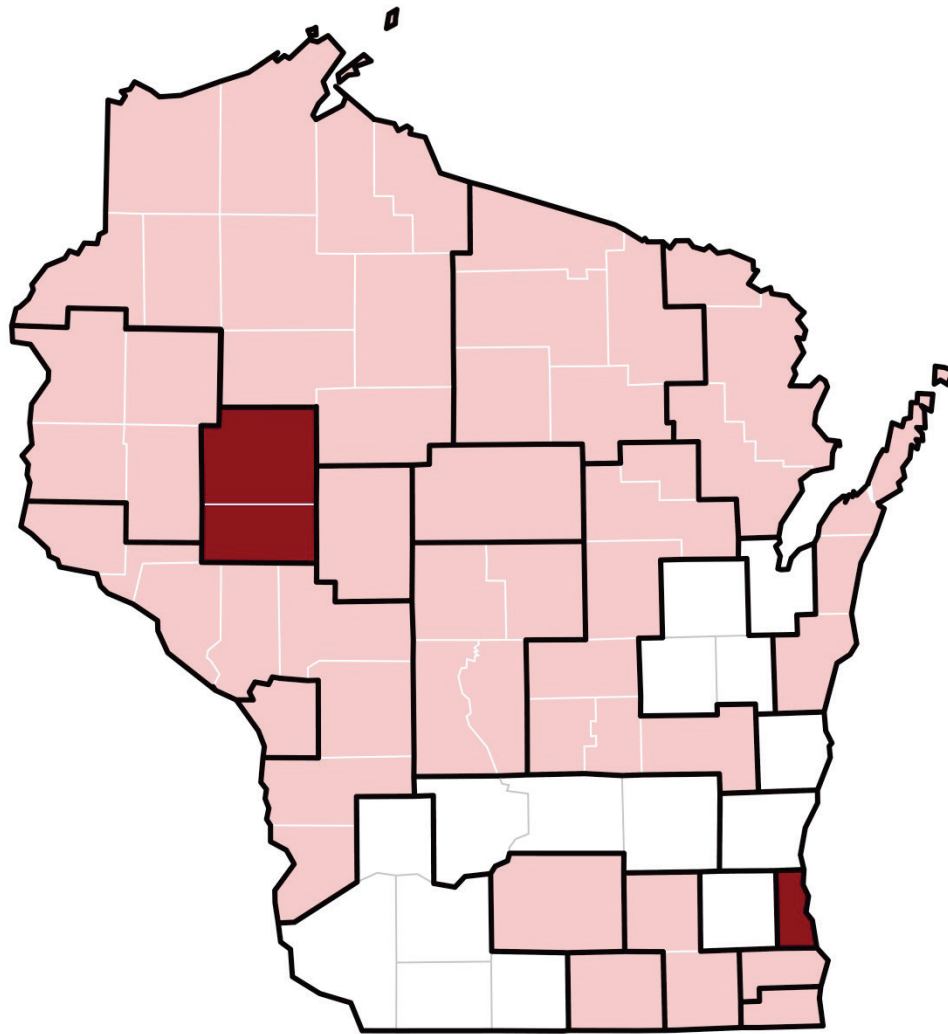


Wisconsin Poverty Report: Policy Context, Methodology, and Results for 2010

Part of the Wisconsin Poverty Project's Fourth Annual Report Series



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ABOUT THE WISCONSIN POVERTY PROJECT

The Wisconsin Poverty Project came into being in late 2008, when a group of researchers at the Institute for Research on Poverty (IRP) sought to gain a more accurate and timely assessment of poverty throughout the state at a time when the worst recession in the postwar era was gripping the nation. The researchers' efforts, which are in line with broader efforts (including federal development of the Supplemental Poverty Measure), sought to inform policy with up-to-date and place-specific data that go beyond the official statistics for Wisconsin. The project, which each year produces the *Wisconsin Poverty Report* (WPR) series, currently in its fourth edition, joins many other endeavors by University of Wisconsin System faculty and staff to improve the lives of people throughout the state in the spirit of the Wisconsin Idea. Simply put, the Wisconsin Poverty Project model reflects IRP's commitment to informing public policy with research findings and, consistent with this idea, one of our primary goals in developing the Wisconsin Poverty Measure is to serve as a model for other states and localities seeking to craft their own more meaningful measures of poverty.

CONSTRUCTION OF THE 2010 WISCONSIN POVERTY REPORT SERIES AND THE ROLE OF THIS REPORT

This year, we have provided two versions of the WPR series: (1) *Wisconsin Poverty Report: How the Safety Net Protected Families from Poverty in 2010*, which is a less technical version that includes key results, and (2) *Wisconsin Poverty Report: Policy Contexts, Methodology, and Results for 2010* (this report), which contains more methodological details and additional results. Last year's WPM series, which explored poverty in Wisconsin in 2009 and was published in May 2011, included three versions: two documents that mirror this year's reports and a third that gathered a range of appendices including further technical details about methodologies and sensitivity test results. This year, the second report (this document) incorporates key details that have previously been included in the third report. When references to appendices from last year may be helpful in this report, we direct interested readers to the appropriate document. All WPR report series are available online at <http://www.irp.wisc.edu/research/wipoverty.htm>.

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ABOUT THE INSTITUTE FOR RESEARCH ON POVERTY

The Institute for Research on Poverty (IRP) is a unit within the College of Letters and Science at the University of Wisconsin–Madison. It was established in 1966 as the nation's original poverty research center for interdisciplinary study of the causes, consequences, and cures of poverty and social inequality in the United States. Major funding is provided by the Assistant Secretary for Planning and Evaluation (ASPE) in the U.S. Department of Health and Human Services. As a National Poverty Research Center sponsored by ASPE, IRP has a particular interest in poverty and family welfare in Wisconsin as well as the nation.

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This report is available in a printable format on IRP's website at www.irp.wisc.edu.

COVER MAP KEY: Map depicts 2010 poverty rates using the Wisconsin Poverty Measure; areas that are below the state average of 10.3% are white; pink areas have no statistically significant difference from 10.3%; and red areas are higher than 10.3%. See page 13 for further details.

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EXECUTIVE SUMMARY

Although national authorities declared an end to the Great Recession in June of 2009, the economic downturn has continued to have negative repercussions in Wisconsin and beyond. Wisconsin experienced further job reductions in 2010 and no substantial job growth in 2011. Official poverty statistics provided by the U.S. Census Bureau reveal that poverty in the state actually increased in 2010 compared to 2009, indicating that Wisconsin residents generally had lower levels of pre-tax cash resources during the period considered.

Given the substantial loss of market income in Wisconsin, the findings of the 2010 Wisconsin Poverty Project are quite surprising. When we estimate poverty using our alternative measure, the Wisconsin Poverty Measure (WPM), we find that state poverty actually dropped between 2009 and 2010, from 11.1 percent to 10.3 percent.

Behind this surprising story is the impact of tax-related provisions and near-cash benefits from programs that government officials augmented to offset increased economic hardship due to the recession. The official poverty measure considers only pre-tax cash income as a resource, and therefore fails to fully capture the effects of national and local government efforts to stimulate the economy and ease economic adversity caused by the recession.

To provide poverty estimates that more accurately account for the needs and resources of Wisconsin families and consider the antipoverty impact of policies, researchers at the Institute for Research on Poverty (IRP) at the University of Wisconsin–Madison have developed the WPM, now in its third year. In determining poverty status, the WPM considers not only cash resources, but also tax credits and noncash benefits, as well as work-related costs that reduce available resources, like child care and health care costs.

For the second year in a row, the WPM tells a different story than the one told by the Census Bureau's official poverty statistics. In last year's annual *Wisconsin Poverty Report*, we found essentially no change in poverty between 2008 and 2009 under the WPM, primarily because the drop in families' earnings and cash income was offset by tax credits and food assistance benefits, which saw substantial increases in funding under the American Recovery and Reinvestment Act (ARRA) of 2009. In this fourth annual *Wisconsin Poverty Report*, we demonstrate that not only did tax credits continue to play a large role in fighting poverty in 2010, but also, nutrition assistance benefits became even more effective during that year, resulting in an unexpected drop in the number of individuals and families living in poverty in 2010.

Additional major findings of the report also reveal the diverse experiences of poverty in Wisconsin following the onset of the recession. The trends in child poverty, which rose under the official measure but dropped from 12.2 percent in 2009 to 10.8 percent in 2010 according to the WPM, are even stronger than the trends in overall poverty. When we examine how each of the specific noncash benefits, tax-related provisions, and medical and work-related expenses affect poverty, we find that tax credits had the greatest impact on reducing poverty in both 2009 and 2010, for all residents and for children. We also note that out-of-pocket medical expenses impose a financial burden on low-income elderly persons, suggesting the importance of support for medical care for this population. We also examine poverty rates across regions within the state, revealing deep poverty in some areas, especially central Milwaukee.

Our key finding—that the safety net provided a buffer against increased poverty during the recession—should not obscure the negative effects of the recession on the lower middle class, such as declining home values, increased debt levels, and flat or falling incomes combined with rising expenses. We believe that the long-term solution to poverty is a secure job that pays well, not an indefinite income support program. However, as this report shows, in times of need, a safety net that supplements low earnings for families with children, puts food on the table, and encourages self-reliance—as Wisconsin's safety net does—makes a big difference in combatting market-driven poverty.

INTRODUCTION

Since the onset of the Great Recession—the worst recession in the postwar era—it has become particularly important for researchers and policymakers to have an accurate and timely understanding of which people and families are poor and the influence of public policies on poverty. National authorities declared that the recession ended in June 2009, but numerous economic indicators continue to signal a fragile recovery and persistent economic need in Wisconsin and elsewhere. In the context of this slow recovery, as political pressure to reduce antipoverty budgets mounts and the need for active government intervention to reduce economic hardship is less immediately obvious, an accurate appraisal of economic resources, including the effects of benefits aimed at low-income people, has become even more critical.

Even though research on poverty measurement is not new, the development of alternative measures to supplement or replace the official U.S. poverty measure is a relatively new topic. The Census Bureau's official poverty measure considers only pre-tax cash income as resources; the measure fails to consider government-provided noncash benefits and tax credits, which increased nationally and locally as the government sought to address economic hardship and its repercussions during the recession. Further, as discussed in critiques of the official poverty measure, including its outdated poverty thresholds and geographically insensitive nature (explained in further detail below), there is an increasing need for the development of an alternative poverty measure that considers a more comprehensive set of needs and resources and accounts for the antipoverty impacts of broader public policies. Despite the need for such a measure, the technical difficulties involved, such as the lack of data and techniques needed to identify accurate information about comprehensive needs and resources, makes the analysis expensive and has impeded research on this topic, especially at the state level.

Taking advantage of resources available at the Institute for Research on Poverty (IRP) and its larger environment and at the U.S. Census Bureau, a group of IRP scholars have developed the Wisconsin Poverty Measure (WPM), an alternative poverty measure for Wisconsin that more accurately accounts for the needs and resources of families in the state. In this report, we use the WPM to estimate an alternative set of Wisconsin poverty rates and trends over time between 2008 and 2010, and discuss the WPM's policy implications, including its use for estimating the antipoverty effects of public programs.

While these IRP efforts are in line with broader efforts to develop and implement an alternative poverty measure, including the federal-level implementation of the Supplemental Poverty Measure (SPM), we also contribute to the field by applying these measures to Wisconsin and its major substate areas. We apply the measures in ways that reflect the characteristics of the state and provide explicit and straightforward guidelines that other states and localities can use to develop their own measures. Our research and consultation on the topic will encourage related research focusing on other areas because the current study will make their research more feasible and affordable.

The Organization of the Report and Changes from Previous Reports

This document is part of the fourth annual *Wisconsin Poverty Report* (WPR) series;¹ the series examines poverty in Wisconsin between 2008 and 2010 with a particular focus on 2010, for which data were newly added to this year's WPR series. This year, the WPR series includes two reports. The current report accompanies the shorter and more accessible *Wisconsin Poverty Report: How the Safety Net Protected Families in 2010*, and provides additional details on methodology and results. These two reports share an executive summary, as well as substantive background information about Wisconsin's economic and policy situation during recent years of recession, and scholarly critiques of the official poverty measure. However, there is an important difference in the organization of the two reports. The shorter version starts with a key finding of the analysis: overall poverty in Wisconsin actually dropped between 2009 and 2010; this discussion occurs in the introduction, because in the

¹For the full series of *Wisconsin Poverty Reports*, see the IRP website at <http://www.irlp.wisc.edu>.

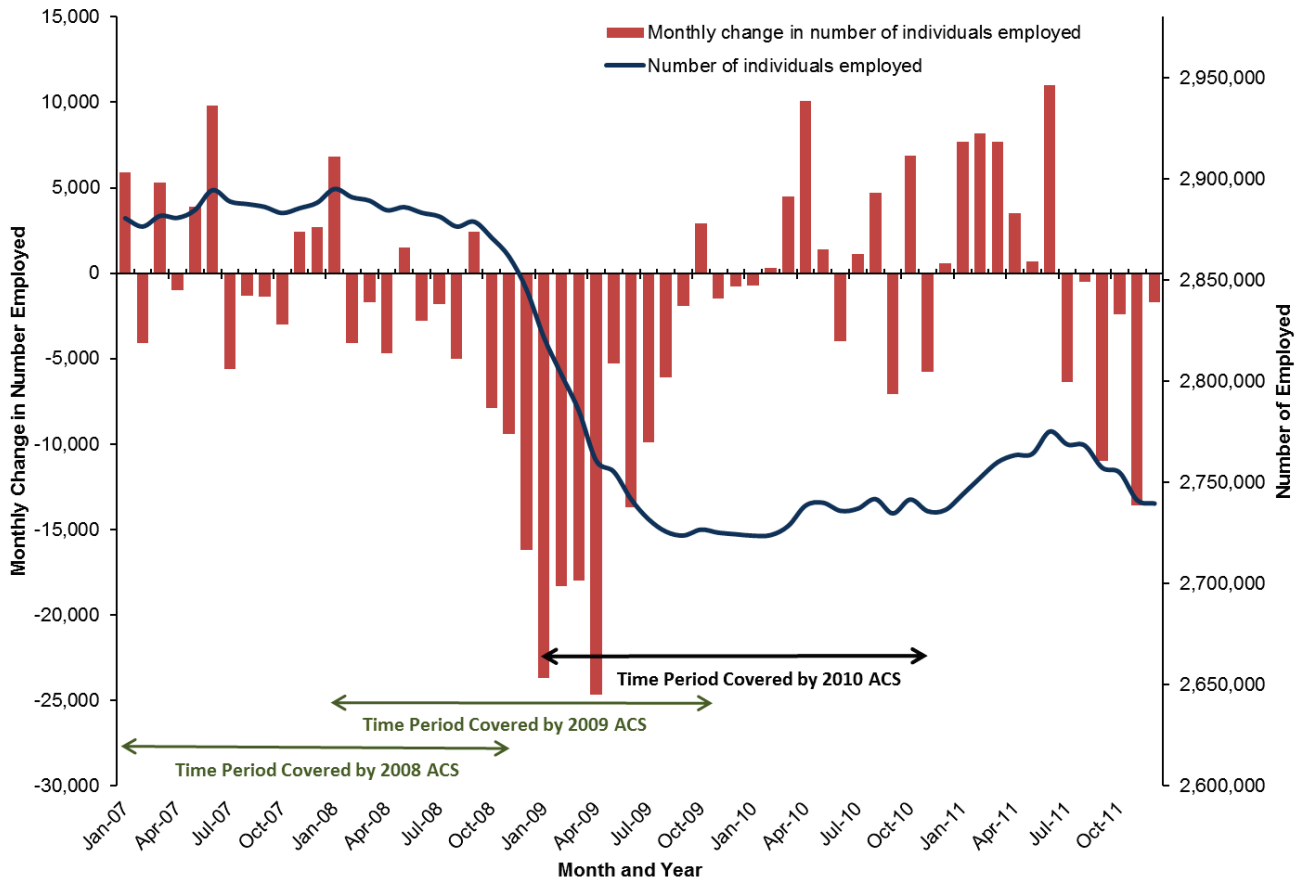
shorter version we sought to portray the overall patterns concisely and effectively. In contrast, the current version is a more technical report, which follows the standard practice of academic papers in the field, so the discussion of results comes after the data and methods section.

The remainder of this report is organized as follows: First, we consider Wisconsin's economic and policy situation during the recent recession, and explain the flaws of the official measure, especially in the context of the recession. Second, we discuss our data and methodological approaches; we describe the intricacies of the WPM and its relationship to the SPM. Compared to the shorter version, this report provides more details about methodology, including explanations of slight methodological differences from past reports. In the results section, we first examine results in 2010, focusing on poverty rates overall and rates for two vulnerable groups: children and the elderly, and results by family type (not covered in the shorter version). We then turn to an examination of the trends in poverty over the 2008 to 2010 period, overall and for children and the elderly. Next, we use the WPM to analyze the influence of public benefits (e.g., tax credits, nutrition assistance programs, housing policies) and expenses (medical and work-related) on poverty. We also examine how local adjustments for cost of living and variation in housing tenure (owners vs. renters) affect our poverty measure (not covered in the shorter version). We then present poverty rates across regions in Wisconsin using the WPM, including a particularly detailed examination of poverty within Milwaukee County, Dane County, and Brown County. Finally, we end the report by outlining its policy implications.

WISCONSIN'S ECONOMY AND PROGRAM PARTICIPATION DURING THE RECESSION

Information about recent changes in the economy in Wisconsin and across the nation helps us understand the importance of poverty issues, including poverty measurement, as components of a policy agenda. Following the rapid decline in employment that occurred during 2009, Wisconsin experienced continued job reductions in 2010 (see Figure 1 below and note that job losses in both 2009 and 2010 affect the 2010 poverty rate measured in this report). At the end of 2010, Wisconsin had about 152,000 fewer jobs than at the beginning of the recession in December 2007—a reduction of 5.3 percent of the pre-recession job base. Although the number of jobs in Wisconsin fluctuated in 2011, at the end of the year there were essentially no more jobs available than at the end of 2010 (see Figure 1). Reflecting this reduction in market-income, official poverty statistics published in fall 2011 revealed that poverty increased in Wisconsin (as in many other parts of the nation) between 2009 and 2010. To address these increasing needs and economic hardships, policies that directly and indirectly reduce poverty became even more pertinent.

Figure 1. Number of Individuals Employed and Monthly Job Gains/Losses in Wisconsin, 2007–2011



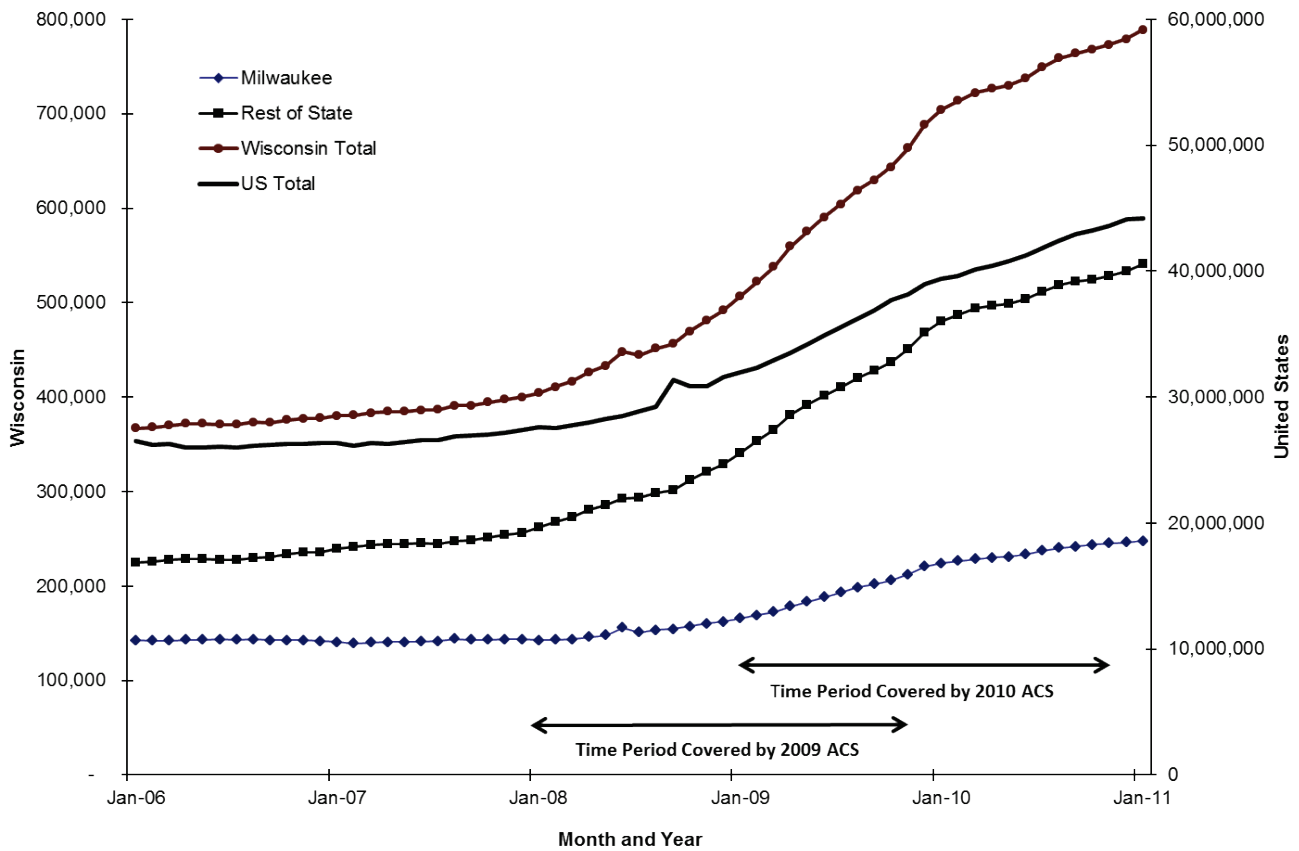
Source: Seasonally adjusted Bureau of Labor Statistics data on total non-farm employment.

Notes: The American Community Survey data for each year are collected throughout the calendar year, and include references to income over the previous 12 months; therefore, the data span a total of 23 months, as shown in the chart. For example, the 2010 poverty rate is based on economic conditions from January 2009 through November 2010. For reference, the official recession began in December 2007 and ended in June 2009.

In this section, we discuss two major government programs that sought to respond to the recession: the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program, and known as FoodShare in Wisconsin, but called SNAP in this report for simplicity) and the Earned Income Tax Credit or EITC. First, SNAP fiscal year benefits in Wisconsin were \$595 million in 2009; \$934 million in 2010 and \$1,105 million in 2011 (Legislative Audit Bureau, 2012). The increase reflects a growing caseload and a benefit increase of 14 percent under the American Recovery and Reinvestment Act (ARRA) on April 1, 2009. As shown in Figure 2, between January 2007 and January 2010, the rate of increase in Wisconsin was even larger than the national rate; the number of people receiving SNAP benefits in Wisconsin nearly doubled (an increase of 95 percent), compared to a 61 percent increase in the nation as a whole. The increase in SNAP caseloads was much steeper outside Milwaukee than within Milwaukee—a long-term high-poverty area—and the increase was particularly steep in the period covered by the 2010 ACS (January 2009 to November 2010), which is the focus of this report.²

²It is worth noting that the ARRA increases in SNAP benefits did not take effect until April 2009, so a portion of the 2010 ACS time period covered in this report was not subject to the increases.

Figure 2. Changes in SNAP Benefit Caseloads in Wisconsin and the United States, 2007–2010



Source: Data on Supplemental Nutrition Assistance Program (SNAP) participation are from the FoodShare data website of the Wisconsin Department of Health Services (<http://www.dhs.wisconsin.gov/em/rsdata/fs-caseload-recv-by-cy.htm>, accessed March 3, 2012).

Notes: The number of cases in Wisconsin is shown on the left-hand scale of the y-axis, while that for the United States is on the right-hand scale of the y-axis.

In addition to raising SNAP benefits, the 2009 ARRA also increased federal income tax credits by expanding the EITC (and the Wisconsin EITC, which is set at a certain percentage of the federal EITC) and the refundable Child Tax Credit and by creating the Making Work Pay tax credit.³ According to the Tax Policy Center’s calculations using data from the Internal Revenue Service Statistics of Income program (which include data for Wisconsin through 2009), there was a 21 percent increase in the total amount of (both refundable and nonrefundable) EITC credits in Wisconsin (from \$643 million in 2008 to \$780 million in 2009) (Williams, Johnson, and Shure, 2009). According to our tax calculations using ACS and state administrative data, the total amount of (both federal and state) tax refunds in Wisconsin increased by 39 percent, from \$922 million to \$1,281 million between 2008 and 2009, and then remained at a similar level (\$1,256 million) in 2010. Because the tax changes under ARRA were implemented retroactively for the full 2009 calendar year and were in effect for all of 2010, they influenced the entire time period covered by the 2010 ACS data.

As discussed above, both tax credits and noncash benefit programs such as SNAP are important social policies, and understanding how these programs work to reduce economic hardship is of important policy interest. However, the official poverty measure does not consider these noncash benefits and tax credits, and thus fails to

³Wisconsin’s EITC was set, for example, at 14 percent of the federal EITC for families with two qualifying children in 2009 and 2010; the level was reduced to 11 percent in 2011.

adequately examine the effects of these programs on poverty. This limitation of the official poverty measure has now become more troubling than ever before because both welfare reform and the government's response to the recent recession have resulted in the absolute and relative growth of noncash programs and tax-related benefits tied to work activities replacing the declining cash transfer programs. We now turn to additional critiques of the official poverty measure.

WHAT'S WRONG WITH THE OFFICIAL POVERTY MEASURE?

Researchers and policymakers have criticized the current official poverty measure for not accurately accounting for the contemporary needs and resources of American families, and have consequently called for improved measures. Critics assert that the official measure not only ignores noncash benefits and tax credits, but also uses an outdated poverty threshold based on a pattern of consumption that was typical in the 1960s; omits health care and work-related expenses such as child care costs; and fails to adjust for geographic differences in prices.

After a National Academy of Sciences (NAS) panel offered an alternative method for measuring poverty that addresses many of these concerns, a number of scholars have developed alternative poverty measures based on the NAS method. And, as mentioned above, the federal government has also recently implemented the Supplemental Poverty Measure (SPM) (Hutto et al., 2011; Arloc, 2011; Short, 2011⁴).

While the WPM is consistent with these alternative national poverty measures, we focus on Wisconsin alone. This leads to both disadvantages and advantages. By focusing on Wisconsin, the generalizability of our results may be limited because other subnational estimates may take slightly different approaches. Further, if public programs in Wisconsin operate at a different level of efficiency compared to those in other states, it is possible that the effects of poverty programs that we report here may differ from those estimated under an alternative poverty measure implemented in other states.

Although we focus on Wisconsin, our goal is to serve as a national model for other states and localities seeking to develop their own place-specific alternative measurements of poverty. Wisconsin is an excellent location for a case study of alternative poverty measures because of the state's historic importance as an experimental site for national policies, and the provision of resources for this research by the federal government. Wisconsin also experiences rich interactions between research and community life, largely because of the University of Wisconsin System's adherence to the "Wisconsin Idea," the principle that university research should improve people's lives beyond the classroom (Smeeding and Marks, 2011). The Wisconsin Idea and the implementation of the WPM could be implemented in national or other regional settings. Lastly, it is important to note that the federal funding for the experimental WPM has now expired, and if the WPM is to continue, funding is needed from Wisconsin state and local agencies and nonprofit organizations.

METHODOLOGICAL APPROACHES TO ESTIMATING POVERTY VIA THE WPM

The WPM takes a broader view of resources than the official poverty measure, incorporating not only pre-tax cash income but also the estimated value of other federal and state resources meant to offset need. The measure also considers a reduction of available resources due to expenses including housing, medical care, and other basic needs such as child care and transportation to work. Specifically, the WPM considers federal programs, as well as Wisconsin's own policy interests, priorities, and programs, including the state Earned Income Tax Credit, BadgerCare health insurance, FoodShare (Wisconsin's SNAP), Wisconsin Shares child care subsidies, and the Homestead Tax Credit. Further, the WPM is adjusted to state-specific costs of living.

The rest of this section describes the details of the WPM's methodological approaches, which we develop and implement in this analysis. As a preview, Table 1 provides descriptions of the characteristics of the WPM, the official poverty measure, and the SPM.

⁴In November 2011, the Census Bureau released the first results from the new SPM in Short (2011).

Table 1. Comparison of Official, Supplemental, and Wisconsin Poverty Measures

Component	Official Poverty Measure	Supplemental Poverty Measure	Wisconsin Poverty Measure
Data Source	Current Population Survey (CPS) <i>Note:</i> While CPS is the source of official national poverty estimates, the American Community Survey provides single and multi-year estimates for smaller areas.	Current Population Survey (CPS)	American Community Survey (ACS)
Poverty Unit or Family Unit	Individual or family unit restricted to married couples and their children.	Expanded family unit including unmarried partners, their children, and any unrelated children (including foster children).	Expanded family unit including unmarried partners, their children, and any unrelated children (including foster children).
Poverty Universe	Universe excludes unrelated children under 15 years old (including foster children), and people in institutional group quarters, college dormitories, and military barracks.	Universe includes unrelated children under 15 years old (including foster children); it excludes people in institutional group quarters, college dormitories, and military barracks.	Universe includes unrelated children under 15 years old (including foster children); it excludes people in group quarters (institutional and non-institutional), college dormitories, and military barracks. The final model of the WPM used in this report also excludes students who are 18 to 23 years old, not living with family members, earned less than \$5,000 in the last year, worked 0–13 weeks per year, and typically worked 0–20 hours per week.

(table continues)

Table 1, continued

Component	Official Poverty Measure	Supplemental Poverty Measure	Wisconsin Poverty Measure
Resources	<p>Pre-tax cash income:</p> <ul style="list-style-type: none"> • Wages, salaries, self-employment income, interest, dividends, rent, trusts, social security and railroad retirement pensions, disability benefits, unemployment compensation, child support received, veterans benefits, educational assistance, Supplemental Security Income, Temporary Assistance for Needy Families (TANF) cash benefits, and other cash public assistance. <p>Does not include near-cash income as resources.</p> <p>Does not consider tax provisions as resources or expenses.</p>	<p>Pre-tax cash income (as defined in official measure)</p> <p><i>Plus</i>, near-cash resources to meet food, clothing, shelter, and utility needs (as data permit):</p> <ul style="list-style-type: none"> • Housing subsidies • SNAP • School meals • WIC • Energy assistance benefits (LIHEAP) <p><i>Plus or minus</i>, tax provisions (the combination of taxes paid including income and payroll taxes paid, as well as tax credits and refunds); tax credits considered include the EITC.</p>	<p>Pre-tax cash income (similar in concept to official measure, but including less detail about different sources of income because the relevant information obtainable from the ACS is more limited than that obtainable from the CPS).</p> <p><i>Plus</i>, near-cash resources to meet food, clothing, shelter, and utility needs:</p> <ul style="list-style-type: none"> • SNAP (called FoodShare in Wisconsin) • Housing subsidies • Energy assistance benefits (LIHEAP) <p><i>Plus</i>, tax provisions (the combination of taxes paid including income and payroll taxes paid as well as tax credits and refunds) relevant to Wisconsin residents; tax credits considered include the federal and state EITCs and Wisconsin Homestead Credit.</p>

(table continues)

Table 1, continued

Component	Official Poverty Measure	Supplemental Poverty Measure	Wisconsin Poverty Measure
	Does not subtract expenses to meet nondiscretionary needs such as medical out-of-pocket costs, work-related costs, child support paid.	<i>Minus</i> , medical out-of-pocket expenses, work expenses (transportation and child care), child support paid.	<i>Minus</i> , work expenses (transportation and child care) <i>Note:</i> Consistent with the SPM, the WPM also considers medical out-of-pocket expenses in determining poverty (see below). The WPM considers these medical expenses in the calculation of the thresholds (i.e., if medical needs are identified as high, the thresholds are constructed high), unlike the SPM, which considers medical expenses in the calculation of resources as a factor reducing resources; however, the spirit and the consequences of these two approaches are essentially the same.
Thresholds	Base threshold is calculated for <i>two-parent, two-child families</i> , based on food costs and the share of income spent on food in the early 1960s.	Base threshold is calculated for <i>all families with two children</i> , and three parameters of adults, based on a five-year average of expenses at the 33 rd percentile for food, clothing, shelter, and utilities (FCSU), multiplied by 1.2 for “a little bit more.”	Base threshold is calculated for <i>two-parent, two-child families</i> , based on a three-year average of expenses at the 33 rd percentile for food, clothing, shelter, and utilities (FCSU); multiplied by 1.2 for “a little bit more.”

(table continues)

Table 1, continued

Component	Official Poverty Measure	Supplemental Poverty Measure	Wisconsin Poverty Measure
	<p>Thresholds are adjusted for:</p> <ul style="list-style-type: none"> • differences in family size and number of children and adults • age, with separate thresholds for individuals and couples age 65 and older 	<p>Thresholds are adjusted for:</p> <ul style="list-style-type: none"> • differences in family size and number of children and adults using a three-parameter scale^a • geographic location by state (and metro vs. non-metro within each state) based on five years of ACS data on rental costs for two-bedroom units • variation by housing tenure (rent vs. own vs. own outright), including all mortgage expenses in shelter costs 	<p>Thresholds are adjusted for :</p> <ul style="list-style-type: none"> • differences in family size and number of children and adults using a three-parameter scale • geographic location by state (from Census Bureau) and six regions within state (authors' calculations from ACS) • variation by housing tenure (rent vs. own vs. own outright), including all mortgage expenses in shelter costs • out-of-pocket medical expenses, with differences based on risk factors (elder presence, family size, health insurance, and health status).

Sources: Short (2011), Interagency Technical Working Group (2010), Isaacs et al. (2010a), and Zedlewski et al. (2010).

^aThe three SPM parameters are: two parents, two children; one parent, two children; and multiple adults in multigenerational families, two children (Betson, 1996; Iceland, 2005).

Data Source

Our primary data source for the analysis is the U.S. Census Bureau's 2010 American Community Survey (ACS), as well as the 2008 and 2009 annual ACS samples,⁵ which we supplement with state administrative data on participation in public assistance programs. The U.S. ACS is an annual survey that provides a variety of useful information about economic and social needs for a representative sample of the U.S. population. To analyze the ACS data, we use data extracts from the Integrated Public Use Microdata Series (IPUMS), which are available to researchers outside the Census Bureau but consist of only a subsample of all ACS data collected and used by the Census Bureau.⁶ In our analysis, each annual data set drawn from the ACS subsamples contains a sample of nearly 60,000 individuals residing in Wisconsin (Ruggles et al., 2010).

The ACS data we use provide unique advantages relevant to our research. First, we take advantage of the relatively large sample sizes in the ACS data set in order to examine poverty in smaller areas within the state. While the Current Population Survey (CPS) is used for national poverty estimates under both the official measure and the SPM, the sample sizes for its single-year data are too small to be reliable for state and local poverty estimates. Specifically, using the ACS IPUMS data, we examine poverty in 22 areas in Wisconsin, including 10 large (more densely populated) counties and 12 multicounty areas that encompass relatively small (less densely populated) counties.⁷ Further, for large counties such as Milwaukee, Dane, and Brown, we provide poverty estimates for subcounty areas. In particular, see Map 2 for the Milwaukee County breakdown. An additional advantage of the data is the inclusion of detailed housing information.

Despite their strengths, the ACS data used in our analysis are also subject to limitations, such as less detailed information about resources (compared to CPS data). For instance, the ACS asks respondents whether they receive SNAP benefits, but does not ask the amount of the benefit. The data contain even less detail on other in-kind benefits (e.g., housing and energy assistance, tax credits, or out-of-pocket expenses for work-related child care or medical expenses). Researchers using the ACS, therefore, must use a variety of imputation methods to estimate taxes, noncash benefits, and family expenses in order to calculate a comprehensive poverty estimate. However, the ACS provides the best available data for examining poverty at the local level, as we do in the current analysis, and the issues stemming from data limitations have been alleviated by our efforts to combine ACS with other data sources including Wisconsin's administrative data on participation in income support programs.

Poverty Measurement under the WPM

In this report for 2010, we use an analytical approach largely consistent with those employed in previous issues of the *Wisconsin Poverty Report* while we update the thresholds to reflect expenses and need in 2010, and implement a few minor methodological refinements. These refinements include an improvement of the measure of child care costs, and two largely off-setting refinements to geographic adjustment, as discussed further below.

⁵As noted previously, ACS data about income in each year span a total of 23 months. For example, the information about income drawn from the 2010 ACS data covers January 2009 through November 2010 because the survey was implemented sometime in 2010, asking about income in the previous 12 months before the time of the survey. This characteristic of the data means it is necessary to use caution when interpreting results, especially those for a given year. However, assuming that the survey data were constructed consistently across the years, this would be less of an issue when examining trends in poverty for an extended period of time.

⁶The particular ACS data set available for public use is a subsample of the ACS data that Census Bureau uses to calculate estimates for smaller areas including the rate for Wisconsin, resulting in a potential difference in official measure estimates between our analysis and Census Bureau's calculations. For example, for 2010, our analysis estimates Wisconsin's overall poverty rate as 13.0 percent, and the Census Bureau estimates Wisconsin's overall poverty rate as 13.2 percent.

⁷The 12 multicounty areas correspond to the Census Bureau's sampling units, called Public Use Microdata Areas (PUMAs); their boundaries are set by the Census Bureau to ensure at least 100,000 residents in each unit (Ruggles et al., 2010).

In this report, we applied the updated methods in our estimates of poverty for 2009 and 2010, providing a consistent time series for those two years. The estimates for 2008 employed slightly different methods and so are not strictly comparable. However, the findings reported last year that poverty rates did not change significantly between 2008 and 2009 under the WPM is not affected by the small methodological refinements we made in 2009 and 2010. See Appendix B for a discussion of these differences.

As with almost all poverty measures, the WPM determines poverty status by comparing a measure of economic need to a measure of the economic resources available to meet that need. A poverty threshold (or measure of need) is the least amount of income deemed necessary to cover the basic expenses of the unit of people considered. Three major components commonly constitute poverty measures: the resource-sharing unit (and the universe of people included in those units), resources, and need; we describe each of these components to demonstrate our approach to the WPM.

Poverty Units and the Universe over which Poverty is Measured

The resource-sharing unit includes all persons who share the same residence and are also assumed to share income and consumption (called “family”). In the WPM, we expand the definition of family used in the official poverty measure (which is restricted to married couples and their families), by including unmarried partners and their families, foster children, and unrelated minor children in our poverty unit. However, our poverty unit is smaller than the household unit because we split unrelated subfamilies and unrelated adults into separate poverty units within the household. In constructing the universe of our analysis, we exclude individuals in group quarters (such as nursing homes, assisted living facilities, prisons, college dormitories, and other institutions) from the poverty units considered.

Our approaches to constructing poverty units and the universe of the analysis are largely consistent with those adopted by the SPM, but we depart from SPM approaches by excluding college students with annual earnings of less than \$5,000 from the universe of poverty. We implement this exclusion because these low-income college students likely have income that was not recorded in our data and may therefore upwardly bias our poverty estimate. Excluding college students changes our estimate for Wisconsin’s overall poverty by 0.1 percentage point while it leads to more substantial changes in college towns such as Madison and La Crosse (see Appendix A for a sensitivity analysis).

Family Resources Considered under the WPM

While the official poverty measure considers nothing beyond pre-tax cash income in its calculation of resources, the WPM incorporates a more comprehensive range of resources, including tax credits and noncash benefits (including SNAP and housing subsidies), and it adjusts for families’ nondiscretionary spending needs that reduce the income available to meet their other needs. Consistent with our goal of measuring poverty in Wisconsin, we include Wisconsin-specific public resources such as the Wisconsin Homestead Tax Credit and the Wisconsin Earned Income Tax Credit (EITC), in addition to the federal EITC. Below, we describe each step in our calculation of family resources in greater detail.

First, our calculation of family resources starts with pre-tax cash income, summed across all individuals in the poverty unit based on amounts reported in the ACS; we then add (or subtract) federal and state income taxes and credits and mandatory payroll taxes. Because the ACS does not have data on taxes paid or tax credits collected, we rely on a tax model developed by John Coder of Sentier Research, LLC for this project. The tax model incorporates Wisconsin-specific taxes, including the Wisconsin Homestead Credit.

Next, we subtract certain expenses spent to meet non-discretionary spending needs. We consider as expenses spent to meet non-discretionary spending needs, work-related expenses that include child care and transportation costs, as well as medical out-of-pocket (MOOP) costs. We subtract our estimate of work-related expenses from the sum of cash income, tax-related provisions (calculated after considering taxes paid and tax credits/refunds),

and noncash benefits in order to determine final family resources that will then be compared to the poverty thresholds.

We have refined our estimate of child care expenses this year, imputing actual child care expenses to working families with children under age 12, based on matched data from the Current Population Survey (CPS). This new approach takes advantage of data about child care expenses newly collected on the CPS. In the past, we had taken an “expected amounts” approach, assigning relatively flat amounts of weekly expenses to all working families with children, with the amounts varying only by the age and number of children. The revised approach incorporates much more of the real-world variation in child care costs, including the fact that many working families report no expenses for child care. The large number of families without any child care expenses reduces work-related expenses, and thus increases family resources (after adjusting for child care expenses), and therefore reduces poverty rates. The change is not trivial. A comparison of 2009 poverty rates with the old and new child care methodologies suggests that this change reduces the 2009 poverty rate by 0.5 percentage points, overall and by 1.3 percentage points for families with children. (For further information, see Appendix B in this report, and also Appendix H in Isaacs et al., 2011b.)

Other than refining our estimate of child care expenses, we estimate work expenses for 2010 employing the same method as our 2009 estimation. We begin with the Census Bureau approach of assigning a flat amount of work expenses to all workers based on data from the Survey on Income and Program Participation. However, we differ from the SPM in making a small adjustment to account for longer commuting distance (and thus higher transportation expenses) for residents in rural areas of Wisconsin.

In contrast to the treatment of work-related expenses as a factor that reduces family resources, for the sake of technical ease, we consider MOOP expenses in determining the poverty threshold (as described below) as a factor that increases the threshold. This approach to MOOP expenses is the same as the one used in last year’s report. Note that some alternative poverty measures (including the SPM) consider medical expenses in determining resources; they often do so by imputing MOOP expenses and subtracting them from each family’s resources. In contrast, we adjust for MOOP expenses by setting different poverty thresholds for families with varying levels of expected medical need, as described below. Despite this technical difference, the spirit of the consideration of MOOP expenses under the WPM is consistent with the consideration under the SPM.

Finally, to calculate total resources for a family (poverty unit), we add these various cash and noncash resources received by the individual members in the unit. The summation is complicated by the fact that some resources are measured at the individual level, some at the household level, and some for a unit that is between person and household. To calculate resources in the poverty unit, we followed the following schematic:

Sum of personal cash income for all persons in the poverty unit
+
Sum of federal and state income tax (+ or –) for all heads of tax-filing units in the poverty unit + sum of payroll tax (–) for all working individuals in the poverty unit
+
Sum of SNAP benefits for all food stamp unit heads in the poverty unit
+
Share of household LIHEAP benefit that goes to poverty unit
+
Share of household public housing benefit that goes to poverty unit
–
Child care and work expenses for the poverty unit

Setting Poverty Thresholds and Determining Poverty Status under the WPM

Once family resources are calculated, poverty thresholds (measures of essential need) must be set as a comparison in order to determine poverty status. To consider need, our poverty thresholds are constructed based on food, clothing, shelter, and other expenses, which are set at roughly the 33rd percentile of national consumption expenses for a two-child, two-adult family,⁸ with adjustments for prices in Wisconsin (Citro and Michael, 1995). The consideration of relative living standard under the WPM differs from the official poverty measure, which is based on three times the cost of a minimally adequate diet in the 1960s, with adjustments for inflation but without reflection of improved overall standard of living over time. The two measures also differ in that thresholds considering living costs differ by region under the WPM, but are the same across regions under the official measure. Our threshold incorporates feedback from Wisconsin residents on priorities specific to the state, as well as prior research on poverty measurement methods. Our state-specific threshold also accounts for the effect of policies that help reduce medical care expenses, such as BadgerCare.

To estimate the poverty threshold specific to Wisconsin, we begin with the current experimental federal poverty threshold published by the U.S. Census Bureau (2012b).⁹ In 2010, the national threshold was \$26,528 based on a three-year average of expenses. For comparison, the official U.S. poverty line for a two-child, two-adult family in 2010 was \$22,113 (U.S. Census Bureau, 2012a). Next, we estimate the ratio of living expenses in Wisconsin to the national average by using ACS data; our estimate for 2010 was .902. Based on this ratio, we subsequently calculated our baseline poverty threshold (i.e., the threshold for a two-adult, two-child family), which was \$23,938 for Wisconsin in 2010 (which we refer to as statewide geographic adjustments; see Table C-1, Appendix C).¹⁰

The reader should note that the WPM poverty line falls from 2008 to 2009 and then from 2009 to 2010 in Appendix Table C-1. This decline reflects the fact that as the nation underwent the recession, people at the 33rd percentile of the distribution spent less on food, clothing, and shelter. Relative poverty lines ought to reflect both growth when times are good and decline when times are bad. The WPM does just that. The three-year average nature of the NAS experimental thresholds that we use mean that the effects of the 2008 to 2010 recession are evident in our 2010 poverty line. In contrast, the SPM poverty line, constructed only for 2009 and 2010, uses a five-year average, and here the poverty line increases from 2009 to 2010 because the longer averaging period includes the relatively “good years” from 2006 to 2008 in their calculation.

In refining the measures of need, we calculated different poverty thresholds for families of different sizes and compositions in Wisconsin for 2010. Table C-2 (in Appendix C) includes Wisconsin poverty thresholds in 2010 by family size and composition under the WPM (but does not address variations in thresholds according to other considerations discussed below). We also used Census Bureau estimates of the difference in thresholds for owners with a mortgage, owners without a mortgage, and renters (Garner and Betson, 2010). We then further adjusted these poverty thresholds based on differences in local costs of living, as measured by housing costs across regions in Wisconsin (for owners with a mortgage, owners without a mortgage, and renters), which we refer to as within-state geographic adjustments. Finally, we added the cost of expected medical expenses to the

⁸The SPM proposes to move to a two-child reference family (with one, two, or more adults), measured at the 33rd percentile. Such a threshold would be lower than the two-adult, two-child threshold (even though it would be expressed in two-adult, two-child family equivalents) because the single-parent and multi-generation families brought into the sample will include more low-income families, thereby lowering expenses measured at any particular point on the income distribution.

⁹The Census Bureau has calculated four different versions of the NAS-based threshold for 1999–2010, each based on three-year average expenses, which can be found at http://www.census.gov/hhes/povmeas/data/nas/tables/2010/web_tab5_povertythres2010.xls. We used the version that includes the repayment of mortgage principal for owned housing (called FCSU).

¹⁰The ratio of Wisconsin expenses to national expenses is less than 1 because the state has a lower cost of living than many other parts of the United States.

thresholds, using varying costs across families based on health insurance status, the presence of elders, and health status.

As noted in Appendix A, compared to last year's analysis, we made small refinements to our geographic adjustments at both the state level (Wisconsin compared to the United States) and the local level (Milwaukee, Dane County, rural areas, etc.); the consequences of these two changes on our estimates largely offset one another and consequently had little effect on poverty estimates (see Appendix B for details). All our other adjustments to thresholds follow the same approaches used in last year's report; last year's technical report and appendices may be consulted for further details (Isaacs et al., 2011a; Isaacs et al., 2011b).

Finally, to determine whether or not a family—and individuals belonging to the family unit—could be considered poor, we compared the comprehensive measure of their resources to the relevant threshold or measure of need. Taken as a whole, the WPM helps us better understand the needs and resources of Wisconsin residents, as well as the impact of policies intended to reduce poverty by lowering expenses and/or increasing resources.

Two Additional Poverty Measurements Employed for Comparison

To provide a more nuanced picture of economic hardship in Wisconsin, in this report we employ three different measures of poverty to provide estimates in the state from 2008 through 2010. In addition to the WPM described above, we employ two additional measures of poverty: a measure based on market (private) income only, and the Census Bureau's official poverty measure, which considers only pre-tax but post-benefit cash income.

Market income includes earnings, investment income, private retirement income, child support, and other forms of private income. The market-income-only measure employed in our analysis is consistent with the Wisconsin Poverty Measure (WPM) with regard to the definitions of poverty thresholds and poverty unit and in the treatment of work and medical expenses, which differ from the approach of the official measure. The estimates of official poverty statistics shown in this analysis are based on our implementation of the official poverty measure using the IPUMS ACS data (a subsample of the ACS data that the Census Bureau uses), and therefore they may differ slightly from official poverty estimates produced by the Census Bureau.

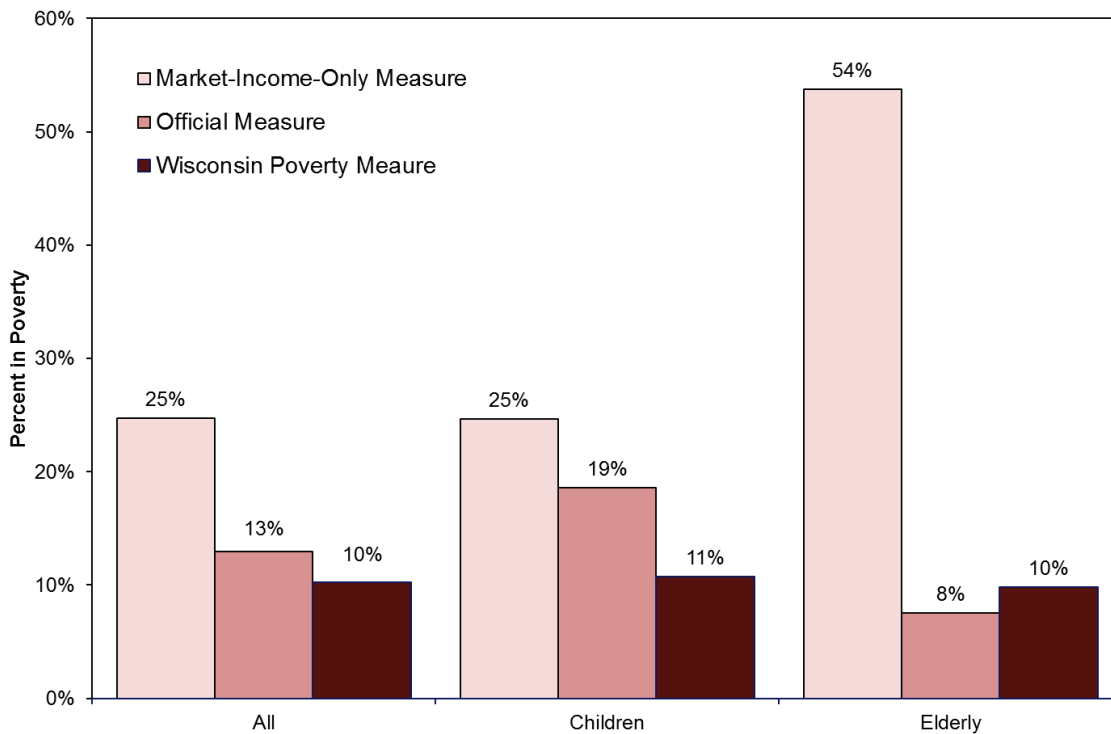
In the next section, we report our results, first reviewing the data for 2010; we discuss overall poverty, and then turn to an examination of poverty for two vulnerable groups (children and the elderly). We then explore poverty trends during the period from 2008 through 2010.

POVERTY AND THE EFFECTIVENESS OF THE SAFETY NET IN WISCONSIN, BY MEASURE AND POPULATION

Wisconsin Poverty in 2010

We begin by asking how Wisconsin fared in 2010, using three different measures for estimating poverty: the market-income-only measure, the official poverty measure, and the WPM. Under the market-income measure of poverty, which is based on private sources of income (e.g., earnings, investment income, private pensions), in 2010 one-fourth of Wisconsin's population was poor, with more than half (53.8 percent) of the elderly and one-fourth of children living in families that were considered poor, as indicated by the three tallest bars in Figure 3 below.

Figure 3. Poverty in Wisconsin in 2010 by Measure: Overall and for Children and the Elderly



Source: IRP tabulations using 2010 American Community Survey data.

Using the official poverty measure, which takes into account the effect of government cash transfers (e.g., Social Security, unemployment insurance, cash welfare payments), elderly poverty drops dramatically, to 7.6 percent, and overall poverty drops from 24.8 percent to 13.0 percent. Child poverty is also much lower under the official measure than under the market-income measure. However, in contrast to the market-income measure, under the official measure the rate of child poverty (18.6 percent) is much higher than the rate of elderly poverty (7.6 percent), in part because fewer cash assistance benefits are currently provided to families with children in the United States. Under the official measure, overall poverty was 13.0 percent in 2010 and lies between the extremes of elderly and child poverty.

Under the WPM (the last bar in each subset of Figure 3) child and elderly poverty rates were relatively similar in 2010: 10.8 percent for children and 9.8 percent for the elderly. Overall poverty was also very similar at 10.3 percent. The primary reason that child poverty is lower under the WPM than in official statistics is that families with children are eligible for a broad range of tax credits (e.g., the Earned Income Tax Credit), and also have markedly high take-up rates of SNAP and other noncash safety net programs. In addition, the WPM, unlike the official measure, counts the income of unmarried partners as part of the family’s resources; this consideration makes a substantial difference in estimates of child poverty because many poor children live with single mothers and their unmarried partners. In contrast, elderly poverty is higher under the WPM than it is according to official measures, mainly because these individuals have substantial out-of-pocket medical expenses not considered by the official measure.

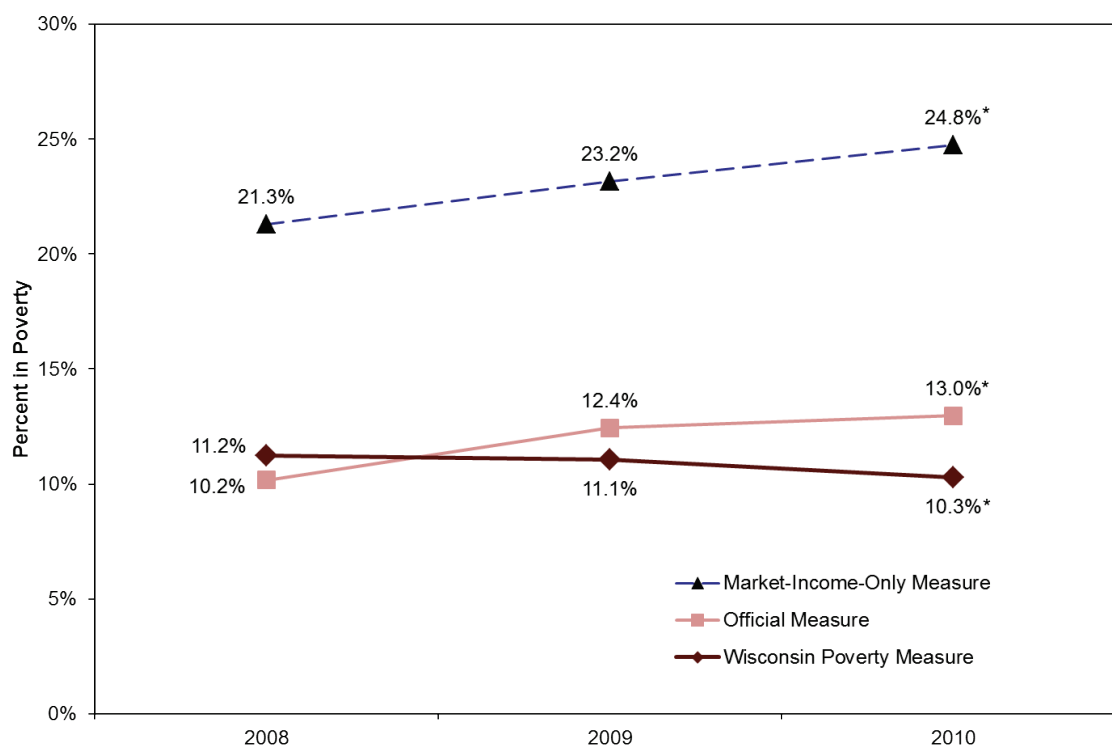
Poverty rates among both children and the elderly vary by family type, with the lowest rates found for married couples. For example, child poverty rates under the WPM ranged from 4.0 percent for children living in married-parent families to 27.1 percent for children living with a single parent (see Appendix D). Children living with cohabiting unmarried parents had a poverty rate of 18.3 percent—much lower than the 46.1 percent rate for this family type under the official measure. The observed difference reflects the fact that the WPM considers the cohabiting partner to be part of the poverty unit and thus includes the unmarried partner’s

resources, while the official measure does not. The result is a lower estimate of poverty rates using the WPM, which likely reflects actual family resources more accurately (compared to the official measure). The small number of elderly individuals living with unmarried partners also sees a lower poverty rate under the WPM; other elderly family types find higher estimates of poverty under the WPM than under the official measure.

Trends in Wisconsin Poverty, 2008 to 2010

As shown in Figure 4, under the market-income measure, which includes only earnings and other private income and ignores all government benefits and taxes, overall poverty rates increased, consistent with the recession-driven decline in employment in Wisconsin in recent years. Across the years examined under the official measure, which includes not only market income but also government cash benefits such as Social Security and Unemployment Insurance, compared to estimates produced under the market-income measure, poverty estimates are much lower. Despite the difference in the size of the estimates for a given year, however, trends in poverty are similar under the official measure and the market-income measure: the official poverty rate also increased by a significant degree.

Figure 4. Wisconsin Poverty Rates under Three Poverty Measures, 2008–2010



Source: IRP tabulations using 2008–2010 American Community Survey (ACS) data.

Notes: The statistical significance of the difference between 2009 and 2010 was examined at the .1 level (two-tailed tests). * = Statistically significant.

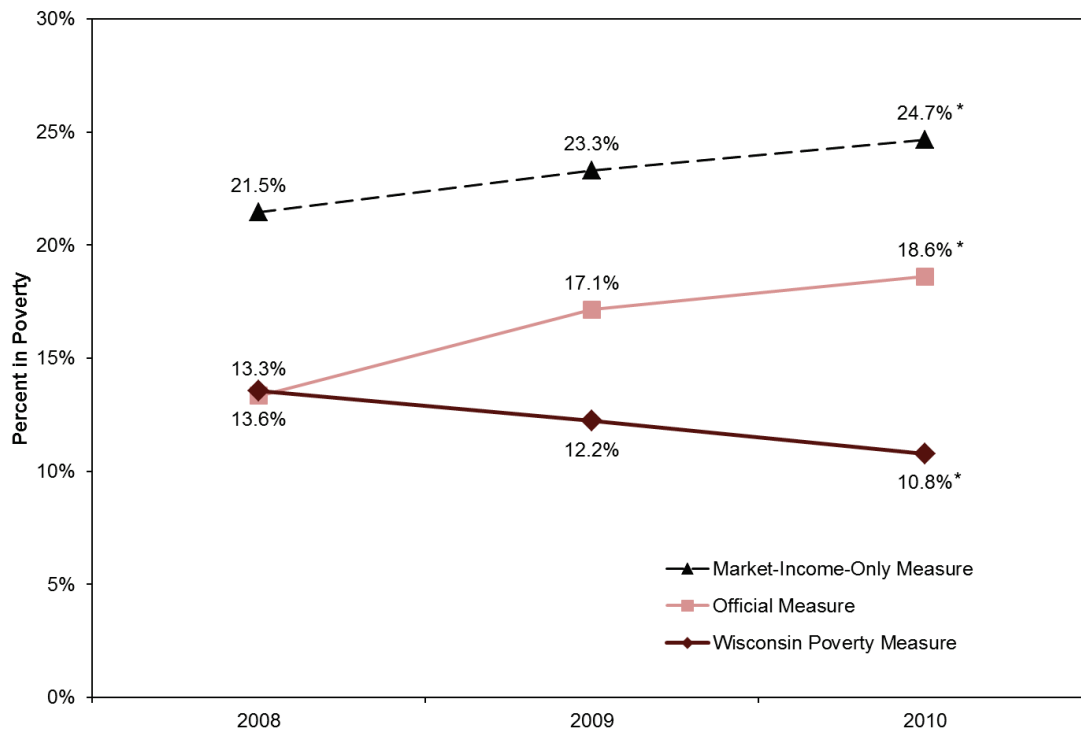
In contrast, the overall poverty rate as calculated under the WPM remained essentially the same between 2008 and 2009, and actually declined (from 11.1 percent to 10.3 percent) between 2009 and 2010. One of the important differences between the more comprehensive WPM and the official measure is that the WPM takes into account increases in noncash benefits and tax credits, which offset the drop in market income in Wisconsin in 2010. In last year’s report, which compared 2008 and 2009, we concluded that policies intended to address the recession and reduce poverty had indeed been successful in our state in that they kept poverty from

increasing.¹¹ This year’s findings go even further, suggesting that work supports and other safety net programs continued to expand and helped Wisconsin families in 2010 even more than in 2009, despite persistent economic hardship and worsening labor market conditions in the state.

In summary, one of the most striking findings of this report is that under the WPM the 2010 poverty rate is lower than the 2009 rate, in contrast to the increase in poverty for the same time period under both the official and market-income measures. The decline is not just statewide, but also occurs in the largest county, Milwaukee, as well as for the most vulnerable age group, children (see below).

Figure 5 shows this pattern even more clearly in child poverty rates, which dropped from 12.2 percent in 2009 to 10.8 percent in 2010 under the WPM, in contrast to an increase under official statistics and market-income measures of poverty. Despite the effects of the recession, which had particularly negative effects on the income of parents of minor children, expanded benefits provided under the ARRA of 2009 substantially helped families with children avoid poverty, even more effectively in 2010 than in 2009. While the expanded tax credits under the ARRA were implemented retroactively for the full 2009 calendar year, the ARRA increases in the amount of SNAP benefits received by families did not occur until partway through 2009, and thus the full effect was not felt until 2010. In addition, SNAP caseloads, which include large numbers of families with children, continued to rise during 2010. Because of this combination of higher benefits per family and more families receiving benefits, the antipoverty effect of SNAP benefits was stronger in 2010 than in 2009, contributing to the drop in child poverty. Even with these benefits and the decrease in child poverty, however, poverty remained higher among children than among any other age group in 2010, as was the case in earlier years.

Figure 5. Child Poverty Rates in Wisconsin under Three Poverty Measures, 2008–2010



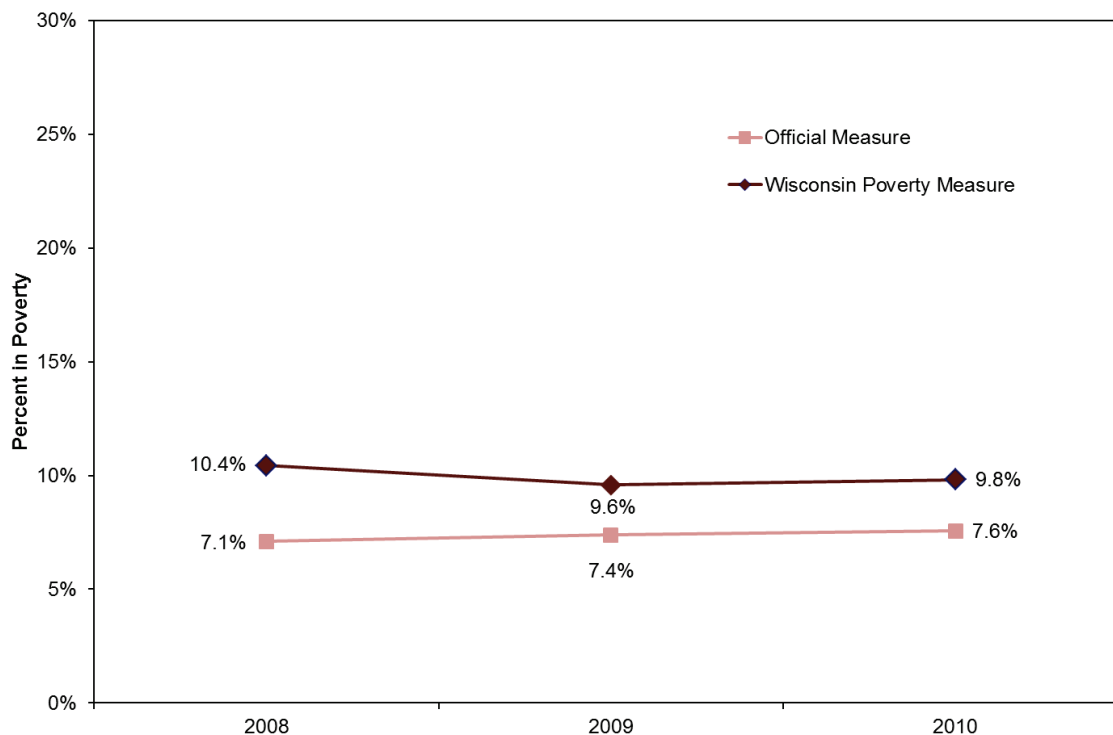
Source: IRP tabulations using 2008–2010 American Community Survey data.

Notes: The statistical significance of the difference between 2009 and 2010 was examined at the .1 level (two-tailed tests).
* = Statistically significant.

¹¹As discussed in the methodology section and in Appendix B, the estimates for 2009 presented here differ slightly from those published a year ago, because of small methodological improvements that were applied to both 2009 and 2010 in order to provide a consistent time trend. The estimates for poverty in 2008 have not been updated.

As shown in Figure 6, elderly poverty did not change significantly between 2009 and 2010, whether measured by the WPM or the official measure (or the market-income measure; data not shown). Elderly individuals are less likely to be employed than younger individuals, and thus are generally less affected by recession. In addition, they are less likely to receive tax credits or noncash benefits, and so have been less affected by the expansion of public benefits undertaken in the ARRA as a response to the recession.

Figure 6. Elderly Poverty Rates in Wisconsin under Two Poverty Measures, 2008–2010



Source: IRP tabulations using 2008–2010 American Community Survey data.

Notes: The statistical significance of the difference between 2009 and 2010 was examined at the .1 level (two-tailed tests). The change was not statistically significant under either measure.

Using the Wisconsin Poverty Measure to Assess the Effect of Policies on Poverty

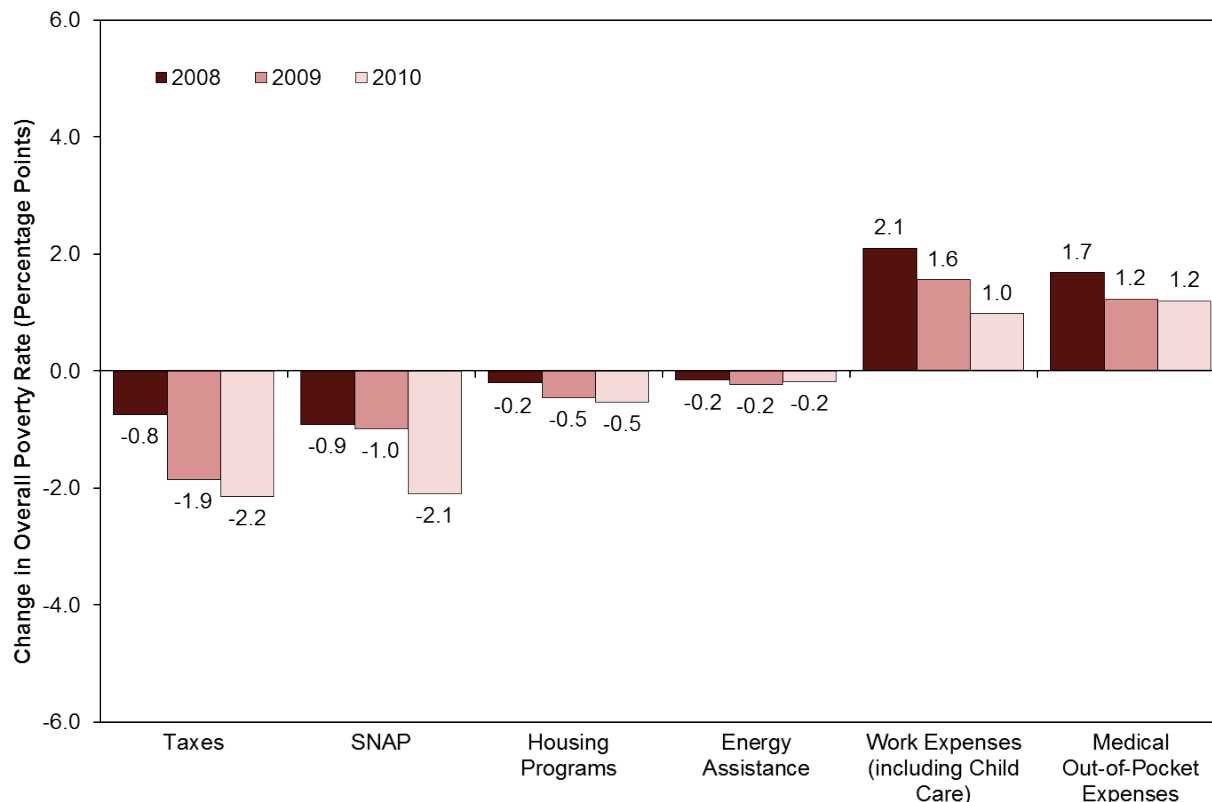
Compared to the official poverty measure, the WPM allows us to examine the economic effects of a wider range of policies aimed at the poor. Partly as a result of welfare reform, the majority of the expansion in public benefits in Wisconsin during the recent recession has been in the form of noncash programs and tax-related benefits tied to work activities, rather than cash transfer programs. Therefore, it is important to document the effects of these noncash and tax benefits on poverty.

In this section, we estimate what poverty rates would have been if we had not considered noncash and tax benefit receipts, or work-related resources/expenses and medical resources/expenses. In addition to estimating the effects of benefits, we indirectly illustrate the impact of medical and work-related expenses on poverty, as policies intended to reduce these expenses would be as important as safety net programs in improving the economic well-being of low-income families.

Among the benefit programs examined in this analysis, tax credits and refunds received by families had the greatest impact on reducing overall poverty in 2009 and 2010; these benefits reduced the percentage of people in

poverty by more than 2 percentage points (see Figure 7). This result reflects the expanded tax credits under the ARRA, which were fully in effect in both 2009 and 2010. In 2010, the antipoverty impact of SNAP was almost as large as the effect of taxes, reflecting an expansion in benefit amounts provided under the ARRA, as well as increased need and participation in the program due to the recession, as seen in Figure 2. The impact of SNAP benefits was twice as large in 2010 as it was in 2009.

Figure 7. Effects of Taxes, Public Benefits, and Expenses on Overall Poverty in Wisconsin, 2008–2010



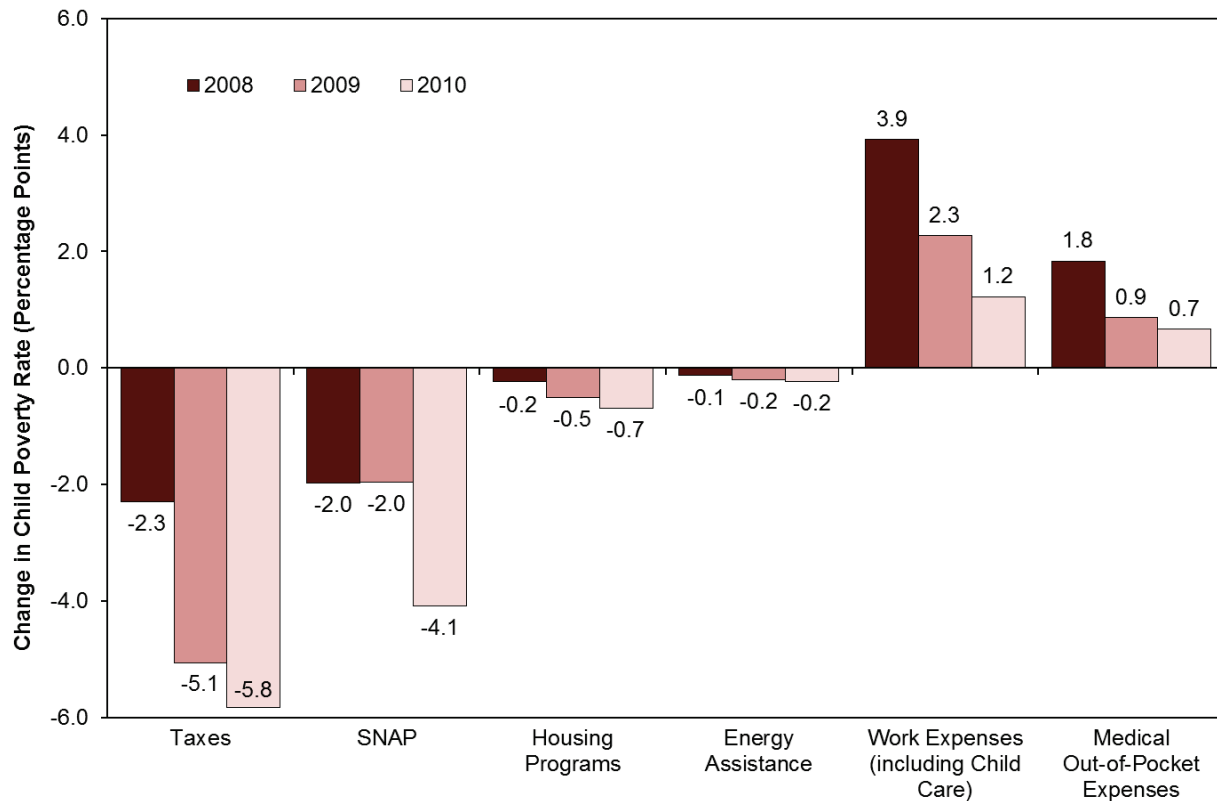
Source: IRP tabulations using 2008–2010 American Community Survey data.

Note: SNAP = Supplemental Nutrition Assistance Program.

Both taxes and SNAP had a large impact on reducing child poverty; this is particularly true of 2010, when tax-related provisions reduced child poverty by 5.8 percent and SNAP benefits reduced child poverty by 4.1 percent (see Figure 8). In contrast, taxes had an almost negligible effect on elderly poverty, and SNAP benefits reduced elderly poverty by less than 1 percent during the time considered (see Figure 9). This pattern of tax effects is expected because the largest tax credits are focused on working individuals who are parents of minor children. With regard to SNAP benefits, a relatively small proportion of the elderly are poor enough to meet the income qualifications for SNAP benefits; even when they do qualify, they are less likely than families with children to apply for nutrition benefits.

Housing and energy assistance provide modest financial assistance to both children and the elderly (see Figures 8 and 9), reducing poverty by less than 1 percent in any year. Housing benefits had a greater impact on poverty among children in 2010 than in 2009.

Figure 8. Effects of Taxes, Public Benefits, and Expenses on Child Poverty in Wisconsin, 2008–2010



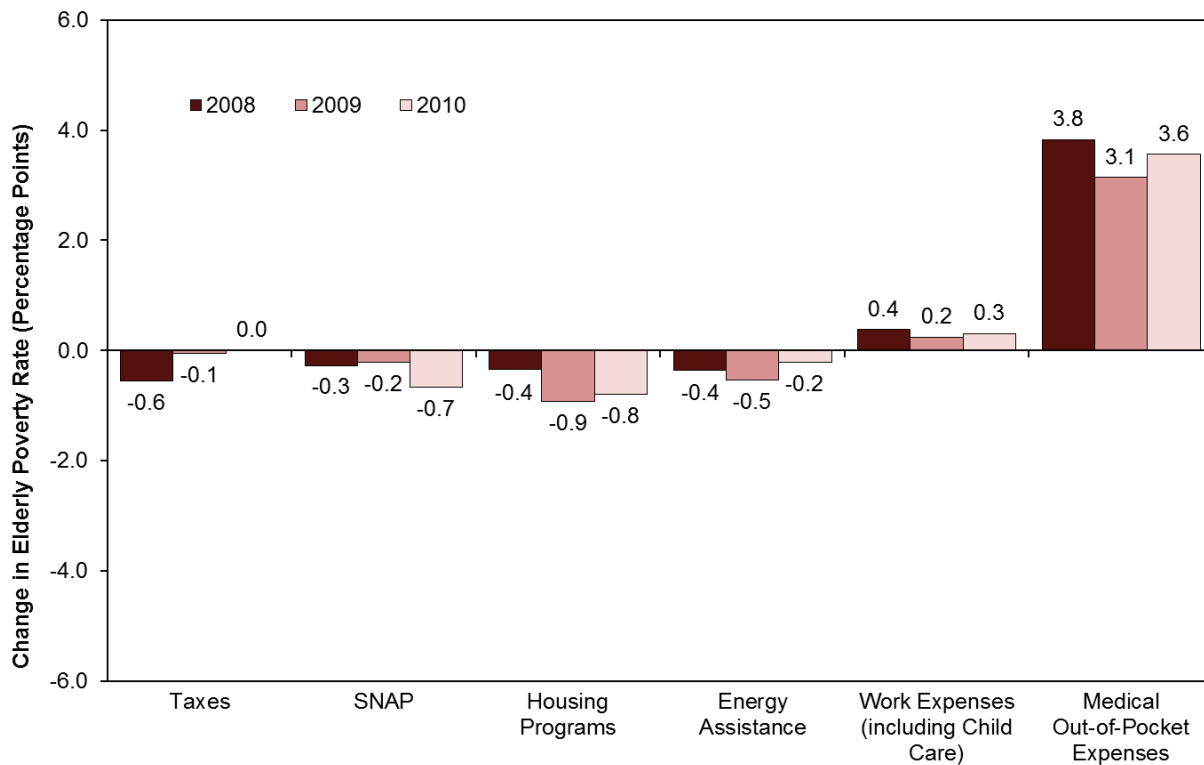
Source: IRP tabulations using 2008–2010 American Community Survey data.

Note: SNAP = Supplemental Nutrition Assistance Program.

Work expenses were more significant for children, but the effects of medical expenses were felt more acutely by the elderly, who are more likely to be in need of more expensive and sustained medical care. In general, out-of-pocket medical expenses (e.g., insurance premiums, co-payments for medical services, prescription and over-the-counter drugs, and medical expenses not covered by insurance) present a significant challenge for the low-income elderly. Public policies designed to increase the coverage of medical expenses for the low-income elderly can help to alleviate the economic hardship felt by this group.

In Appendix E, we also show the marginal impact of eight alternate specifications of the WPM for 2008 through 2010, including six specifications that include/exclude specific resources or expenses (as shown in Figures 7, 8, and 9), and two additional alternate specifications: the first considering within-state cost-of-living adjustments (COLAs) and the second considering housing tenure. The final two new specifications have generally smaller effects (compared to other specifications) overall and for children; however, the pattern differs for the elderly, which reveals the importance of methodological considerations as to whether/how to include housing tenure in poverty measurements for the elderly. These results indicate that a particular methodological consideration may be more important for one group than for others in estimating poverty rates, and suggest the need to pay close attention to poverty measurement for sub-demographic groups beyond the development of region-specific measures.

Figure 9. Effects of Taxes, Public Benefits, and Expenses on Elderly Poverty in Wisconsin, 2008–2010



Source: IRP tabulations using 2008–2010 American Community Survey data.

Note: SNAP = Supplemental Nutrition Assistance Program.

Poverty within Wisconsin: Poverty Rates by County or Multicounty Substate Areas

A significant strength of the WPM is its ability to portray poverty across regions within the state. Our categorization of substate areas includes 10 large counties and 12 multicounty Public Use Microdata Areas (PUMAs) that encompass the remaining areas of the state. While some of the multicounty areas comprise only two counties (e.g., Chippewa and Eau Claire), others require as many as seven to 10 of the more rural counties in order to gain a sufficient sample size for confidentiality reasons and also to obtain reliable estimates.

As shown in Table 2 below, our analysis of substate areas reveals that the overall poverty rate hides substantial variations in poverty across regions. In 2010, estimates of WPM poverty rates in these substate areas range from 16.7 percent in Milwaukee County to 4.2 percent in the area including Ozaukee and Washington counties. As shown in Map 1, Milwaukee County and the region including Chippewa and Eau Claire counties were the only areas in which rates were significantly higher than the state average. While Milwaukee County still shows the highest poverty rate in the state, its rate decreased to 16.7 percent in 2010 from 18.7 percent in 2009 (see Table 3 for comparison between 2009 and 2010). The area including Chippewa and Eau Claire counties had a poverty rate of 14.5 percent in 2010, significantly higher than the 12.1 percent rate in 2009. Dane County had a poverty rate of 11.9 percent in 2010, lower than its rate of 13.5 percent in 2009. In fact, in contrast with the WPM findings for 2009, in 2010 Dane County’s rate was no longer significantly different from the state average. Meanwhile, seven areas have rates that are significantly lower than the statewide rate, including the following counties: Ozaukee/Washington (4.2 percent), Waukesha (5.1 percent), Brown (7.3 percent), and Sheboygan (7.0 percent).

Table 2. WPM Poverty Rates in Wisconsin by County or Multicounty Area with Upper and Lower Bounds, 2010

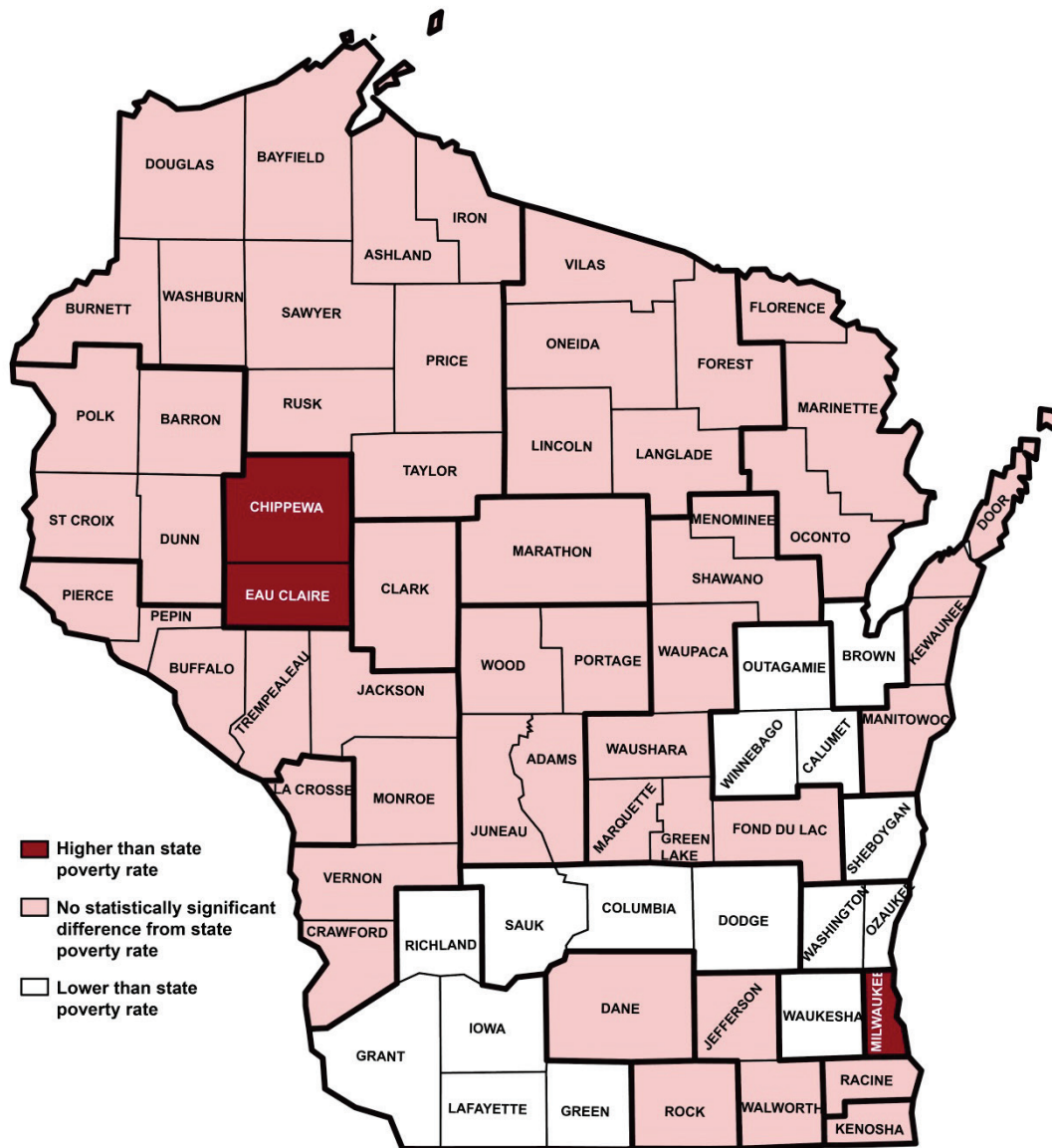
	Wisconsin Poverty Measure (%)	90% Confidence Interval: Lower Bound (%)	90% Confidence Interval: Upper Bound (%)	Difference from State Average†
County				
Milwaukee	16.7	15.1	18.4	Higher
Dane (Madison)	11.9	10.4	13.3	NS
Waukesha	5.1	3.7	6.6	Lower
Brown (Green Bay)	7.3	5.1	9.4	Lower
Racine	11.1	8.5	13.7	NS
Kenosha	11.8	9.0	14.7	NS
Rock (Janesville)	11.1	8.7	13.5	NS
Marathon (Wausau)	7.5	4.6	10.4	NS
Sheboygan	7.0	4.9	9.2	Lower
La Crosse	9.7	6.9	12.5	NS
Multi-County Area				
Ozaukee/Washington	4.2	2.8	5.7	Lower
Jefferson/Walworth	9.8	7.5	12.1	NS
Chippewa/Eau Claire	14.5	11.3	17.6	Higher
Calumet/Outagamie/Winnebago (Appleton)	7.5	5.8	9.1	Lower
Columbia/Dodge/Sauk (Baraboo)	6.7	4.9	8.5	Lower
5-county area (Menomonie)	10.8	8.8	12.7	NS
5-county area (Dodgeville)	7.6	6.0	9.2	Lower
6-county area (Manitowoc)	9.6	7.5	11.7	NS
7-county area (Fond du Lac)	9.4	7.4	11.4	NS
8-county area (Sparta)	9.3	7.2	11.4	NS
9-county area (Stevens Point, Crandon)	9.0	7.5	10.4	NS
10-county area (Superior)	10.1	8.3	11.9	NS
State Total	10.3	9.8	10.7	

Source: IRP tabulations using 2009–2010 American Community Survey data.

Note: NS = Not statistically significant.

† In this analysis, each region's difference from the state average was assessed as not statistically significant if the 90% confidence intervals for each region's statistics and the state's overall statistics overlap.

Map 1. Wisconsin Counties and Multicounty Areas with 2010 WPM Poverty Rates Above or Below the State Rate of 10.3%



Source: IRP tabulations using 2010 American Community Survey data.

Notes: WPM = Wisconsin Poverty Measure.

Table 3. Wisconsin WPM Poverty Rates by County or Multicounty Area, 2009–2010

	Wisconsin Poverty Measure 2009 (%)	Wisconsin Poverty Measure 2010 (%)	Difference from 2009†
County			
Milwaukee	18.7	16.7	Lower
Dane (Madison)	13.5	11.9	Lower
Waukesha	5.4	5.1	NS
Brown (Green Bay)	12.4	7.3	Lower
Racine	11.1	11.1	NS
Kenosha	11.9	11.8	NS
Rock (Janesville)	10.4	11.1	NS
Marathon (Wausau)	6	7.5	NS
Sheboygan	7.1	7.0	NS
La Crosse	13.4	9.7	Lower
Multi-County Area			
Ozaukee/Washington	5.7	4.2	NS
Jefferson/Walworth	12.2	9.8	Lower
Chippewa/Eau Claire	12.1	14.5	Higher
Calumet/Outagamie/Winnebago (Appleton)	9.4	7.5	Lower
Columbia/Dodge/Sauk (Baraboo)	5.5	6.7	Higher
5-county area (Menomonie)	9.8	10.8	NS
5-county area (Dodgeville)	10.9	7.6	Lower
6-county area (Manitowoc)	7.4	9.6	Higher
7-county area (Fond du Lac)	9.5	9.4	NS
8-county area (Sparta)	7.6	9.3	Higher
9-county area (Stevens Point, Crandon)	7.1	9.0	Higher
10-county area (Superior)	11.7	10.1	Lower
State Total	11.1	10.3	Lower

Source: IRP tabulations using 2010 American Community Survey data.

Note: NS = Not statistically significant.

† T-tests for comparison between 2009 and 2010 were implemented (at the .1 significance level for two-tailed tests).

Poverty estimates for some regions within the state’s largest counties can also be assessed by taking advantage of the relatively large sample sizes in ACS data, and examining poverty rates across subcounty regions within Wisconsin may show variations in poverty rates that are more dramatic within counties than across the 22 areas in the state. Using the WPM, we estimated poverty for some regions within the state’s most densely populated counties (see Table 4 and Map 2). Within Milwaukee County, 2010 poverty rates ranged from about 5 percent in some suburban areas to nearly 36 percent in the central city, suggesting a significant segregation of the poor and the rich within that county. Further, Milwaukee is surrounded by wealthy suburban counties to the north and west, in which poverty rates are notably below the state average (e.g., Waukesha County had a rate of 5.1 percent and Ozaukee/Washington counties had a rate of 4.2 percent). In 2010, Brown County showed little variation in poverty rates, while Dane County experienced larger variations, with a rate of 18.4 percent in Madison and a rate of 6.4 percent in the rest of Dane County.

Table 4. Poverty Rates in Milwaukee, Dane, and Brown Counties under the Wisconsin Poverty Measure with Upper and Lower Bounds, 2010

	Wisconsin Poverty Measure (%)	90% Confidence Interval: Lower Bound (%)	90% Confidence Interval: Upper Bound (%)	Difference from State Average ^a
Milwaukee (Overall)	16.7	15.1	18.4	Higher
Outer Northwest and East	20.4	16.0	24.7	Higher
Inner North	22.2	17.9	26.5	Higher
Central	35.6	29.4	41.7	Higher
South	15.9	11.9	19.9	Higher
Brown Deer, Glendale, Shorewood, Wauwatosa, Whitefish Bay, Other	5.3	2.8	7.9	Lower
Southern Suburbs ^b	7.0	5.1	8.9	Lower
Dane (Overall)	11.9	10.4	13.3	NS
Madison	18.4	16.0	20.9	Higher
Fitchburg, Middleton, Stoughton, Sun Prairie, Other	6.4	4.6	8.2	Lower
Brown (Overall)	7.3	5.1	9.4	Lower
Green Bay	7.5	4.3	10.7	NS
Rest of Brown County	7.1	4.2	10.0	NS

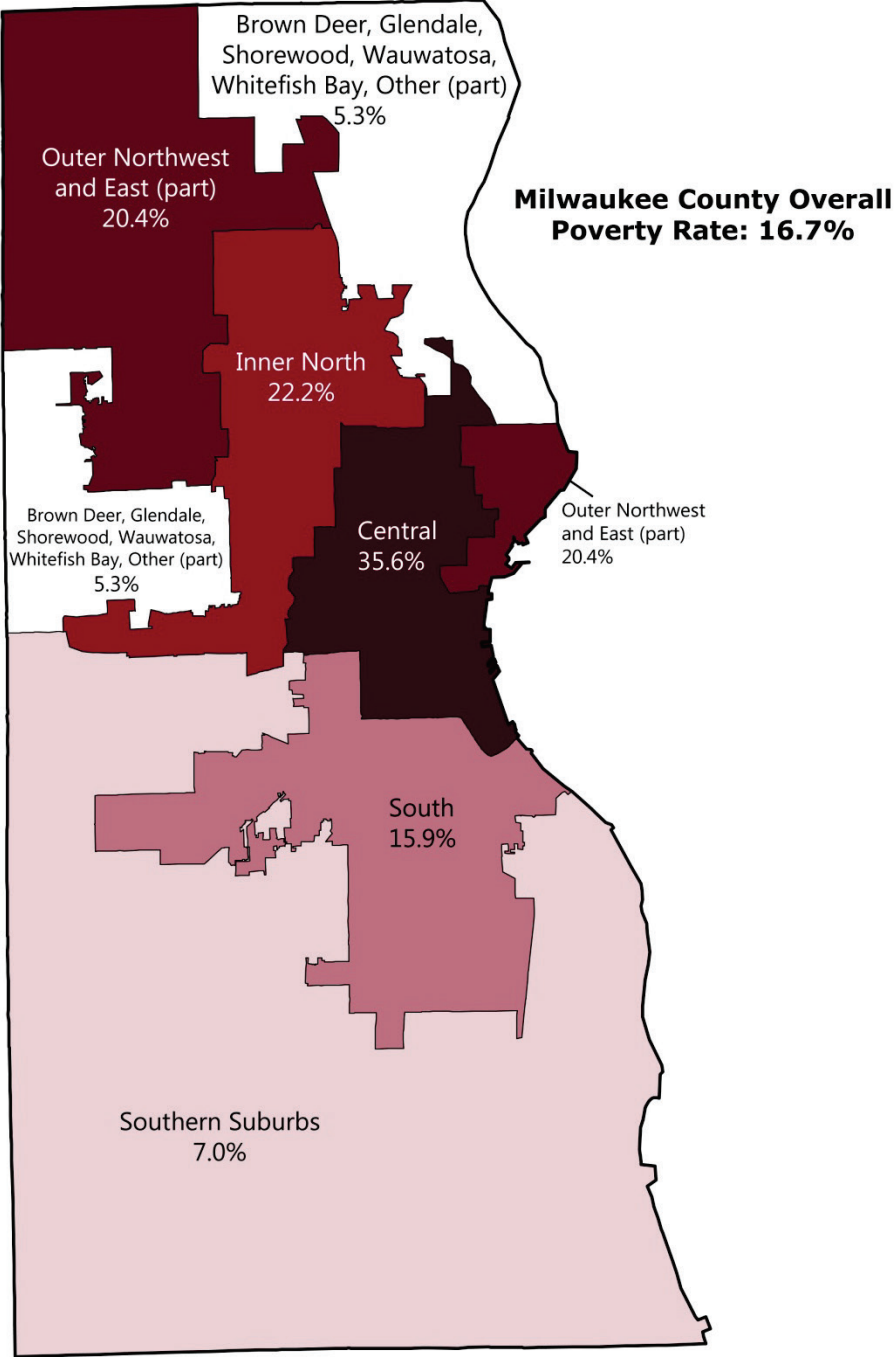
Source: IRP tabulations using 2010 American Community Survey data.

Note: NS = Not statistically significant.

^a In this analysis, each region’s difference from the state average was assessed as not statistically significant if the 90% confidence intervals for each region’s statistics and the state’s overall statistics overlap.

^b The area includes Cudahy, Franklin, Greendale, Greenfield, Oak Creek, South Milwaukee, and West Allis.

Map 2. 2010 WPM Poverty Rates within Milwaukee County by PUMA†



Source: IRP tabulations using 2010 American Community Survey data.

Note: The state poverty rate calculated with the WPM in 2010 was 10.3%. All differences between the regional estimates and the state average as examined here were statistically significant.

† Public Use Microdata Areas (PUMAs) are predefined areas designated by the U.S. Census Bureau that have 100,000 or more residents.

CONCLUSION

The *Wisconsin Poverty Report* provides new insight into poverty in Wisconsin after the onset of the Great Recession by introducing poverty estimates based on an improved measure, the Wisconsin Poverty Measure (WPM). The WPM includes noncash benefits and refundable taxes, which increased in importance during the recession, and has other features that better reflect the characteristics and interests of our state than does the official measure. In doing so, the WPM demonstrates the importance of using an improved measure of poverty to examine the antipoverty impacts of public policies, while at the same time providing estimates across different regions and subgroups within Wisconsin.

The official poverty measure illustrates that Wisconsin families had lower levels of cash resources in 2010 than they did in 2009 and, therefore, poverty rose. The WPM also considers near-cash benefits and programs intended to offset increased need caused by the recession. Poverty rates using the WPM suggest that decreases in employment and earnings in 2010 were offset to a considerable extent through increases in refundable tax credits and noncash benefits, ultimately resulting in a reduction in both the overall poverty rate and the poverty rate for children in 2010. Simply put, targeted benefits with strong take-up rates were very helpful in keeping struggling families out of poverty during the Great Recession.

In this report, the WPM was also used to estimate the extent to which specific noncash benefits and tax-related provisions or medical and work-related expenses affect poverty. Results suggest that SNAP and tax credits have been particularly effective in reducing the state's poverty rate, especially for families with children. We also examined poverty rates across regions in the state, revealing deep poverty in certain areas, including central Milwaukee. The WPM could also be used to examine other demographic groups, such as racial groups, were resources available to do so.

It is important for researchers and policymakers to ask not only whether an income support policy was effective in reducing poverty, but also what solutions might better alleviate longer-term poverty as we emerge from the recession. Long-term poverty solutions for working families should include employment opportunities with wages and employer benefits that can meet family needs and increase economic self-sufficiency. Long-term solutions must also include policies that support work by reducing work-related expenses for families with children, especially families in which there is only one parent who works or in which both parents work full time.

It is also important to note that the adverse effects of the recession went beyond the poor and near-poor to also affect the lower middle class, who experienced declining home values, increased debt levels, and also flat or falling incomes in combination with rising expenses. Indeed, we believe that the long-term solution to poverty is a secure job that pays well, rather than an indefinite income support program. As this report demonstrates, however, in times of need, a safety net that enhances low earnings for families with children, puts food on the table, and encourages self-reliance—as Wisconsin's safety net does—can make a difference in combatting market-driven poverty.

The success of its safety net may be diminished in the future because Wisconsin has recently scaled back its safety net provisions. For example, in 2011 Wisconsin reduced its EITC from 14 percent to 11 percent of the federal credit for families with two or more children (Oliff and Johnson, 2012). Compared to 2010, we expect to see a smaller role of the safety net in reducing poverty in 2011, which will be the focus of next year's report (should we find the resources to carry it out).

Our Wisconsin Poverty Project is one of the first comprehensive statewide implementations of the National Academy of Sciences-based alternative poverty measure and, as such, this study makes unique contributions to the understanding of the effects of policy on poverty. In addition, we are strongly committed to refining our methods as the Census Bureau and other poverty researchers produce new findings about the federal Supplemental Poverty Measure and as we learn more from other poverty measurement research.

APPENDIX A. POVERTY UNIVERSE AND TREATMENT OF COLLEGE STUDENTS

Our poverty universe excludes individuals in group quarters from our analysis. The Census Bureau includes individuals in certain types of noninstitutional group quarters in the poverty universe for the official measure. We have not done so, partly because the detailed coding for types of group quarters is not available on the IPUMS version of the American Community Survey (ACS), but also because it would be difficult to impute noncash resources for such individuals. Our exclusion of all individuals in group quarters is consistent with research on alternative poverty measures for New York City, Minnesota, and Connecticut (New York City Center for Economic Opportunity, 2011; Zedlewski et al., 2010).

This is our third year of exploring the treatment of college students in the poverty universe, namely undergraduate students living in off-campus housing. The ACS asks respondents if they are attending school, with a distinction for undergraduate education, but makes no distinction as to full- versus part-time enrollment. Under the official poverty measure, ACS poverty rates in areas with large numbers of college students are higher than Current Population Survey (CPS) poverty rates due to the survey design. Unlike the CPS, the ACS is conducted throughout the year, meaning college students may be surveyed when they are away from their parents' homes and therefore treated as independent consumer units.¹² Students may report that they are living alone or with roommates, and that they have little or no income; however, in many cases they are relying on the income of family elsewhere or financial aid to meet their food, clothing, shelter, and utility needs. In these cases, it might not be appropriate to consider these individuals as living in poverty.

Following last year's analysis (for further information, see Appendix C in Isaacs et al., 2011b), we eliminate selected college students who meet all of the following criteria:¹³

- ages 18–23;
- attending college as an undergraduate;
- not living with parents or family members, including unmarried partners. To be consistent with our poverty unit definition, this means treating unmarried partners as family and only defining our student population as those living with all other unrelated individuals;
- earned less than \$5,000 in the past 12 months. In 2008, 93 percent of Wisconsin college students had earnings greater than zero and 37 percent had earnings from \$1 to \$4,999; and,
- worked 0–13 weeks during the past year, and typically worked 0–20 hours per week.

We believe these criteria identify students who are not supporting themselves through earnings and who are receiving support from some other source.

Table A1 compares poverty rates under our final model for 2010 (also the final for 2009 in last year's analysis) with 2010 poverty rates if we had kept all college students in our poverty universe. The poverty rate would have been only slightly higher (0.1 percentage point) in 2010 if we had kept all students in our poverty universe, and there would have been no discernible impact on poverty rates for most of the areas examined. However, in areas with large student populations, such as La Crosse, Chippewa/Eau Claire, and Dane counties, the change in

¹²Individuals in group quarters, including college dormitories, are already excluded from our poverty universe. This discussion on treatment of college students pertains strictly to those individuals living in off-campus, privately owned housing.

¹³As the specification for our final model, all poverty rates within this report are based on this definition of the poverty universe, with the exception of those in Tables C-1 and C-2.

poverty due to this sample restriction was larger. For example, in 2010, the poverty rate in La Crosse County would have been 1.6 percent higher in 2010 if we kept all students in our poverty universe.

Not surprisingly, excluding all college students would result in larger changes in estimates than the selection method employed in the current analysis. The sensitivity of the estimates to the decision regarding the selection of college students was explored in last year's report (for further information, see Appendix C in Isaacs et al., 2011b). Last year's analysis explored three specifications: (1) excluding all college students from the sample, (2) the limited restriction explained above (the baseline method in the current analysis), and (3) no sample restriction; these specifications produced overall poverty rates of 10.2 percent, 11.5 percent, and 11.6 percent in 2009, respectively.

Table A-1. Sensitivity of Wisconsin Poverty Measure Estimates to Treatment of College Students, 2010

	[Baseline Model] 2010 Wisconsin Poverty Measure excluding selected college students (%)	[Sensitivity Test] 2010 Wisconsin Poverty Measure including all college students (%)	Difference (percentage points)
County			
Milwaukee	16.7	16.8	0.08
Dane (Madison)	11.9	12.1	0.23
Waukesha	5.1	5.1	0.00
Brown (Green Bay)	7.3	7.3	0.00
Racine	11.1	11.1	0.00
Kenosha	11.8	11.8	0.00
Rock (Janesville)	11.1	11.1	0.00
Marathon (Wausau)	7.5	7.5	0.00
Sheboygan	7.0	7.0	0.00
La Crosse	9.7	11.3	1.64
Multi-County Area			
Ozaukee/Washington	4.2	4.2	0.00
Jefferson/Walworth	9.8	9.9	0.04
Chippewa/Eau Claire	14.5	14.7	0.26
Calumet/Outagamie/Winnebago (Appleton)	7.5	7.7	0.21
Columbia/Dodge/Sauk (Baraboo)	6.7	6.7	0.00
5-county area (Menomonie)	10.8	10.8	0.00
5-county area (Dodgeville)	7.6	7.8	0.15
6-county area (Manitowoc)	9.6	9.6	0.00
7-county area (Fond du Lac)	9.4	9.4	0.01
8-county area (Sparta)	9.3	9.3	0.00
9-county area (Stevens Point, Crandon)	9.0	9.1	0.16
10-county area (Superior)	10.1	10.1	0.00
State Total	10.3	10.4	0.12

Source: IRP tabulations using 2010 American Community Survey data.

APPENDIX B. METHODOLOGICAL DIFFERENCES FROM LAST YEAR'S REPORT

Our analytical approach in this report is largely consistent with those employed in previous issues of the *Wisconsin Poverty Report*. However, we made three methodological refinements. The largest difference, both conceptually and in terms of its effect on poverty rates, is to use imputed child care expenses rather than assigning modest amounts to each working family with children under age 12. The new method incorporates more of the real-world variation in child care costs, including the fact that many working families report no expenses for child care. For the large number of families without any child care expenses, the new method resulted in a reduction in work-related expenses and thus an increase in family resources (after adjusting for child care expenses); although the new method produced an increased estimate for child care expenses for some families, the net effect of the method change (examined while using data for 2009) was a reduction in poverty estimates among families with children. This change alone would have reduced the 2009 poverty rate by 0.5 percentage points overall and by 1.3 percentage points for families with children. (See Appendix H in Isaacs et al., 2011b for further information.)

We also made two smaller corrections concerning the calculation of geographic adjustments, first for the state as a whole, and then for regions within the state. In our calculation of the ratio of Wisconsin's relative living costs compared to the cost of living in the nation as a whole (relevant to what we refer to as statewide geographic adjustments in Table B-1), we corrected our treatment of cases that had a "missing location" and so were not identified as within or outside of Metropolitan Statistical Areas (see Table B-1 for details). As a result, our 2009 ratio of statewide geographic adjustments compared to the national average cost-of-living was changed from about 91.8 percent to about 90.7 percent. This change, however, was largely offset by a correction to our geographical cost-of-living adjustments across six subareas *within* Wisconsin. Each of these six regional adjustments was increased by about 1.2 percent, as we rightly added a normalization procedure so that the weighted average across the six regional thresholds would be equal to the statewide threshold. These two changes to the geographical adjustments at the statewide and within-state level were in no way connected, but, to our good fortune, they largely offset each other.

The three methodological changes are summarized in Table B-1.

Table B-1. Methodological Improvements between 2009 Report and 2010 Report

	Methodologies Used in 2009 Report	Methodologies Used in 2010 Report (Current)	Implication of the Change for Estimates in Current Report†
Treatment of Child Care Expenses	Expected value of child care expenses, where every working family with children under age 12 are assigned modest child care expenses, varying only on age and number of children, and weeks of parental work.	Actual child care expenses, imputed from match between ACS and CPS data, where there is large variation in reported child care expenses and many working families report no expenses.	Reduces child care expenses for many families (and raises them for some families), with the net effect of increases in family resources net of expenses for many low-income families, and therefore reducing poverty for families with children.
Statewide Geographic Adjustments (GA)	Assign national average values to cases with missing information about location when calculating Wisconsin's relative living costs.	Assign Wisconsin's average values to cases with missing information about location when calculating Wisconsin's relative living costs because these cases in our sample are Wisconsin residents.	Decrease in thresholds and increase in poverty estimates (but offset by change below).
Within-State Geographic Adjustments	Weights after GA do not sum to 1.	Weights after GA sum to 1.	Increase in poverty thresholds and decrease in poverty rates (but offset by change above).

Note: † Data for 2009 were used to explore this issue.

We refer to the third annual *Wisconsin Poverty Report* (WPR) series published in May 2011 as the “2009 report” because that series focused on poverty in 2009. In contrast, we refer to the current WPR series as the “2010 report” because it focuses on poverty in 2010.

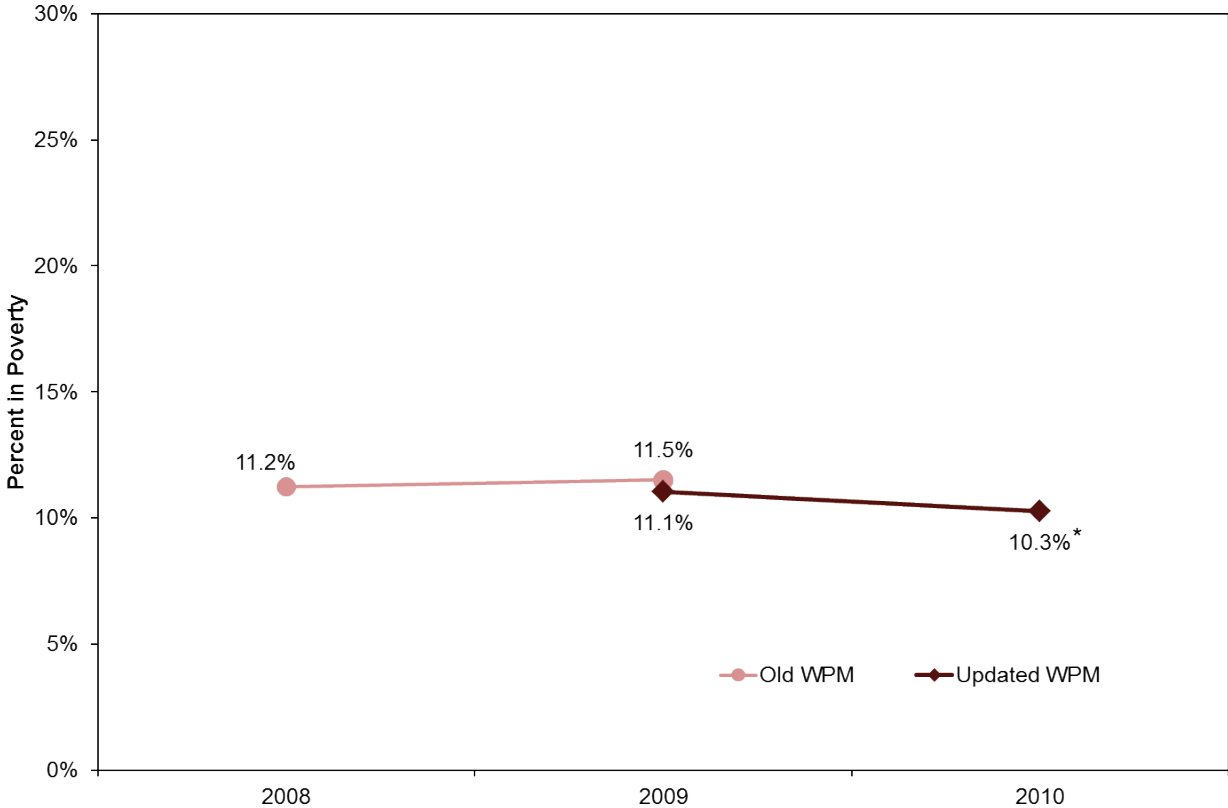
As shown in Table B-2, the net effect of all three refinements was a reduced poverty estimate in 2009; the overall poverty estimate changed from 11.5 percent (using the old method) to 11.1 percent (using the new method). The effect *t* was larger for child poverty (and negligible for elderly poverty), because most of the difference in estimates was driven by the change in the estimation of child care expenses.

Table B-2. 2009 Poverty Rates under Old and New WPM Methodologies

	2009 Poverty Estimates (%)	
	Old Methodology Used in 2009 Report	New Methodology Used in 2010 Report (Current)
Overall Poverty	11.5	11.1
Child Poverty	13.4	12.2
Elderly Poverty	9.6	9.6

Finally, in Figure B-1, we show the same trend as in Figure 4 (2008–2010), but include the break in time series. While the estimates for 2008 are not strictly comparable to those in 2010, the basic trend over time is that poverty rates did not change significantly between 2008 and 2009 under the WPM, and poverty fell from 2009 to 2010 (for details of the estimates for 2008, see Isaacs et al., 2010b, and Isaacs et al., 2011b).

Figure B-1. Changes in Poverty Levels from 2008 to 2010, Using Both Old and New WPM Methodologies for 2009 Estimates



Source: IRP tabulations using 2008–2010 American Community Survey (ACS) data.

Notes:

- WPM = Wisconsin Poverty Measure.
- Old WPM = WPM methodologies employed in 2009 report.
- New WPM = WPM methodologies employed in the current report.
- The difference between 2008 and 2009 was not statistically significant.
- * = The difference between 2009 and 2010 was statistically significant.

APPENDIX C. WISCONSIN POVERTY THRESHOLDS

Table C-1. Wisconsin's Poverty Thresholds for Two-Adult, Two-Child Families, Adjusted for Relative Living Costs

	National NAS-Based FCSU, Two-Adult, Two-Child Family ^a	Wisconsin's Cost-of-Living Ratio Compared to the National Average ^b	Wisconsin's NAS-Based FCSU, Two-Adult, Two-Child Family ^c
2008	27,043	0.9186	24,843
2009	26,778	0.9070	24,289
2010	26,528	0.9024	23,938

^aThe national FCSU thresholds represent those based on out-of-pocket expenditures (including repayment of mortgage principal for owned housing), obtained from the Census Bureau's website:

http://www.census.gov/hhes/povmeas/data/nas/tables/2010/web_tab5_povertythres2010.xls.

^bEach year, we calculate Wisconsin's cost-of-living ratio compared to the national average using ACS data. We call this the statewide adjustment.

^cWe calculated Wisconsin's baseline thresholds by multiplying the national thresholds by our calculated Wisconsin ratio for two-adult, two-child families. For example, $\$26,528 \times 0.9024 = \$23,938$. For further adjustments by family type, see Table C-2.

Table C-2. Wisconsin Poverty Lines in 2010 under the WPM

Two Adults & Two Children (Baseline [†])	Two Adults & Three Children	Two Adults & One Child	One Adult & Two Children	Two Adults	One Adult & One Child	One Adult
\$23,938	\$26,636.57	\$21,047	\$19,854	\$15,626	\$16,723	\$11,082

Notes: To determine the poverty line for each family unit, we take the following two steps. First, we calculate the number of equivalent adults for each unit as follows:

single individual: 1.00;

childless couple only: 1.41;

single-parent families: $(A + \alpha + P*(C - 1))^F$;

all other families: $(A + P*C)^F$,

where $\alpha = 0.8$, $P = 0.5$, and $F = 0.7$; A = number of adults; and C = number of children (less than 18 years of age).

Next, we divide each unit's number of equivalent adults by 2.16, and then multiply by the Wisconsin's 2010 baseline threshold (\$23,938) to determine the poverty line for each unit. In this specific calculation, housing tenure and geographic region within Wisconsin is not considered.

[†]The Wisconsin 2010 baseline threshold was calculated by multiplying \$26,528 (the 2010 national poverty line) by .902 (the authors' calculation for geographic adjustment for Wisconsin using 2010 ACS data).

APPENDIX D. POVERTY RATES OF CHILDREN AND THE ELDERLY BY FAMILY TYPE, AND THE ELDERLY BY SEX, IN 2010, UNDER OFFICIAL AND WISCONSIN POVERTY MEASURES

	Family Type	Official Poverty Measure, 2010	Wisconsin Poverty Measure, 2010	Difference in Percentage Points
Children by Family Type				
Children living with married parents	67%	7.6%	4.0%	-3.6
Children living with a single parent	22	39.7	27.1	-12.6
Children living with a parent and his/her unmarried partner	8	46.1	18.3	-27.8
Children not living with a parent	3	37.1	22.6	-14.5
All Children	100	18.6	10.8	-7.8
Elderly by Family Type				
Married elderly†	51	3.0	4.8	1.8
Single elderly†	34	15.1	18.1	3.0
Elderly living with unmarried partnerst	1	10.7	1.9	-8.8
Elderly living with others	14	5.6	9.1	3.5
All Elderly	100	7.6	9.8	2.2
Elderly by Sex				
Male elderly	44	5.6	7.5	1.9
Female elderly	56	9.1	11.7	2.6
All Elderly	100	7.6	9.8	2.2

Source: IRP tabulations using 2010 American Community Survey data.

Notes: Numbers may not sum due to rounding.

†The married or cohabiting couples are limited to those in two-person poverty units; single elderly individuals are limited to those in one-person poverty units. Married couples or individuals living with other relatives are shown in the category of elderly living with others.

APPENDIX E. POVERTY RATES UNDER ALTERNATIVE SPECIFICATIONS OF THE WISCONSIN POVERTY MEASURE (WPM) AND MARGINAL EFFECTS ON STATE POVERTY RATE, 2008–2010

(%)	WPM without Resource or Adjustment			Marginal Effect on Poverty Rate (%)			Wisconsin Poverty Measure (%)		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
	All								
Taxes & credits	12.0	12.9	12.4	-0.8	-1.9	-2.2	11.2	11.1	10.3
SNAP benefits	12.2	12.0	12.4	-0.9	-1.0	-2.1	11.2	11.1	10.3
Public housing	11.4	11.5	10.8	-0.2	-0.5	-0.5	11.2	11.1	10.3
Energy assistance	11.4	11.3	10.5	-0.2	-0.2	-0.2	11.2	11.1	10.3
Child care & other work expenses	9.1	9.5	9.3	2.1	1.6	1.0	11.2	11.1	10.3
Medical expenses	9.6	9.8	9.1	1.7	1.2	1.2	11.2	11.1	10.3
Within-state COLA	11.7	11.0	10.4	-0.5	0.1	-0.1	11.2	11.1	10.3
Housing tenure	11.2	11.3	10.5	‡	-0.2	-0.2	11.2	11.1	10.3
	Children								
Taxes & credits	15.9	17.3	16.6	-2.3	-5.1	-5.8	13.6	12.2	10.8
SNAP benefits	15.5	14.2	14.9	-2.0	-2.0	-4.1	13.6	12.2	10.8
Public housing	13.8	12.7	11.5	-0.2	-0.5	-0.7	13.6	12.2	10.8
Energy assistance	13.7	12.4	11.0	-0.1	-0.2	-0.2	13.6	12.2	10.8
Child care & other work expenses	9.6	10.0	9.6	3.9	2.3	1.2	13.6	12.2	10.8
Medical expenses	11.7	11.4	10.1	1.8	0.9	0.7	13.6	12.2	10.8
Within-state COLA	14.0	11.9	11.0	-0.4	0.4	-0.2	13.6	12.2	10.8
Housing tenure	12.8	11.6	10.5	0.8	0.6	0.3	13.6	12.2	10.8
	Elderly								
Taxes & credits	11.0	9.6	9.8	-0.6	‡	‡	10.4	9.6	9.8
SNAP benefits	10.7	9.8	10.5	-0.3	-0.2	-0.7	10.4	9.6	9.8
Public housing	10.8	10.5	10.6	-0.4	-0.9	-0.8	10.4	9.6	9.8
Energy assistance	10.8	10.1	10.0	-0.4	-0.5	-0.2	10.4	9.6	9.8
Child care & other work expenses	10.1	9.3	9.5	0.4	0.2	0.3	10.4	9.6	9.8
Medical expenses	6.6	6.4	6.3	3.8	3.1	3.6	10.4	9.6	9.8
Within-state COLA	11.0	9.9	10.1	-0.6	-0.3	-0.3	10.4	9.6	9.8
Housing tenure	12.5	11.9	11.7	-2.1	-2.3	-1.8	10.4	9.6	9.8

Source: IRP tabulations using 2008–2010 American Community Survey data.

Note: ‡ = Less than 0.1.

The estimates for 2008 are based on an old method (see Appendix B for details) and therefore are not strictly comparable with the estimates for 2009 or 2010.

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