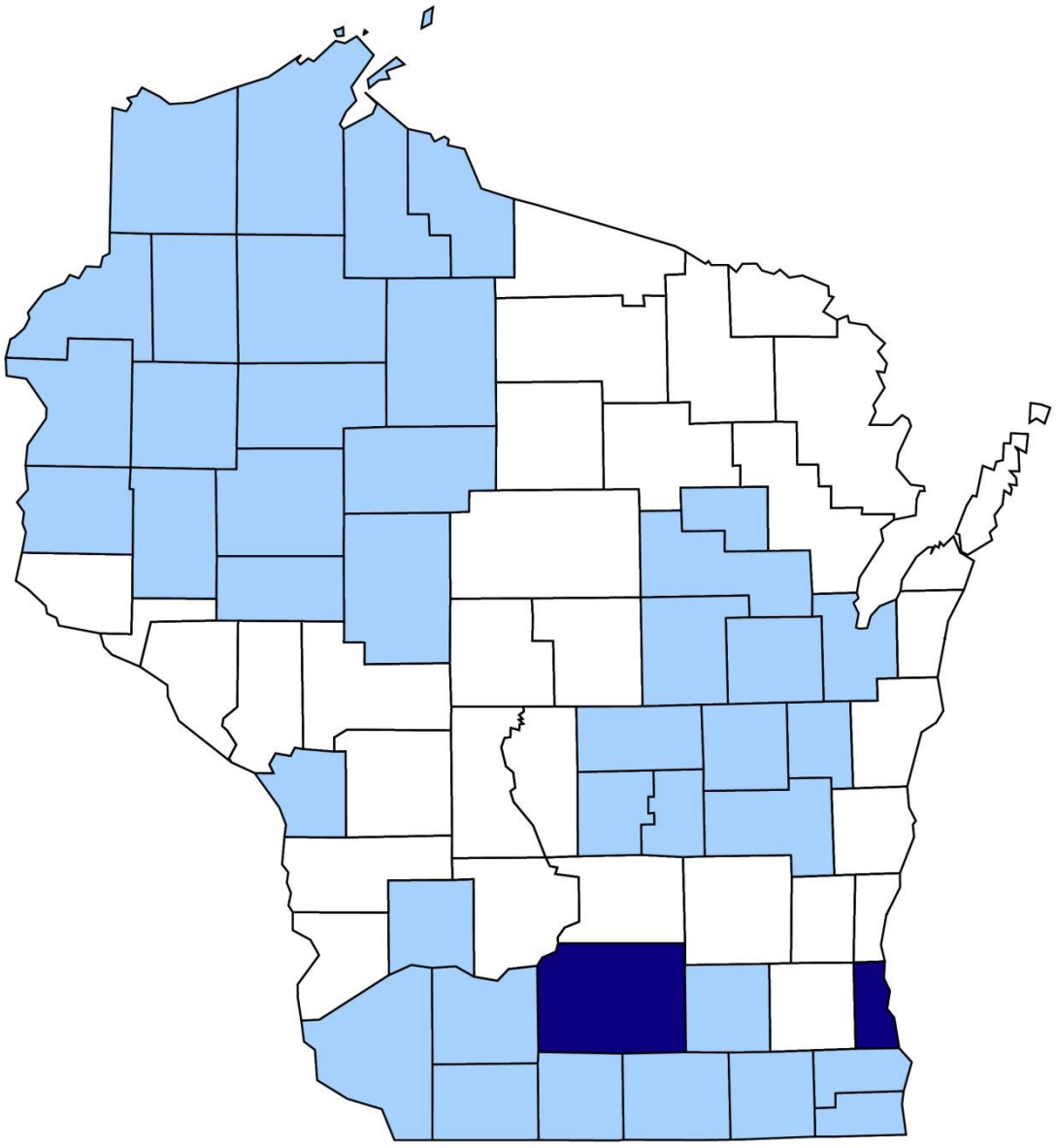
Wisconsin Poverty Report: Methodology and Results for 2009



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ABOUT THE REPORT

This report is available in a printable format on IRP's Web site at www.irp.wisc.edu. Two companion reports—*Wisconsin Poverty Report: Were Antipoverty Policies Effective in 2009?* and *Wisconsin Poverty Report: Technical Appendix for 2009*—are also available at www.irp.wisc.edu.

See Figure 4 for the key to the front cover map.

ABOUT IRP

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 to study 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 in the U.S. Department of Health and Human Services.

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EXECUTIVE SUMMARY

Economic need has grown in Wisconsin over the past few years as the effects of the Great Recession have hit the state head on. Conventional poverty measures indicate a rise in poverty between 2008 and 2009 for all individuals and for children. Yet the story differs under the more comprehensive Wisconsin Poverty Measure, which finds little change in the number of poor individuals and families after measuring the impact of public policies designed to help the poor and the unemployed. In this third annual *Wisconsin Poverty Report*, we use the Wisconsin measure to examine need in 2009 and changes in economic security from 2008 to 2009. Unveiled by Institute for Research on Poverty researchers last year, the Wisconsin Poverty Measure more broadly assesses needs and resources to better understand the impact of state and federal policies.

The official poverty measure in the United States captures only cash income, and so it overlooks changes in poverty due to expansions or contractions of tax credits and noncash benefits, thereby missing many policies undertaken in response to the Great Recession. To capture the effects of such policies, as well as the impacts on poverty of work-related costs and health care costs that impinge on family-income spending, we turn to our more expansive measure. The Wisconsin measure incorporates many elements of the proposed Supplemental Poverty Measure under development at the federal level, while also taking into account Wisconsin's own policies and priorities and state-specific costs of living.

In 2009, 11.5 percent of the Wisconsin population was poor under the Wisconsin Poverty Measure, virtually unchanged from the rate for 2008. In contrast, the official poverty rate increased from 10.2 percent to 12.4 percent. The contrast between the official and comprehensive measures is even stronger for child poverty, which increased almost 4 percentage points under the older, cash-based measure, but showed no significant change between 2008 and 2009 under the more inclusive Wisconsin measure. We find that expanded tax credits and food assistance benefits offset a drop in families' earnings and cash income in 2009 and kept child poverty from rising between 2008 and 2009.

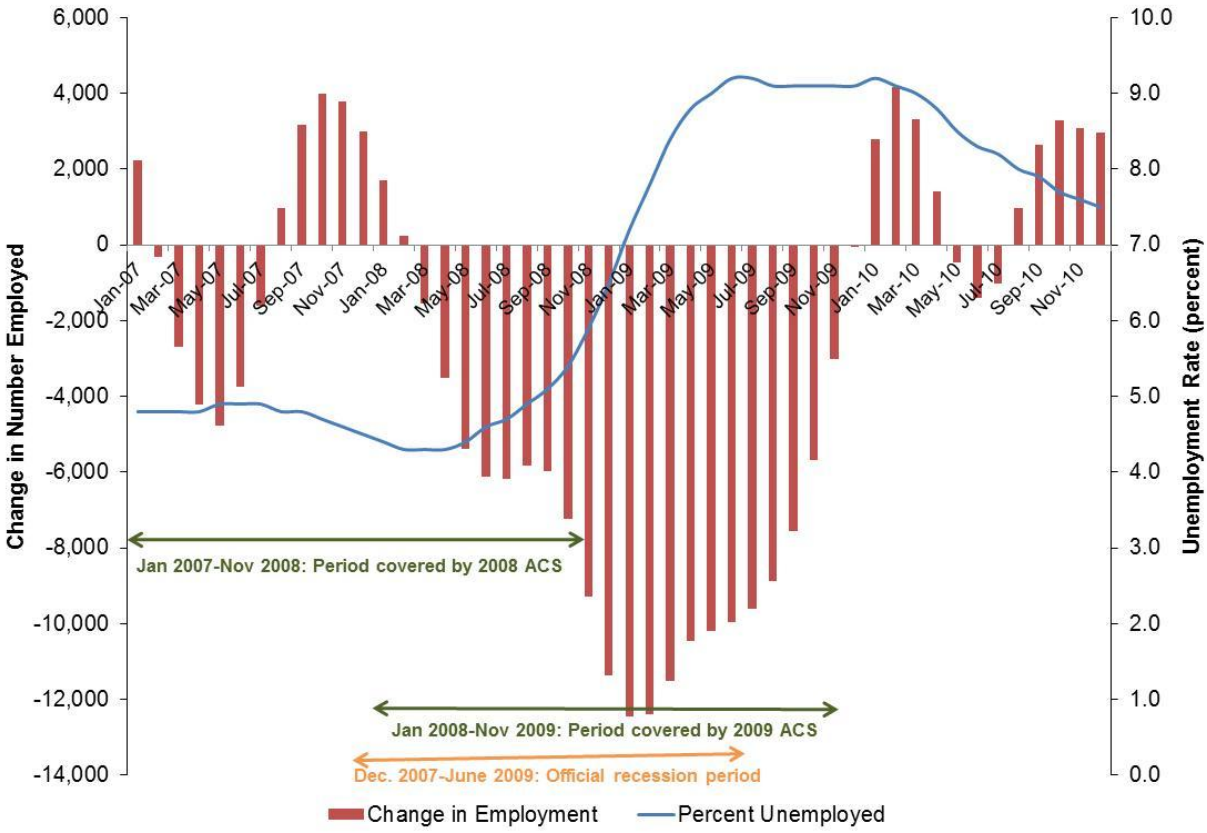
Even with these benefits, however, child poverty is higher than poverty for other ages, at 13.4 percent under the Wisconsin measure in 2009, compared to 9.6 percent for the elderly and 11.2 percent for adults between the ages of 18 and 64. There was no significant change in elderly poverty between 2008 and 2009 under either the Wisconsin or the official measure.

The results in this report demonstrate a strong contrast between alternative poverty measures such as the Wisconsin Poverty Measure and the official poverty measure. By analyzing both the policies in place to support families and the specific costs of getting by in our state, the Wisconsin measure tells us how families are faring in tough economic times and quantifies the difference public policies make in the lives of those in need.

I. INTRODUCTION

By traditional measures, economic need has grown in Wisconsin over the past few years as the effects of the Great Recession have hit the state head on: incomes fell, unemployment rose, and poverty increased under the official measure. Other indicators pointed to greater need as well, such as an increased uptake of nutrition assistance under the Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps and called FoodShare in Wisconsin). The official period of the economic downturn began in December 2007 and ended in June 2009, yet its effects have persisted in Wisconsin and across the nation, as shown in Figure 1. In response to the Great Recession, state and federal policymakers put forth policies to bolster the safety net and offset the downturn's impact on individuals and families. What effects have the existing safety net programs, and the temporary measures to increase low-income families' resources and reduce their expenses, had on poverty during this time?

Figure 1. Monthly Unemployment Rate and Job Losses in Wisconsin, 2007–2010



Note: Monthly unemployment rate is seasonally adjusted.
Sources: U.S. Bureau of Labor Statistics and U.S. Census Bureau.

The official poverty measure suggests that poverty rose in Wisconsin from 2008 to 2009, for all individuals, as well as for children under age 18. But as a measure of cash income alone, the official measure lacks the ability to analyze how tax credits and noncash benefits affect poverty. Under the Wisconsin Poverty Measure (WPM), the story of poverty in 2008 and 2009 is somewhat different, primarily due to the impacts of public policies in place to help the poor and the unemployed.

In this third annual *Wisconsin Poverty Report*, we use the WPM to examine need in Wisconsin in 2009, as well as changes from 2008 to 2009. Unveiled last year, the WPM captures the impact of state and federal policies by taking a broader account of needs and resources than the official measure.[1] Unlike the official measure, the WPM allows us to examine the impact of noncash safety net programs on family resources and expenses for 2009, including temporary changes aimed at mitigating the effects of the recession. As we demonstrate in this report, differences in benefits and expenses have a large effect on poverty in Wisconsin, particularly amid the economic challenges of 2009.

This report is being written amid discussions about reducing benefits under state and federal programs. It is being published after the recession has been deemed over by official standards for nearly a year—and yet our state and nation are clearly still hurting from the lingering effects of the recession. This report sheds light on the effects of programs and benefits to promote work and provide a basic safety net for our state's neediest residents. As major funding and policy questions are debated at the state and national levels, particularly within tight fiscal constraints, our measure points to the fact that programs and policies *do* make a difference in families' economic well-being. Indeed, our measure offers insights into not just whether they make a difference, but by how much. We can also see how much worse poverty *would have been* without one or more of these factors.

About the Wisconsin Poverty Measure

The WPM takes a broader view of resources than the official measure, incorporating not only pre-tax cash income, but also the estimated value of other federal and state resources to offset need. It also looks at expenses that reduce income that could be spent on food, housing, and other basic needs, such as child care and transportation for going to work. The new WPM allows Wisconsinites to see how poverty is affected not only by federal programs but also by their own programs (e.g., the state Earned Income Tax Credit, BadgerCare health insurance, SNAP (FoodShare), Wisconsin Shares child care subsidies, and the Homestead Tax Credit). Our WPM incorporates many elements of the new Supplemental Poverty Measure currently under development at the federal level, while also taking into account Wisconsin's own policies and priorities and state-specific costs of living.

Outline of Report

As with our report on 2008, this year we present results by demographic group (emphasizing children and the elderly); by region within Wisconsin, with breakouts for the largest counties and metropolitan areas. The report provides poverty rates under alternative specifications, looking at marginal and combined effects of tax credits and noncash benefits as well as adjustments for expenses. We also offer comparisons between 2008 and 2009, both in terms of improvements to our methods and for results under the official and Wisconsin measures, with explanations of key differences.

II. METHODS

Our approach to 2009 poverty is largely the same as our approach in the report on poverty in 2008, with a few refinements and updates.[2] Like other poverty measures, ours has two components: a measure of economic need (threshold) and a comparable and consistent measure of resources to meet those needs.

[1]For the full series of *Wisconsin Poverty Reports*, see the IRP Web site at http://www.irp.wisc.edu. Additional details and results for 2009 are available in two companion reports, *Wisconsin Poverty Report:Were Antipoverty Policies Effective in 2009?* and *Wisconsin Poverty Report: Technical Appendix for 2009.*

[2]In addition to updating parameters based on 2009 data, we make modest refinements in our treatment of students, our estimate of publicly subsidized housing, and our tax model. See the Technical Appendix for further details on changes in methods between 2008 and 2009.

Our measure of need is based on a threshold recommended by the National Academy of Sciences, with certain adjustments for characteristics of our state and each family (Citro and Michael, 1995). For resources, we count both cash income and major noncash benefits: tax credits and other tax provisions, food assistance under the Supplemental Nutrition Assistance Program (SNAP, formerly known as food stamps and called FoodShare in Wisconsin), public housing, and energy assistance, less work expenses like work-related transportation and child care. In this section, we describe our approach for 2009, beginning with our choice of dataset, and then briefly discuss our definition of poverty unit and poverty universe, calculation of resources, and how we set poverty thresholds.

In many ways, the Wisconsin measure parallels the Supplemental Poverty Measure (SPM) being developed at the federal level, though it has important differences. Both measures start with a needs standard recommended by the National Academy of Sciences, and use a comprehensive measure of resources that goes beyond cash income to take into account the effects of taxes, tax credits, noncash benefits, medical expenses, work-related expenses such as child care, homeownership costs, and geographic differences in the cost of living. Yet our measure differs in important respects. In particular, our model differs from the SPM in its data source (the American Community Survey [ACS] vs. the Current Population Survey [CPS]), its use of within-state adjustments for regional cost of living differences, the base family unit used in setting the needs standard, and its treatment of medical expenses, as well as other smaller issues. Below we describe our approach, beginning with our choice of dataset, and then discuss our definition of poverty unit (and universe over which we measure poverty),[3] calculation of resources, and setting of poverty thresholds. As a preview, Table 1 compares the treatment of these key elements (data, unit and universe, resources and expenses, and thresholds) in the official, Supplemental, and Wisconsin measures, respectively.[4]

[3]The poverty universe for the official measure excludes unrelated children under 15 years old (including foster children), individuals in institutional group quarters, and individuals in college dormitories or military barracks. It includes individuals in the following non-institutional group quarters: emergency and transitional shelters, non-correctional group homes for adults, workers' group living quarters and Job Corps centers, and religious group quarters.

[4]For further detail on the model components and related imputations, please see the longer companion report, *Wisconsin Poverty Report: Technical Appendix for 2009*.

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

Component	Official Poverty Measure	Supplemental Poverty Measure	Wisconsin Poverty Measure
Data Source	Current Population Survey (CPS)	Current Population Survey (CPS)	American Community Survey (ACS)
Poverty or Family Unit	Individual or family unit	Expanded family unit includes unmarried partners, their children, and any unrelated children (including foster children).	Expanded family unit includes 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-), college dormitories, and military barracks. The final model for 2009 also excludes students 18–23 years old, not living with family members, who earned less than $5,000 in the last year and 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	Cash income Wages, salaries, self-employment Interest, dividends, rent, trusts Social Security & Railroad Retirement Pensions Disability benefits Unemployment compensation Child support Veterans benefits Educational assistance Supplemental Security Income TANF Other cash public assistance	Cash income (as defined in official measure)	Cash income (similar in concept to official measure, but collected with less detail about different sources of income in the ACS)
	Does not include near-cash resources	Near-cash resources to meet food, clothing, shelter, and utility needs (as data permit): Food Stamps/SNAP Housing Subsidies School Meals WIC LIHEAP	Near-cash resources to meet food, clothing, shelter, and utility needs: Food Stamps/SNAP (FoodShare) Housing Subsidies LIHEAP
	Does not include tax credits	Tax credits, including the EITC	Tax credits (including Wisconsin Homestead Credit and federal and state EITCs)

(table continues)

Table 1, continued

Component	Official Poverty Measure	Supplemental Poverty Measure	Wisconsin Poverty Measure
Expenses	Does not subtract taxes or other expenses from resources	Subtracts taxes from resources	Subtracts taxes from resources
		Subtracts medical out-of-pocket expenses, child support payments paid out, and work expenses (transportation and child care)	Subtracts work expenses (transportation and child care)
Thresholds	Base threshold is calculated for two-parent, two-child families, based on food costs and the share of income spent on food in 1963.	Base threshold is calculated for all families with two children, and three parameters of adults, based on five-year average of expenses at the 33rd percentile for food, clothing, shelter, and utilities (FCSU), times 1.2 for "a little bit more."	Base threshold is calculated for two-parent, two-child families, based on expenses at the 33rd percentile for food, clothing, shelter, and utilities (FCSU), times 1.2 for "a little bit more."
	Thresholds are adjusted for • differences in family size and number of children and adults age, with separate thresholds for individuals and couples ages 65 and older	Thresholds are adjusted for • differences in family size and number of children and adults using a three-parameter scale[a] • geographic adjustments 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	Thresholds are adjusted for • differences in family size and number of children and adults using a three-parameter scale • geographic adjustments 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).
[a]The three SPM parameters are: two parents, two children; one parent, two children; and multiple adults in multigenerational families, two children.

Data Source

Our primary data source is the U.S. Census Bureau's 2009 American Community Survey (ACS), which we supplement with administrative data specific to Wisconsin. Although the Current Population Survey (CPS) is used for national poverty estimates for 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.

In contrast, the ACS provides annual data on incomes, housing costs, and other variables for a representative sample of more than 135,000 Wisconsin residents every year (and more than 40 percent of these, or approximately 59,000 individuals, are included in the public use dataset available to researchers outside the Census Bureau). The ACS collects sufficient data to allow us to report poverty rates for 10 large counties in Wisconsin (including six sub-county breakdowns within Milwaukee), as well as for 12 multi-county areas that encompass the rest of the state.[5] In addition, the ACS includes extensive information on housing expenses, allowing us to bore down within the state to adjust for regional differences in housing costs across Wisconsin.

Despite the ACS strengths of detailed housing data and large sample size for our measure, the survey also has certain drawbacks, such as less detail on income and resources than the CPS. For instance, the ACS asks respondents whether they receive SNAP benefits, but not the amount of the benefit. It has 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 have to use a variety of imputation methods to estimate taxes, noncash benefits and family expenses in order to do a comprehensive poverty estimate. As described below, our primary imputation method relies on detailed state administrative data. We also are exploring matches between the ACS and CPS data, because the CPS has new questions to capture the detail needed for the Supplemental Poverty Measure (e.g., data on actual medical and child care expenses, as well as use of in-kind benefits).

Poverty Units and Universe over which Poverty is Measured

To compare the resources families have to the needs they face, we group individuals into poverty units, which are larger than family units. We chose poverty units that reflected patterns of income and consumption sharing across families and individuals living within households. Our poverty unit is expanded beyond the Census Bureau family unit to include unmarried partners who cohabit and their children, foster children, and unrelated minor children. Yet our units are smaller than household units because we split unrelated subfamilies and unrelated adults into separate small poverty units within the household.[6] We exclude individuals in group quarters (such as nursing homes, assisted living facilities, prisons, college dormitories, and other institutions) from our analysis. We also redefine our poverty universe in 2009 to exclude college students living off-campus, not living with family, and working and

[5]For more on ACS sample size and data quality, see http://www.census.gov/acs/www/methodology/sample_size_and_data_quality/. We analyzed the ACS using a data extract from the Integrated Public Use Microdata Series (IPUMS). The 2009 ACS subsample for Wisconsin in IPUMS contained 59,049 individuals, including individuals living in group quarters (Ruggles et al., 2010). The 12 multi-county areas correspond to the Census Bureau's sampling units, called Public Use Microdata Areas (PUMAs), and their boundaries are set by the Census Bureau to ensure at least 100,000 residents in each unit. The multi-county areas can cover as many as 10 counties in the more rural areas of the state, as detailed in the tables and maps in our results section and in Technical Appendix A.

[6]We also show how poverty rates would differ if we had included all members of the household as one poverty unit (as reported under results and Technical Appendix B).

earning very little—those who might drive poverty rates up despite the fact that they actually receive support from family elsewhere or financial aid and are not truly poor.[7]

Our final sample for 2009 comprises 57,356 people living in 23,630 households.[8]

Family Resources

Our calculation of family resources starts with cash income, summed across all individuals in the poverty unit based on amounts reported in the ACS. To this we 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 (see Technical Appendix D).

Our estimate of family resources also includes several important noncash benefits: SNAP (known as FoodShare in Wisconsin), energy assistance (LIHEAP), and public housing.[9] For SNAP benefits, we begin with SNAP recipients identified in the ACS data, and then adjust for under-reporting by simulating additional recipients in each county or PUMA so as to match the number of SNAP recipients in state administrative records. Our simulation model draws participants so as to nearly match statewide totals for recipients in families with children and in families with public assistance. For energy assistance and housing assistance we also develop simulation models, in which we first estimate eligibility using annual income data from the ACS, and then randomly draw participants from eligibility groups sorted by county or multi-county sampling area and demographic characteristics common to the ACS and state administrative data. The final step for all noncash benefits is to impute annual benefit amounts, again drawing from the state administrative data. In the case of SNAP, we have access to detailed microdata; for LIHEAP and public housing, we draw from aggregate data reported on state and federal Web sites (see Technical Appendices E, F, and G).

We subtract child care and other work-related expenses from the sum of cash income, taxes and tax credits, and noncash benefits in order to determine final family resources that will be compared to the poverty thresholds. Our estimate of work expenses for 2009 employs the same method as 2008. For expenses other than child care expenses, 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. For child care expenses, we also subtract relatively flat amounts of expected child care expenses for each week that both parents worked, varying only by number and age of children, following an approach used several years ago by the Census Bureau. In contrast, for the SPM, the Census Bureau is proposing to estimate actual child care expenses, building in much more variation, based on questions about actual child care expenses added to the 2010 CPS. We have begun exploring methods for estimating actual child care expenses based on a match to the CPS, and may switch methods in the future.[10]

[7]See results in this report and Technical Appendix C for a comparison of poverty rates under the 2008 and 2009 treatments of college students.

[8]See Technical Appendix B for more on poverty units, households, and the poverty universe.

[9]We do not include free or reduced price school meals or WIC benefits; note that school meal benefits are not purchased by families and thus are not included in the "food, clothing, shelter and utilities" expenses on which poverty thresholds are based.

[10]See Technical Appendix H for further detail on this alternate approach for estimating child care expenses.

In contrast to some other alternative poverty measures, including the proposed SPM, we do not attempt to impute and subtract actual medical expenses from each family's resources. Instead, we adjust for out-of-pocket medical expenses by setting different poverty thresholds for families with varying levels of expected medical need, as described below.[11]

To sum up, calculation of total resources for a poverty unit requires adding these various cash and noncash resources. The summation is complicated by the fact that some resources are measured at the person 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 this 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 the Line

Poverty status is determined by comparing the resources outlined above to need. Need is measured through a poverty threshold, or floor amount of income that is needed to cover basic expenses. Once resources are calculated, thresholds must be set as a comparison. Our threshold incorporates feedback from Wisconsin residents on priorities specific to the state, as well as prior research on poverty measurement methods.

The basic starting point is the current experimental federal poverty lines, published by the Census Bureau and based on food, clothing, shelter, and other expenses (FCSU), set at 78 percent to 83 percent of median

[11] Another difference from the SPM is that we do not attempt to subtract child support payments paid out to other household members.

national consumption, or roughly the 33rd percentile of national consumption for a two-child, two-adult family.[12] In 2009, the national threshold for such a unit was $26,778.[13]

Our base poverty threshold without medical expenses is $24,575 for Wisconsin in 2009, due to the state's lower cost of living relative to many other parts of the United States.[14] For comparison, the official U.S. poverty line for a two-child, two-adult family in 2009 was $21,756 (U.S. Census Bureau, 2010a). We made additional adjustments to the poverty lines based on differences in housing tenure; the cost of living around the state; family size and composition; and expected medical expenses, as detailed below.

Based on the Garner and Betson (2010) argument that the poverty threshold facing those who own their homes outright ought to differ from the thresholds for others, we make an adjustment for homeownership status. Our measure has three thresholds by housing status: renters, owners with mortgage, and owners with no mortgage (see Table 2). Our thresholds for renters and owners with mortgages are very similar, and so the biggest distinction is between those who own outright, and everyone else. To test the sensitivity of this approach, results are also available without this adjustment.

Table 2. Ratios of Housing Costs by Housing Tenure, 2009

Housing Tenure	Ratio	Base Threshold
All	**n.a.**	**$24,575**
Renter	1.03	$25,312
Owner with mortgage	1.01	$24,821
Owner with no mortgage	0.78	$19,169

Source: Garner and Betson, 2010, and authors' calculations.

To reflect the variation in expenses facing people in different parts of the state, we make an intra-state geographic adjustment. In 2008, we analyzed a subset of low- to moderate-income households in the ACS and calculated median annual housing costs for renters. From these costs, we constructed an index of housing costs for renters based on areas of the state with similar costs and geographic types; we use the 2008 index again in 2009. We group the 31 Wisconsin PUMAs into six regions—four metro areas and two generally non-metro areas—to account for these differences in costs of living. We use differences in housing costs and the share of shelter costs in the threshold to generate cost-of-living ratios. We end up

[12]The 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. We would therefore expect a lower poverty rate in Wisconsin if our measure were adapted to follow the SPM threshold.

[13]The Census Bureau has calculated four different versions of the threshold for 1999–2009, as shown in Technical Appendix J and found at http://www.census.gov/hhes/povmeas/data/nas/web_tab5_povertythres2009.xls. We use the version that included repayment of mortgage principal for owned housing but do not include medical expenses (which we add in separately).

[14]See Technical Appendix I for more on geographic adjustments to the thresholds.

with thresholds that are 8 percent lower in less populated rural areas and 5 percent higher in outer Milwaukee/Waukesha counties.[15]

Recognizing that families of different sizes and compositions face different costs, we apply the three-parameter equivalence scale to the reference family threshold (Betson, 1996; Iceland, 2005). This is the same equivalence scale proposed for the SPM and used in most other alternative poverty measures. The reference family for this scale is a two-parent, two-child family and adjustments to the threshold are made up or down based on the number of adults and children. All portions of the threshold—except for medical expenses in the threshold (MIT)—are equivalized using this scale.[16]

For medical out-of-pocket expenses, we also follow the same methods as in 2008. Under this approach, we adjust the threshold for "expected normal expenses" for average families, and then adjust for the presence of the elderly, health status, family size, and insurance type using Census Bureau methods. For example, we would add $1,946 annually for a non-elderly family with private insurance and good health, reflecting average costs for premiums and co-payments for families in good health. The medical adjustment would drop from $1,946 to only $58 for this same family if the family lost private insurance and were able to qualify for public insurance, since then most of their medical costs are likely to be covered by the public insurance. However, if the family's elderly grandmother moved in, the medical adjustment would increase to $1,771 if she were healthy and $1,965 if she were in fair/poor health, because even elderly persons with public insurance are likely to have high out-of-pocket medical expenses, based on available national data on health expenses.[17]

To illustrate how these thresholds would vary after the full set of adjustments for medical care, housing tenure, and within-state geographic adjustment, consider the following examples for a two-parent, two-child family in good health with no elderly members:

- A (four-person) family owning its home with a mortgage in Dane County (Madison) with private health insurance would have a threshold of $27,760, (compared to $25,814 without adjustments for medical expenses, a $1,946 difference for health care costs);

- A (four-person) family renting its home in inner Milwaukee with public health insurance would have a threshold of $25,370; and

[15]We also explore within-state geographic adjustment based on variation in shelter costs for renters in 2-bedroom units, the method that will be used in the SPM. See Technical Appendix I for a comparison of results under our final method to the restricted 2-bedroom renter approach, as well as a map detailing our six regions: inner Milwaukee; outer Milwaukee/Waukesha; Dane County; Other Metropolitan; and two rural areas.

[16]Mathematically, the three-parameter scale is defined as follows:

single individual: 1.00;
childless couple only: 1.41;
single-parent families: $(A + \alpha + P*(C - 1))^F$
all other families: $(A + P*C)^F$,

As in the basic formula, 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). We use these formulas to calculate the number of equivalent adults per unit, divide that by 2.16, then multiply by the appropriate threshold (based on housing tenure and geographic region) to determine the poverty line for each unit.

[17]These three examples are drawn from the full list of 22 different adjustments for medical thresholds, derived from Table A-10 in Short (2001), as shown in Technical Appendix K.

- A (four-person) family owning its home outright in rural Wisconsin (Region 6) with no health insurance would have a threshold of $20,770.

In summary, we combine the above adjustments for Wisconsin's lower cost of living relative to the nation, housing tenure type, geographic region within the state, family size and composition, and expected medical expenses to calculate a threshold level for each poverty unit, which we then compare to the unit's available resources to determine poverty status.

III. CHANGES IN POVERTY IN WISCONSIN BETWEEN 2008 AND 2009

The WPM is now two years old, permitting us to track how poverty has changed over time. The change in poverty between 2008 and 2009 is surprisingly different under the WPM as compared with the time trend under the older, official poverty rate. While the official, cash-based measure revealed a sharp increase in poverty during the recession, the more comprehensive WPM shows little change in the number of poor individuals and families, despite the increase in unemployment. The new measure shows that the negative financial impacts of job losses and reduced earnings were largely offset by increases in noncash benefits and refundable tax credits, particularly among low-income families with children.

In 2009, 11.5 percent of the Wisconsin population was poor under the WPM, an estimate that is not statistically different from the 11.2 percent poverty rate reported for 2008, because both estimates have a margin of error of about 0.5 percentage points.[18] In contrast, the official poverty rate increased from 10.2 percent to 12.4 percent, a statistically significant increase of more than 2 percentage points.[19] This striking difference in trends is driven by the effects of refundable tax credits and noncash benefits; such benefits are not counted in the official poverty rate but are included in the WPM. In fact, an alternate specification of the WPM that *excludes* tax credits, nutrition benefits, and housing and energy assistance shows a 2.0 percentage point increase in poverty between 2008 and 2009, similar to that in the official measure (see Figure 2).[20] Hence, even with a poverty threshold higher than the official line, the effects of programs and policies designed to fight poverty have largely worked in our state.[21]

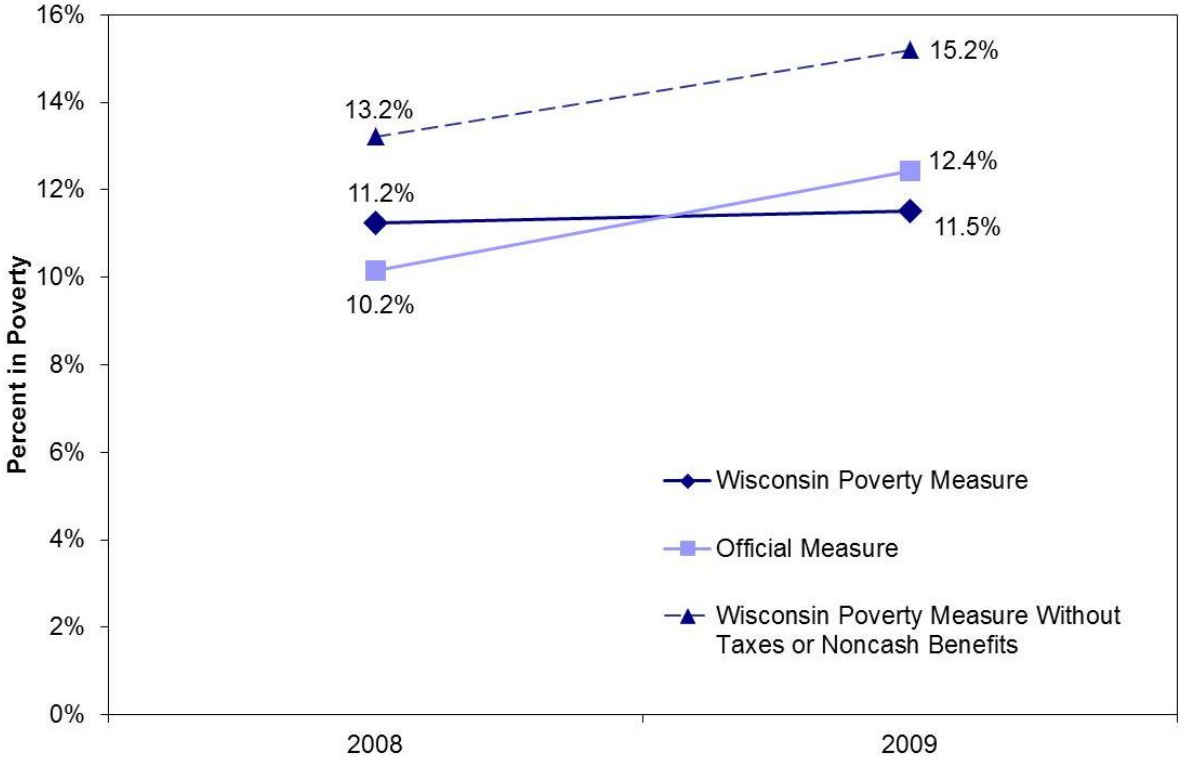
[18]The 11.5 percent overall poverty rate under the WPM in 2009 is bounded by a confidence interval that stretches from 11.1 to 12.0, meaning we are unable to state with 90 percent confidence that the true underlying poverty rate is outside the bound of reasonable estimates from that reported for 2008.

[19]The official poverty rates in Wisconsin shown here are based on our tabulations of the IPUMS ACS; published data are the same in 2009 (12.4 percent) but were slightly higher in 2008 (10.4 vs. 10.2 percent). Our results differ in some years because while we exclude individuals in all group quarters from our estimates of both official and Wisconsin Poverty Measure rates, the Census Bureau includes individuals in certain types of non-institutional group quarters in the poverty universe for the official measure. In addition, differences may arise from sampling error (the IPUMS and other public use versions of the ACS data are based on a 40 percent sample of the original data underlying the published reports).

[20]As detailed in the Technical Appendix, the comparison from 2008 to 2009 also is affected by small methodological improvements. Most notably, our 2009 estimate is slightly lower than it otherwise would have been due to refined treatment of students and publicly subsidized housing. Without these two changes, our 2009 poverty estimate would have been 11.7 percent, still statistically insignificant from the 2008 rate. (The tax model also was refined modestly between 2008 and 2009, but the technical refinements were done simultaneously with modeling the legislative expansions under the American Recovery and Reinvestment Act [ARRA] of 2009 and so we do not have an estimate of 2009 taxes under the 2008 version of the model.)

[21]This is not to say that that the recession did not create hardship in Wisconsin and elsewhere. While the WPM is more comprehensive than the official measure, it does not capture all the effects of the recession; factors such as increased financial uncertainty associated with job loss and unemployment, loss of homes due to

Figure 2. Poverty Rates under the Wisconsin Poverty Measure and the Official Poverty Measure, 2008 and 2009



Source: IRP tabulations of 2008 and 2009 American Community Survey data.

Despite the increase in official poverty, the official poverty rate for Wisconsin remains lower than the national rate of 14.3 percent in 2009. The District of Columbia and 29 states had higher poverty rates than Wisconsin under the official measure in 2009. We cannot make a similar comparison under the WPM, because the new measure is only available for Wisconsin and its counties and multi-county regions. Instead, the strength of the WPM is to compare poverty across different demographic subgroups *within* the state (in this report we focus on children and the elderly) as well as across different counties and regions within the state. Poverty rates by age and region are presented below, with a focus on the change in rates between 2008 and 2009, as well as some discussion of how the WPM differs from the official rate. We then discuss how poverty rates change with the inclusion or exclusion of various taxes and public benefits and adjustments for within-state differences in costs of living and variations in family out-of-pocket medical and work expenses. This discussion will highlight the role that public policies can play in reducing poverty, and specifically, how expanded benefits in 2009 resulted in little change in poverty between 2008 and 2009 according to the WPM.

Poverty by Age

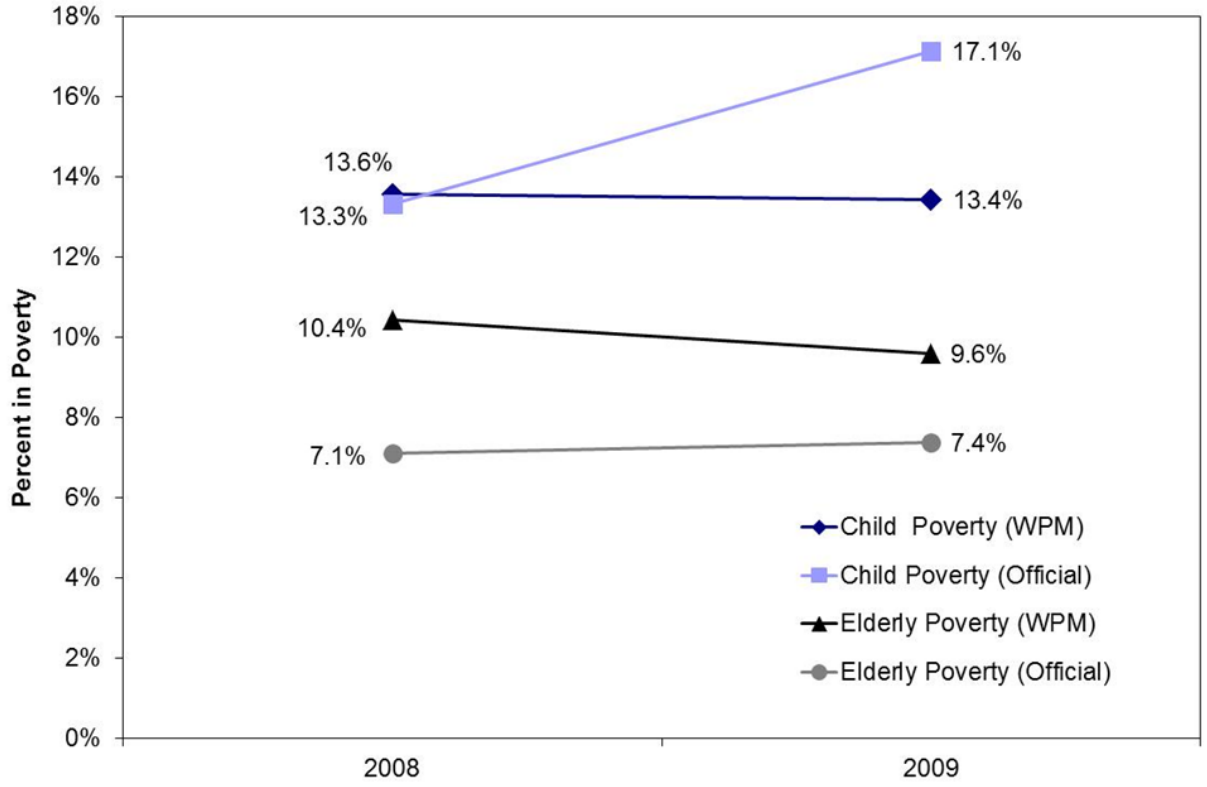
Child poverty showed little change between 2008 and 2009 under the WPM; the 2009 child poverty rate of 13.4 percent is virtually unchanged from the 2008 rate of 13.6 percent, given the margin of error for the

foreclosure, and increases in debts are among the factors that are not fully included in the methodology and data of our measure.

estimates.[22] Child poverty based on the traditional cash-based poverty measure, however, increased from 13.3 to 17.1, a dramatic increase of almost 4 percentage points (see Figure 3). The reason for these countervailing trends is that low-income families with children experienced a considerable drop in earnings and cash income in this first year of the recession, but also benefitted considerably from the expansion of tax credits and Supplemental Nutrition Assistance Program (SNAP) benefits under the American Recovery and Reinvestment Act (ARRA) of 2009. The expansion of benefits kept child poverty from rising as much between 2008 and 2009 under the comprehensive measure that counts tax credits and noncash benefits as family resources.

Even with these benefits, however, child poverty is higher than poverty for other ages under both the WPM and official poverty rates. The rate for those between ages 18 and 64 was 11.2 percent in 2009 under the WPM (not shown), and the elderly poverty rate was 9.6 percent in 2009 (see Figure 3).

Figure 3. Child and Elderly Poverty Rates under the Wisconsin Poverty Measure and the Official Poverty Measure, 2008 and 2009



Source: IRP tabulations of 2008 and 2009 American Community Survey data.

Elderly poverty does not change much between 2008 and 2009, whether measured under the WPM or the official measure. While the WPM shows an apparent downward trend and the official measure a slight

[22]The 13.4 percent child poverty rate under the WPM is bounded by a 90 percent confidence interval that stretches from 12.4 percent to 14.5 percent. We define children as all individuals less than 18 years of age. See Technical Appendix L for tables displaying lower and upper bounds for our poverty estimates.

upward trend, neither trend is statistically significant, given sampling error.[23] (Moreover, some of the change in elderly poverty under the WPM between 2008 and 2009 is due to a methodological improvement in measuring public housing assistance for the elderly, as discussed further below.) The lack of change in elderly poverty between 2008 and 2009 is likely a reflection of the fact that elderly individuals are less likely to be in the labor force than younger individuals and also are less likely to receive tax credits or noncash benefits, and thus are less subject to changes in unemployment or expansions in tax credits and noncash benefits.

Although the two measures are similar in time trend, the WPM shows a considerably higher level of elderly poverty. In 2009, for example, elderly poverty is 9.6 percent under the WPM, compared to 7.4 percent under the official measure. The difference in levels is largely because a fair number of senior citizens in Wisconsin have cash incomes just slightly above the official poverty threshold and are re-classified as poor under the higher WPM threshold. This higher threshold drops an old assumption in the official measure regarding lower costs of living for single- and two-person elderly households and instead incorporates an upward adjustment to account for medical out-of-pocket expenses for the elderly.

Both child and elderly poverty vary by family type, as shown in Table 3. Child poverty rates vary from 4.1 percent for children living in married-parent families to 36.7 percent for children living with a single parent (see Table 3). A similar range is found whether one examines the WPM or the official measure. Where the two measures differ is in the treatment of children living with a single parent and his or her unmarried partner. The poverty rate for children living with cohabiting adults drops in half under the WPM (19.7 percent rather than 40.1 percent), because the unmarried partner's resources are included in total family resources. Elderly poverty shows lower levels but similar patterns, with higher poverty rates among single as compared with married elderly (19.5 percent vs. 4.5 percent) and a sharp increase in poverty under the WPM as compared to the official measure for the very small number of cohabiting elderly couples.

The drop in poverty among cohabiting couples has the strongest effect for individuals in such families, but also brings down the overall poverty rate somewhat. Note that if the poverty unit were expanded even further, to not only treat unmarried partners but all household members as fully sharing income, the overall poverty rate for 2009 would fall from 11.5 to 10.6 percent.[24]

[23]The 9.6 percent elderly poverty rate under the WPM in 2009 is bounded by a 90 percent confidence interval that stretches from 8.9 percent to 10.3 percent. We define elderly as all individuals 65 years of age and older.

[24]See Technical Appendix B for a comparison of poverty rates by household versus poverty unit under the Wisconsin Poverty Measure for the 22 areas within Wisconsin.

Table 3. Poverty Rates of Children and the Elderly by Family Type, and the Elderly by Sex, in 2008 and 2009, Under Official and Wisconsin Poverty Measures

	Percentage in Family Type	Official Poverty Measure	Wisconsin Poverty Measure 2009	Difference (percentage points)
Children by Family Type				
Children living with married parents	67%	6.2%	4.1%	-2.1
Children living with a single parent	22	39.5	36.7	-2.8
Children living with a parent and his/her unmarried partner	8	40.1	19.7	-20.4
Children not living with a parent	3	43.7	31.2	-12.5
All Children	100	17.1	13.4	-3.7
Elderly by Family Type				
Married elderly*	52	2.6	4.5	1.9
Single elderly*	31	16.5	19.5	3.0
Elderly living with unmarried partners*	1	19.3	5.5	-13.7
Elderly living with others	16	4.2	7.5	3.3
All Elderly	100	7.4	9.6	2.2
Male elderly	44	5.2	7.2	2.0
Female elderly	56	9.1	11.5	2.4
All Elderly	100	7.4	9.6	2.2

Source: IRP tabulations of 2009 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.

Poverty by County or Multi-County Area

Consistent with our report approach over the last two years, we have generated estimated poverty rates for 10 large counties in Wisconsin, as well as for 12 multi-county areas that encompass the remaining areas of the state. The multi-county areas used in this report were predetermined by the boundary lines for the Census Bureau's Public Use Microdata Areas (PUMAs) and cannot be disaggregated further for single-year poverty estimates.[25] While some of the multi-county areas comprise only two counties (e.g., Ozaukee

[25]County-level poverty estimates under the official measure are available from American FactFinder at http://factfinder.census.gov/ using the 2005–2009 American Community Survey 5-year estimates. The public use datasets needed for estimates under the Wisconsin Poverty Measure allow analysis only at the PUMA level, even for multi-year samples. The boundaries for the PUMAs within Wisconsin are likely to be revised somewhat in the future, reflecting the 2010 Decennial Census.

and Washington), others require as many as seven to ten of the more rural counties in order to gain sufficient sample size to obtain reliable estimates.

Under the Wisconsin measure, the poverty rate ranges from 19.6 percent in Milwaukee County to less than 6 percent in four more affluent areas. The full set of poverty rates is shown in Table 4, which first lists the ten counties that are large enough to be their own PUMA (ranked in order of population size in 2009) and then lists the 12 multi-county areas (ranked by the number of counties in the multi-county areas and thus from more urban to more rural). Even with the rich sample of the ACS, there is a considerable margin of error around most of the county and multi-county poverty estimates, and those margins of error, combined with the lack of large changes in poverty statewide between the two years, means that most (19 of the 22 areas) experienced no statistically significant change in poverty between 2008 and 2009.[26] Our area analysis therefore focuses less on changes from 2008 and 2009 and more on whether counties and multi-county areas had poverty rates that were significantly higher or lower than the statewide average of 11.5 percent.

Nearly one in five persons was poor in Milwaukee County in 2009, which has a poverty rate of 19.6 percent under the WPM. Two counties—Dane County and La Crosse County—have poverty rates of about 14 percent (13.9 percent in Dane County and 14.2 percent in La Crosse County). However, it is only in Milwaukee County and Dane County that the poverty rate is both high enough and measured with enough precision to state that the rates are significantly higher than the statewide average (see Figure 4). Poverty remains high in Dane County, home to Madison, even though we have adjusted our measure to exclude 18- to 23-year-old students who have little reported earnings, yet are living alone off-campus, presumably supported by their parents.[27]

Twelve areas have rates that are not statistically different than the state rate of 11.5 percent. Finally, eight areas have rates below the state WPM rate, including four areas with poverty of less than 6 percent under the WPM: Columbia/Sauk/Dodge counties (5.4 percent), Waukesha County (5.6 percent), the two-county area of Ozaukee/Washington (5.6 percent) and Marathon County (5.7 percent). Ozaukee/Washington counties had a poverty rate below 6 percent in 2008 as well.

Note that the rich sample size of the ACS allows us to look more deeply within our state's largest counties. The city-level poverty rate exceeds 20 percent in the cities of Madison and Green Bay, which have poverty rates of 20.8 and 20.7 percent, respectively, under the WPM. These areas of high poverty

[26]The three areas with significant changes include one county with an increase—Brown County (Green Bay)—and two multi-county areas with decreases—the nine-county area near Stevens Point and Crandon and the three-county area of Columbia/Sauk/Dodge, counties immediately north of Madison's Dane County. As reported in the 2008 report, the 90 percent confidence interval poverty rate in Brown County (Green Bay) was 7.3 to 11.6 percent, the interval for Columbia/Dodge/Sauk counties was 6.7 to 11.3 percent, and the interval for the nine-county area near Stevens Point was 8.2 to 11.7 percent. For the full list of poverty rates and lower and upper bounds in 2008, see page 32 of the *Wisconsin Poverty Report: Technical Appendix* for 2008 (Isaacs et al., 2010b).

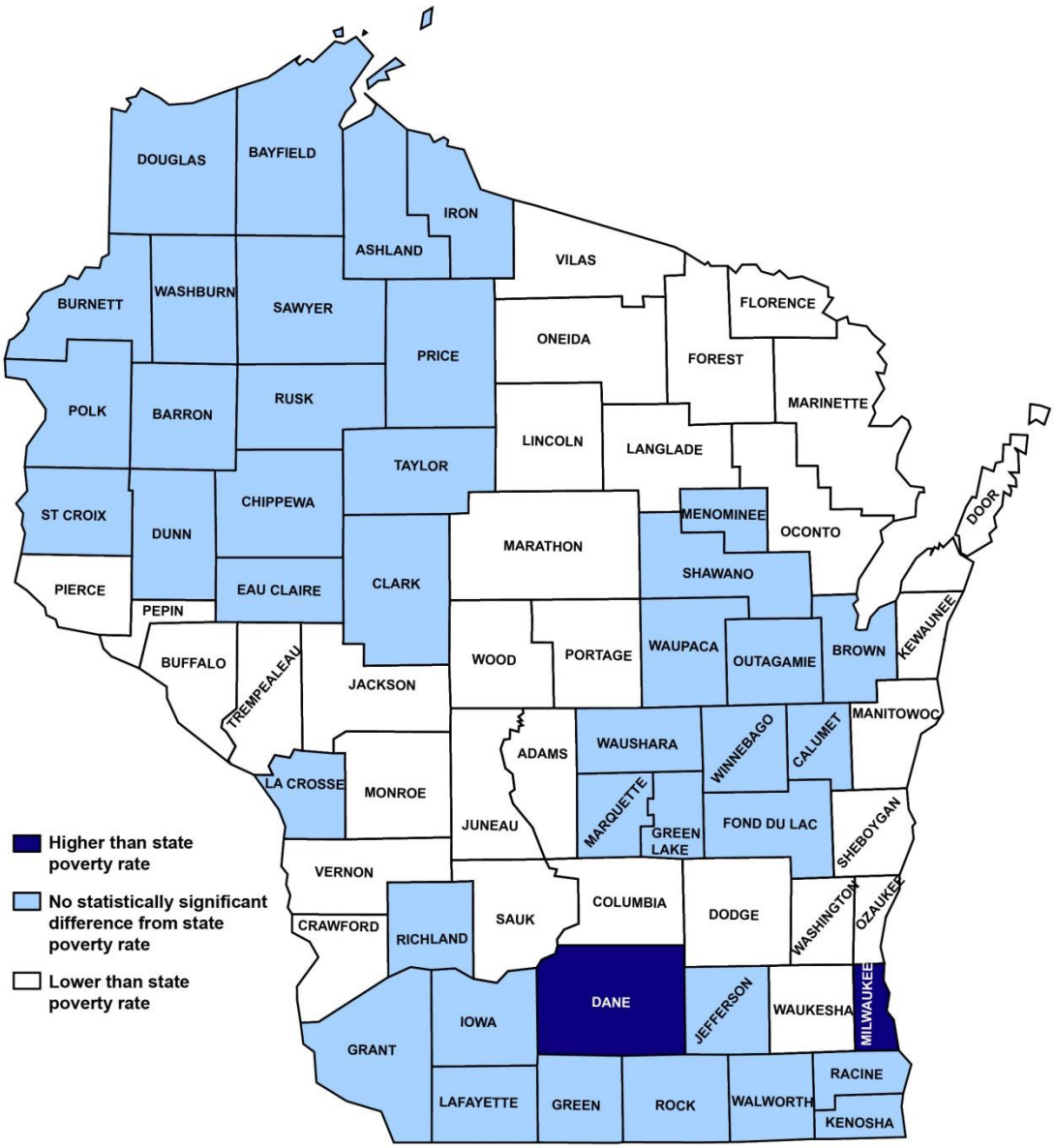
[27]Students living on campus in institutional quarters (e.g., dormitories) are already excluded from both the numerator and denominator of our poverty estimates, because they are not part of the household population. We took the additional step of removing certain students living as unrelated individuals in households from the poverty universe, because of our concern that the large number of such students in Madison and other areas might overstate poverty in those areas, particularly if the students are receiving significant amounts of assistance from parents or financial aid. We used a conservative definition in removing students, because we did not want to remove the many 18- to 23-year-olds who were combining work and part-time or full-time school and are quite likely to be supporting themselves, not relying on unseen parental contributions. See Technical Appendix C for further details.

Table 4. Wisconsin Poverty Rates by County or Multi-County Area with Upper and Lower Bounds, 2009

	Wisconsin Poverty Measure	90% Lower Bound	90% Upper Bound	Difference from State Average
County				
Milwaukee	19.6%	17.7%	21.5%	Higher
Dane (Madison)	13.9	12.3	15.6	Higher
Waukesha	5.6	4.0	7.2	Lower
Brown (Green Bay)	13.3	10.9	15.7	NS *
Racine	11.3	8.5	14.1	NS
Kenosha	12.0	9.2	14.9	NS
Rock (Janesville)	10.7	7.9	13.4	NS
Marathon (Wausau)	5.7	3.7	7.6	Lower
Sheboygan	7.1	4.8	9.5	Lower
La Crosse	14.2	10.9	17.5	NS
Multi-County Area				
Ozaukee/Washington	5.6	3.8	7.5	Lower
Jefferson/Walworth	11.7	8.8	14.7	NS
Chippewa/Eau Claire	12.6	10.4	14.9	NS
Calumet/Outagamie/Winnebago (Appleton)	11.2	9.2	13.1	NS
Columbia/Dodge/Sauk (Baraboo)	5.4	4.1	6.8	Lower**
5-county area (Menomonie)	9.6	7.6	11.7	NS
5-county area (Dodgeville)	11.4	9.3	13.4	NS
6-county area (Manitowoc)	7.5	5.7	9.3	Lower
7-county area (Fond du Lac)	9.9	8.3	11.6	NS
8-county area (Sparta)	8.2	6.8	9.6	Lower
9-county area (Stevens Point, Crandon)	7.7	6.6	8.8	Lower *
10-county area (Superior)	11.6	9.6	13.6	NS
State Total	**11.5**	**11.1**	**12.0**	

Source: IRP tabulations of 2009 American Community Survey data.
Note: Differences may not sum due to rounding.
NS: No statistically significant difference between area rate and state rate (11.5%).
*The 2009 poverty rate is significantly higher than the 2008 rate.
**The 2009 poverty rate is significantly lower than the 2008 rate.

Figure 4. Counties and Multi-County Areas with Poverty Above or Below the State Poverty Rate under the Wisconsin Poverty Measure, 2009



Source: IRP tabulations of 2009 American Community Survey data.
Note: The state poverty rate under the WPM is 11.5 percent.

are masked by the relatively low poverty rates (about 8 percent) in the areas of Dane and Brown counties surrounding these two cities (see Table 5). We observe an even greater variation across the six different statistical sampling areas in Milwaukee County, where poverty rates range from 5.3 percent in some suburban areas to 39.2 percent in central Milwaukee (see Table 5 and Figure 5). This pattern of higher poverty rates within the more urban parts of Milwaukee, Dane, and Brown counties is true of the official poverty measure as well as the WPM.[28]

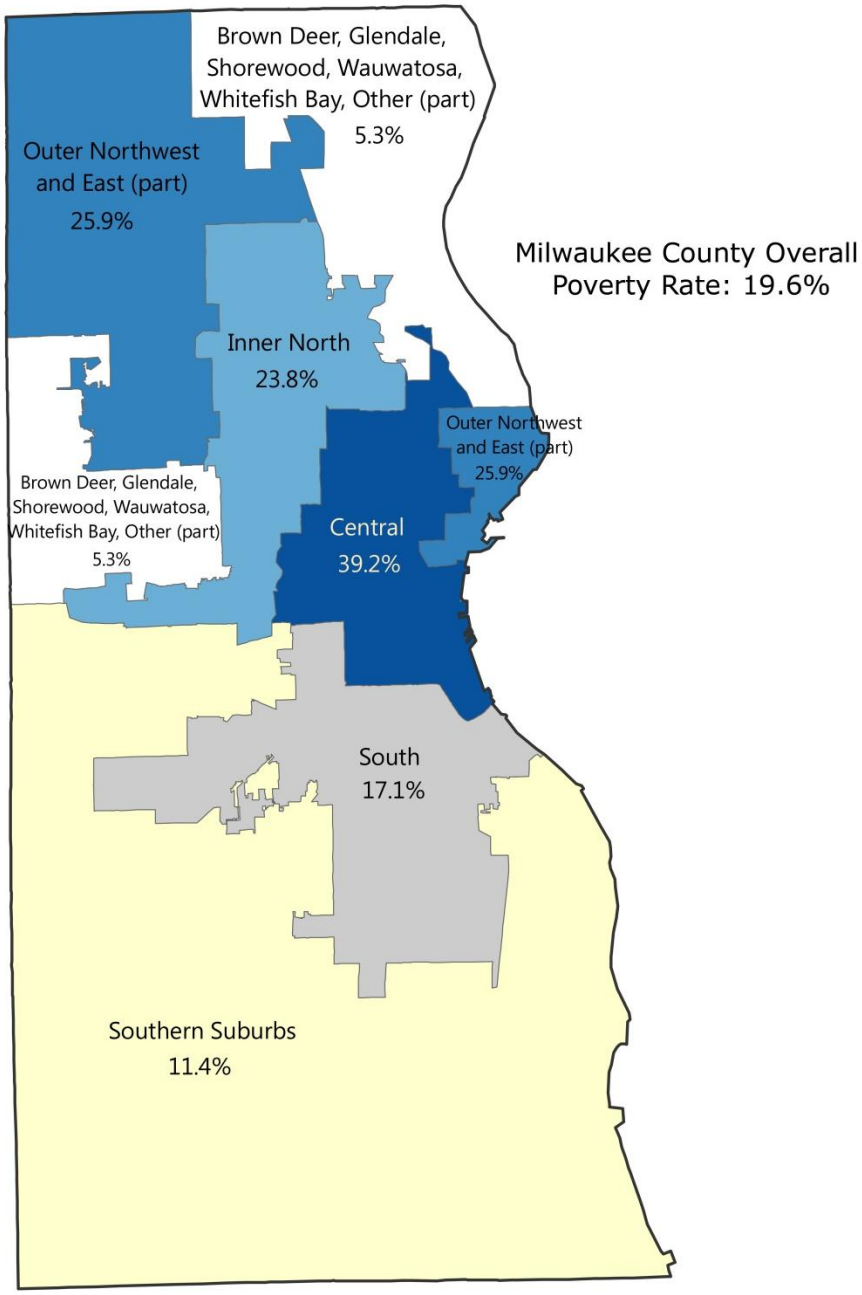
Table 5. Poverty Rates Within Milwaukee, Dane and Brown Counties under the Wisconsin Poverty Measure with Upper and Lower Bounds, 2009

County/Area	Wisconsin Measure	90% Lower Bound	90% Upper Bound	Difference from State Average
Milwaukee (overall)	**19.6%**	**17.7%**	**21.5%**	**Higher**
Outer Northwest and East	25.9	21.2	30.5	Higher
Inner North	23.8	18.4	29.2	Higher
Central	39.2	32.4	46.0	Higher
South	17.1	12.7	21.6	Higher
Brown Deer, Glendale, Shorewood, Wauwatosa, Whitefish Bay, Other	5.3	2.9	7.7	Lower
Southern Suburbs*	11.4	8.7	14.2	NS
Dane (Overall)	**13.9**	**12.3**	**15.6**	**Higher**
Madison	20.8	17.8	23.7	Higher
Fitchburg, Middleton, Stoughton, Sun Prairie, Other	8.2	6.3	10.2	Lower
Brown (Overall)	**13.3**	**10.9**	**15.7**	**NS**
Green Bay	20.7	15.4	26.0	Higher
Rest of Brown County	8.0	6.1	10.0	Lower

Source: IRP tabulations of 2009 American Community Survey data.
Differences may not sum due to rounding.
*Cudahy, Franklin, Greendale, Greenfield, Oak Creek, South Milwaukee, West Allis, Other.
NS: No statistically significant difference between area rate and state rate (11.5%).

[28]Waukesha County is the fourth county in Wisconsin that has a large enough sample size to support some disaggregation of poverty within the county; however, there is little difference in poverty across the three statistical sampling areas in Waukesha County under the WPM.

Figure 5. Poverty Rates within Milwaukee County by PUMA under the Wisconsin Poverty Measure, 2009



Source: IRP tabulations of 2009 American Community Survey data.
Credit: Applied Population Laboratory, University of Wisconsin–Madison.

IV. ALTERNATIVE SPECIFICATIONS AND USING THE WISCONSIN POVERTY MEASURE TO ASSESS THE EFFECT OF POLICIES ON POVERTY

As discussed above in the Methods section and summarized in Table 1, the Wisconsin measure differs from the official measure in a number of ways. Some of these differences (such as including tax refunds and noncash benefits in family resources) serve to reduce poverty, and other adjustments (such as using a higher base threshold and adjusting for medical out-of-pocket costs) serve to push poverty up. In 2008, the net effect of the largely offsetting adjustments was an increase in the poverty rate of about 1 percentage point; the WPM was 11.2 percent, compared to an official rate of 10.2 percent. In contrast, in 2009, the net effect of adjustments is a decrease of 0.9 percentage points; the WPM is 11.5 percent, compared to an official rate of 12.4 percent.

Why is the WPM lower than the official rate in 2009 when it was higher than the official in 2008? And why did the WPM show so little change in poverty between 2008 and 2009, despite the increase shown in the official measure? A partial explanation is that the WPM threshold is based on recent data on family expenditures, which can increase faster than inflation when standards of living are rising, but also can fall when families are cutting back on expenses, as often occurs in times of recession. In fact, the WPM threshold fell by 1.1 percent between 2008 and 2009, based on changes in three-year average expenditure data for 2006 to 2008 and 2007 to 2009.[29] The official measure, which is indexed to inflation, also fell between 2008 and 2009, but by only 0.4 percent (U.S. Census Bureau, 2010b). The 1.1 percent decline in the WPM threshold between 2008 and 2009 contributed to the lack of increase in poverty under the WPM between 2008 and 2009, but only modestly. If the threshold had declined only 0.4 percent rather than 1.1 percent, the WPM poverty would have been 11.7 percent in 2009, a rate that is slightly higher than our final estimate of 11.5 percent, but still below the official rate and not statistically different from the 2008 rate of 11.2 percent.

In addition, small changes in WPM estimating methodology between 2008 and 2009 have an impact of similar magnitude; the WPM poverty rate in 2009 would have been 0.2 percentage points higher if we had used our older, 2008, methodology.[30]

While these measurement issues play a role in the lack of change between 2008 and 2009, the primary explanation lies in changes in families' resources. To illustrate this, we turn to an analysis of the marginal impact of alternate specifications of the WPM, asking, "What would poverty have been if we had not included taxes in our definition of family resources?" and "What would poverty have been if we had not adjusted our threshold for medical expenses?" And, from these measurement questions, we can turn to more policy-relevant questions, namely, "What is the net effect of various tax policies on low-income families?" and "How much do high out-of-pocket medical expenses contribute to poverty among children

[29]The national threshold used in our measure (FCSU with mortgage payments but not medical expenses) decreased from $27,043 in 2008 to $26,778 in 2009, or 0.98 percent. Our base threshold for Wisconsin decreased slightly more, from $24,842 in 2008 to $24,575 in 2009, or 1.07 percent after adjusting for costs of living in Wisconsin relative to the nation. Note that the SPM would use five years, rather than three years, of expenditure data in establishing thresholds, thereby reducing the impact of one-year changes in expenditure patterns.

[30]The two methodological changes concerned treatment of students and public housing. Namely, we excluded certain 18- to 23-year-olds who had little to no earnings and were students from our poverty estimates under the assumption that they were college students relying upon parental support and we improved our estimate of publicly subsidized housing to better capture housing vouchers, priorities for elderly individuals, and subsidy values. See the Technical Appendix for further details.

and the elderly?" By comparing the marginal impact of various resources on poverty rates in 2008 and 2009, we can better understand differences in poverty between 2008 and 2009.

In Table 6, we show the marginal impact of eight alternate specifications of the WPM, including five specifications that exclude or include specific resources or expenses (taxes, nutrition benefits, housing, energy assistance, work expenses) and three specifications that vary the thresholds (adjustments for medical expenses, within-state cost-of-living-adjustments [COLAs], and housing tenure). Policy-relevant highlights are shown in Figure 6. In selecting policy-relevant examples in the figures, we include not just taxes and noncash benefits, but also work expenses and medical expenses, to highlight the fact that poverty rates are affected not only by safety net assistance programs that provide additional resources, but also by the presence (or lack) of work-support policies to assist families with free or subsidized child care or to provide them with free or subsidized health insurance.

Impact of Policies on Overall, Child, and Elderly Poverty

Adjusting for tax credits has a much bigger effect in 2009 than 2008, reflecting increases in tax credits under the American Recovery and Reinvestment Act of 2009 (see first row of Table 6 and the first bar in Figure 6). Even in 2008, taxes served to reduce poverty rates because most poor people in Wisconsin receive more in tax credits than they owe in other taxes, largely as a result of the federal Earned Income Tax Credit (EITC), the Wisconsin EITC, and the Wisconsin Homestead Credit. Under ARRA, there was an expansion in the EITC for families with three or more children as well as introduction of a new Making Work Pay tax credit and an expansion in the refundable portion of the Child Tax Credit. This expansion in tax credits, combined with economic changes between 2008 and 2009, resulted in an even larger poverty reduction due to taxes in 2009 as compared to 2008 (1.9 vs. 0.8 percentage points).[31]

Supplemental Nutrition Assistance Program (SNAP) benefits also had a larger impact on reducing poverty in 2009 than 2008, reducing poverty by 1.2 percentage points in 2009, compared to 0.9 percentage points in 2008. The larger 2009 impact reflects growth in both the number of people receiving benefits and the size of the benefit. The number of Wisconsin residents receiving SNAP benefits grew from 445,000 to 604,000, a 36 percent increase, between July 2008 and July 2009, compared to 23 percent nationally.[32] In addition, the federal government increased maximum benefits by 13.6 percent on April 1, 2009, as one of the stimulus provisions in ARRA. We expect that SNAP benefits will have an even larger impact in 2010, when the ARRA provision is in effect for the full year.[33]

[31]In addition to the three policy expansions discussed above, the tax model underwent some modest technical refinements (most notably, using a match of CPS-ACS data to model child care expenses in order to improve estimates of the child and dependent care tax credit), but these had much less of an effect than the changes due to the legislative and economic changes. See Technical Appendix D for more on the tax model.

[32]SNAP participant data are from Wisconsin's State Food Stamp/FoodShare Benefits and Participation Data: Recipients, at http://www.dhs.wisconsin.gov/em/rsdata/fs-caseload-recip-by-cy.htm and the National Supplemental Nutrition Assistance Program Monthly Data – National Level at http://www.fns.usda.gov/pd/34SNAPmonthly.htm.

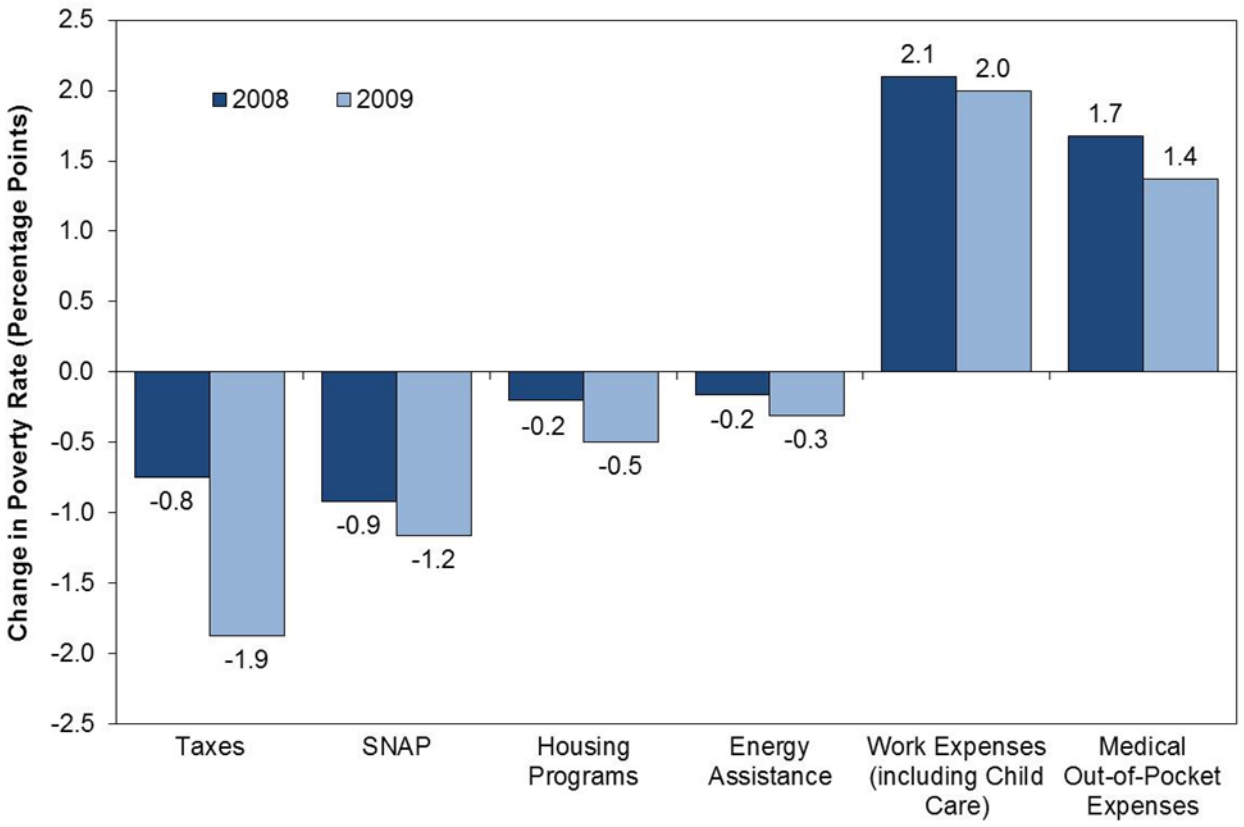
[33]Because our 2009 model focuses on SNAP benefits received between July 2008 and June 2009, our model only captures three months of the ARRA impact in our 2009 estimates. See Technical Appendix E for more on imputation of SNAP benefits.

Table 6. Poverty Rates under Alternative Specifications of the Wisconsin Poverty Measure (WPM) and Marginal Effects on State Poverty Rate, 2008 and 2009

	WPM Without Resource or Adjustment		Marginal Effect on Poverty Rate (Percentage Points)		Wisconsin Poverty Measure	
	2008	2009	2008	2009	2008	2009
All						
Taxes & credits	12.0%	13.4%	**- 0.8**	**-1.9**	11.2%	11.5%
SNAP benefits	12.2	12.7	**- 0.9**	**-1.2**	11.2	11.5
Public housing	11.4	12.0	**- 0.2**	**-0.5**	11.2	11.5
Energy assistance	11.4	11.8	**- 0.2**	**-0.3**	11.2	11.5
Child care & other work expenses	9.1	9.5	**+ 2.1**	**+2.0**	11.2	11.5
Medical expenses	9.6	10.1	**+ 1.7**	**+1.4**	11.2	11.5
Within-state COLA	11.7	11.8	**- 0.5**	**-0.3**	11.2	11.5
Housing tenure	11.2	11.7	*	**-0.2**	11.2	11.5
Children						
Taxes & credits	15.9	18.5	**-2.3**	**-5.0**	13.6	13.4
SNAP benefits	15.5	15.9	**-2.0**	**-2.4**	13.6	13.4
Public housing	13.8	14.1	**-0.2**	**-0.6**	13.6	13.4
Energy assistance	13.7	13.8	**-0.1**	**-0.4**	13.6	13.4
Child care & other work expenses	9.6	10.0	**+3.9**	**+3.5**	13.6	13.4
Medical expenses	11.7	12.2	**+1.8**	**+1.3**	13.6	13.4
Within-state COLA	14.0	13.7	**-0.4**	**-0.2**	13.6	13.4
Housing tenure	12.8	12.8	**0.8**	**0.6**	13.6	13.4
Elderly						
Taxes & credits	11.0	9.7	**-0.6**	**-0.1**	10.4	9.6
SNAP benefits	10.7	9.8	**-0.3**	**-0.2**	10.4	9.6
Public housing	10.8	10.5	**-0.4**	**-0.9**	10.4	9.6
Energy assistance	10.8	10.1	**-0.4**	**-0.5**	10.4	9.6
Child care & other work expenses	10.1	9.4	**+0.4**	**+0.2**	10.4	9.6
Medical expenses	6.6	6.4	**+3.8**	**+3.2**	10.4	9.6
Within-state COLA	11.0	10.1	**-0.6**	**-0.5**	10.4	9.6
Housing tenure	12.5	12.0	**-2.1**	**-2.4**	10.4	9.6

Source: IRP tabulations of 2008 and 2009 American Community Survey data.
Note: Numbers may not sum due to rounding.
*Less than 0.1.

Figure 6. Effects of Taxes, Public Benefits, and Expenses on Overall Poverty under the Wisconsin Poverty Measure, 2008 and 2009



Source: IRP tabulations of 2008 and 2009 American Community Survey data.

The antipoverty effects of housing and energy assistance benefits also increased between 2008 and 2009, though in both years these programs have less of an effect on poverty than taxes and SNAP benefits, reflecting the relatively small number of people living in subsidized housing in Wisconsin and the modest size of energy assistance benefits compared with tax credits and other noncash benefits. The increase in the marginal impact of housing (from 0.2 percentage points in 2008 to 0.5 percentage points in 2009) is not due to legislation or the economy, but reflects technical changes. We improved our imputation of publicly subsidized housing to include a voucher program that was omitted in our 2008 estimate, to better capture targeting of benefits to elderly households, and to better estimate the values of public housing subsidies. In contrast, the increase in antipoverty effectiveness of energy assistance reflects a legislative change—specifically, a federal funding bill, which passed early in 2009, before ARRA, and which included an expansion of the Low-Income Home Energy Assistance Program (LIHEAP) in order to address rising energy prices. As a result, there was a 19 percent increase in LIHEAP benefits distributed in Wisconsin between federal fiscal years 2008 and 2009.

Tax credits and noncash benefits have more of an effect on child than elderly poverty, as shown in Figures 7 and 8. Tax credits had a big effect on child poverty in 2008 (reducing it by 2.3 percentage points), but an even larger effect in 2009: the child poverty rate would be 5.0 percentage points higher but for taxes and tax credits. Two of the ARRA tax expansions in ARRA were limited to families with children (the expansion of the additional Child Tax Credit and the expansion of the Earned Income Tax

Figure 7. Effects of Taxes, Public Benefits, and Expenses on Child Poverty under the Wisconsin Poverty Measure, 2008 and 2009

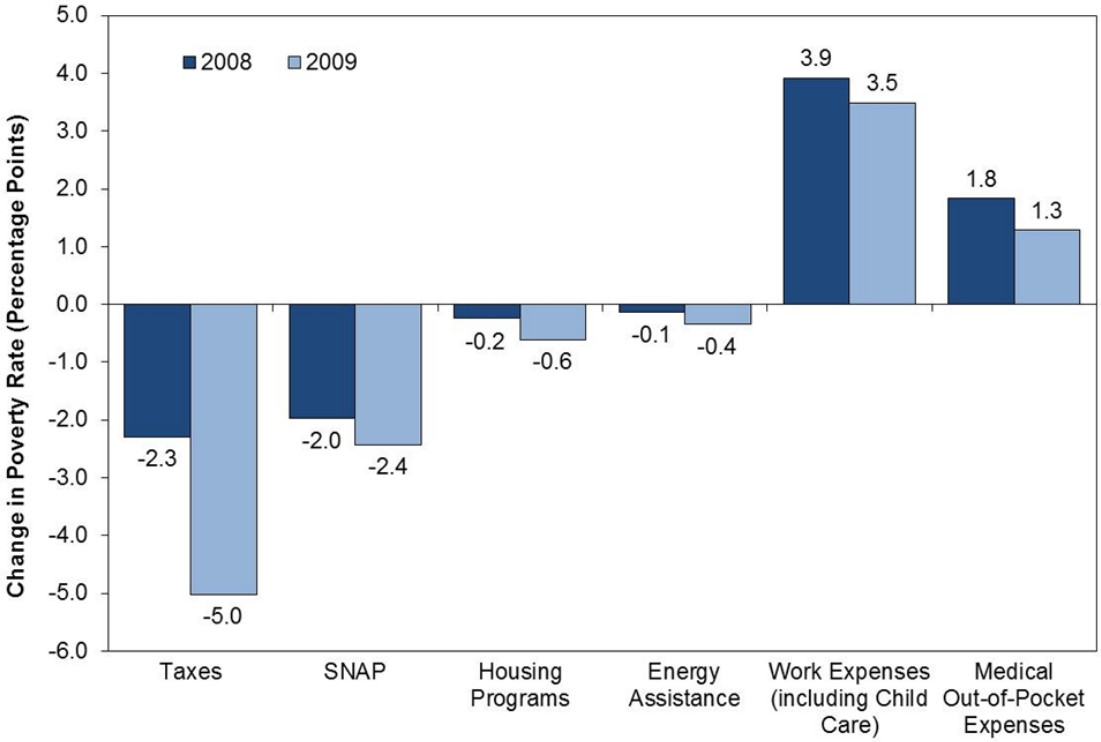
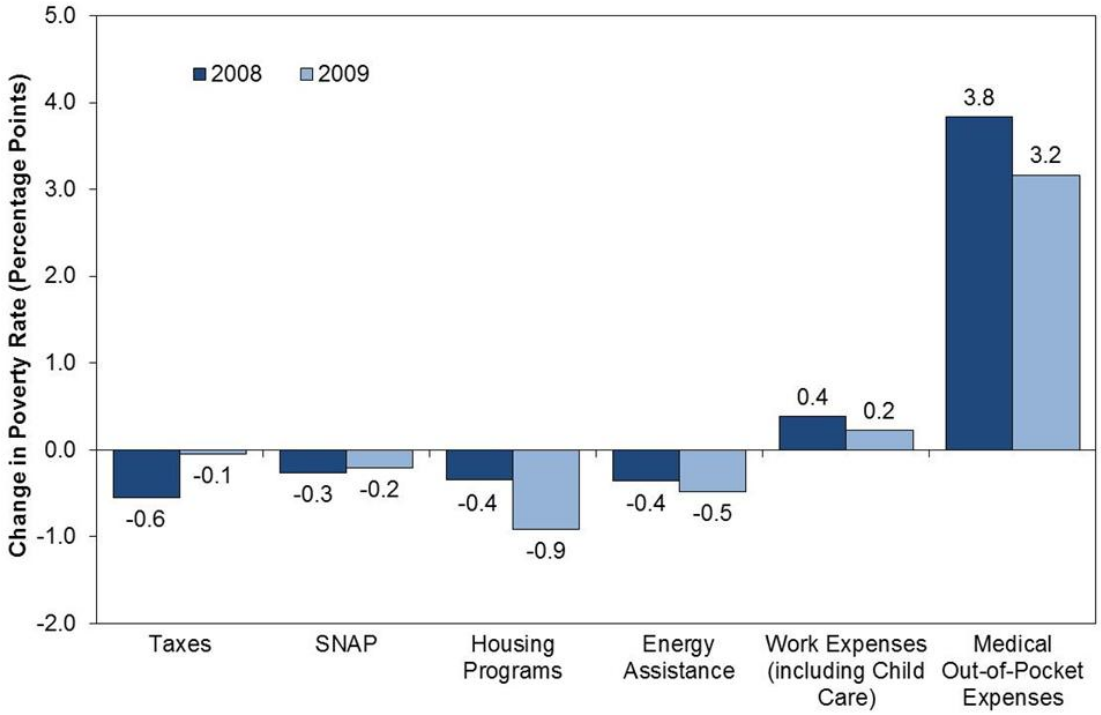


Figure 8. Effects of Taxes, Public Benefits, and Out-of Pocket Costs on Elderly Poverty under the Wisconsin Poverty Measure, 2008 and 2009



Source: IRP tabulations of 2008 and 2009 American Community Survey data.

Credit) and the third credit is targeted to workers, many of whom are parents of children. SNAP benefits also play a strong role in reducing child poverty, which would be 2.4 percentage points higher, if there had been no SNAP program in 2009.

Taxes and SNAP benefits have much more modest impacts on the elderly, who are less affected by taxes due to their low participation in the labor force, and also have relatively low levels of participation in the SNAP program compared to families with children. One noncash benefit that does have a stronger impact on the elderly than on children is housing assistance, which is often targeted to the elderly and disabled and reduces elderly poverty by an estimated 0.9 percentage points in 2009. In general, however, elderly poverty is less driven by noncash benefits and tax policy, and more by challenges of high out-of-pocket expenses, particularly medical expenses.

While counting the value of taxes and noncash benefits reduces poverty rates, adjusting for out-of pocket expenses increases poverty rates. Poverty would fall by 2.0 percentage points and child poverty would fall by 3.5 percentage points (from 13.4 percent to 10.0 percent) but for the family resources that are tied up in commuting and work-related child care, as well as smaller amounts for uniforms, union dues, and other miscellaneous work-related expenses. Annual work expenses are based on estimated weekly expenses, multiplied by the number of weeks worked, and, indeed, work expenses appear to have had slightly less of an effect in 2009 than 2008, consistent with the reduction in employment during the recession.

High medical expenses also drive up poverty under the WPM, particularly for the elderly. Poverty would fall by 1.4 percentage points and elderly poverty would fall by 3.2 percentage points (from 9.6 to 6.4 percent) if people did not have to spend so much of their income on out-of-pocket medical expenses, such as insurance premiums, co-payments on medical services, prescription and over-the-counter drugs, and uninsured medical expenses. Medical expenses had less of an effect on poverty in 2009 than in 2008, reflecting a decline in the Census Bureau estimates for medical expenses in the national thresholds. In both years, we made a modest adjustment to the national estimates to reflect Wisconsin's BadgerCare program, which provides health insurance and thereby lowers medical costs for low-income individuals and families. In the long run, we would like to have better estimates of state-level medical expenses to have a better sense of how state health care policies such as BadgerCare can affect the economic well-being of low-income populations.

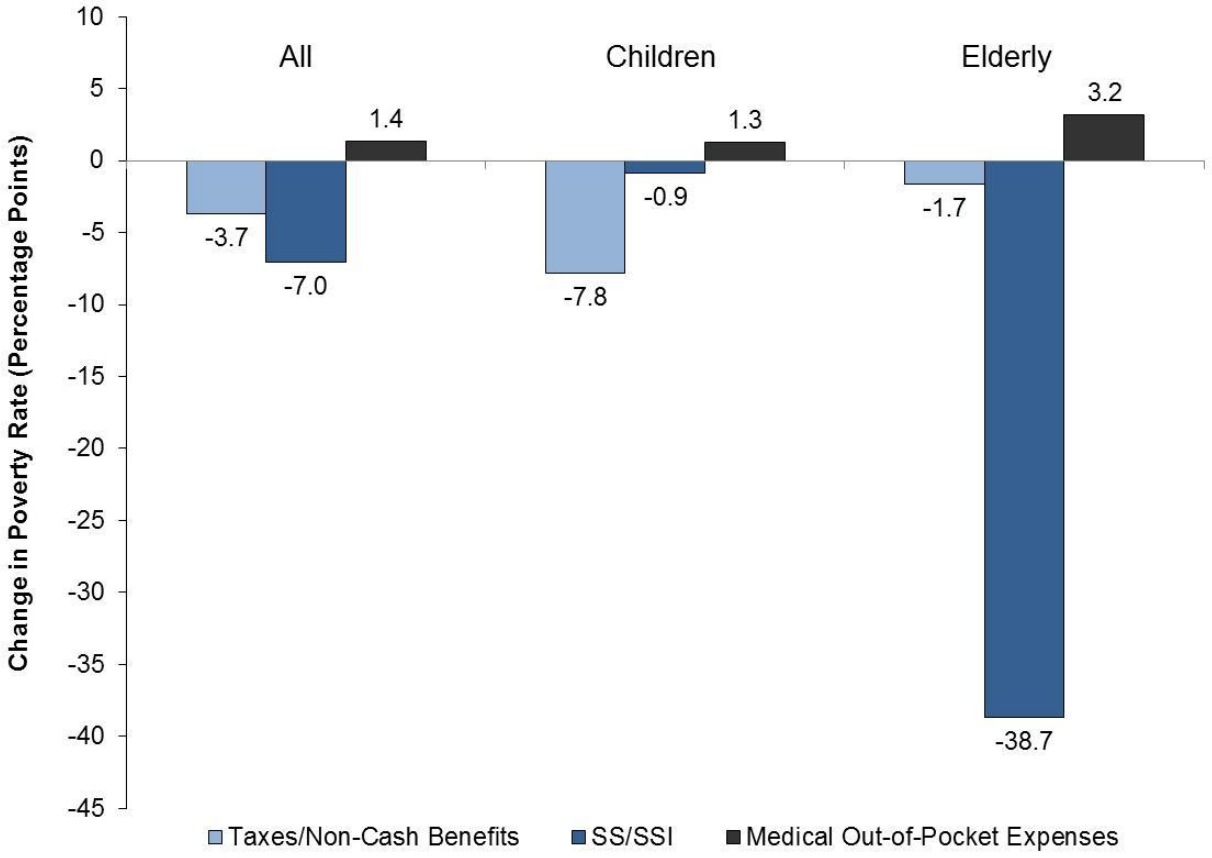
Two other alternate specifications are shown in Table 6, but not highlighted in the figures because they are not directly subject to policy action: adjusting the thresholds for within-state COLAs and adjusting the thresholds for home tenure. While neither adjustment has a big impact on the overall poverty rate, one of them, the homeowner or housing tenure adjustment, has a big impact on elderly poverty. This adjustment takes into account the lower monthly income needed to meet basic expenses if one owns one's house outright and no longer has to pay rent or mortgage payments. This homeowner adjustment lowers the overall poverty rate by 0.2 percentage points and the elderly poverty rate by 2.4 percentage points (see last row of Table 6).

In Figures 6 through 8, we have highlighted the ways in which the WPM can be used to show the effects of taxes, noncash benefits, and out-of-pocket expenses on poverty. We do not want to omit, however, the effects of *cash* benefits on poverty, and in Figure 9, we contrast the antipoverty effectiveness of two large cash benefit programs—Social Security and Supplemental Security Income (SSI)—with the combined effects of all tax provisions and noncash benefits included in our model, as well as with the effects of out-of-pocket medical expenses.[34] Social Security benefits for the general retirement and disability populations, combined with SSI benefits for low-income elderly and disabled persons, reduce overall

[34]Benefits under the Railroad Retirement program are included along with Social Security and SSI benefits.

poverty by 7.0 percentage points, far more than the 3.7 percentage point reduction from the combined effect of taxes and credits, SNAP benefits, energy assistance, and housing benefits.[35]

Figure 9. Effects of Selected Noncash Benefits, Cash Benefits, and Out-of-Pocket Costs on Poverty under the Wisconsin Poverty Measure, 2009



Source: IRP tabulations of 2009 American Community Survey data.

In summary, most of the lack of increase in poverty and child poverty between 2008 and 2009 was driven by the expanded role of tax credits and noncash benefits in reducing poverty, as was highlighted in Figures 6 and 7. Reductions in work expenses and medical expenses were less important, but also trended in the same direction. Federal actions taken early in 2009—specifically the expansions of tax credits and SNAP benefits under the American Recovery and Reinvestment Act and the smaller expansion in energy assistance in separate legislation—appear to have been successful in mitigating the effects of the recession on Wisconsin families. The dramatic increase in SNAP participation, encouraged by state administrative practices such as online application, also played a role.

The story is somewhat different for elderly poverty, which saw little change between 2008 and 2009 under either the official or the WPM measure. The elderly are less affected by job loss, taxes and tax

[35]All of our estimates show static changes, not taking into account the likelihood that work and savings behaviors would be different if there were no Social Security or SSI retirement and disability programs.

credits on workers, or expansion of most noncash benefits. In contrast, the elderly are more affected by treatment of medical expenses and homeownership tenure, reflecting the financial strain many elderly face from high medical expenses, which is offset for some elderly by the benefit of owning a house outright. The economic well-being of the elderly is also affected by public retirement programs that provide cash benefits that keep many elderly out of poverty.

V. CONCLUSION

Our look at poverty in 2009, including changes relative to 2008, illustrates the comprehensive nature of the WPM. In Wisconsin, we saw an increase in unemployment in 2008 and early 2009, and then a leveling off (though at a high rate of 9 percent or more). Data gathered in the American Community Survey, our primary data source for the WPM, covered more of the Great Recession period in 2009 than in 2008. And from the official poverty measure, we know that families had fewer cash resources in 2009 than in 2008. Yet the WPM considers not only cash resources, but also near-cash benefits and programs in place to offset the increased need of 2009. Taken together, the WPM indicates that decreases in employment and earnings for 2009 were offset to a great extent by increases in refundable tax credits and noncash benefits, ultimately resulting in little change in poverty rates under the new measure. Researchers using other alternative measures of poverty for the nation and New York City found similar results regarding the strong effect of policies in moderating poverty in 2009 (Sherman, 2010; New York City Center for Economic Opportunity, 2011). A slight decrease in the WPM threshold and small methodological refinements also played a modest role in explaining the lack of increase in poverty between 2008 and 2009 under the WPM measure.

The results in this report demonstrate a strong contrast between alternative poverty measures like the WPM and the official poverty measure. While the official measure is useful for tracking trends over time, it is outdated in many ways and captures only a partial picture of how families in the United States are faring. The WPM reflects both the policies in place to support families and the specific costs of getting by in our state, offering a more comprehensive picture of resources and need. It allows us to look at need within the state, to examine the impacts of resources and expenses on different demographic groups, and to demonstrate policy effects individually and combined.

Our model reflects IRP's commitment to the Wisconsin Idea, with university research offering new knowledge and insights to serve people throughout the state. In addition, one of our goals in developing the Wisconsin measure is to serve as a national model for other states and localities seeking to craft their own measures of need. Our model, including programming and other technical details, is available to other states and localities working to develop their own place-specific alternative measures of poverty. And we will continue to refine our methods as new details about the proposed federal Supplemental Poverty Measure and other poverty measurement research emerge from the Census Bureau and other poverty researchers.

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