Minnesota Poverty Report 2009-2019

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About the Author
Angie Fertig, PhD, is an economist and faculty member at the Humphrey School of Public Affairs at the University of Minnesota, Twin Cities. Her research focuses on the social determinants of health and policies aimed at improving the health of vulnerable populations. Dr. Fertig received her PhD from Brown University and her BA from Stanford University.

About the Humphrey School of Public Affairs
The Hubert H. Humphrey School of Public Affairs at the University of Minnesota ranks among the country's top 10 professional public policy and planning schools, and is led by Dean Nisha Botchwey, PhD. The Humphrey School is respected for its role in shaping public policy, its focus on social justice and human rights, and its expertise in planning, leadership, and management. The School has 60 full-time faculty and 80 staff members. HHH offers six distinctive master's degrees, a doctoral degree, and six certificate programs. The School houses nine research and outreach centers, leading the way in developing solutions to many of the critical challenges facing Minnesota, the nation, and the world. The mission of the Humphrey School is to inspire, educate, and support innovative leaders to advance the common good in a diverse world.

About MinnCAP
The Minnesota Community Action Partnership (MinnCAP) is made up of 24 Community Action Agencies and 11 Tribal Nations in communities across the state of Minnesota and is led by Executive Director Bill Grant. These member organizations serve all 87 counties across the state, providing poverty solutions through various programs and services including: homeless prevention and housing assistance, utility bill assistance, healthcare enrollment, food and nutrition services, Head Start early childhood programming, financial asset building, regional transit and more. The mission of MinnCAP is to remove obstacles and solve problems that block the achievement of self-sufficiency. To reduce poverty in its community, a Community Action Agency works to better focus available local, state, private and federal resources to assist individuals and families with low incomes to acquire useful skills and knowledge, gain access to new opportunities and achieve economic self-sufficiency.

Acknowledgements
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Executive Summary

This report calculated the poverty rate for Minnesota from 2009 to 2019 using three different measures: the Supplemental Poverty Measure (SPM), the Official Poverty Measure (OPM), and the Market Income Measure (MKT). *Using any measure, the poverty rate in Minnesota declined significantly from 2009 to 2019.* The OPM rate fell the most over this period from 10.8% to 8.7%, a change of 2.1 percentage points. The MKT rate, which reflects the economy in the absence of a safety net, fell from 16.0% to 14.2%, a change of 1.8 percentage points. The SPM rate fell 1.3 percentage points from 9.9% to 8.6%. *The decline in poverty over this period is largely due to the economy rebounding from the Great Recession*, which ended in 2009, not to changes in the safety net.

Poverty rates declined for all racial/ethnic groups in Minnesota, but the poverty rates for non-White Minnesotans are still much higher than for White Minnesotans. The SPM rate for Native American residents in 2016-19 was 23.0% and the rate for Black residents was 20.0%, while the rate for White residents was 7.2%. Thus, the Black-White poverty gap is almost 13 percentage points, and the Native American-White poverty gap is almost 16 percentage points in Minnesota, where both are only about 12 percentage points in the US as a whole.

This report examined poverty rates across regions of the state, revealing *especially high poverty rates in the Duluth metro area; Blue Earth, Nicollet and Waseca counties; and Ramsey county*. A total of seven regions examined (of 23) covering 20 counties (of Minnesota's 87) and one metro area had SPM rates significantly above the state average. Even worse, two of the regions with higher-than-average poverty rates experienced a growth in their poverty rate between 2009 and 2019; Blue Earth, Nicollet, and Waseca counties had their SPM rate grow from 11.7% in 2009-12 to 13.2% in 2016-19, and Crow Wing, Morrison, Todd and Wadena counties saw their SPM rate grow from 9.5% to 10.4% over the same period. On the positive side, 10 regions examined covering 30 counties had supplemental poverty rates below the state average in 2016-2019, and *14 regions covering 52 counties experienced a significant decline in poverty between 2009 and 2019*.

Between 2009 and 2019, poverty rates declined for all age groups in Minnesota. The SPM rate for children (birth to age 17) fell the most (1.9 percentage points), from 9.9% in 2009-12 to 8.0% in 2016-2019. The SPM rate for working age adults (age 18-64) fell 1.3 percentage points, from 10.2% in 2009-12 to 9.0% in 2016-2019. The SPM rate for seniors (age 65+) fell the least (0.9 percentage points), from 10.9% to 10.0%. *Seniors have a significantly higher poverty rate and children have a significantly lower poverty rate than the state rate*.

Benefit programs from the safety net play a large role in poverty reduction. In 2016-2019, Social Security had the largest effect on poverty in Minnesota, bringing the poverty rate down by 6.4 percentage points overall. *The federal earned income tax credit (EITC), the Supplemental Nutrition and Assistance Program (SNAP), and housing subsidies are the most important benefits for children and non-White families in Minnesota.*

Overall, this report brings some good news. The poverty rate in Minnesota declined from 2009 to 2019 affecting all age groups and racial/ethnic groups. However, not all regions experienced a decline in poverty and racial/ethnic disparities in poverty are still huge. This report also underscores the importance of the safety net. Without the safety net, the poverty rate in Minnesota would likely be double the current rate. However, the decline in poverty rates that this report documents is due to changes in market income, not to an expansion in the safety net. *More work is needed to further reduce poverty and to eliminate disparities in poverty in Minnesota.*

Introduction

This report estimates poverty defined three different ways for 23 regions of Minnesota between 2009 and 2019 to help policy makers and human services professionals better understand the varying economic needs across the state. Poverty measures compare the resources that a family has to a threshold; if the family's resources fall below the threshold, all individual members of the family are classified as in poverty. The three poverty measures estimated in this study primarily vary by the resources counted and by the threshold used. **Table 1** provides an overview of the differences across the three measures estimated in this report.

Table 1: Resources and Threshold Differences for Three Poverty Measures

	Resources Included	**Poverty Threshold**
Market Income Poverty Measure (MKT)	Labor earnings + Investment income + Retirement income + Other private income (Before Tax)	Same as OPM
Official Poverty Measure (OPM)	Resources listed above + Cash welfare (TANF) benefits + Cash Social Security benefits + Cash Supplemental Security Income (SSI) benefits	Thresholds are defined by the U.S. Census based on 3 times the cost of a minimum food diet in 1963. The threshold varies by number of adults and number of children in the family only. For example, the 2019 poverty threshold for a family of 2 adults and 2 children was $25,465.
Supplemental Poverty Measure (SPM)	Resources listed above + noncash benefits (SNAP, WIC, school lunch program, housing assistance, energy assistance) + tax credits (earned income tax credits) - non-discretionary expenses (state and federal taxes, FICA, work expenses, medical out-of-pocket expenses)	Thresholds are based on expenditures of food, clothing, shelter, and utilities. The threshold varies by the number of adults and the number of children in the family, and the cost of housing in the geographic area of residence. For example, the 2019 threshold for a family of 2 adults and 2 children was $30,460 if they rented a home in the Twin Cities metro and $25,168 if they rented a home in a non-metro area of Minnesota.

The **market income poverty measure (MKT)** is intended to capture the poverty rate in the absence of any public assistance benefits to families. The **official poverty measure (OPM)** accounts for some cash public assistance benefits in addition to private income. The **supplemental poverty measure (SPM)** aims to capture all possible resources available to a family to cover necessities. It attempts to comprehensively reflect a family's economic circumstances by adding in the value of non-cash public benefits, like food stamps and earned income tax credits, and subtracting out expenses that are non-discretionary, like taxes paid and out-of-pocket medical expenses. The SPM also sets the poverty threshold based on the costs of living (not just food costs) and reflects the fact that some regions of the country are more or less expensive than others.

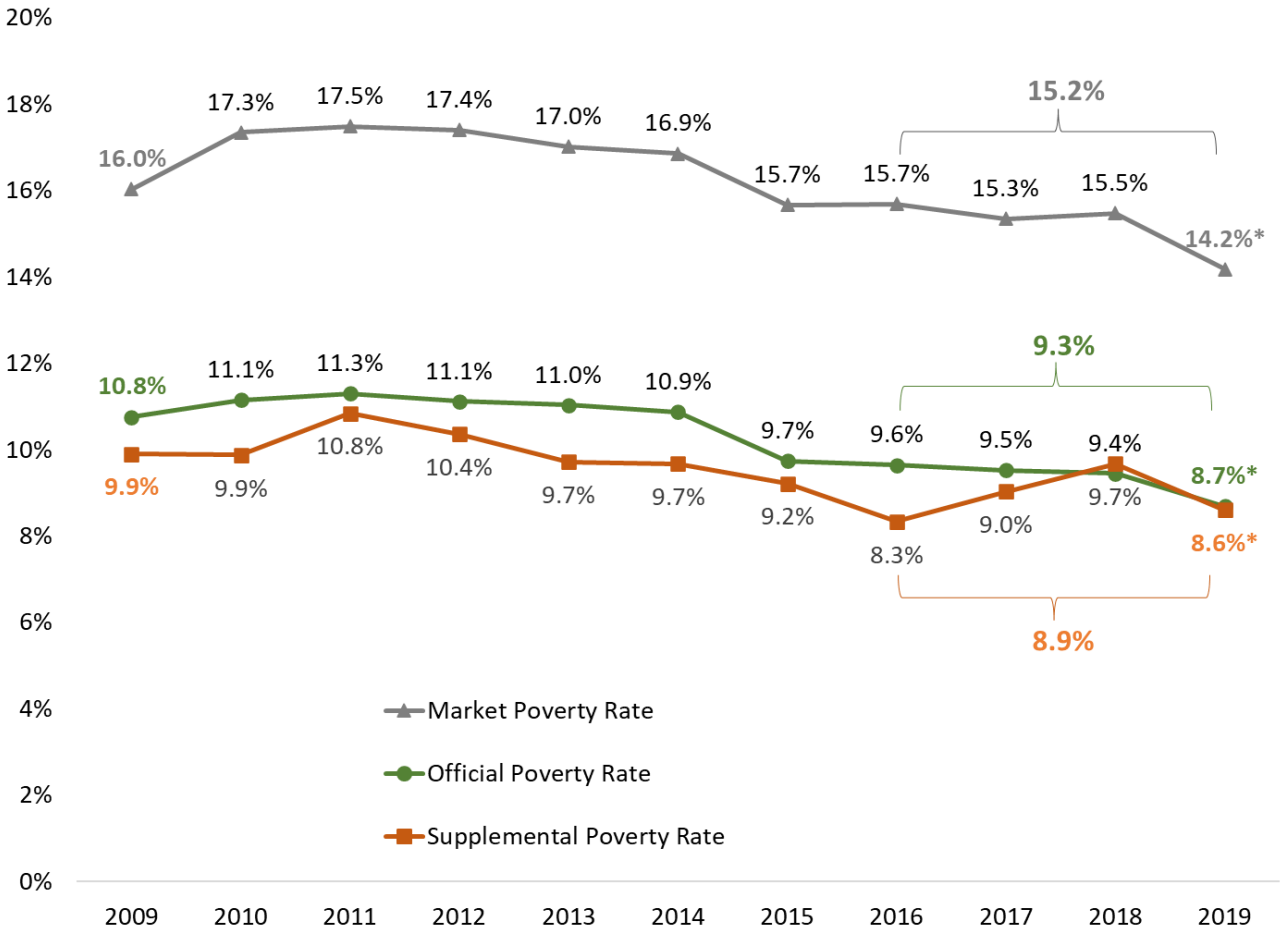
The official poverty rate produced by the U.S. Census Bureau for the nation and for each state are estimated using data from the Current Population Survey (CPS), a nationwide survey of 100,000

conducted in March of each year. However, to calculate poverty measures for a geographic area smaller than the state, a larger dataset is needed. This report uses the American Community Survey (ACS) from 2009 to 2019, which includes between 51,000 and 55,000 people from the state of Minnesota each year. The ACS does not ask the exact same questions as the CPS, and so the poverty measures produced using the ACS will not line up exactly with those produced using the CPS. However, every effort was made to reproduce the poverty measures estimated by the Census Bureau.

Key Findings

The **key findings** of this report are shown in Figures 1-6. The official poverty rate for the state of Minnesota is estimated to be 8.7% in 2019, which is significantly lower than the official poverty rate of 10.8% in 2009 (**Figure 1**). In 2019, cash benefits to Minnesota families brings the poverty rate down from the market poverty rate of 14.2% -- the rate of poverty that would exist if families did not receive any cash payments from the government (welfare, social security, or supplemental security income). Finally, when noncash benefits are included, non-discretionary spending is excluded, and thresholds are adjusted for housing costs, the supplemental poverty rate for the state is 8.6% in 2019. All three poverty rates in 2019 are significantly lower than their corresponding rate in 2009. In some analyses, I use an average poverty rate from 2016 to 2019 and thus show those average rates in **Figure 1** as well.

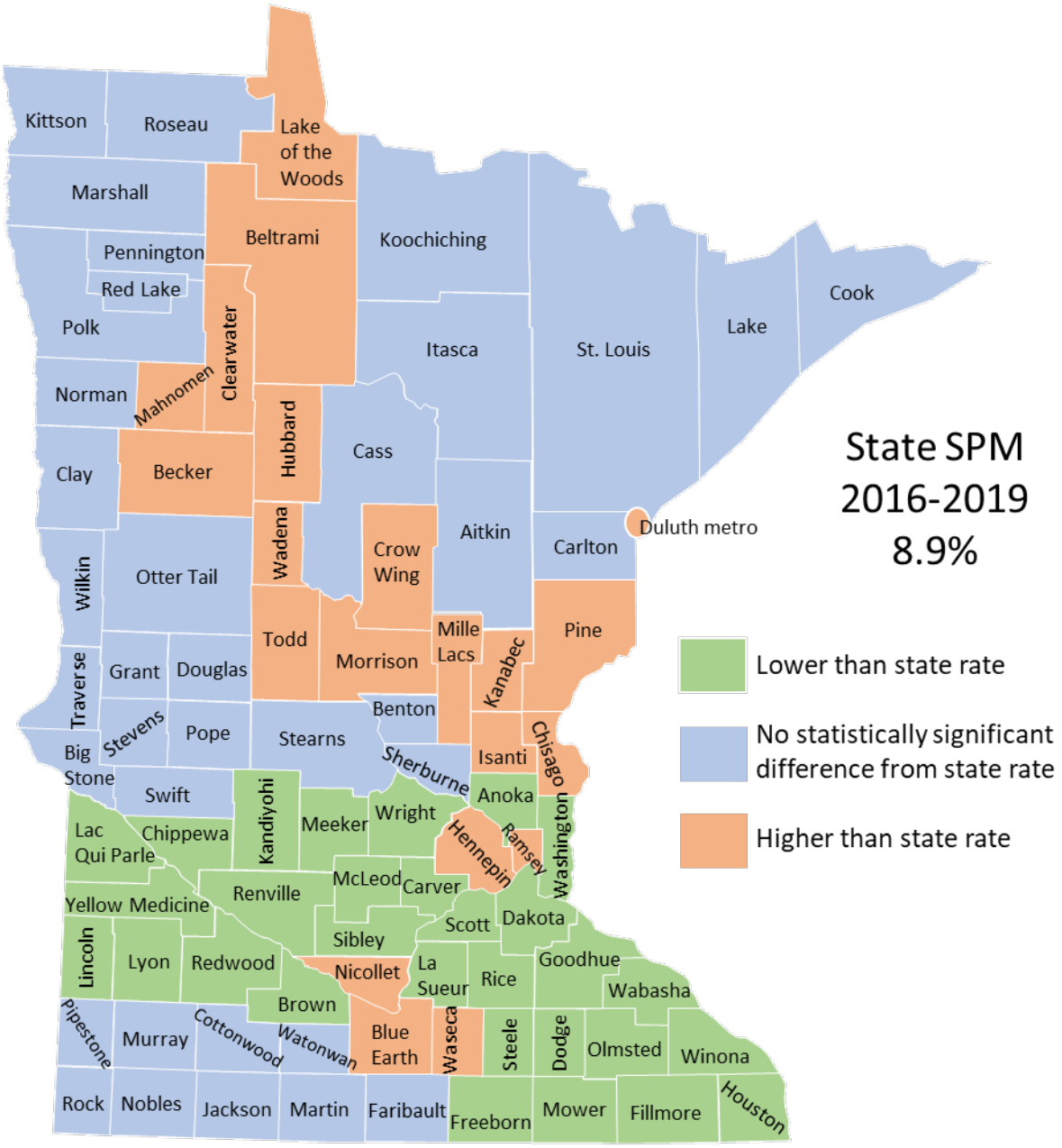
Figure 1: Three Poverty Measures for the State of Minnesota, 2009-2019



*Indicates that the poverty rate in 2019 is statistically significantly different from the rate in 2009.

The overall state rate masks substantial differences by region of the state. I separated the state into 23 regions (populous counties and the Duluth metro area are their own region, but less populous counties are combined into multi-county regions). Because the numbers of people in each of regions is small for statistical purposes, I average three or four years of data together to create poverty rate estimates with reasonable margins of error. Of the 23 regions in Minnesota, ten had a significantly lower supplemental poverty rate in 2016-2019 than the state rate (indicated by green in **Figure 2**), six regions had the same rate (indicated by blue), and seven regions had a significantly higher poverty rate in 2016-2019 than the state rate (indicated by orange).

Figure 2: Regions with a Supplemental Poverty Rate Above/Below the State Rate in 2016-2019



The trends in the supplemental poverty rate also varied by region. While 14 of the 23 regions examined had significantly lower supplemental poverty rates in 2016-2019 than in 2009-2012 (indicated by purple in **Figure 3**), six regions had supplemental poverty rates in 2016-19 that were not significantly different from their rate in 2009-12 (indicated by gray), and three regions had significantly higher SPM rates in 2016-19 than in 2009-12 (indicated by pink).

Figure 3: Changes in the Supplemental Poverty Rate from 2009-12 to 2016-19 by Region

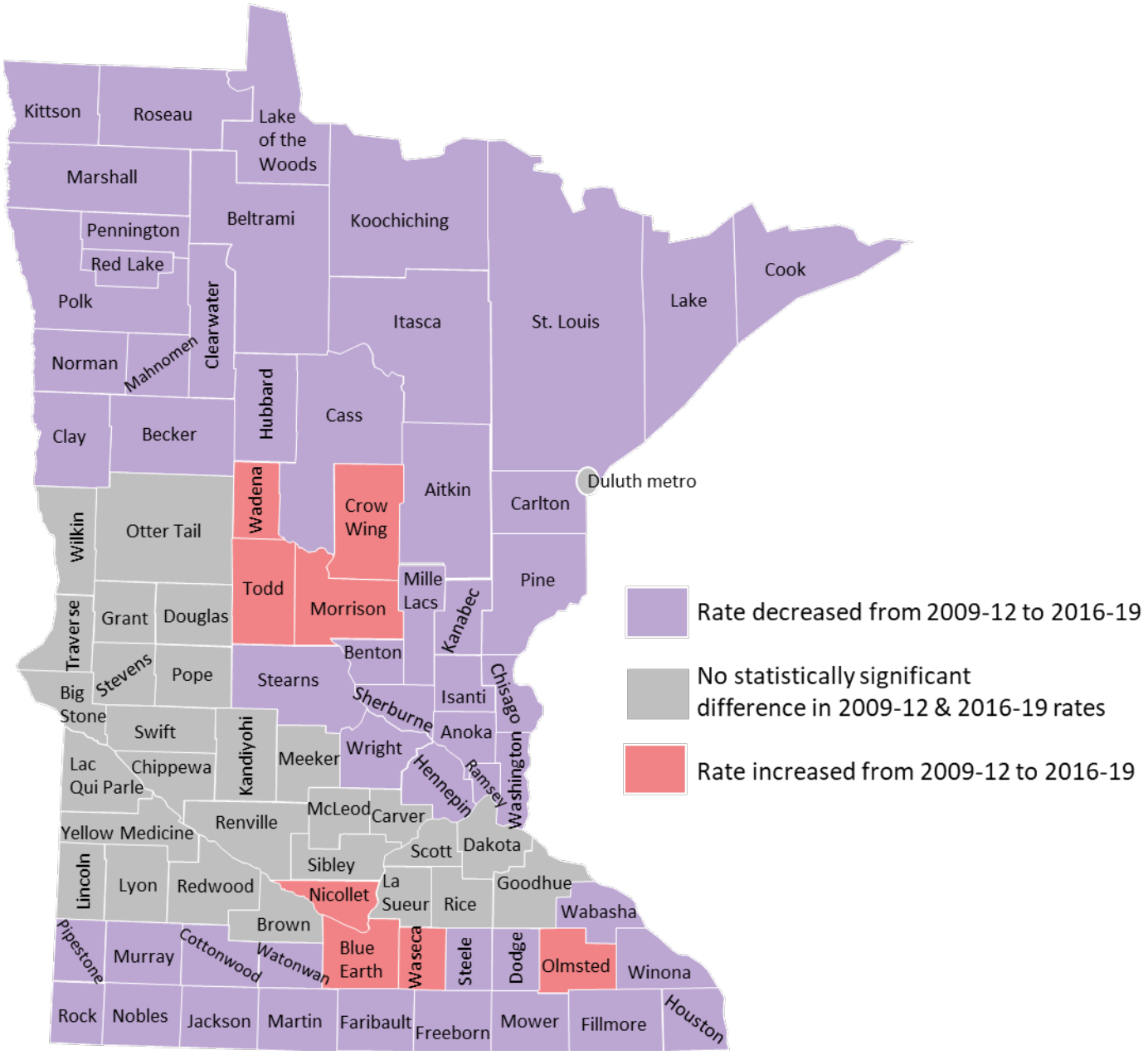
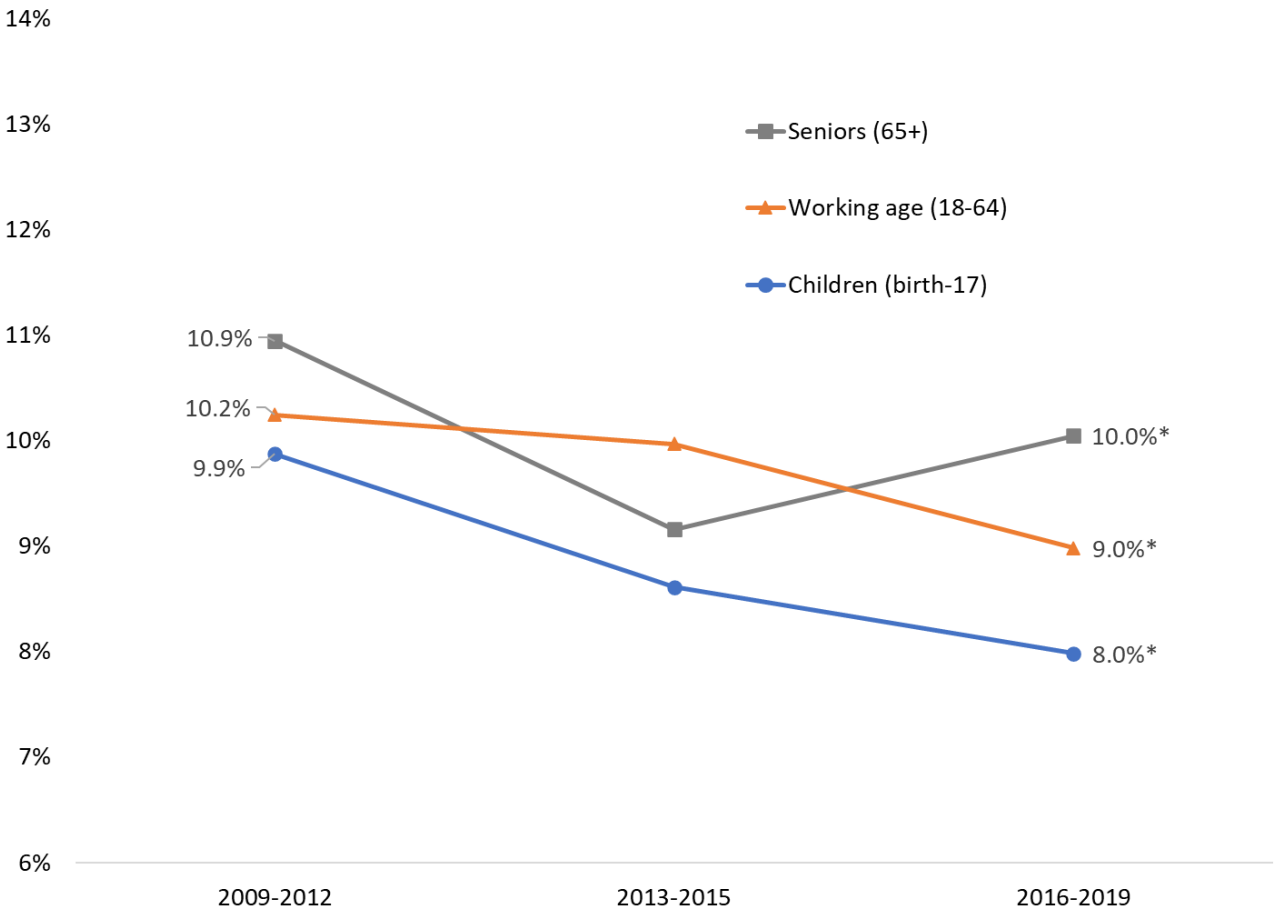


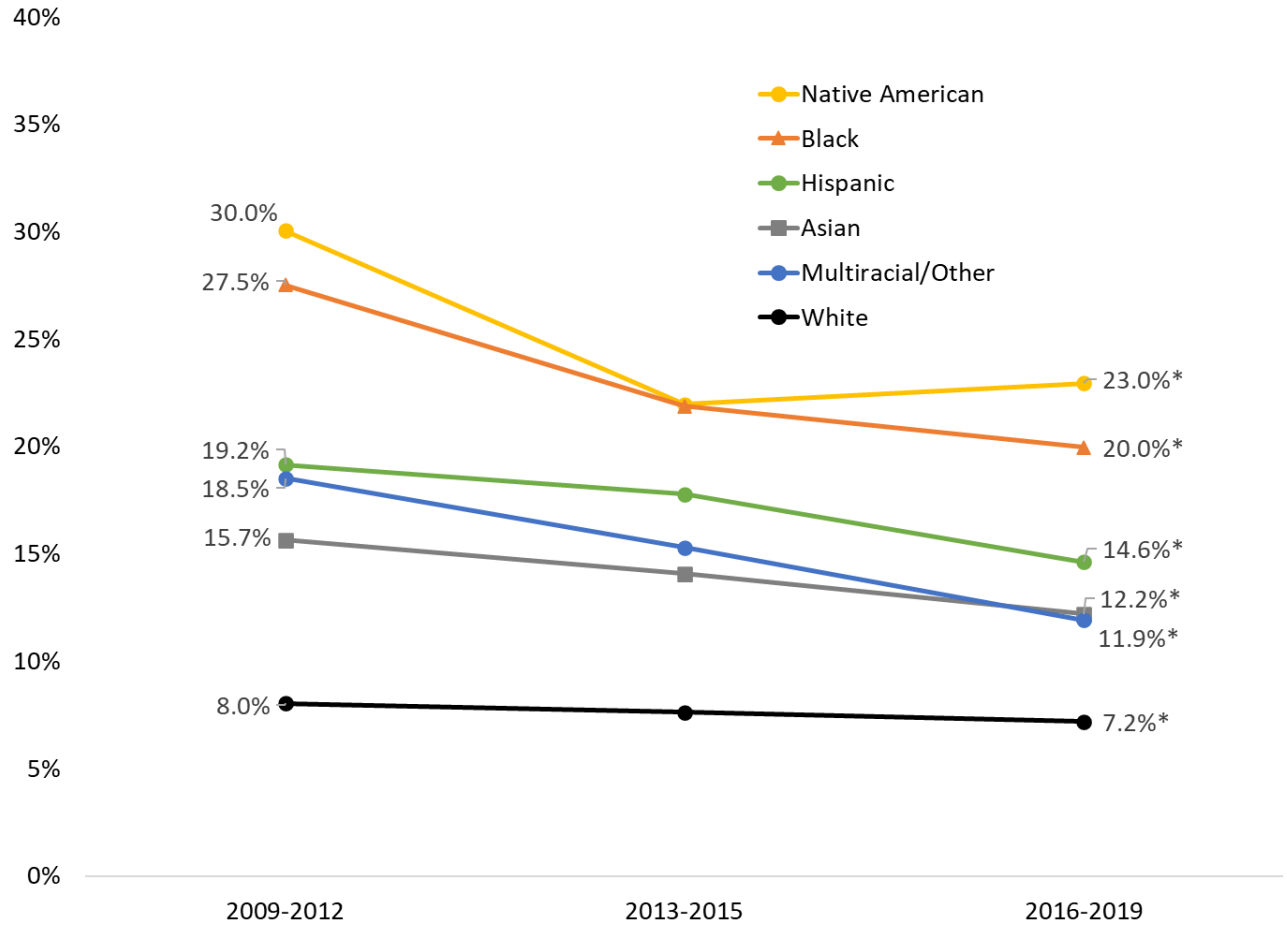
Figure 4: Supplemental Poverty Rate by Age Group, 2009-2019



*Indicates that the poverty rate in 2016-19 is statistically significantly different from the rate in 2009-12.

In **Figure 4**, we can see that the supplemental poverty rate declined over time for all age groups between 2009-12 and 2016-19. In 2016-19, children had the lowest supplemental poverty rate among all age groups of 8.0%, followed by working age adults at 9.0%. 10.0% of seniors in Minnesota were in poverty in 2016-19 according to the supplemental poverty measure.

Figure 5: Supplemental Poverty Rate by Race/Ethnicity, 2009-2019

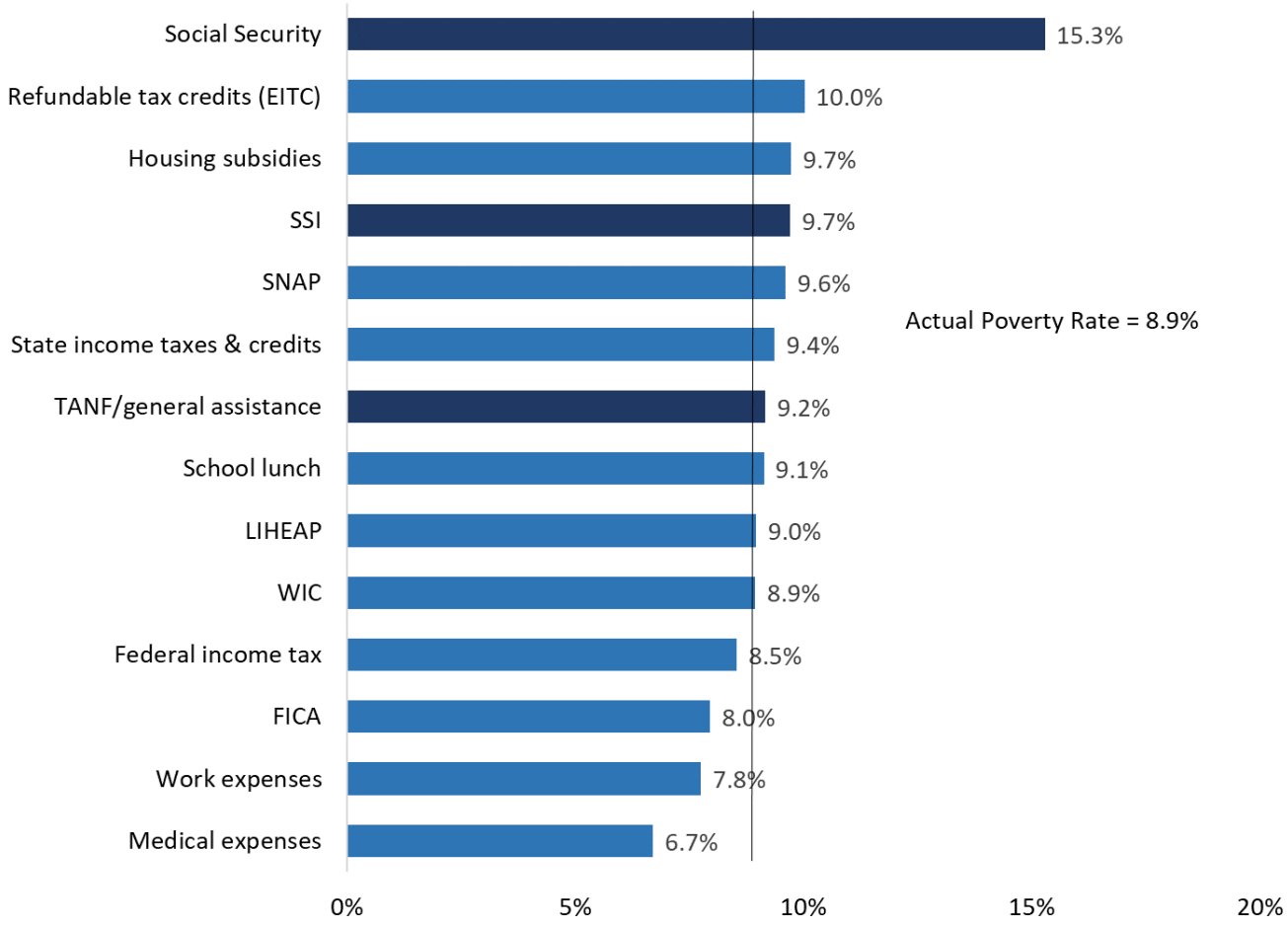


*Indicates that the poverty rate in 2016-19 is statistically significantly different from the rate in 2009-12.

In **Figure 5**, we observe that the supplemental poverty rate fell significantly for all racial/ethnic groups in Minnesota. The decreases in poverty rates appear to be larger for the non-White groups than for the White group, but the disparities in 2016-19 are still enormous. In 2016-19, 23.0% of Native Americans, 20.0% of Black individuals, 14.6% of Hispanic individuals, 12.2% of Asians, and 11.9% of people who identify as some other non-Hispanic race or indicated that they identify with more than one non-Hispanic race were in poverty, while only 7.2% of White individuals were in poverty.

Figure 6 shows what the supplemental poverty rate would be without each program or expense listed in the figure. This analysis simulated the effect of each element on the SPM rate by subtracting the value of one program or expense at a time and recalculating the poverty rate. The dark blue bars are the elements that are accounted for in the official poverty measure, and the lighter blue bars are the additional elements that are accounted for in the supplemental poverty measure. The results indicate that, instead of the actual rate of 8.9%, the supplemental poverty rate would be would 15.3% if no one in the state received Social Security checks. In contrast, the poverty rate in Minnesota would be 6.7% if no one in the state had to pay out-of-pocket medical expenses.

Figure 6: Effects of Policies on the Supplemental Poverty Rate, 2016-19



Notes: FICA=Federal Insurance Contributions Act (federal payroll tax); WIC=Special Supplemental Nutrition Program for Women's, Infant's, and Children's benefits; LIHEAP=Low Income Home Energy Assistance Program; TANF=Temporary Assistance for Needy Families (in Minnesota this program is called MFIP=Minnesota Family Investment Program); SSI=Supplemental Security Income; SNAP=Supplemental Nutrition Assistance Program; EITC=federal Earned Income Tax Credit.

The remainder of this report expands on these key findings. First, I provide a short description of the economic and policy environment in Minnesota between 2009 and 2019. Second, the methodology used in this report is explained. Finally, detailed results between 2009 and 2019 for each of the 23 regions and for specific subgroups of interest are provided.

Minnesota Background

Minnesota's economy compared to the US

The state of Minnesota's supplemental poverty rate in 2016-2019 (8.9%) is much lower than the US average (15.0%). The lower poverty rate is in part due to Minnesota's economy: the median household income in 2019 was $74,593 in Minnesota compared to the US median of $65,712.[1] The poverty rate is also lower because Minnesota's safety net is more generous than other states in certain ways (see below).

However, there are many ways in which Minnesota is a hard place to live for low-income families. The median rent for the state in 2019 was $977.[2] As a result, 43% of renter households pay more than 30% of their income toward housing, and 22% pay more than 50% of their income toward housing.[2] In addition, Minnesota has one of the highest state and local income taxes per capita at $1,984 in 2017 (seventh highest in the nation).[3] Minnesota also ranks among the most expensive states in terms of childcare, where infant care costs $16,087 per year on average, or 77.3% of the earnings from a full-year, full-time minimum wage job.[4]

Minnesota's economy also varies greatly by geography. Scott and Carver counties, adjacent to the Twin Cities, have median household incomes above $100,000, where Mahnomen and Beltrami counties in northern Minnesota have median household incomes below $50,000.[5] Similarly, median gross rent in Hennepin County was $1,135 in 2019, where in Wilkin County on the western border of Minnesota, the median rent was $523.[4]

Minnesota also has greater disparities in poverty by race/ethnicity than the US average. Minnesota's supplemental poverty rate in 2016-2019 was 23.0% for Native Americans and 20.0% for African Americans, which are only slightly lower than the US averages of 23.2% and 22.9%, respectively. However, the Black-White poverty gap is almost 13 percentage points, and the Native American-White poverty gap is almost 16 percentage points in Minnesota, where both are only about 12 percentage points in the US as a whole.

The large racial/ethnic disparities in Minnesota have recently been coined the "Minnesota Paradox" by Samuel Myers.[6] Explanations include redlining practices that restricted financial services like mortgage lending to neighborhoods of color and racially restrictive covenants on deeds,[7] as well as the destruction

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[1] US Census, American Community Survey 1-year estimates. https://data.web.health.state.mn.us/income_basic (accessed 7/23/2022).
[2] Minnesota Housing Partnership. (2021). "State of the State's Housing 2021". Available at https://www.mhponline.org/publications/2021-state-of-the-state-s-housing (accessed 3/5/2022).
[3] Tax Foundation. (2020). "State and Local Individual Income Tax Collections per Capita" Available at https://taxfoundation.org/state-and-local-individual-income-taxes-per-capita-2020/ (accessed 3/5/2022).
[4] Economic Policy Institute "Childcare costs in the United States: Minnesota" Available at https://www.epi.org/child-care-costs-in-the-united-states/#/MN (accessed 3/5/2022).
[5] U.S. Census Bureau. "Median Household Income (in 2019 dollars), 2015-2019" Available at https://www.census.gov/quickfacts/fact/dashboard/US/PST045221 (accessed 3/5/2022).
[6] Myers, Samuel L. (2022) "Minnesota Paradox" Available at https://www.hhh.umn.edu/research-centers/roy-wilkins-center-human-relations-and-social-justice/minnesota-paradox (accessed 9/7/2022).
[7] Delegard, K., Ehrman-Solberg, K. (2017). "'Playground of the People'? Mapping Racial Covenants in Twentieth-century Minneapolis." Open Rivers: Rethinking The Mississippi, no 6. Retrieved from

of home equity for many African Americans when Interstate 94 was routed through historic black neighborhoods. As a result, Minneapolis has the widest racial homeownership gap out of the 100 US cities with the largest black populations.[8]

Another explanation is policing policies in Minnesota which have disproportionately affected Native American and African American communities. Evidence indicates that structural racism contributes to the over-representation of American Indians[9] and African Americans[10] in the criminal justice system. Disparities in the criminal justice system lead to disparities in every other aspect of life. Incarceration leads to the loss of income of the incarcerated while incarcerated but also results is reduced employability and eligibility for social programs after release.

https://editions.lib.umn.edu/openrivers/article/mapping-racial-covenants-in-twentieth-century-minneapolis/ (accessed 9/7/2022).

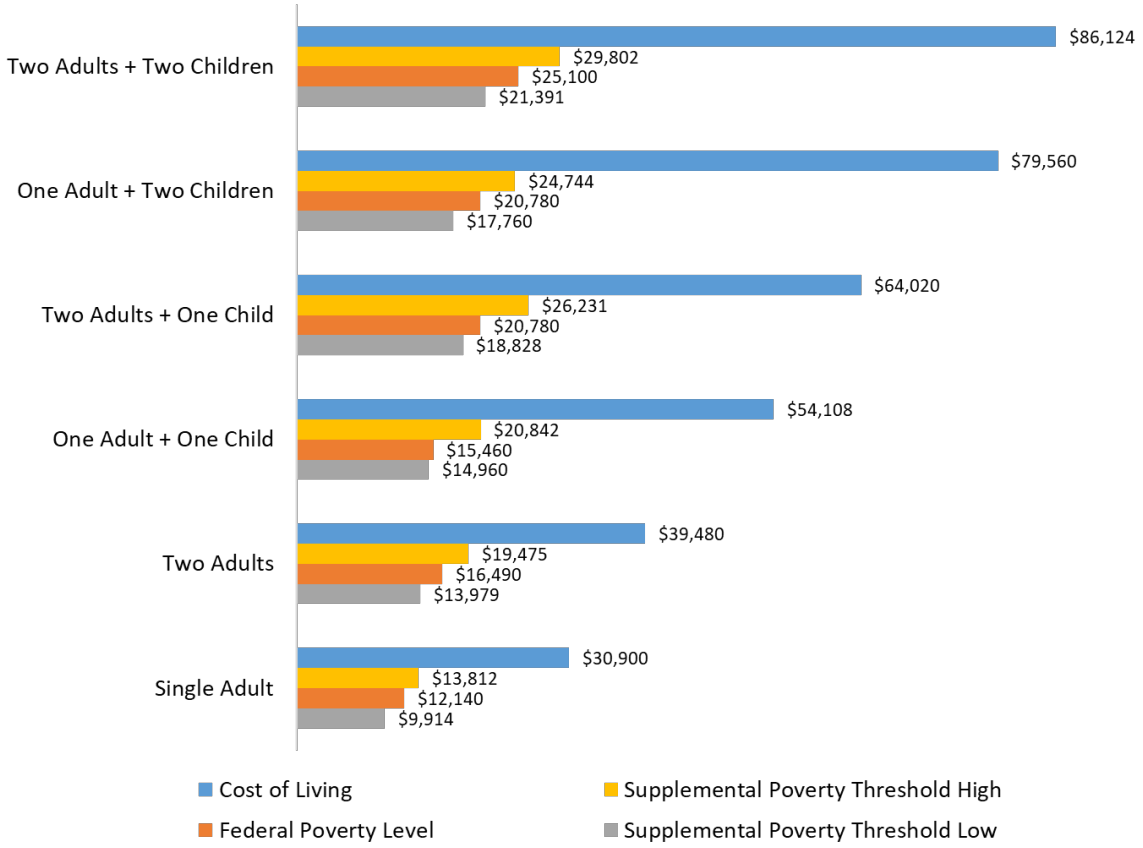
[8] McCargo, A., Strochak, S. (2018, February 26). Mapping the Black Homeownership Gap. Retrieved from https://www.urban.org/urban-wire/mapping-black-homeownership-gap

[9] Arya, N., Rolnick, A. (2009) "A Tangled Web of Justice: American Indian and Alaska Native Youth in Federal, State, and Tribal Justice Systems." Retrieved from Campaign for Youth Justice Policy Brief, vol. 5.

[10] Heitzeg, N. (2015). "'Whiteness," criminality, and the double standards of deviance/social control." Retrieved from Contemporary Justice Review; 18(2).

Overall, Minnesota's cost of living is roughly the same as the US average.[11] However, the cost of living is substantially higher than the poverty rate. **Figure 7** shows the cost of living in Minnesota in 2018, as calculated by the Minnesota Department of Employment and Economic Development (DEED), compared to the 2018 Federal Poverty Level (FPL) and the 2018 Supplemental Poverty Thresholds (which vary by housing costs). The cost-of-living measure is intended to capture the costs of meeting basic needs for health and safety, not a middle-class living. A family of two adults and one child needed $64,020 to cover food, housing, health care, transportation, childcare, other necessities, and net taxes. This figure does not include savings, vacations, entertainment, eating out, tobacco or alcohol. However, the poverty thresholds were less than half that figure, or between $18,000 and $26,000 depending on where they lived in Minnesota.

Figure 7: Income Standards for Minnesota, 2018



Sources: ACS Supplement Poverty Measures Research File 2018, Minnesota Department of Human Services (September 2020). "We definitely struggle…the worry is always there: Improving the health of people living in deep poverty" Research Report. https://www.lrl.mn.gov/docs/2021/other/210226.pdf (accessed 7/23/2022).

[11] Missouri Economic Research and Information Center (2022) "Cost of Living Data Series" https://meric.mo.gov/data/cost-living-data-series (accessed 8/31/2022).

Minnesota's economy between 2009 and 2019

The Great Recession (2007-2009) officially ended in June 2009. Thus, during the period 2009 to 2019, the US economy was experiencing economic growth. The unemployment rate for Minnesota in 2009 was 7.9% and declined to 3.4% by 2019.[12] In addition, Minnesota raised the state minimum wage in 2014 such that the hourly minimum wage increased from $7.25/hour in 2013 to $9.86/hour for large employers in 2019. Minneapolis instituted a city-wide minimum wage rate in 2018 that set hourly wages for large businesses at $10.00/hour initially and $12.25/hour in 2019. Overall, median household income in Minnesota rose about 20% between 2009 and 2019.[13]

While incomes were rising over this period, costs were also rising. According to my calculations using price data from the Bureau of Labor Statistics,[14] prices overall rose 19% between 2009 and 2019, but some prices rose more than others. The average price for medical care services in the US rose 40% between 2009 and 2019.[10] The average price for shelter rose 29% in the US,[10] but the average fair market rent in Hennepin County for a 3-bedroom unit was $1,143 in 2009, rising to $1,636 in 2019, an increase of 43%.[15] The average cost for center-based childcare for an infant rose 20% between 2009 and 2020.[16]

Public programs in Minnesota

Minnesota is thought to have a generous safety net compared to other states. In some ways, this is true. The welfare benefit for a 3-person family in 2019 was $532/month, where the US average is $476/month.[17] In addition, unlike 18 states, Minnesota supplements the incomes of working low-income families with a state earned income tax program, the Minnesota Working Family Credit, above the federal earned income tax credit.[18]

However, there are several ways in which Minnesota's programs have been less generous than many states. For example, Minnesota's SNAP eligibility was just recently (in Fall 2022) raised to 200% of the federal poverty level, joining 19 other states that had that threshold. Similarly, welfare benefits had not increased in over three decades until an increase of $100 was approved in 2020.

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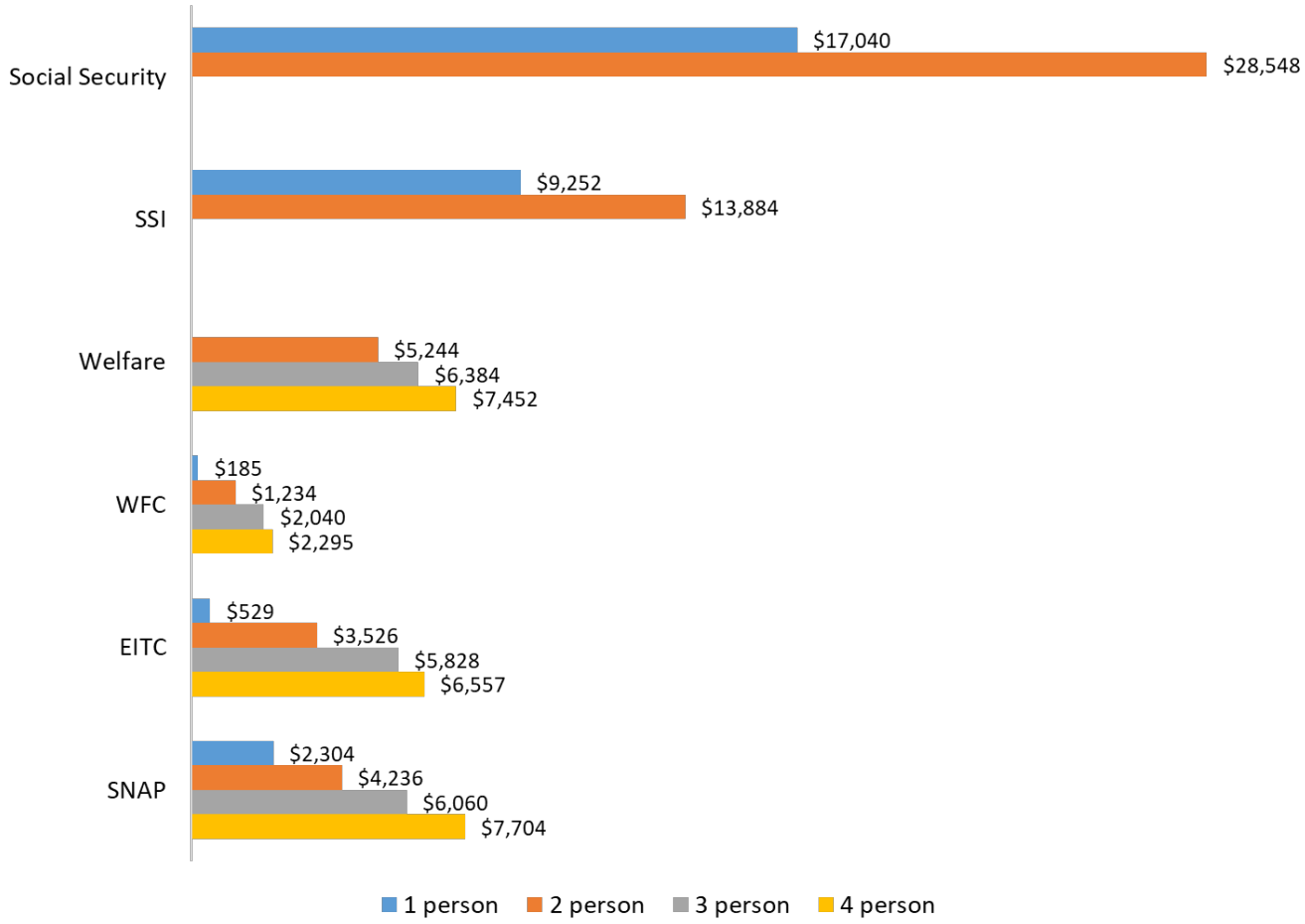
[12] U.S. Bureau of Labor Statistics, Unemployment Rate in Minnesota [MNURN], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MNURN (accessed 7/23/2022).
[13] U.S. Census Bureau, Real Median Household Income in Minnesota [MEHOINUSMNA672N], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/MEHOINUSMNA672N (accessed 7/23/2022).
[14] US BLS "12-month percentage change, Consumer Price Index, selected categories, not seasonally adjusted; https://www.bls.gov/charts/consumer-price-index/consumer-price-index-by-category-line-chart.htm (accessed 8/26/2022).
[15] US HUD "Fair Market Rents (40th PERCENTILE RENTS)" https://www.huduser.gov/portal/datasets/fmr.html (accessed 7/23/2022).
[16] Kids Count Data Center "Average Annual Cost for Licensed Center-Based Childcare in Minnesota" https://datacenter.kidscount.org/data/tables/6154-average-annual-cost-for-licensed-center-based-child-care?loc=25&loct=2#detailed/2/any/false/37,38/2303/12841 (accessed 7/23/2022).
[17] University of Kentucky Center for Poverty Research. (2022, Feb.). UKCPR National Welfare Data, 1980-2020. Lexington, KY. Available at http://ukcpr.org/resources/national-welfare-data (accessed 3/5/2022).
[18] Urban Institute. State Earned Income Tax Credits. (2022). https://www.urban.org/policy-centers/cross-center-initiatives/state-and-local-finance-initiative/state-and-local-backgrounders/state-earned-income-tax-credits. (accessed 8/25/2022).

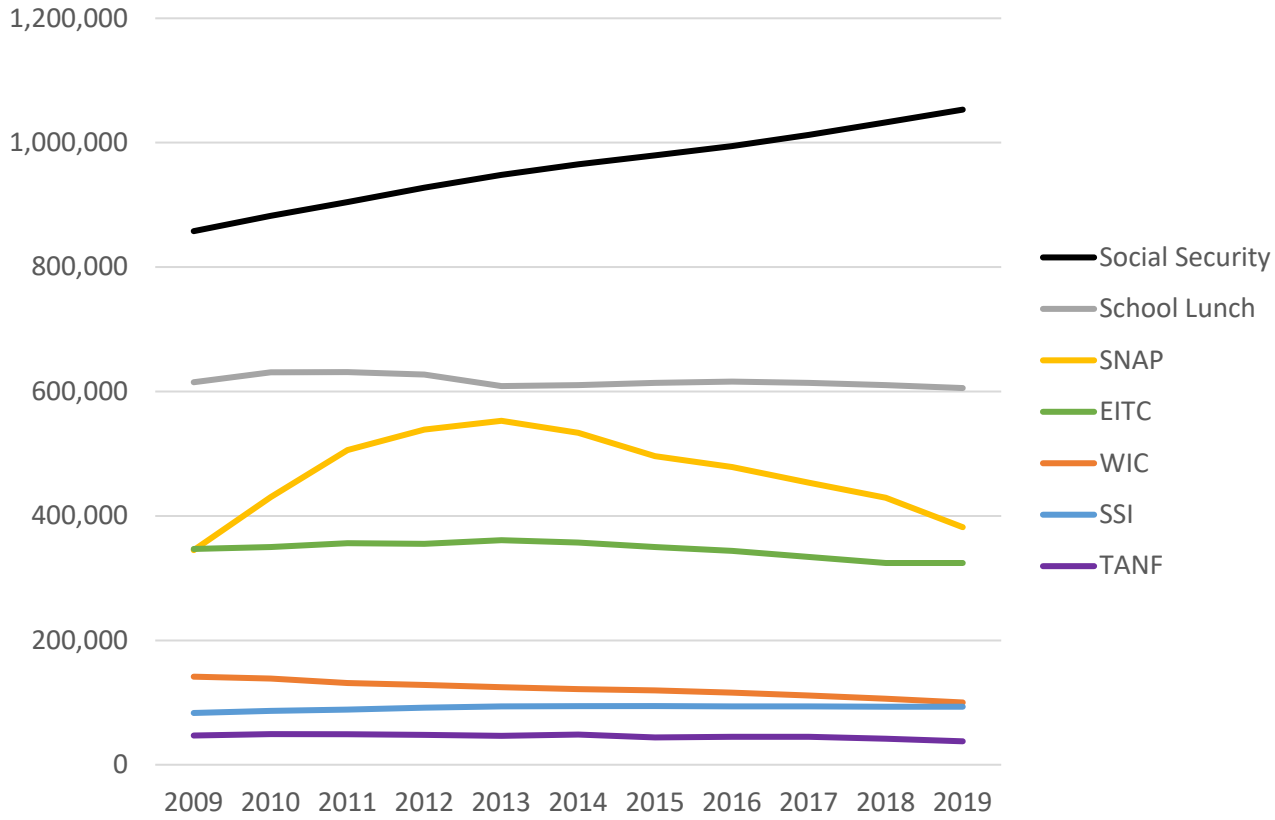
Except for Social Security, programs available from the government to help those below the poverty threshold are not enough to bring families above the poverty threshold. **Figure 8** provides the average annual benefit in Minnesota from some of the programs included in the supplemental poverty measure. Social Security benefits would bring a single adult ($17,040) or a couple ($28,548) above the highest poverty threshold ($13,812 for a single adult and $19,475 for a couple) but would not be enough to cover the cost of living in Minnesota ($30,900 for a single adult or $39,480 for a couple). However, for a family with one adult who is not working and two children, welfare plus SNAP adds up to $12,444, which is well below even the lowest poverty threshold ($17,760).

Figure 8: Maximum Annual Benefit Levels in Minnesota, 2019



Sources: University of Kentucky Center for Poverty Research. 2021. "UKCPR National Welfare Data, 1980-2019." URL: http://ukcpr.org/resources/national-welfare-data (accessed 7/23/2022).
Notes: SSI=Supplemental Security Income; Welfare=Temporary Aid for Needy Families (TANF), or Minnesota Family Investment Program (MFIP) in Minnesota, WFC=Working Family Credit, Minnesota's state earned income tax credit, EITC=federal Earned Income Tax Credit, SNAP=Supplemental Nutrition Assistance Program.

Figure 9: Number of Benefit Recipients in Minnesota, 2009-2019



Sources: University of Kentucky Center for Poverty Research. 2021. "UKCPR National Welfare Data, 1980-2019." URL: http://ukcpr.org/resources/national-welfare-data (accessed 7/23/2022). Tax Policy Institute "EITC Claims by State" based on data from IRS, Statistics of Income Division, Historical Table 2, State Data Tax Year 2009-2019, https://www.taxpolicycenter.org/statistics/eitc-claims-state (accessed 8/26/2022). Social Security Administration, Master Beneficiary Record, 100 percent data, OASDI Beneficiaries by State and County, 2009-2019, https://www.ssa.gov/policy/docs/statcomps/oasdi_sc/2012/index.html (accessed 8/26/2022).
Notes: SNAP=Supplemental Nutrition Assistance Program; EITC=federal Earned Income Tax Credit; WIC=Special Supplemental Nutrition Program for Women, Infants, and Children; SSI=Supplemental Security Income; TANF=Temporary Aid for Needy Families, called Minnesota Family Investment Program (MFIP) in Minnesota.

Finally, **Figure 9** shows the number of Minnesota households or individuals receiving various benefits over the period 2009 to 2019. Social Security was received by more than one million people in the state in 2019, up from about 850,000 in 2009. After Social Security, school lunch programs reach the most people in the state, at slightly more than 600,000 children each year. The number of SNAP recipients in Minnesota grew from less than 350,000 recipients in 2009 to a peak of over 550,000 recipients in 2013, following a trend in the US due to the slow recovery from the recession and growing participation rates among those eligible for SNAP.[19] The decline in SNAP receipt after 2013 is due to the improving economy, but also to a change in eligibility for Able Bodied Adults without Dependent Children

[19] Greenstein R, Keith-Jennings, Rosenbaum D. (2018) Factors affecting SNAP Caseloads. Center on Budget and Policy Priorities. https://www.cbpp.org/sites/default/files/atoms/files/8-8-18fa.pdf (accessed 8/26/2022)

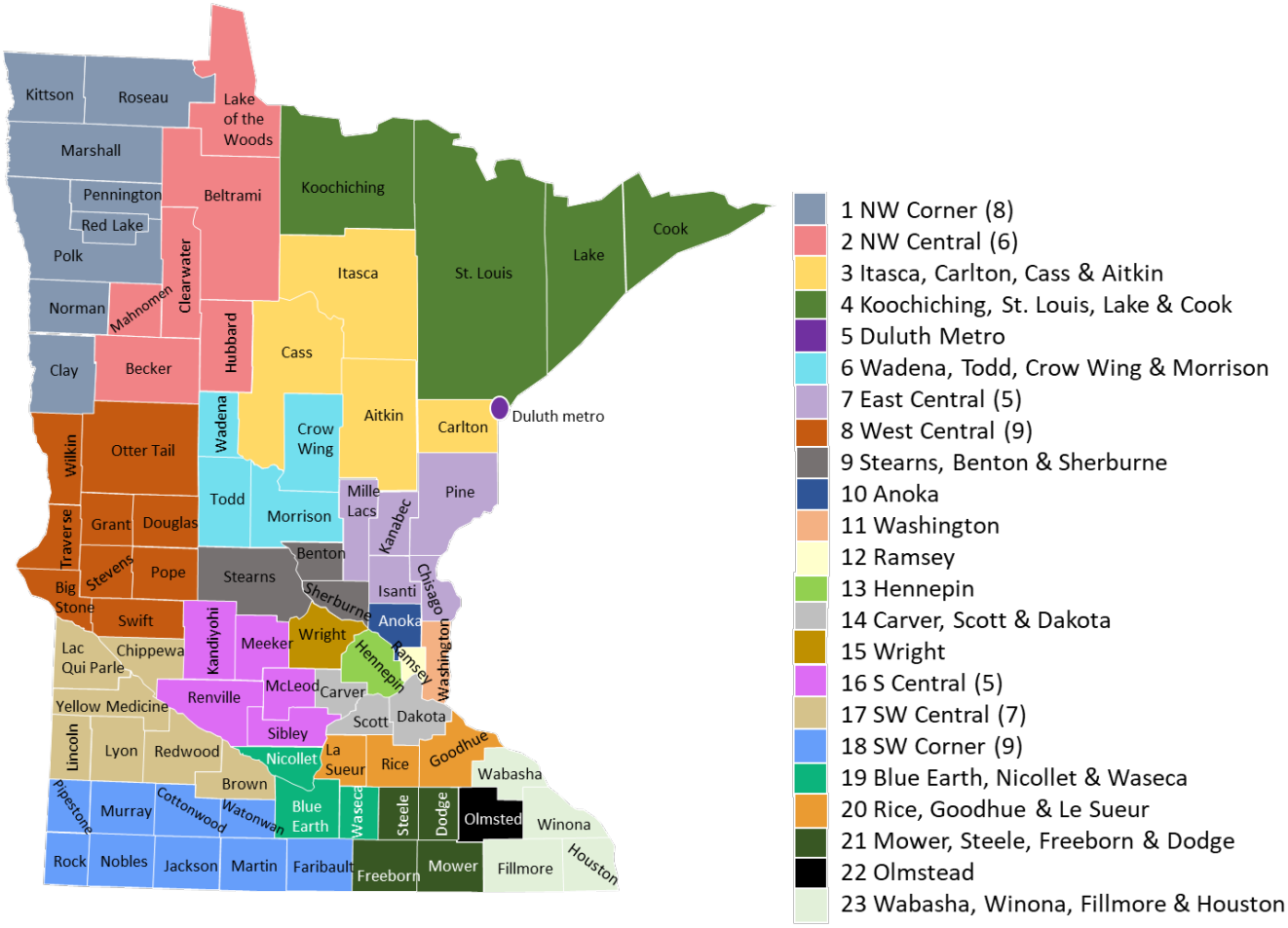
(ABAWDs). Since 1996, SNAP limits benefits to individuals aged 18-49 who are not raising minor children (although many are non-resident fathers) and do not have a documented disability, to three months of benefits out of every three years, unless they meet certain work requirements. This provision was waived in 2009 by the American Recovery and Reinvestment Act and reinstated in Minnesota in 2013. It is estimated that 45,000 ABAWD SNAP cases in Minnesota were closed in 2014 due to this change.[20] The federal EITC was claimed on nearly 350,000 tax returns from Minnesota each year. WIC benefits were received by about 100,000 families in 2019, down from 140,000 in 2009. SSI was received by about 93,000 people in the state in 2019, up from 83,000 in 2009. Finally, TANF (called MFIP in Minnesota) was received by less than 38,000 people in Minnesota in 2019, down from 47,000 in 2009.

[20] Kollannor-Samuel, G., Boelche-Stennes, K.A., Nelson, J., Martin, E., Fertig, A.R., Snyder, S., Schiff, J. (2022) "Supplemental Nutrition Assistance Program Participation is Associated with Lower Healthcare Spending among Working Age Adults," *Journal of Health Care for the Poor and Underserved,* 33(2), 737-750.

Methods and Data

Data for this study come from the 2009-2019 American Community Surveys (ACS)[21] and the 2009-2019 ACS Supplemental Poverty Measures Research Files.[22] The ACS include the income, household composition, and the geographic area of between 50,000 and 54,000 non-institutionalized people residing in Minnesota each year. The SPM Research Files are produced by researchers at the U.S. Census Bureau and include additional information needed to calculate the Supplemental Poverty Measure for everyone in the ACS, including estimates of the amount of public program benefits received by the household and state and federal taxes paid.

Figure 10: Twenty-three Minnesota regions analyzed



I examined 23 areas in Minnesota, including six individual counties (Anoka, Washington, Ramsey, Hennepin, Wright, and Olmsted), one metro area (Duluth), and 16 multi-county areas. **Figure 10** displays a map separating out the 23 areas. The Census Bureau separates the state into public use microdata areas (PUMAs) which contain about 100,000 people each. For this reason, most rural counties

[21] I obtained the ACS data from the Integrated Public Use Microdata Series (IPUMS) available at usa.ipums.org/usa/.

[22] U.S. Census Bureau. "ACS Supplemental Poverty Measures (SPM) Research Files: 2009 to 2019" Available at https://www.census.gov/data/datasets/time-series/demo/supplemental-poverty-measure/acs-research-files.html (accessed 12/20/2022).

in Minnesota cannot be identified individually, but instead several counties are grouped together into one PUMA. On the other hand, large counties, like Hennepin, are separated into several PUMAS. I analyzed all rural PUMAs separately but aggregated almost all metropolitan PUMAs that were smaller than a county to the county level. The only exception was the Duluth metro area, which is its own PUMA, so I analyzed it separately from the PUMA which contains Cook, Lake, St. Louis, and Koochiching counties.[23] The crosswalk between PUMAs and the 23 regions is provided in **Table 2**. The non-institutionalized population of each area ranges from 92,924 (Duluth metro area) to 1,240,740 (Hennepin County) in 2019. The average population in each region is 239,525 in 2019.

Table 2: Region Definitions

Region	PUMA	Counties (or City in the case of Duluth)
1	100	Clay, Kittson, Marshall, Norman, Pennington, Polk, Red Lake, Roseau
2	200	Becker, Beltrami, Clearwater, Hubbard, Lake of the Woods, Mahnomen
3	300	Aitkin, Cass, Carlton, Itasca
4	400	Cook, Koochiching, Lake, St. Louis (except Duluth, Hermantown, Proctor cities)
5	500	Duluth, Hermantown & Proctor cities
6	700	Crow Wing, Morrison, Todd, Wadena
7	600	Chisago, Isanti, Kanabec, Mille Lacs, Pine
8	800	Big Stone, Douglas, Grant, Otter Tail, Pope, Stevens, Swift, Traverse, Wilkin
9	900	Sterns
9	1000	Sherburne, Benton
10	1101-1103	Anoka
11	1201-1202	Washington
12	1301-1304	Ramsey
13	1401-1410	Hennepin
14	1501-1503	Dakota
14	1600	Scott (eastern part)
14	1700	Carver & Scott (western part)
15	1800	Wright
16	1900	Kandiyohi, McLeod, Meeker, Renville, Sibley
17	2000	Brown, Chippewa, Lac qui Parle, Lincoln, Lyon, Redwood, Yellow Medicine
18	2100	Cottonwood, Faribault, Jackson, Martin, Murray, Nobles, Pipestone, Rock, Watonwan
19	2200	Blue Earth, Nicollet, Waseca
20	2300	Goodhue, Le Sueur, Rice
21	2400	Dodge, Freeborn, Mower, Steele
22	2500	Olmsted
23	2600	Fillmore, Houston, Wabasha, Winona

[23] Note that the Duluth metro area only became its own PUMA in 2012 so for the years 2009-2011 in this analysis, Duluth metro and Cook, Lake, St. Louis, and Koochiching counties were combined into one PUMA.

I also calculated poverty rates for three age groups (children, working age adults, and seniors), and for six racial/ethnic groups. To get a more accurate picture of subgroups that were small (i.e., regions and racial/ethnic groups), whenever I examined these subgroups, I averaged 3-4 years of data to have a large enough sample to observe meaningful changes over time. Specifically, I combined 2009 through 2012, 2013 through 2015, and 2016 through 2019 for these subgroups.

Measures

The official poverty measure was estimated for all non-institutionalized individuals residing in Minnesota using the 2009-2019 American Community Surveys. The ACS is collected over all 12 months of the year and asks about income over the last 12 months. This means that families who completed the survey in January 2019 are reporting on 2018 income and families who completed the survey in December 2019 are reporting on mostly 2019 income. As a result, I used an average of the official poverty thresholds established by the U.S. Census Bureau from the current and last year.[24] These thresholds vary by the number of adults, the number of children, and the age of the head of the household. These thresholds were matched to households of related families. For each family, resources were summed from wage or salary income and self-employment income from everyone in the family; interest, dividends, or net rental income; Social Security; Supplemental Security Income (SSI); welfare income (benefits from the Temporary Aid for Needy Families (TANF) program, called the Minnesota Family Investment Program (MFIP) in Minnesota; retirement income; and other types of income. All individuals in a family whose resources were below their family's poverty threshold were categorized as in poverty.

The market poverty income uses the same poverty thresholds as the official measure. The difference is that I subtract from the resources three items: social security income, supplemental security income benefits, and welfare income.

The supplemental poverty measure is provided in the 2009-2019 ACS Supplemental Poverty Measure Public Use Research Files.[16] These data files include a sum of all resources, which includes all income included in the official poverty measure described above plus the estimated value of Supplemental Nutrition Assistance Program (SNAP) benefits, Special Supplemental Nutrition Program for Women's, Infant's and Children's (WIC) benefits, the family's housing assistance benefits, the National School Lunch Program (NSLP) benefits, and the families Low-Income Home Energy Assistance Program (LIHEAP) benefits. Subtracted from these resources are the estimated taxes paid to the federal government (this number can be negative if refundable tax credits are greater than a family's tax liability), to the state government, and to the Federal Insurance Contribution Act (FICA, or federal payroll taxes) and federal retirement contribution; and the estimated expenditures of the family on work (e.g., travel to work) and childcare expenses and out-of-pocket medical expenditures. Out-of-pocket medical expenditures include premiums paid for health insurance or Medicare Part B and co-pays or deductibles, but do not otherwise account for whether someone has health insurance (i.e., the value of Medicaid is not factored in as a resource to the household). The data files also include the poverty threshold used by the Supplemental Poverty Measure that adjusts for geographic shelter and utility costs. The federal and

[24] U.S. Census Bureau. Poverty Thresholds. Available at https://www.census.gov/data/tables/time-series/demo/income-poverty/historical-poverty-thresholds.html (accessed 1/20/2022).

state taxes paid by each observation were estimated using TAXSIM,[25] a microsimulation model that is used by researchers to estimate state and federal taxes. Data on the household's income and household composition are entered into TAXSIM and the household's estimated state and federal taxes are provided by the model.
The family unit is defined slightly differently in the SPM than in the OPM – unmarried partners and their relatives, and foster children count as family members in the supplemental measure, but not for the OPM. As above, all individuals in a SPM family unit whose SPM resources were below their family's SPM poverty threshold were categorized as in poverty.[26]

The supplemental poverty measure was also recalculated under 14 different hypothetical assumptions to obtain the poverty rate if a program or expense were omitted from the households' resources. These 14 hypothetical poverty rates assume no behavioral changes (e.g., we do not consider that seniors might have to work if social security was eliminated) and does not attempt to estimate the causal impact of each element. The 14 hypothetical assumptions were excluding three public cash benefits included in the official poverty rate: 1) social security income, 2) supplemental security income, and 3) TANF benefits; excluding six public assistance benefits that are included in the supplemental poverty rate: 4) SNAP benefits, 5) housing subsidies, 6) school lunch programs, 7) WIC benefits, 8) LIHEAP benefits, 9) and refundable tax credits like the EITC; and including five non-discretionary expenses: 10) federal income taxes, 11) FICA, 12) work expenses (transportation and childcare), 13) medical expenses (out of pocket, including premiums), and 14) state income taxes (and credits).

Analysis

The poverty measures were estimated using sampling weights provided by the ACS. The non-institutionalized sample residing in Minnesota in 2019 was 54,102 individuals weighted to represent 5,509,065 Minnesotans. All percentages are created using weights to make them representative of the state population in that year. For each percentage, a 95% confidence interval was computed using standard errors from the unweighted percentages. Unweighted standard errors were used to provide a conservative margin of error around the percentages. Percentages were identified as statistically significant if their 95% confidence intervals did not overlap.

[25] Feenberg, Daniel Richard, and Elizabeth Coutts, *An Introduction to the TAXSIM Model*, Journal of Policy Analysis and Management vol 12 no 1, Winter 1993, pages 189-194.
[26] Fox, Liana, Glassman, Brian, Pacas, Jose. "The Supplemental Poverty Measure using the American Community Survey" SEHSD Working Paper #2020-09" https://www.census.gov/library/working-papers/2020/demo/SEHSD-WP2020-09.html (accessed 8/31/2022)

Detailed Findings

Table 3 provides the Supplemental Poverty Rate in 2009-12, 2013-15, and 2016-19 for 23 regions of Minnesota, three age groups, and six racial/ethnic groups.

Variations by Region – 2016-2019

The supplemental poverty rate for the state was 8.9% in 2016-19. The highest poverty rate of all 23 regions was 15.9% for the Duluth metro area. Washington county had the lowest poverty rate in 2016-19 at 3.8%. **Figure 2** shows which regions had rates above, below or the same as the state rate. **Table 3** provides the detailed numbers behind that figure.

Seven regions had supplemental poverty rates in 2016-19 that were statistically significantly *higher than the state rate*. These regions span northern, central, and southern Minnesota, and include both urban and rural areas.

- The Duluth metro region [region 5]: **15.9%**
- Blue Earth, Nicollet, and Waseca counties [region 19]: **13.2%**
- Ramsey county [region 12]: **13.1%**
- The NW Central region (Becker, Beltrami, Clearwater, Hubbard, Lake of the Woods, and Mahnomen counties) [region 2]: **12.3%**
- The East Central region (Mille Lacs, Kanabec, Pine, Chisago, and Isanti counties) [region 7]: **10.6%**
- Crow Wing, Morrison, Todd, and Wadena counties [region 6]: **10.4%**
- Hennepin county [region 13]: **10.2%**

Ten regions had poverty rates in 2016-19 were significantly *below the state rate*. These regions were primarily in southern Minnesota and the suburban and exurban areas around the Twin Cities.

- Washington county [region 11]: **3.8%**
- Wright county [region 15]: **5.4%**
- Goodhue, Le Sueur and Rice counties [region 20]: **5.8%**
- Anoka county [region 10]: **6.2%**
- Carver, Dakota and Scott counties [region 14]: **6.3%**
- The South Central region (Kandiyohi, McLeod, Meeker, Renville, and Sibley counties) [region 16]: **7.1%**
- Dodge, Freeborn, Mower, and Steele counties [region 21]: **7.3%**
- Olmsted county [region 22]: **7.4%**
- Fillmore, Houston, Wabasha, and Winona counties [region 23]: **8.1%**
- The SW Central region (Brown, Chippewa, Lac qui Parle, Lincoln, Lyon, Redwood, and Yellow Medicine counties) [region 17]: **8.2%**

The remaining six regions had poverty rates in 2016-19 that were statistically the *same as the state rate*. These are mostly less populated multi-county regions concentrated primarily in northern Minnesota but also include the southwest corner of the state.

- The NW Corner region (Clay, Kittson, Marshall, Norman, Pennington, Polk, Red Lake, and Roseau counties) [region 1]: **8.5%**

- Aitkin, Cass, Carlton, and Itasca counties [region 3]: **8.6%**
- The SW Corner region (Cottonwood, Faribault, Jackson, Martin, Murray, Nobles, Pipestone, Rock, and Watonwan counties) [region 18]: **8.7%**
- Benton, Sherburne, Stearns counties [region 9]: **8.8%**
- The West Central region (Big Stone, Douglas, Grant, Otter Tail, Pope, Stevens, Swift, Traverse, and Wilkin counties) [region 8]: **9.1%**
- Cook, Koochiching, Lake, and St. Louis counties [region 4]: **9.4%**

Variations by Region – Trends over time

The supplemental poverty rate for the state fell from 10.2% in 2009-2012 to 8.9% in 2016-19, a drop of 1.3 percentage points (pp). As shown in **Figure 3**, not all regions experienced a decrease in poverty over this period. The largest decline in poverty appears to have occurred in the Cook, Koochiching, Lake and St. Louis counties region (4.9 percentage points from 14.3% to 9.4%), however, the Duluth metro was part of that PUMA until 2011. Thus, while the change in the combined region (Duluth + the four-county area) is statistically significant, the size of the change was due to the removal of the Duluth metro area. The decline in the poverty rate of the combined region was only 2.3 percentage points (from 14.5% to 12.1%). Among those regions whose composition was stable over time, the largest decline in poverty (3.3 percentage point decline from 13.9% to 10.6%) was experienced by the East Central region (Chisago, Isanti, Kanabec, Mille Lacs, and Pine counties), and the largest increase in poverty (1.5 percentage point increase from 11.7% to 13.2%) was experienced by the region made up of Blue Earth, Nicollet and Waseca counties.

Fourteen regions saw *significant declines* in their supplemental poverty rates between 2009-12 and 2016-19. These regions span northern, central and southern Minnesota, and include urban, suburban & exurban, and rural areas.

- Cook, Koochiching, Lake, and St. Louis counties [region 4]: **-4.9 pp**
- The East Central region (Mille Lacs, Kanabec, Pine, Chisago, and Isanti counties) [region 7]: **-3.3 pp**
- The NW Corner region (Clay, Kittson, Marshall, Norman, Pennington, Polk, Red Lake, and Roseau counties) [region 1]: **-3.2 pp**
- Washington county [region 11]: **-2.9 pp**
- Ramsey county [region 12]: **-2.4 pp**
- Fillmore, Houston, Wabasha, Winona counties [region 23]: **-2.3 pp**
- Benton, Sherburne, Stearns counties [region 9]: **-2.3 pp**
- Aitkin, Cass, Carlton, and Itasca counties [region 3]: **-2.1 pp**
- The SW Corner region (Cottonwood, Faribault, Jackson, Martin, Murray, Nobles, Pipestone, Rock, and Watonwan counties) [region 18]: **-1.7 pp**
- Hennepin county [region 13]: **-1.7 pp**
- The NW Central region (Becker, Beltrami, Clearwater, Hubbard, Lake of the Woods, and Mahnomen counties) [region 2]: **-1.5 pp**
- Anoka county [region 10]: **-1.4 pp**
- Wright county [region 15]: **-1.3 pp**
- Dodge, Freeborn, Mower, and Steele counties [region 21]: **-0.9 pp**

Three regions saw *significant increases* in their supplemental poverty rates between 2009-12 and 2016-19.

- Blue Earth, Nicollet, and Waseca counties [region 19]: **+1.5 pp**
- Olmsted county [region 22]: **+1.2 pp**
- Crow Wing, Morrison, Todd, and Wadena counties [region 6]: **+0.9 pp**

Six regions saw *no statistically significant change* in their supplemental poverty rates between 2009-12 and 2016-19.

- Goodhue, Le Sueur and Rice counties [region 20]: **-0.7 pp**
- Carver, Dakota and Scott counties [region 14]: **-0.4 pp**
- The SW Central region (Brown, Chippewa, Lac qui Parle, Lincoln, Lyon, Redwood, Yellow Medicine) [region 17]: **-0.4 pp**
- The West Central region (Big Stone, Douglas, Grant, Otter Tail, Pope, Stevens, Swift, Traverse, and Wilkin counties) [region 8]: **-0.3 pp**
- The Duluth metro region [region 5]: **0.0 pp**
- The South Central region (Kandiyohi, McLeod, Meeker, Renville, Sibley) [region 16]: **+0.5 pp**

Variations by Age

The supplemental poverty rate for children is 0.9 percentage points below the state rate of 8.9% in 2016-19, while the rate for seniors is 1.1 percentage points higher than the state rate. Working age adults have the same rate as the state rate. As shown in **Figure 4** and **Table 3**, the supplemental poverty rate has significantly decreased for all age groups between 2009 and 2019. The largest decrease was for children (1.9 percentage points from 9.9% to 8.0%) and the smallest decrease was for seniors (0.9 percentage points from 10.9% to 10.0%).

Variations by Race/Ethnicity

The SPM rates declined significantly for all racial/ethnic groups in Minnesota, but the poverty rates for non-White Minnesotans are still much higher than for White Minnesotans (see **Figure 5** and/or **Table 3**). In 2009-12, the rates of poverty ranged from 30.0% for Native American residents to 8.0% for White residents, a 22-percentage point gap. In 2016-19, the gap has fallen to 15.8 percentage points, but the poverty rate for Native American residents is still more than 3 times that of White residents. In 2016-19, Native American residents had the highest SPM rate of any racial/ethnic group at 23.0%, while the lowest poverty rate of any group was 7.2% for White residents. The poverty rate for Black residents was 20.0% in 2016-19. Hispanic residents had a SPM rate of 14.6% and Asian residents had a poverty rate of 12.2%. Other or multiracial residents (those with a race other than Native American, Black, Asian, or White, or who listed more than one race, and who were not Hispanic) had a poverty rate of 11.9% in 2016-19.

Table 3: Supplemental Poverty Rates in 2016-2019 by Region, Age Group, and Race/Ethnicity

	2009-2012	2013-2015	2016-2019
Minnesota	10.2%	9.5%	8.9%^
Regions			
1 NW Corner (8)	11.6%	9.5%	8.5%^
2 NW Central (6)	13.7%	11.8%	12.3%*^
3 Aitkin, Cass, Carlton, Itasca	10.7%	9.3%	8.6%^
4 Cook, Koochiching, Lake, St. Louis	14.3%	10.3%	9.4%^
5 Duluth Metro*	15.9%	17.6%	15.9%*
6 Crow Wing, Morrison, Todd, Wadena	9.5%	7.9%	10.4%*^
7 East Central (6)	13.9%	9.3%	10.6%*^
8 West Central (9)	9.4%	9.5%	9.1%
9 Benton, Sherburne, Stearns	11.1%	11.2%	8.8%^
10 Anoka	7.6%	6.2%	6.2%*^
11 Washington	6.8%	5.2%	3.8%*^
12 Ramsey	15.5%	13.4%	13.1%*^
13 Hennepin	11.8%	10.8%	10.2%*^
14 Carver, Dakota, Scott	6.7%	6.7%	6.3%*
15 Wright	6.8%	5.1%	5.4%*^
16 South Central (5)	6.6%	5.7%	7.1%*
17 SW Central (7)	8.6%	9.7%	8.2%*
18 SW Corner (9)	10.4%	10.9%	8.7%^
19 Blue Earth, Nicollet, Waseca	11.7%	16.0%	13.2%*^
20 Goodhue, Le Sueur, Rice	6.5%	6.8%	5.8%*
21 Dodge, Freeborn, Mower, Steele	8.2%	8.3%	7.3%*^
22 Olmsted	6.2%	8.4%	7.4%*^
23 Fillmore, Houston, Wabasha, Winona	10.4%	10.4%	8.1%*^
Age Groups			
Children (birth-17)	9.9%	8.6%	8.0%*^
Working age (18-64)	10.2%	10.0%	9.0%^
Seniors (65+)	10.9%	9.2%	10.0%*^
Racial/Ethnic Groups			
Non-Hispanic White Only	8.0%	7.6%	7.2%*^
Non-Hispanic Black Only	27.5%	21.9%	20.0%*^
Non-Hispanic Asian Only	15.7%	14.1%	12.2%*^
Non-Hispanic Native American Only	30.0%	22.0%	23.0%*^
Non-Hispanic Other or Multiracial	18.5%	15.3%	11.9%*^
Hispanic	19.2%	17.8%	14.6%*^

Source: Author's calculations from 2009-2019 American Community Survey and the 2009-2019 ACS SPM Research Files. Numbers in parenthesis indicate the number of counties in that region if county names are not listed. * indicates that the 2016-2019 estimate is statistically significantly different from the rate for the state ($p<0.05$). ^ indicates that the 2016-2019 estimate is statistically significantly different from the corresponding rate in 2009-2012 ($p<0.05$).

Effects of Policies on the SPM Rate

The calculation of the supplemental poverty rate includes more programs and policies than the official poverty measure. As a result, I can estimate what the SPM rate would have been in 2016-2019 if I exclude a benefit like SNAP or a non-discretionary expense like childcare. **Tables 4 and 5** show these results for the state, the 23 regions, three age groups, and six racial/ethnic groups. The results for the state overall are also shown in **Figure 6**. The results for the state indicate that, instead of the actual SPM rate for Minnesota of 8.9% in 2016-19, the poverty rate in Minnesota would be 15.3% (or 6.4 percentage points higher) if no one in the state received Social Security checks. In contrast, the rate would be 6.7% (or 2.2 percentage points lower) if no one in the state had to pay out-of-pocket medical expenses. The overall impact of each program/element on the state's poverty rate is driven by both how much the benefit is per person and how many residents receive the benefit. Social Security has such a large affect because it is both a large benefit amount (see **Figure 8**) and is received by many residents (see **Figure 9**). The relatively small effect of SSI of poverty (0.8 percentage points) is because the benefit amount is half that of Social Security (see **Figure 8**) and is received by only a fraction of the number of people receiving Social Security benefits (see **Figure 9**).

Policy Effects by Region

Because **Table 4** is a lot to digest, I highlighted with gray shading the five regions that each policy affects the most. For example, housing subsidies reduce the poverty rate the most in Ramsey, Hennepin, Blue Earth, Nicollet, Waseca, Cook, Koochiching, Lake, St. Louis, and Olmsted counties. The reduction in poverty associated with housing subsidies in these counties ranges between 0.9 and 1.8 percentage points. Looking across the policy effects for Ramsey and Hennepin counties shows that the Twin Cities metro area is in the top five counties benefitting from many policies. However, many out-state regions benefit more from policies than these two counties.

- Social Security has the biggest effect on Aitkin, Cass, Carlton and Itasca counties.
- The EITC has the biggest effect on the SW Central region (Brown, Chippewa, Lac qui Parle, Lincoln, Lyon, Redwood, Yellow Medicine).
- SNAP has the biggest effect on the NW Central region (Becker, Beltrami, Clearwater, Hubbard, Lake of the Woods, and Mahnomen counties).
- SSI has the biggest effect on Cook, Koochiching, Lake, and St. Louis counties.
- The school lunch program has the biggest effect on Dodge, Freeborn, Mower, and Steele counties.
- TANF (called MFIP in Minnesota) has the largest effect on the NW Central region (Becker, Beltrami, Clearwater, Hubbard, Lake of the Woods, and Mahnomen counties).
- LIHEAP has the biggest effect on Cook, Koochiching, Lake, and St. Louis counties.
- State income taxes and credits have the largest effect on Dodge, Freeborn, Mower, and Steele counties.
- WIC has the largest effect on Dodge, Freeborn, Mower, and Steele counties.

The simulated effects of removing the expenses in the last 4 columns have negative values, but reveal the same insight as the other columns; a larger number in absolute value tells us how a policy removing these expenses would affect the poverty rate. If no one paid federal income taxes, the poverty rate in Benton, Sherburne, and Stearns counties would be almost 1 percentage point lower (-0.92 percentage points). FICA has the largest effect on the poverty rate in Ramsey county. Work expenses, which include

childcare and transportation costs, have the largest effect on Ramsey county. Out-of-pocket medical expenses have the largest effect on the East Central region (Mille Lacs, Kanabec, Pine, Chisago, and Isanti counties).

Policy Effects by Age

Table 5 indicates that the policies that have the largest effect on childhood poverty, in order of effect size, are EITC, SNAP, housing subsidies, state income tax credits, Social Security, the School Lunch program, TANF, and WIC. The policies that have the largest effect on poverty among seniors (age 65+) are Social Security, housing subsidies, SSI, SNAP, TANF, and LIHEAP. While more programs are targeted at helping families with children, Social Security single-handedly cuts poverty among seniors to a fraction of what it would be without the program. Among working age adults, the benefit that reduces the poverty of this age group the most is Social Security, followed by EITC, SSI, housing subsidies and SNAP. On the flip side, federal income taxes, FICA, and work expenses push many working age adults (and their children) across the poverty threshold. As expected, out-of-pocket medical expenses are the most burdensome on seniors, but have a large effect on all age groups.

Policy Effects by Race/Ethnicity

The policies that have the largest effect on poverty among White residents are Social Security, followed by SSI and EITC. In contrast, for Black residents, the policy that has the largest effect on poverty is housing subsidies, followed by EITC and SNAP. For Asian residents, Social Security has the largest effect on poverty, followed by EITC, and SNAP. For Native American residents, Social Security has the largest effect on poverty, and the next most important policy is SNAP. For Hispanic residents, like Black residents, Social Security has a smaller effect on poverty than other policies; in particular, the EITC is the most important poverty-reducing policy for Hispanic Minnesotans.

Table 4: Program Effects on the SPM Rates in 2016-2019 by Region

		Change in Poverty Rate due to Element													
	Total SPM rate	Social Security	Housing subsidies	EITC	SNAP	SSI	School lunch	TANF	LIHEAP	State income taxes/ credits	WIC	Federal income taxes	FICA	Work expenses	Medical expenses
Minnesota	8.9%	6.4	0.8	1.1	0.7	0.8	0.23	0.25	0.05	0.5	0.03	-0.37	-0.9	-1.2	-2.2
1 NW Corner (8)	8.5%	6.5	0.5	0.5	0.6	1.0	0.01	0.20	0.01	0.2	0.02	-0.13	-0.4	-0.9	-2.2
2 NW Central (6)	12.3%	9.6	0.7	1.3	1.5	1.6	0.55	1.02	0.03	0.5	0.02	-0.22	-1.1	-1.6	-3.1
3 Aitkin, Cass, Carlton, Itasca	8.6%	11.4	0.4	0.7	0.8	0.9	0.19	0.20	0.01	0.5	0.00	-0.19	-0.9	-1.4	-2.5
4 Cook, Koochiching, Lake, St. Louis	9.4%	10.4	1.1	1.4	0.8	1.6	0.10	0.18	0.19	0.5	0.02	-0.07	-0.8	-1.1	-2.3
5 Duluth Metro*	15.9%	6.5	0.4	0.4	0.4	1.4	0.10	0.19	0.00	0.1	0.00	-0.31	-1.2	-1.9	-3.3
6 Crow Wing, Morrison, Todd, Wadena	10.4%	9.6	0.5	1.0	0.5	0.9	0.34	0.39	0.01	0.5	0.05	-0.41	-0.8	-1.2	-2.7
7 East Central (5)	10.6%	9.0	0.3	0.6	0.8	0.6	0.14	0.02	0.07	0.5	0.00	-0.54	-1.1	-1.2	-3.3
8 West Central (9)	9.1%	9.5	0.3	0.8	0.2	0.6	0.02	0.18	0.09	0.5	0.00	-0.32	-0.9	-1.2	-2.7
9 Benton, Sherburne, Stearns	8.8%	6.2	0.4	1.2	1.0	0.5	0.18	0.00	0.00	0.4	0.00	-0.92	-1.5	-1.5	-2.4
10 Anoka	6.2%	6.3	0.6	0.9	0.4	0.4	0.19	0.18	0.00	0.1	0.00	-0.44	-0.7	-0.9	-2.0
11 Washington	3.8%	4.9	0.3	0.6	0.2	0.5	0.09	0.07	0.03	0.2	0.00	-0.23	-0.4	-0.5	-1.3
12 Ramsey	13.1%	6.2	1.8	1.6	1.0	1.0	0.19	0.28	0.06	0.5	0.00	-0.33	-1.6	-2.0	-2.8
13 Hennepin	10.2%	4.7	1.3	1.3	1.1	1.1	0.43	0.49	0.09	0.7	0.02	-0.58	-1.2	-1.3	-2.2
14 Carver, Dakota, Scott	6.3%	5.0	0.5	0.8	0.3	0.5	0.20	0.21	0.05	0.3	0.02	-0.18	-0.8	-0.9	-1.7
15 Wright	5.4%	4.7	0.6	0.7	0.1	0.2	0.00	0.00	0.00	0.3	0.00	-0.20	-0.7	-1.0	-2.0
16 South Central (5)	7.1%	7.5	0.3	0.8	0.8	1.1	0.00	0.03	0.01	0.2	0.00	-0.25	-0.7	-0.8	-2.2
17 SW Central (7)	8.2%	7.8	0.3	2.2	0.2	0.6	0.12	0.08	0.08	1.1	0.00	-0.29	-0.6	-0.6	-2.2
18 SW Corner (9)	8.7%	8.0	0.5	0.8	0.4	0.9	0.06	0.16	0.13	0.5	0.22	-0.23	-0.5	-0.6	-1.7
19 Blue Earth, Nicollet, Waseca	13.2%	6.0	1.1	1.8	0.7	0.2	0.24	0.33	0.06	0.2	0.18	-0.43	-0.9	-0.9	-1.8
20 Goodhue, Le Sueur, Rice	5.8%	7.8	0.5	1.1	0.5	0.5	0.09	0.03	0.10	0.5	0.00	-0.16	-0.2	-0.4	-1.7
21 Dodge, Freeborn, Mower, Steele	7.3%	7.3	0.5	2.3	0.7	0.9	0.71	0.09	0.01	1.5	0.47	-0.19	-0.8	-1.1	-1.4
22 Olmsted	7.4%	6.3	0.9	1.3	0.4	0.6	0.00	0.03	0.02	0.3	0.19	-0.20	-0.9	-1.0	-1.7
23 Fillmore, Houston, Wabasha, Winona	8.1%	9.6	0.9	0.9	0.7	1.3	0.09	0.34	0.01	0.6	0.00	-0.14	-0.6	-1.1	-2.0

Example Interpretation: Social security payments reduce the poverty rate in the NW Corner by 6.5 percentage points (from 15.0% to 8.5%).

Note: The highest (in absolute value) 5 values are shaded in each column.

Table 5: Program Effects on the SPM Rates in 2016-2019 by Age Group and Race/Ethnicity

		Change in Poverty Rate due to Element													
	Total SPM rate	Social Security	Housing subsidies	EITC	SNAP	SSI	School lunch	TANF	LIHEAP	State income taxes/ credits	WIC	Federal income taxes	FICA	Work expenses	Medical expenses
Age Groups															
Children (birth-17)	8.0%	0.9	1.0	2.4	1.2	0.4	0.6	0.4	0.1	0.9	0.1	-0.4	-1.1	-1.3	-1.3
Working age (18-64)	9.0%	2.1	0.6	0.9	0.6	0.9	0.2	0.2	0.0	0.3	0.0	-0.4	-1.1	-1.3	-2.0
Seniors (65+)	10.0%	31.8	1.3	0.0	0.4	1.2	0.0	0.2	0.1	0.6	0.0	-0.1	-0.2	-0.3	-4.4
Racial/ethnic Groups															
White	7.2%	7.2	0.4	0.5	0.3	0.6	0.1	0.1	0.0	0.3	0.0	-0.3	-0.7	-0.8	-2.1
Black	20.0%	4.2	5.1	4.4	4.3	2.9	1.0	1.5	0.1	1.2	0.1	-1.0	-3.0	-3.1	-2.8
Asian	12.2%	2.0	0.5	1.6	1.0	0.7	0.4	0.2	0.0	0.8	0.0	-0.4	-1.1	-1.7	-2.5
Native American	23.0%	6.0	1.8	2.0	3.7	2.0	1.6	0.8	0.4	0.6	0.0	-1.0	-1.6	-1.9	-3.3
Other/Multiracial	11.9%	3.5	1.8	1.8	1.1	1.3	1.1	0.7	0.0	0.5	0.0	-0.3	-1.0	-1.7	-1.6
Hispanic	14.6%	1.8	1.3	4.8	1.4	0.7	0.6	0.5	0.3	1.7	0.3	-0.4	-2.1	-2.6	-2.9

Example Interpretation: Social security payments reduce the poverty rate for children by 0.9 percentage points (from 8.9% to 8.0%).

Note: The highest (in absolute value) value is shaded in each column for the age groups, and for the racial/ethnic groups.

Conclusion

This report provides important insights into poverty in Minnesota and helps us to understand the important role of programs in our safety net. Overall, this report brings some good news. The poverty rate in Minnesota declined from 2009 to 2019 affecting all age groups and racial/ethnic groups. However, not all regions experienced a decline in poverty and racial/ethnic disparities in poverty are still huge. Without the safety net, the poverty rate in Minnesota could be double the current rate. However, the decline in poverty rates that this report documents is due to changes in market income, not to an expansion in the safety net. More work is needed to further reduce poverty and to eliminate disparities in poverty in Minnesota.