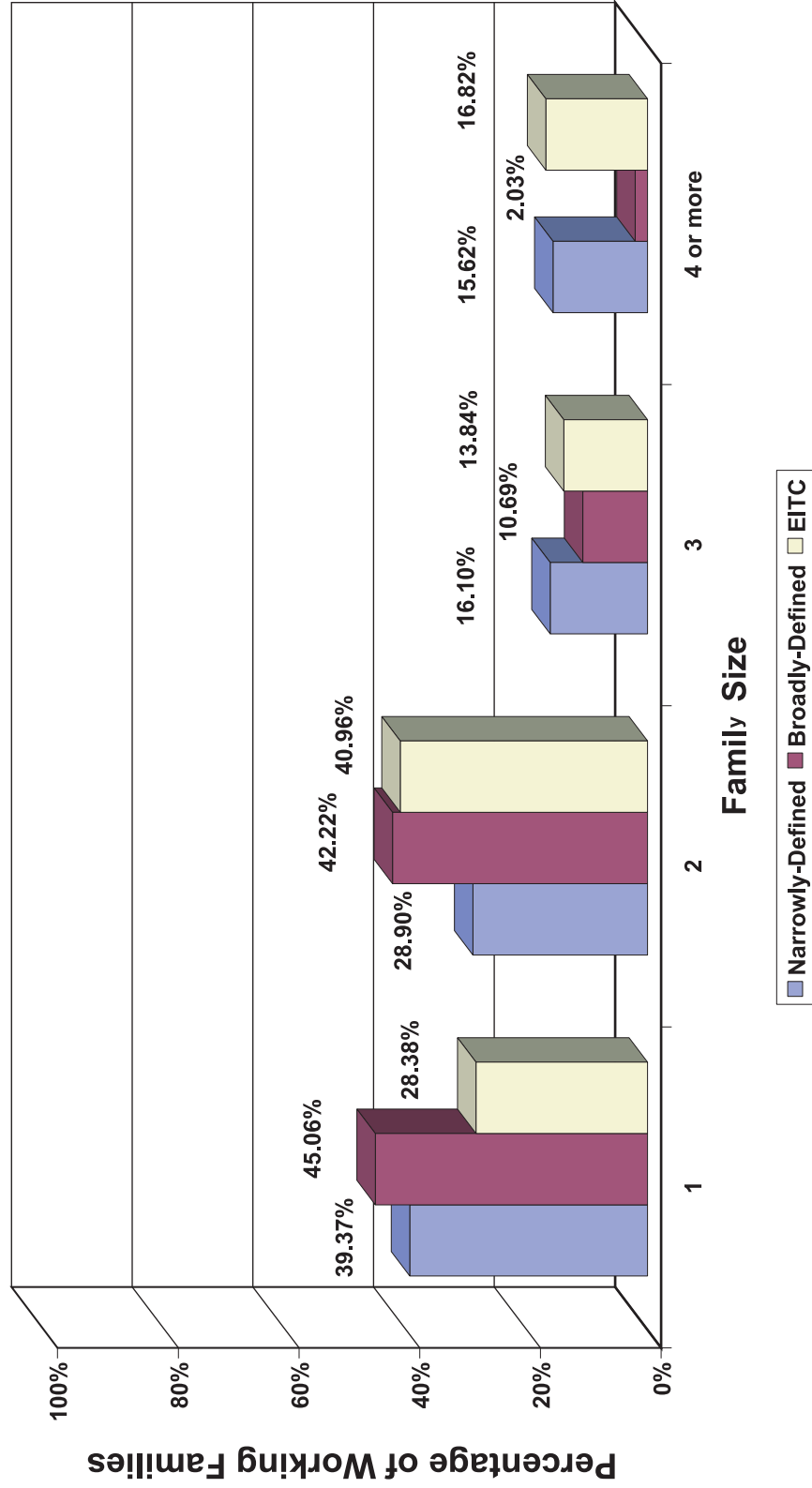


Figure 7

Percent of Poor Families Before and After Redistribution

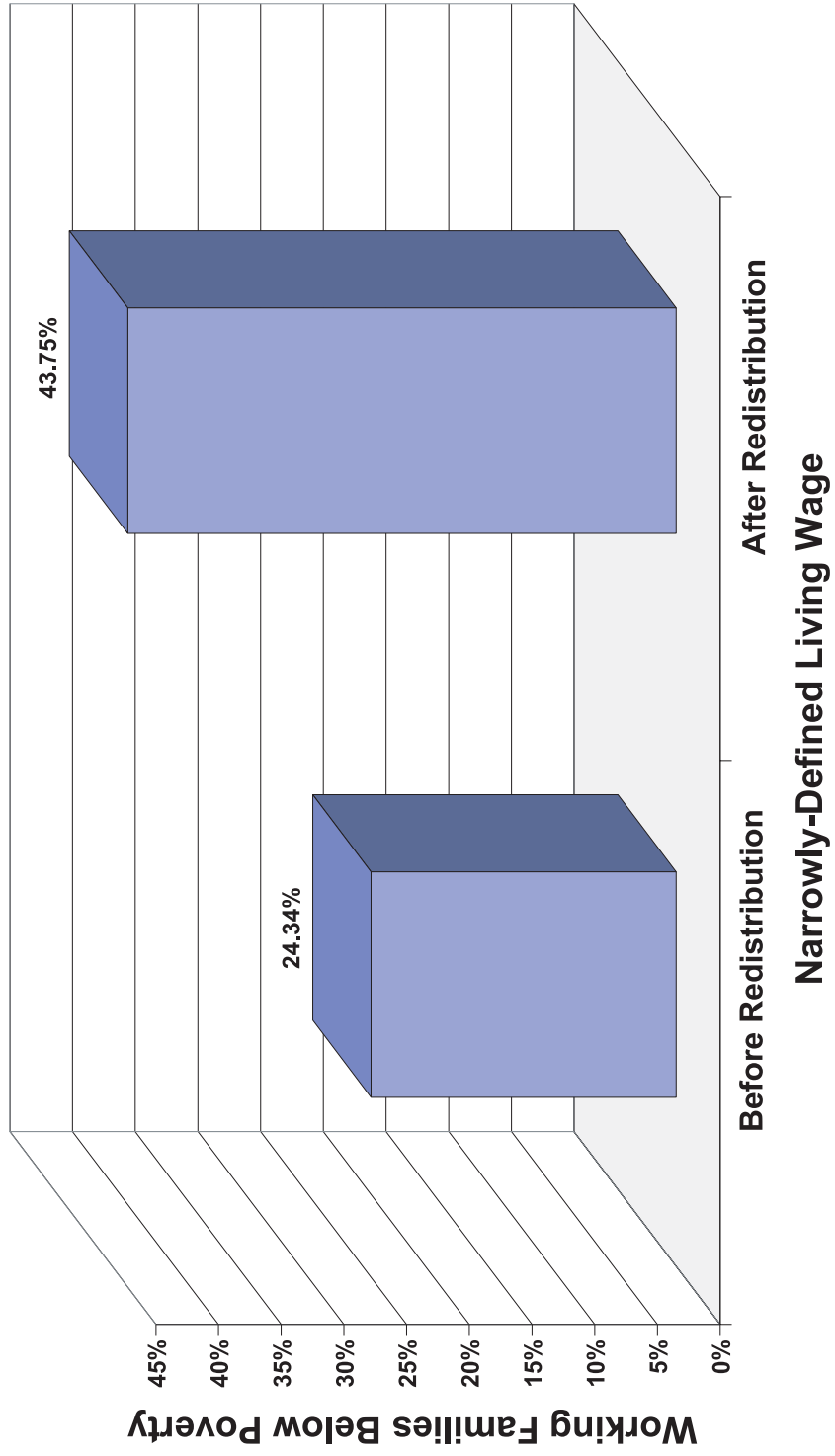
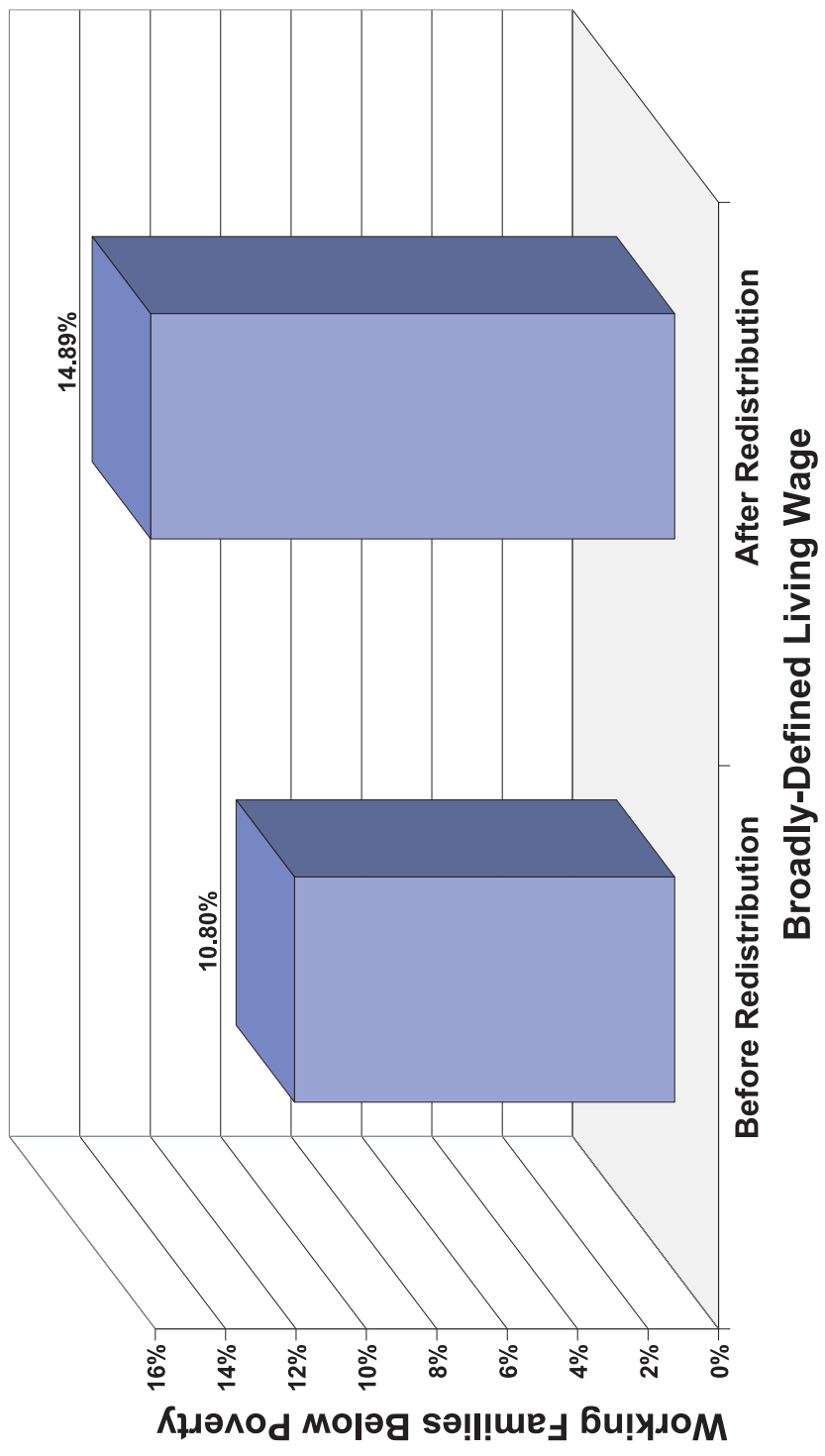


Figure 8

Percent of Poor Families Before and After Redistribution



Recent Publications

Measuring Poverty in America, by the Employment Policies Institute, April 2002.

The Economic Well-Being of Low-Income Working Families, by Dr John P. Formby, Mr Hoseong Kim, University of Alabama and Dr. John A. Bishop, East Carolina University, March 2002

The Long-Term Effects of Youth Unemployment, by Dr. Thomas A. Mroz and Dr. Timothy H. Savage, University of North Carolina, Chapel Hill and Welch Consulting Economists, October 2001.

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