

ALICE IN MICHIGAN: A FINANCIAL HARDSHIP STUDY

LIVE UNITED®



2021 MICHIGAN REPORT



Michigan Association of
United Ways

ALICE IN THE TIME OF COVID-19



The release of this ALICE Report for Michigan comes during an unprecedented crisis – the COVID-19 pandemic. While our world changed significantly in March 2020 with the impact of this global, dual health and economic crisis, ALICE remains central to the story in every U.S. county and state. The pandemic has exposed exactly the issues of economic fragility, widespread hardship, and growing disparities – particularly by race and ethnicity – that United For ALICE and the ALICE data work to reveal.

That exposure makes the ALICE data and analysis more important than ever. The ALICE Report for Michigan presents the latest ALICE data available – a point-in-time snapshot of economic conditions across the state in 2019. By showing how many Michigan households were struggling then, the ALICE Research provides the backstory for why the COVID-19 crisis is having such a devastating economic impact. The ALICE data is especially important now to help stakeholders identify the most vulnerable in their communities, and direct programming and resources to assist them throughout the pandemic and the recovery that follows. And as Michigan moves forward, this data can be used to estimate the impact of the crisis over time, providing an important baseline for changes to come.

This crisis is fast-moving and quickly evolving. To stay abreast of the impact of COVID-19 on ALICE households and their communities, visit our website at UnitedForALICE.org/COVID19 for updates.

LETTER TO THE COMMUNITY

Dear Fellow Michiganders,

As a result of the COVID-19 pandemic, we have learned a lot about whom we rely on to keep the wheels in motion when all else fails. When disaster struck, we turned to our health care workers, infrastructure workers, and educators to help us move forward. However, those critical frontline workers are in desperate need of our support – and they have been for years.

Many of those who educate and care for our children, keep us healthy, and make our quality of life possible do not earn enough to support their own families.



We all know people who fall into the category of ALICE: Asset Limited, Income Constrained, Employed. They're the households where hard-working Michiganders still have to make tough choices about basic necessities. Many of us live in ALICE households ourselves. Whether it's deciding between quality childcare or paying the rent and picking up groceries, these decisions have long-term consequences not only for ALICE, but for all of us.

Now is the time to do the hard work of improving outcomes for ALICE.

As you will read in the pages to follow, low wages, reduced work hours, and depleted savings, combined with increased costs of living, meant that nearly four in 10 households were struggling to get by in 2019 – and that was before the pandemic hit. Due to longstanding inequities, those numbers were even worse for Black, Hispanic, and single-female-headed households.

In the seven years since our first ALICE report, new data sources have become available. As a result, with the release of this year's report comes added local variation, a better reflection of household composition, and new ALICE data points that give us an even clearer picture of who ALICE is and the challenges ALICE faces in Michigan.

United Ways in Michigan are pleased to come together once again to release this ALICE Report with the goal of better recognizing the depth and breadth of households facing financial hardship, in order to make the most effective changes possible.

We remain committed to serving ALICE, and all those in need, through programs that strive to improve the health, education, and financial security of all Michigan residents. We have the necessary information – now it's time to do the hard work of improving outcomes for ALICE. We call on Michigan legislators to help us do just that.

A handwritten signature in black ink, appearing to read "Mike Larson".

Mike Larson,
President & CEO,
Michigan Association of United Ways

UNITED WAYS OF MICHIGAN

Albion-Homer United Way	Plymouth Community United Way	United Way of Marquette County
Allegan County United Way	Roscommon County United Way	United Way of Mason County
Barry County United Way	St. Joseph County United Way	United Way of Midland County
Branch County United Way	Tri-City Area United Way	United Way of Monroe/Lenawee Counties
Capital Area United Way	United Way for Southeastern Michigan	United Way of Northeast Michigan
Char-Em United Way	United Way Montcalm-Ionia Counties	United Way of Northwest Michigan
Chelsea United Way	United Way of Bay County	United Way of Saginaw County
Crawford County United Way	United Way of Clare & Gladwin Counties	United Way of Sanilac County
Gogebic Range United Way	United Way of Delta County	United Way of Southwest Michigan
Greater Huron County United Way	United Way of Dickinson County	United Way of St. Clair County
Greater Ottawa County United Way	United Way of Genesee County (Shiawassee)	United Way of the Battle Creek and Kalamazoo Region
Heart of West Michigan United Way	United Way of Gratiot & Isabella Counties	United Way of the Eastern Upper Peninsula
Livingston County United Way	United Way of Jackson County	United Way of the Lakeshore
Marshall United Way	United Way of Lapeer County	United Way of Tuscola County
Mecosta-Osceola United Way	United Way of Manistee County	United Way of Washtenaw County
Ogemaw County United Way		United Way of Wexford-Missaukee Counties
Oscoda Area United Way		
Otsego County United Way		

Learn more about ALICE in Michigan: uwmich.org/alice

Michigan State Partner

Thank you to Consumers Energy Foundation, Michigan's Funding Partner

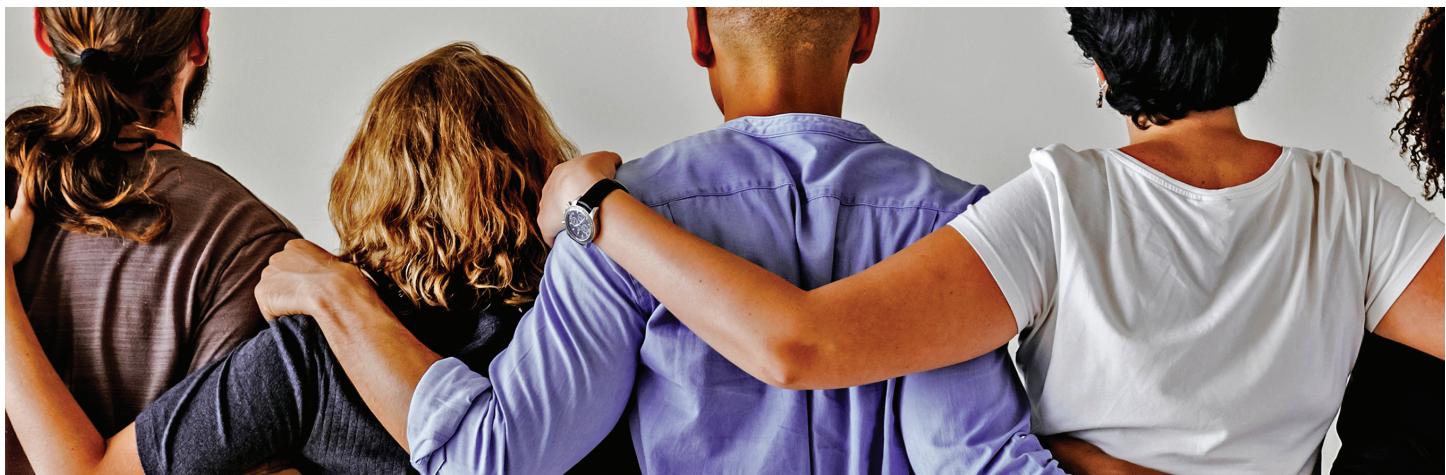


Acknowledgments

Michigan Association of United Ways thanks our sponsors, partners, and community stakeholders throughout the state for their support and commitment to this 2021 ALICE Report for Michigan. It is our hope that this Report will help raise awareness of the 38% of households in the state who live in poverty or who are **ALICE – Asset Limited, Income Constrained, Employed**. Our goal is to inform and inspire policy and action to improve the lives of ALICE families.

To learn more about how you can get involved in advocating and creating change for ALICE in Michigan, contact: Nancy Lindman at Nancy.Lindman@uwmich.org

To access the ALICE data and resources for Michigan, go to UnitedForALICE.org/Michigan



ALICE RESEARCH

ALICE Reports provide high-quality, research-based information to foster a better understanding of who is struggling in our communities. To produce the ALICE Report for Michigan, our team of researchers collaborated with a Research Advisory Committee composed of experts from across the state. Research Advisory Committee members from our partner states also periodically review the ALICE Methodology. This collaborative model ensures that the ALICE Reports present unbiased data that is replicable, easily updated on a regular basis, and sensitive to local context.

Learn more about the ALICE Research Team on our website at UnitedForALICE.org/ALICE-Team

Director and Lead Researcher: Stephanie Hoopes, Ph.D.

Research Support Team:

Andrew Abrahamson; Ashley Anglin, Ph.D.; Catherine Connelly, D.M.H.; Max Holdsworth, M.A.; Dan Treglia, Ph.D.

ALICE Research Advisory Committee for Michigan

Neil Carlson, Ph.D.

Calvin University

David Clifford, Ph.D.

Eastern Michigan University

Matias (Matt) McCauley

Networks Northwest

Kurt Metzger

Data Driven Detroit

Brian Pittelko, M.P.A

W.E. Upjohn Institute for Employment Research

René Pérez Rosenbaum, Ph.D.

Michigan State University

Peter Ruark, M.S.W.

Michigan League for Public Policy

H. Luke Shaefer, Ph.D.

University of Michigan

Molly Trueblood

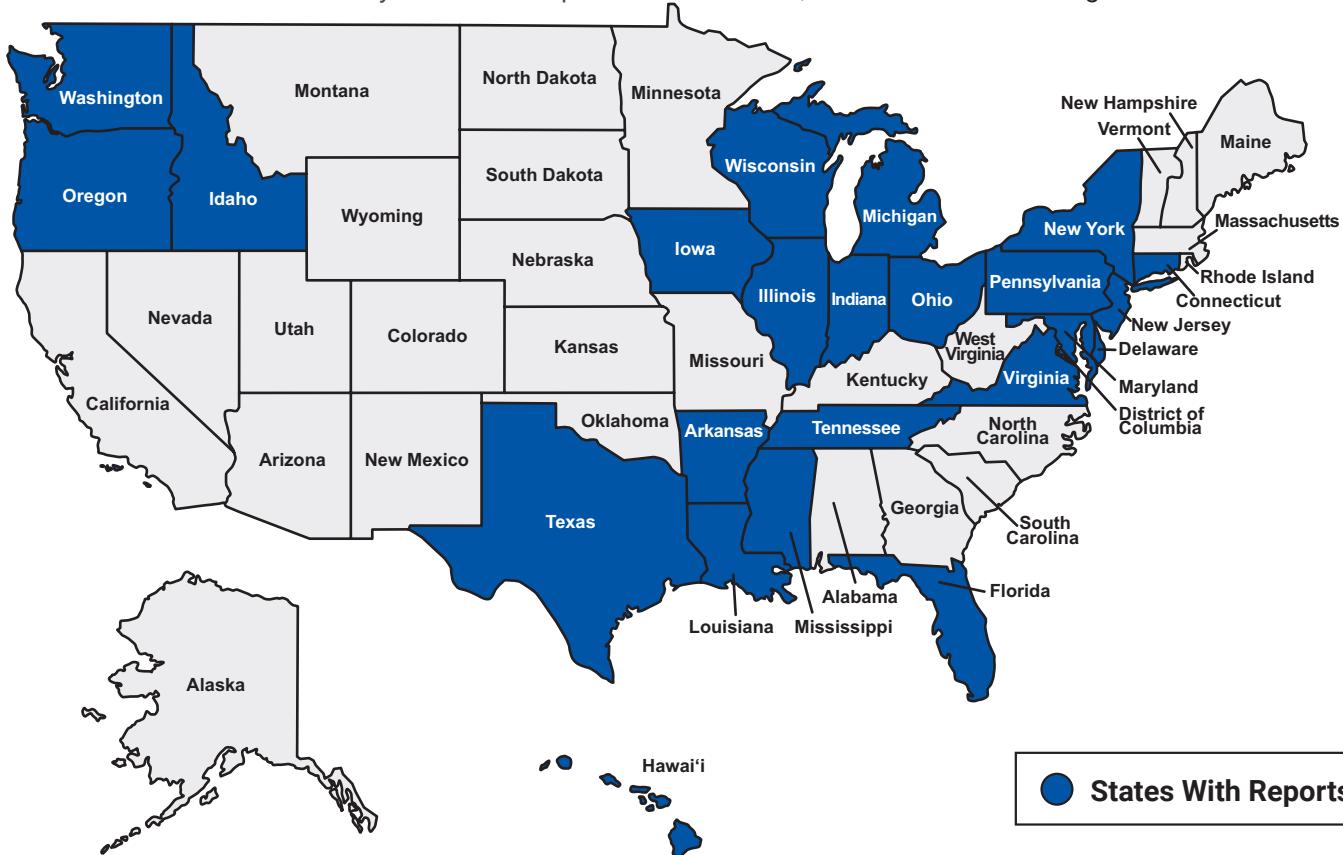
W.E. Upjohn Institute for Employment Research

ALICE: A GRASSROOTS MOVEMENT

This body of research provides a framework, language, and tools to measure and understand the struggles of a population called **ALICE** — an acronym for **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed. ALICE represents the growing number of households in our communities that do not earn enough to afford household necessities.

Partnering with United Ways, nonprofits, academic institutions, corporations, and other state organizations, this research initiative provides data to stimulate meaningful discussion, attract new partners, and ultimately inform strategies for positive change.

Based on the overwhelming success of this research in identifying and articulating the needs of this vulnerable population, this work has grown from a pilot in Morris County, New Jersey to 23 states and more than 660 United Ways. Together, United For ALICE partners can evaluate current initiatives and discover innovative approaches to improve life for ALICE and the wider community. To access Reports from all states, visit UnitedForALICE.org.



NATIONAL ALICE ADVISORY COUNCIL

The following companies are major funders and supporters of this work:

**Aetna Foundation • Allergan • Alliant Energy • AT&T • Atlantic Health System • Compare.com • Deloitte
Entergy • Johnson & Johnson • JLL • Kaiser Permanente • RWJBarnabas Health • Robert Wood Johnson Foundation
The Hartford • Thrivent • UPS • U.S. Venture • U.S. Venture-Schmidt Family Foundation**

WHAT'S NEW IN ALICE RESEARCH

Every two years, United For ALICE undertakes a full review of the ALICE Methodology to ensure that the ALICE measures are transparent, replicable, and current in order to accurately reflect how much income families need to live and work in the modern economy. In 2019, more than 40 external experts — drawn from the Research Advisory Committees across our United For ALICE partner states — participated in the review process. A full description of the Methodology and sources is available at UnitedForALICE.org/Methodology.

This Report includes the following improvements:

More local variation: The ALICE Household Survival Budgets for housing, food, transportation, health care, and taxes incorporate more local data. For housing, we differentiate counties within Metropolitan Statistical Areas using American Community Survey gross rent estimates. For food, the U.S. Department of Agriculture's Thrifty Food Plan is adjusted at the county level using Feeding America's cost-of-meal data. For transportation, auto insurance is added to new miles-traveled data (discussed in the next paragraph) to reflect different driving costs by state. For health care, out-of-pocket costs are provided by census region. And taxes now systematically include local income tax, using data from the Tax Foundation.

Better reflection of household composition: Transportation and health care budgets now better reflect costs for different household members. The transportation budget for driving a car uses the Federal Highway Administration's miles-traveled data, sorted by age and gender, and AAA's cost-per-mile for a small or medium-sized car. The health care budget reflects employer-sponsored health insurance (the most common form in 2018, when it covered 49% of Americans¹), using the employee's contribution, plus out-of-pocket expenditures by age and income, from the Agency for Healthcare Research and Quality Medical Expenditure Panel Survey.

More variations by household size: The median household size in the U.S. is three people for households headed by a person under age 65 and two people for households headed by seniors (65+).² Reflecting this reality, the Household Survival Budgets are presented in new variations, including a Senior Survival Budget. The website provides data to create budgets for households with any combination of adults and children. The ALICE Threshold has also been adjusted to incorporate the most common modern household compositions. These new budget variations are included in the County Profile and Household Budget pages on UnitedForALICE.org/Michigan.

New ALICE measures:

- The **Senior Survival Budget** more accurately represents household costs for people age 65 and over. Housing and technology remain constant; however, some costs are lower — transportation, food, and health insurance premiums (due to Medicare) — while others are higher, especially out-of-pocket health costs. Because over 90% of seniors have at least one chronic condition, the Senior Survival Budget includes the additional cost of treating the average of the five most common chronic diseases.
- The **ALICE Essentials Index** is a standardized measure of the change over time in the costs of essential household goods and services, calculated for both urban and rural areas. It can be used as a companion to the Consumer Price Index from the Bureau of Labor Statistics (BLS), which covers all goods and services that families at all income levels buy regularly.

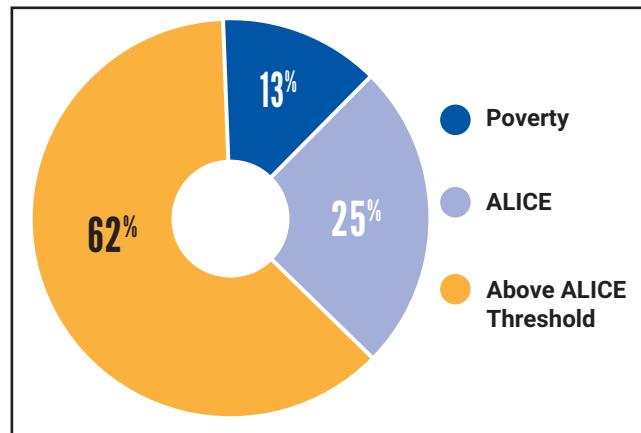
Data Notes: The data are estimates; some are geographic averages, others are one- or five-year averages depending on population size. Change-over-time ranges start with 2007, before the Great Recession, then measure change from 2010 to 2019. County-level data remains the primary focus, as state averages mask significant differences between counties. For example, the share of households below the ALICE Threshold in Michigan ranges from 24% in Livingston County to 56% in Lake County. Many percentages are rounded to whole numbers, sometimes resulting in percentages totaling 99% or 101%. The methodological improvements included in this Report have been applied to previous years to allow for accurate year-over-year comparisons. This means that some numbers and percentages at the state and county level will not match those reported in previous ALICE Reports for Michigan.

TABLE OF CONTENTS

Asset Limited, Income Constrained, Employed	1
At-A-Glance: Michigan.....	3
Who Is ALICE?	6
ALICE in Detroit	8
Trends: Household Demographics	9
The Cost of Living in Michigan	11
The ALICE Household Budgets	11
The ALICE Essentials Index	13
Trends: Cost of Living	14
The Changing Landscape of Work in Michigan	17
Household Costs Outpacing Wages	17
Inside The Labor Force	19
ALICE Jobs: Maintaining the Economy	22
Trends: The Landscape of Work	24
Next Steps: Data for Action	26
Identifying Gaps	26
Understanding ALICE: Health, Education, and Social Factors	28
The Benefits of Moving Toward Equity in Michigan	30
Endnotes	34
Figure 12: Sources	46

ASSET LIMITED, INCOME CONSTRAINED, EMPLOYED

Over the last decade, behind the veneer of a strong economy, conditions have actually worsened for thousands of families across Michigan – setting the stage for the dual health and economic crises of the COVID-19 pandemic. From 2010 to 2019, Michigan showed steady economic improvements according to traditional measures. Unemployment fell to historic lows, GDP grew, and wages rose slightly. Yet in 2019, nine years after the end of the Great Recession, 38% of Michigan's 3,963,558 households still struggled. And while 13% of these households were living below the Federal Poverty Level (FPL), another 25% – nearly twice as many – were **ALICE** households: Asset Limited, Income Constrained, Employed. These households earned above the FPL, but not enough to afford household necessities.



This Report provides new data and tools that explain the persistent level of hardship faced by ALICE households, revealing aspects of the Michigan economy not tracked by traditional measures. Three critical trends help us understand why the pandemic is hitting so hard for so many:

- **The cost of living has been increasing for ALICE households.** From 2007 to 2019, the cost of household essentials (housing, child care, food, transportation, health care, and technology) increased faster than the cost of other goods and services. The ALICE Essentials Index, a new tool that measures change over time in the cost of household essentials, increased at an average rate of 3.4% annually nationwide over the past decade, while the official rate of inflation was 1.8%.
- **The economy is increasingly dominated by jobs with low wages and less security.** By 2019, a near-record-low number of people were reported to be unemployed. However, that low unemployment concealed employment trends that expose ALICE workers to greater risk: growth in the number of low-wage jobs, minimal increases in wages, and more fluctuations in job hours, schedules, and benefits that make it harder to budget and plan. These trends were clear in 2019: A record number of Michigan workers – 58% – were paid by the hour, and 58% of the state's jobs paid less than \$20 per hour.
- **The number of ALICE households in Michigan increased in response to the Great Recession and never fully recovered.** Despite the improved economic conditions in the years that followed the Recession, increasing numbers of ALICE households struggled as a result of rising costs and stagnant wages. There are more ALICE households than households in poverty, and the number of ALICE households is increasing at a faster rate. The FPL, with its minimal and uniform national estimate of the cost of living, far underestimates the number of households that cannot afford to live and work in the modern economy. In Michigan, the percentage of households that were ALICE rose from 19% in 2007 to 25% in 2019. By contrast, during the same time period, households living in poverty climbed from 13% in 2007, to a high of 16% in 2012, before returning to 13% in 2019.

This Report provides critical measures that assess Michigan's economy from four perspectives: They track financial hardship over time and across demographic groups, quantify the basic cost of living in Michigan, assess job trends, and identify gaps in assistance and community resources. These measures also debunk assumptions and stereotypes about low-income workers and families. ALICE households are as diverse as the general population, composed of people of all ages, genders, races, and ethnicities, living in rural, urban, and suburban areas.

The Report concludes with an analysis of the economic benefits if all households had income above the ALICE Threshold. Not only would there be a significant positive impact on families and their communities, but the state economy would also benefit. In fact, the added value to the Michigan GDP would be approximately \$97.9 billion.

This Report and its measures are tools to help stakeholders ask the right questions, reduce vulnerabilities, remove obstacles to advancement, identify gaps in community resources, build a stronger workforce, and implement programs and policies that help put financial stability within reach for ALICE households. With the magnitude of financial hardship revealed, these actions can help move all households toward a more equitable economy, and ensure that no one is left behind in harder times.

GLOSSARY

ALICE is an acronym that stands for Asset Limited, Income Constrained, Employed — households with income above the Federal Poverty Level but below the basic cost of living. A household consists of all the people who occupy a housing unit. In this Report, households do not include those living in group quarters such as a dorm, nursing home, or prison.

The **Household Survival Budget** estimates the actual bare-minimum costs of household necessities (housing, child care, food, transportation, health care, and a basic smartphone plan) in Michigan, adjusted for different counties and household types.

The Senior Survival Budget incorporates specific cost estimates for seniors for food, transportation, and health care, reflecting key differences in household expenses by age.

The **Household Stability Budget** calculates the costs of supporting and sustaining an economically viable household over time, including a contingency for savings.

The **ALICE Threshold** is the average income that a household needs to afford the necessities defined by the Household Survival Budget for each county in Michigan. Households **Below the ALICE Threshold** include both ALICE and poverty-level households.

The **ALICE Essentials Index** is a national standardized measure of the average change over time in the costs of the essential goods and services that households need to live and work in the modern economy — housing, child care, food, transportation, health care, and a smartphone plan.

ALICE ONLINE

Visit UnitedForALICE.org for more details about ALICE, including:



Interactive Maps

Data at the state, county, municipal, and ZIP code levels



Research Advisory Committee

Learn about the members and role of this critical group



Additional Reports

Explore The ALICE Essentials Index and The Consequences of Insufficient Household Income



Demographic Data

Information about ALICE households by age, race/ethnicity, and household type



Data Spreadsheet

Download the ALICE data



Labor Force Data

Details about the challenges ALICE workers face



County Profiles

Detailed data about ALICE households in each county



Methodology

Overview of the sources and calculations used in the ALICE research



More About United For ALICE

See our partners, press coverage, learning communities, etc.

Follow us on Facebook and Twitter @UnitedForALICE

AT-A-GLANCE: MICHIGAN

2019 Point-in-Time Data

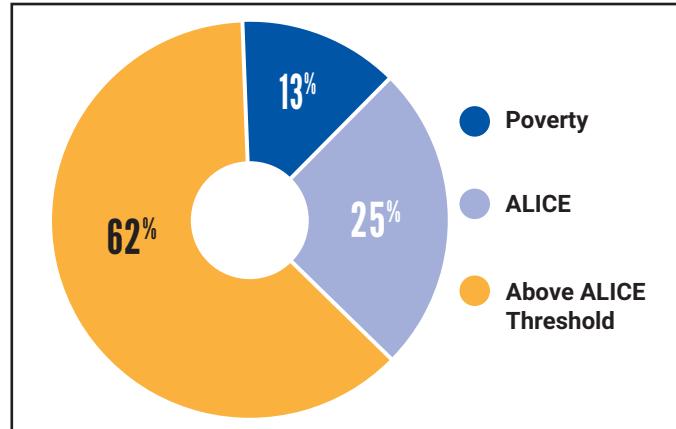
Population: 9,986,857

Number of Counties: 83

Number of Households: 3,963,558

How many households are struggling?

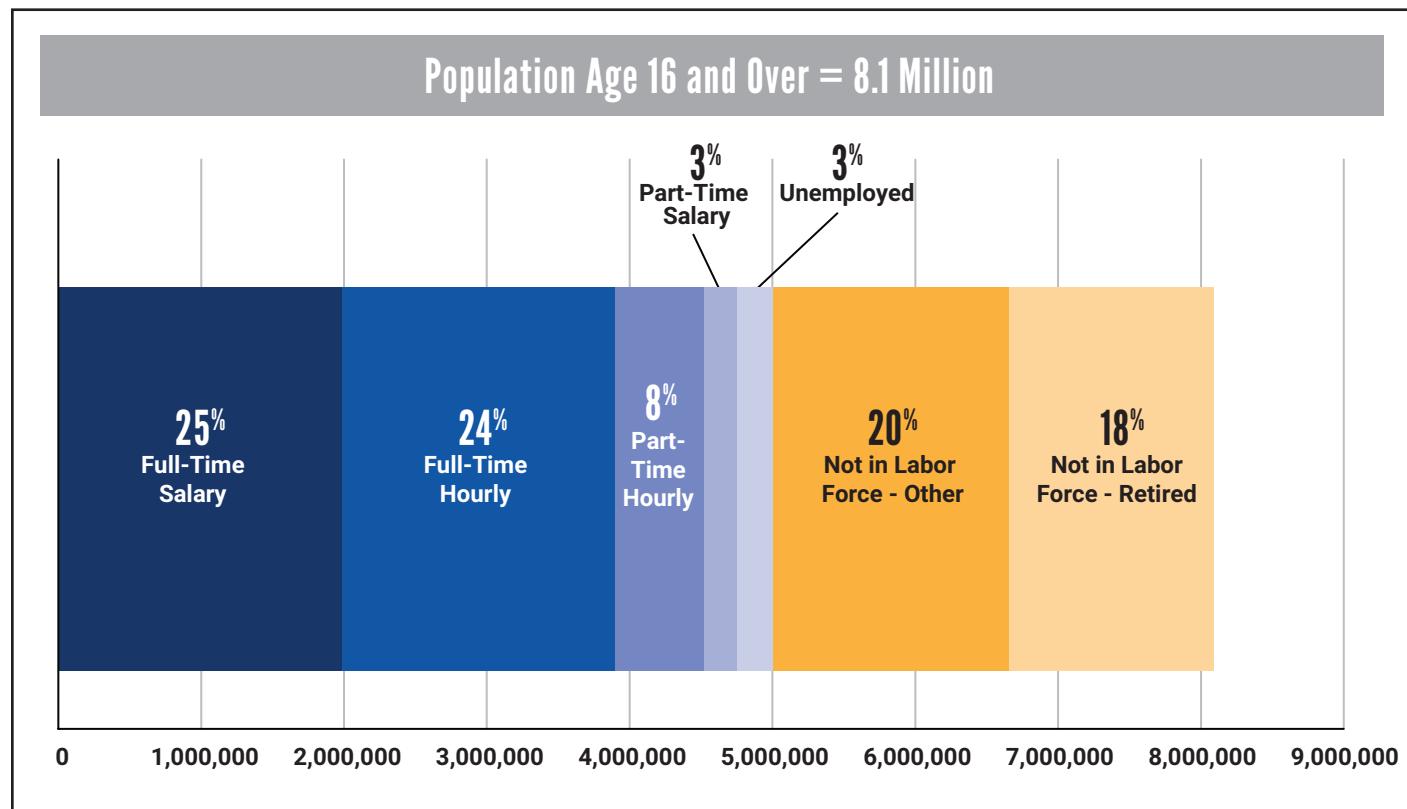
ALICE, an acronym for Asset Limited, Income Constrained, Employed, comprises households that earn more than the Federal Poverty Level but less than the basic cost of living for the state (the ALICE Threshold). Of Michigan's 3,963,558 households, 504,237 earned below the Federal Poverty Level (13%) in 2019, and another 1,004,047 (25%) were ALICE.



What does the Michigan labor force look like?

A 2019 overview of the labor status of Michigan's 8,090,968 working-age adults (people age 16 and over) shows that 63% of adults were in the labor force (blue bars), yet slightly more than half were workers who were paid hourly. Hourly paid jobs tend to have lower wages, fewer benefits, and less stability. In addition, 38% of adults were outside the labor force (gold bars), either because they were retired or because they had stopped looking for work.

Labor Status, Population Age 16 and Over, Michigan, 2019



Note: Data for full- and part-time jobs is only available at the national level; these national rates (49% of full-time workers and 73% of part-time, hourly workers) have been applied to the total Michigan workforce to calculate the breakdown shown in this figure. Full-time represents a minimum of 35 hours per week at one or more jobs for 48 weeks per year. Many percentages are rounded to whole numbers, sometimes resulting in percentages totaling 99% or 101%.

What does it cost to afford the basic necessities?

The average ALICE Household Survival Budget in Michigan was \$23,400 for a single adult, \$26,244 for a single senior, and \$64,116 for a family of four in 2019 – significantly more than the Federal Poverty Level of \$12,490 for a single adult and \$25,750 for a family of four.



Household Survival Budget, Michigan Average, 2019

	SINGLE ADULT	SENIOR (1 ADULT)	2 ADULTS, 1 INFANT, 1 PRESCHOOLER
Monthly Costs			
Housing	\$549	\$549	\$779
Child Care	-	-	\$1,122
Food	\$261	\$225	\$794
Transportation	\$457	\$406	\$929
Health Care	\$189	\$481	\$569
Technology	\$55	\$55	\$75
Miscellaneous	\$177	\$199	\$486
Taxes	\$262	\$272	\$589
Monthly Total	\$1,950	\$2,187	\$5,343
ANNUAL TOTAL	\$23,400	\$26,244	\$64,116
Hourly Wage*	\$11.70	\$13.12	\$32.06

*Full-time wage required to support this budget

Michigan Counties, 2019

COUNTY	TOTAL HOUSEHOLDS	% ALICE & POVERTY
Alcona	4,988	46%
Alger	3,007	54%
Allegan	43,667	31%
Alpena	12,752	43%
Antrim	9,899	34%
Arenac	6,571	47%
Baraga	3,107	49%
Barry	24,296	27%
Bay	44,887	35%
Benzie	6,792	38%
Berrien	61,809	38%
Branch	16,650	36%
Calhoun	53,827	39%

Michigan Counties, 2019

COUNTY	TOTAL HOUSEHOLDS	% ALICE & POVERTY
Cass	21,019	37%
Charlevoix	11,503	37%
Cheboygan	11,195	39%
Chippewa	13,999	47%
Clare	12,199	53%
Clinton	30,070	30%
Crawford	6,141	41%
Delta	16,234	39%
Dickinson	11,231	38%
Eaton	44,420	29%
Emmet	14,463	36%
Genesee	169,247	41%
Gladwin	11,047	44%

Michigan Counties, 2019

COUNTY	TOTAL HOUSEHOLDS	% ALICE & POVERTY
Gogebic	6,744	51%
Grand Traverse	37,319	33%
Gratiot	15,035	45%
Hillsdale	18,107	40%
Houghton	13,386	49%
Huron	13,847	38%
Ingham	114,534	42%
Ionia	22,964	37%
Iosco	11,669	38%
Iron	5,225	46%
Isabella	24,690	49%
Jackson	61,403	41%
Kalamazoo	103,196	39%
Kalkaska	7,145	41%
Kent	245,437	35%
Keweenaw	1,081	35%
Lake	4,631	56%
Lapeer	33,902	31%
Leelanau	9,139	43%
Lenawee	38,499	38%
Livingston	73,502	24%
Luce	2,231	49%
Mackinac	5,269	42%
Macomb	351,666	36%
Manistee	9,426	42%
Marquette	27,981	34%
Mason	12,186	40%
Mecosta	15,808	48%
Menominee	10,627	46%
Midland	34,350	28%
Missaukee	6,055	40%
Monroe	60,875	34%
Montcalm	23,913	43%
Montmorency	4,452	45%
Muskegon	66,148	43%

Michigan Counties, 2019

COUNTY	TOTAL HOUSEHOLDS	% ALICE & POVERTY
Newaygo	19,161	39%
Oakland	508,464	30%
Oceana	10,156	44%
Ogemaw	9,184	46%
Ontonagon	2,793	51%
Osceola	9,181	43%
Oscoda	3,806	44%
Otsego	9,944	37%
Ottawa	105,004	30%
Presque Isle	5,797	42%
Roscommon	11,139	44%
Saginaw	79,050	43%
Sanilac	17,499	38%
Schoolcraft	3,468	47%
Shiawassee	26,830	33%
St. Clair	63,806	36%
St. Joseph	24,150	35%
Tuscola	21,777	38%
Van Buren	30,974	36%
Washtenaw	141,680	31%
Wayne	689,270	47%
Wexford	12,963	42%

Sources: *Point-in-Time Data:* American Community Survey, 2019. **ALICE Demographics:** ALICE Threshold, 2019; American Community Survey, 2019.

Labor Status: American Community Survey, 2019; Federal Reserve Bank of St. Louis, 2019. **Budget:** AAA, 2019; Agency for Healthcare Research and Quality, 2019; American Community Survey, 2019; Bureau of Labor Statistics, 2019—Consumer Expenditure Surveys; Bureau of Labor Statistics, 2019—Occupational Employment Statistics; Centers for Medicare & Medicaid Services, 2016—Medicare Current Beneficiary Survey; Centers for Medicare & Medicaid Services, 2019; Centers for Medicare & Medicaid Services, 2019—Medicare - Chronic Conditions; Federal Highway Administration, 2017; Feeding America, 2020; Fowler, 2019; Internal Revenue Service, 2020; Internal Revenue Service—FICA, 2020; Medicare.gov; Public Policy Associates, 2018; Scarboro, 2018; The Zebra, 2020; U.S. Department of Agriculture, 2019—Official USDA Food Plans; U.S. Department of Housing and Urban Development, 2019—Fair Market Rents; Walczak, 2019

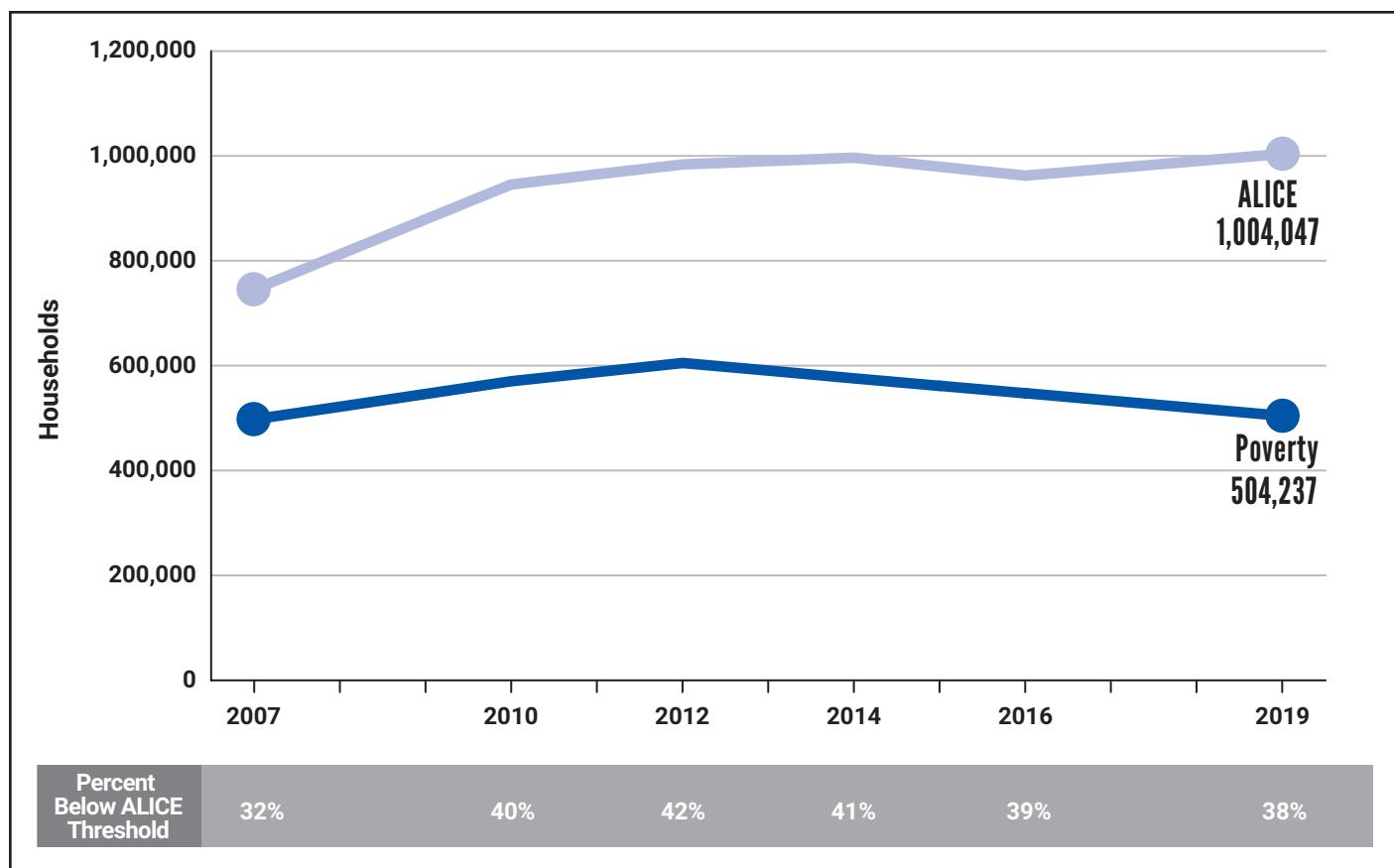
For more details, see the Methodology Overview at UnitedForALICE.org/Methodology

WHO IS ALICE?

With income above the Federal Poverty Level (FPL) but below a basic survival threshold – defined as the ALICE Threshold – ALICE households earn too much to qualify as “poor” but are still unable to make ends meet. They often work as cashiers, nursing assistants, office clerks, servers, laborers, and security guards. These types of jobs are vital to keeping Michigan’s economy running smoothly, but they do not provide adequate wages to cover the basics of housing, child care, food, transportation, health care, and technology for these ALICE workers and their families.

Between 2007 and 2019, the total number of Michigan households increased slightly (3%) to 3,963,558 households. The number of households in poverty started and ended the period at 13% of all households, peaking at 16% in 2012. But the number of ALICE households increased significantly (from 745,446 to 1,004,047, a 35% jump), with their share of all households rising from 19% in 2007 to 25% in 2019. The most dramatic increase in ALICE households occurred during the Great Recession between 2007 and 2010, and while those numbers remained relatively stable during the nine-year recovery, 2010 to 2019, they never returned to pre-Recession levels. Overall, the percentage of households living below the ALICE Threshold (ALICE and poverty-level households combined) increased from 32% in 2007 to 38% in 2019 (Figure 1).

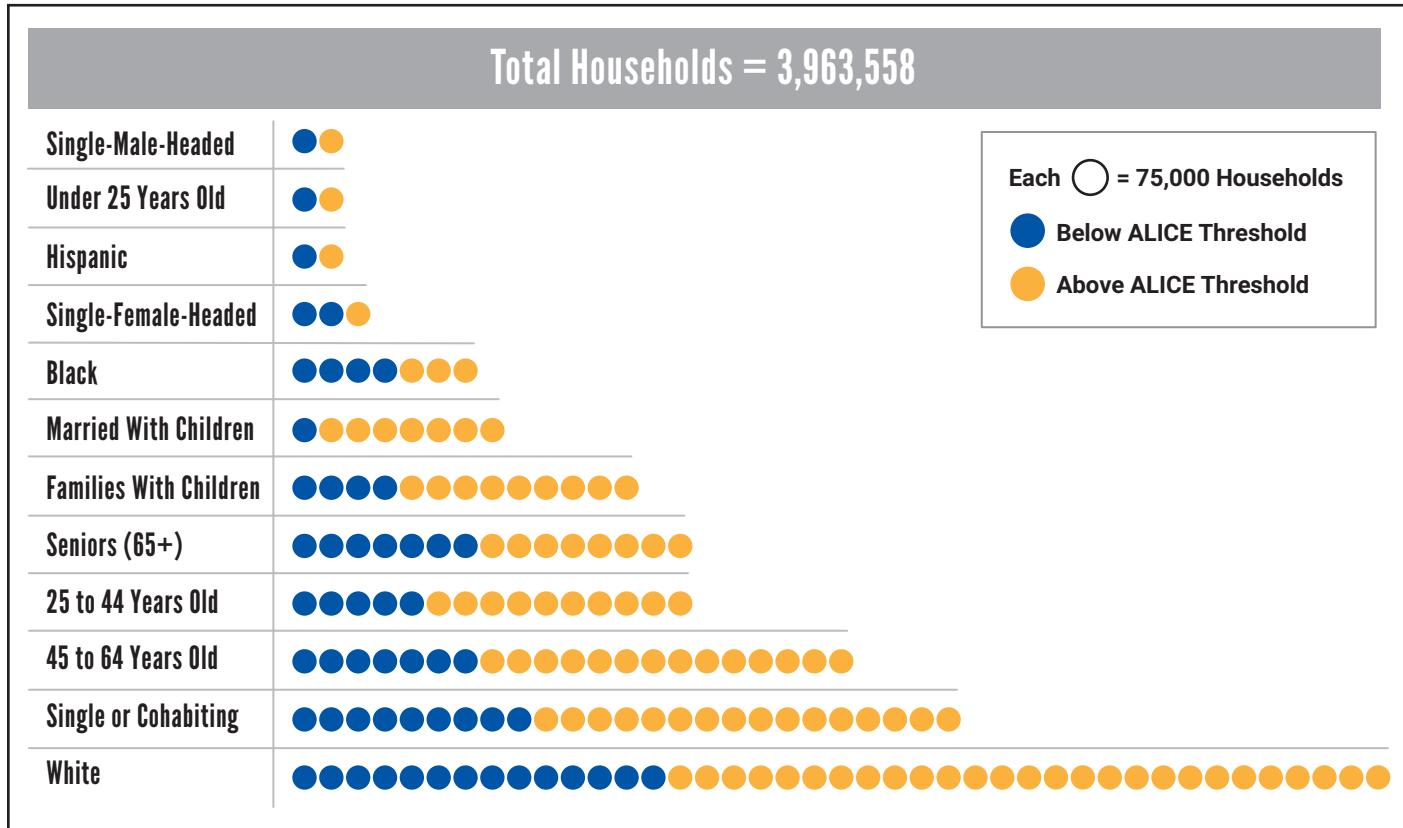
Figure 1.
Households by Income, Michigan, 2007–2019



Sources: ALICE Threshold, 2007–2019; American Community Survey, 2007–2019

ALICE households live in every county in Michigan – urban, suburban, and rural – and they include people of all genders, ages, and races/ethnicities, across all household types. Figure 2 shows that in 2019, the largest numbers of households below the ALICE Threshold were in the largest demographic groups in Michigan – namely, White households, single or cohabitating households (without children or seniors), and households headed by someone in their prime working years (25 to 64 years old). Seniors – another of the state’s biggest groups – accounted for 35% (521,693) of all households below the ALICE Threshold. Among families with children, married-parent families were the largest subgroup and accounted for 30% of the 319,975 families with children living below the ALICE Threshold.

Figure 2. Household Types by Income, Largest Groups, Michigan, 2019

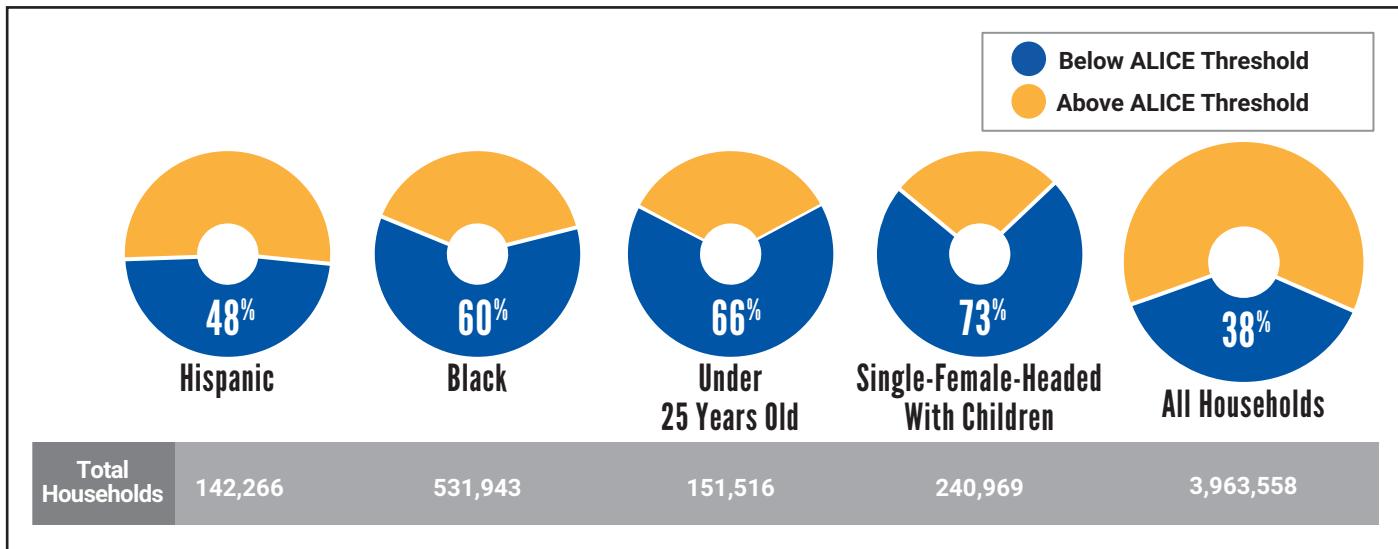


Note: The groups shown in this figure overlap across categories (age, household type, race/ethnicity). Within the race/ethnicity category, all racial categories except Two or More Races are for one race alone. Race and ethnicity are overlapping categories; in this Report, the Asian, Black, Hawaiian (includes other Pacific Islanders), and Two or More Races groups may include Hispanic households. The White group includes only White, non-Hispanic households. The Hispanic group may include households of any race. Because household poverty data is not available for the American Community Survey’s race/ethnicity categories, annual income below \$15,000 is used as a proxy.

Sources: ALICE Threshold, 2019; American Community Survey, 2019

Another way to examine the data is to look at the proportion of each group that is below the ALICE Threshold. Overall, 38% of households in Michigan had income below the ALICE Threshold in 2019. Yet certain population groups had a disproportionately high percentage of families below the ALICE Threshold, including Black and Hispanic households, young households (headed by someone under age 25), and single-parent households (Figure 3). In contrast, Asian households, a small group, fared better than the largest demographic group, with 28% of Asian households below the ALICE Threshold compared to 34% of White households.

Figure 3.
Select Household Groups by Income, Michigan, 2019



Sources: ALICE Threshold, 2019; American Community Survey, 2019

In addition to these demographic disparities by age, race/ethnicity, and family type — which are perpetuated by discrimination and institutionalized racism, ageism, and sexism — other factors can also make households more likely to face financial hardship. Lower incomes are associated with households headed by a recent immigrant, especially one who is undocumented or unskilled; by someone with low proficiency in English; by a lesbian, gay, bisexual, transgender, or queer (LGBTQ+) person; by someone with a low level of education; by someone who was previously incarcerated; or by someone living with a disability. Groups with more than one of these factors — recent immigrants with special needs, for example, who may have both limited English proficiency and a disability, or LGBTQ+ people of color, who face systemic racism and discrimination — are even more likely to experience financial hardship.³

ALICE IN DETROIT

Even within Michigan's counties, there is considerable variation in how many households are struggling. In Wayne County, financial hardship was greater in the city of Detroit in 2019 than in other parts of the county. The percentage of households with income below the ALICE Threshold in Detroit was 69% in 2019, with even higher rates in River Rouge and Highland Park, at 76% and 80% respectively. This is a stark difference from areas just outside the city, including Dearborn with 46% and Allen Park with 32% of households below the ALICE Threshold.

According to a 2020 *U.S. News and World Report* analysis, Detroit saw the greatest increase in diversity of all U.S. cities from 2010 to 2018 due in large part to its growing White and Hispanic populations.⁴ The overall population of Detroit has changed from 83% Black, 11% White, and 6% Hispanic in 2010, to 78% Black, 15% White and 8% Hispanic in 2019. Despite the changing demographics, neighborhoods within the city remain largely segregated.⁵ Detroit residents have experienced persistent racial discrimination, which has led to significant and longstanding disparities in jobs, wages, schools, housing, and health. While community revitalization efforts have brought some positive changes, higher rates of poverty and unemployment persist. The median household income in Detroit in 2019 was \$30,894 — well below the overall state median household income of \$57,144.⁶

TRENDS: HOUSEHOLD DEMOGRAPHICS

A growing number of households live on the edge of the ALICE Threshold. For these households, even a small increase in the cost of housing or a decrease in work hours can mean the difference between being financially stable and being ALICE. In Michigan, 10% of households (414,583) were on the cusp of the ALICE Threshold in 2019; of those, approximately 60% earned just above the ALICE Threshold and 40% earned just below it.⁷ These families are one crisis — a rent increase, unexpected home repair, or public health disaster — away from becoming ALICE. This matters for families, but it can also impact the Michigan economy as a whole: Even a small drop in wages or hours worked, or an unexpected medical emergency, could destabilize a large number of households. Conversely, a small increase in wages or a decrease in rent or a car payment could help push families above the ALICE Threshold.

Michigan is becoming more diverse and income gaps between groups are growing. Statewide, the largest percentage of households by race/ethnicity in 2019 were White (78%), with smaller shares of Black (12%), Hispanic (4%), and Asian households (3%). While all of the state's racial and ethnic groups grew by number of households between 2010 and 2019, their trajectories differed. The largest group, White households, increased by only 1%, with a larger proportion of seniors than other racial/ethnic groups; Black households increased 4%, Hispanic households 28%, and Asian households 35%. As the racial and ethnic diversity of households in Michigan increased, economic hardship was far greater among households of color: White households saw a 4% drop in the number of households below the ALICE Threshold, while others experienced an increase: Black households by 4%, Hispanic households by 25%, and Asian households by 41%.⁸

In Southeast Michigan, 10 counties comprised more than half the state's population in 2019: Genesee, Lapeer, Livingston, Macomb, Monroe, Oakland, Shiawassee, St. Clair, Washtenaw, and Wayne counties.⁹ Population growth in the state has been concentrated in metropolitan areas of the Lower Peninsula, which offer greater opportunities for work and therefore attract a younger, more diverse population. Meanwhile, the aging population in rural counties has remained largely White, and population growth in these counties has remained flat or even declined as baby boomers grow older and age in place.¹⁰

“Even a small drop in wages or hours worked, or an unexpected medical emergency, could destabilize a large number of households.”

Michigan's household structure continues to change. The number of married-parent families with children decreased from 2010 to 2019, falling 11%. In 2019, single adults or cohabiting adults (including roommates, unmarried partners, adult relatives, etc.) under age 65 with no children under age 18 made up the largest proportion of households in Michigan (47%), as well as the largest share of households below the ALICE Threshold (44%). Nationally, the number of cohabiting adults more than doubled between 1996 and 2017, and these partners tend to have higher levels of education and be more racially diverse today than cohabiting adults 20 years ago.¹¹

Baby boomers and millennials, the two largest population bubbles, are getting older. This natural aging of the population is reducing the proportion of both college-age students and families with children as millennials have passed traditional college age, are having fewer children, and are waiting longer than previous generations to have

them. Between 2008 and 2012, on the heels of the Great Recession, many young adults who were just starting out left the state seeking better employment opportunities. Additionally, the number of seniors has been increasing as more baby boomers pass age 65. As a result, Michigan is aging faster than other states in the country. By 2025, Michiganders age 65 and over will outnumber young people under age 18, ten years ahead of the national trend.¹²

Having lived through a decade of financial challenges since the Great Recession, more Michigan seniors will become ALICE. While there are many policies and programs in place to help seniors financially – such as Social Security, property tax deductions or exemptions based on age, and senior discounts for both private and public purchases – increasing numbers of seniors will experience financial hardship. In 2019, nearly half (47%) of all senior households in Michigan were living below the ALICE Threshold. Seniors also make up a larger portion of households in rural areas, where they face additional challenges in access to transportation, health care, and social services as they age in place.¹³ A 2021 report on the best and worst places for seniors to live ranked Michigan 31st out of 50 states, with unavailability of multi-family housing, limited frequency of local public transit, traffic congestion, and lack of access to grocery stores driving down the ranking.¹⁴

“Inequality in income and wealth will continue to rise as the highest income earners experience wage growth and job stability, while low-income workers face smaller wage increases and less job security.”

Inequality in income and wealth will continue to rise as the highest income earners experience wage growth and job stability, while low-income workers face smaller wage increases and less job security. Nationwide, from the late 1940s to the early 1970s, incomes across the income distribution grew at nearly the same pace. Then, beginning in the 1970s, income disparities began to widen: The average income for the top 1% increased over five times more than that of the middle 60% and over two and a half times more than that of the bottom fifth, from 1979 to 2016.¹⁵ In Michigan, income disparities between the top and bottom earners have persisted. By 2016, the top 1% of Michigan households held approximately 18% of the total income in the state and earned 21 times more than the bottom 99%.¹⁶ The gap in wealth (savings and assets) is even greater. Unable to save, ALICE families do not have the means to build assets, let alone catch up to those who already have them (especially those who have been building assets for generations). ALICE families and certain racial and ethnic groups face more barriers to homeownership, savings, investments, and retirement plans; when compounded, these barriers create an even bigger wealth gap.¹⁷ According to the 2019 Survey of Consumer Finances, nationally, White families had five times the wealth – defined as the difference between gross assets and liabilities – as Hispanic families, and eight times that of Black families.¹⁸ The COVID-19 pandemic is exacerbating all of these trends: The crisis has had a starkly disproportionate impact on lower-income households, making recovery much steeper for those struggling the most.¹⁹

THE COST OF LIVING IN MICHIGAN

Traditional economic measures systematically underestimate the actual cost of basic needs and their rate of increase over time, concealing important aspects of the local and national economy. To better capture the reality of how much income households need to live and work in the modern economy in each county in Michigan, this Report includes the **ALICE Household Budgets**. In addition, the Report presents the **ALICE Essentials Index**, a standardized national measure that captures change over time in the cost of household essentials that ALICE households purchase. Together, these tools provide a more accurate estimate of the cost of living and a clearer way to track change over time.

THE ALICE HOUSEHOLD BUDGETS

United For ALICE provides three basic budgets for all counties in Michigan. Each budget can be calculated for various household types.

- The **ALICE Household Survival Budget** is an estimate of the minimal total cost of household essentials – housing, child care, food, transportation, health care, and technology, plus taxes and a miscellaneous contingency fund equal to 10% of the budget. It does not include savings, auto repairs, cable service, travel, laundry costs, or amenities such as holiday gifts or dinner at a restaurant that many families take for granted.
- The **Senior Survival Budget**, new to this Report, adjusts the Household Survival Budget to reflect the fact that seniors have lower food costs than younger adults, travel fewer miles for work and family responsibilities, and have increasing health needs and out-of-pocket health care expenses.
- For comparison to a more sustainable budget, the **ALICE Household Stability Budget** estimates the higher costs of maintaining a viable household over time, and it is the only ALICE budget to include a savings category, equal to 10% of the budget.

The actual cost of household basics in every county in Michigan is well above the Federal Poverty Level (FPL) for all household sizes and types (Figure 4). For a single adult, the FPL was \$12,490 per year in 2019, but the average Household Survival Budget in Michigan was \$23,400 per year.²⁰ The average Senior Survival Budget totaled \$26,244 per year, primarily due to increased health costs. (Despite having Medicare, seniors have greater out-of-pocket health care costs, largely due to increased spending on chronic health issues like heart disease and diabetes.) And all budgets were significantly lower than the Household Stability Budget, which reached \$43,080 per year for a single adult.

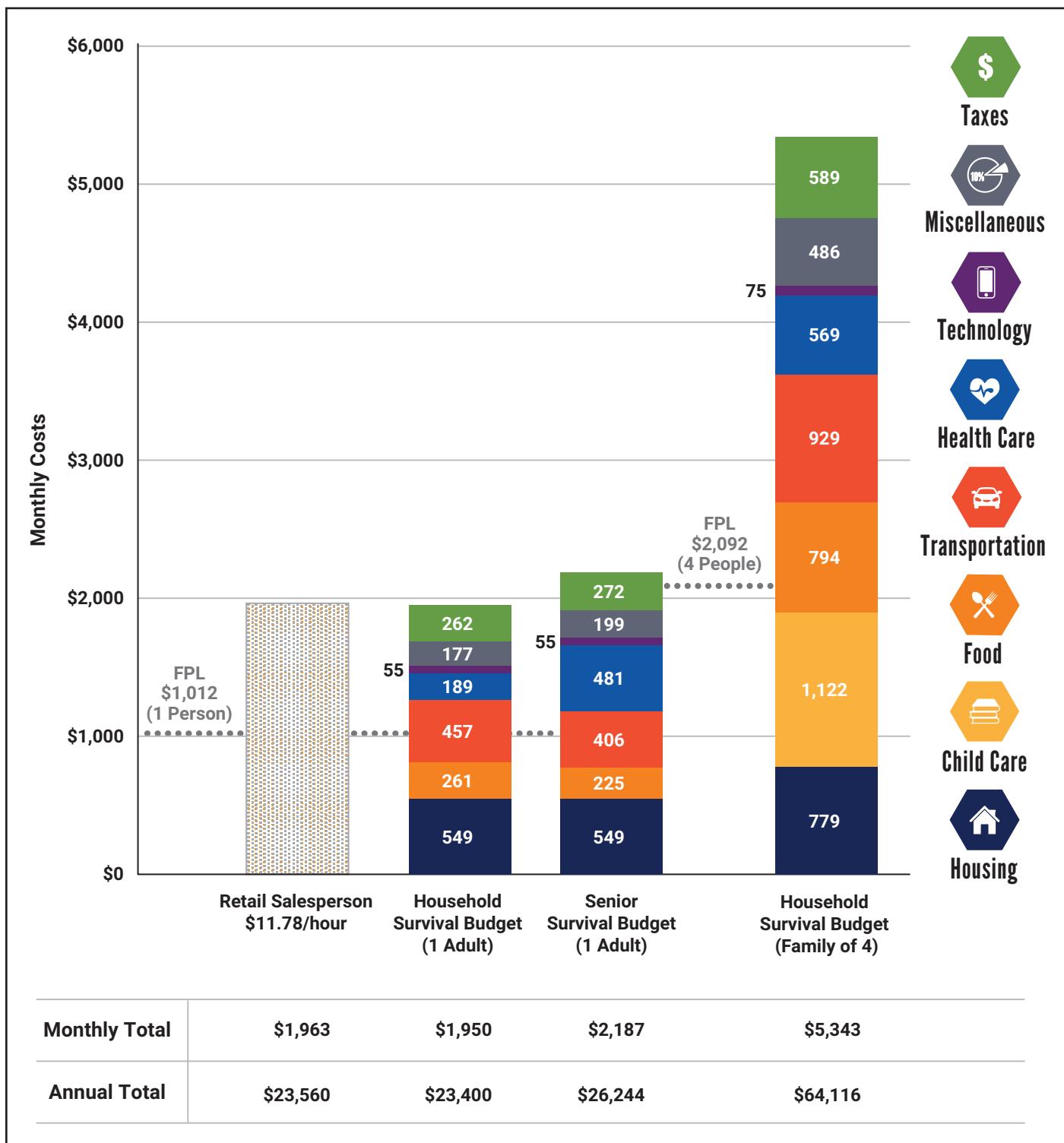
The gaps are even larger for families. The FPL for a four-person family was \$25,750 in 2019, while the Household Survival Budget for a family with two adults, an infant, and a four-year-old was \$64,116.²¹ The cost of living is highest in Leelanau, Oakland, and Washtenaw counties at more than \$80,000 a year for a family of four, and lowest in Hillsdale, Mackinac, and Ogemaw counties at approximately \$55,000 a year for the same household size.

The hourly wages needed to support these budgets were \$11.70 per hour for the single-adult Survival Budget; \$13.12 for the Senior Survival Budget; and \$32.06 for one worker, or \$16.03 each for two workers, for the family of four's Survival Budget. To put these budgets in perspective, the median hourly wage for the most common occupation in Michigan, retail salesperson, was \$11.78 in 2019, or \$23,560 if full time, year-round – just enough to support a single-adult Survival Budget but not enough for the senior budget or the family budget, even with two adults working at that rate.

Public assistance programs are based on the FPL, but the FPL is not enough for a household to cover even its most minimal costs, as shown by the comparison to the Household Survival Budget in Figure 4. This means that assistance programs serve far fewer households than actually need assistance, even in a strong economy.

To see the details of each ALICE budget for different household types, visit UnitedforALICE.org.

Figure 4.
Budget Comparison, Michigan, 2019



Note: The FPL is a total; there is no breakdown of how that amount is allocated by budget category.

Sources: AAA, 2019; Agency for Healthcare Research and Quality, 2019; American Community Survey, 2019; Bureau of Labor Statistics, 2019—Consumer Expenditure Surveys; Bureau of Labor Statistics, 2019—Occupational Employment Statistics; Centers for Medicare & Medicaid Services, 2016—Medicare Current Beneficiary Survey; Centers for Medicare & Medicaid Services, 2019; Centers for Medicare & Medicaid Services, 2019—Medicare - Chronic Conditions; Federal Highway Administration, 2017; Feeding America, 2020; Fowler, 2019; Internal Revenue Service, 2020; Internal Revenue Service—FICA, 2020; Medicare.gov; Public Policy Associates, 2018.; Scarboro, 2018; The Zebra, 2020; U.S. Department of Agriculture, 2019—Official USDA Food Plans; U.S. Department of Housing and Urban Development, 2019—Fair Market Rents; Walczak, 2019. For more details, see the Methodology Overview at UnitedForALICE.org/Methodology.²²

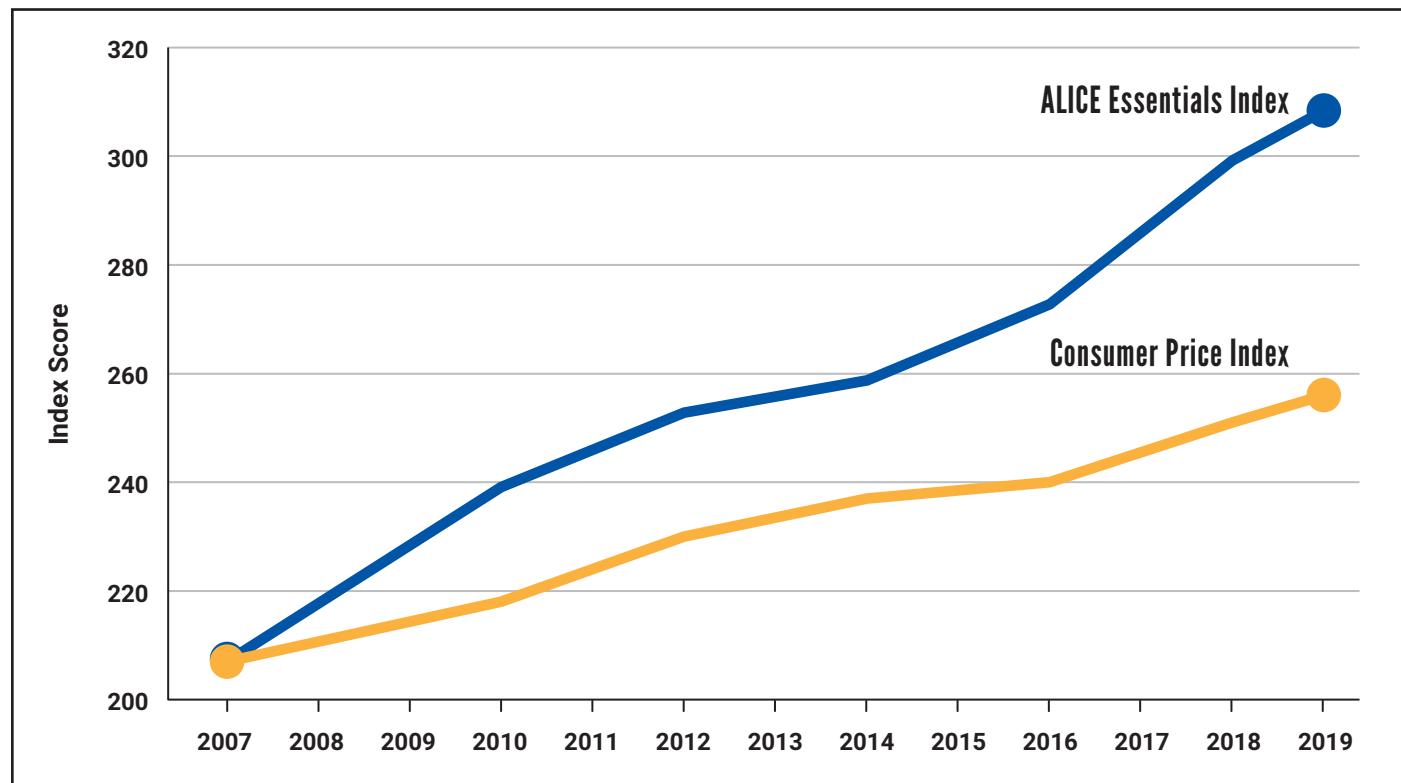
THE ALICE ESSENTIALS INDEX

Based on items in the Household Survival Budget, the ALICE Essentials Index measures the change over time in the costs of household essentials — a much narrower definition than the more common rate of inflation based on the Consumer Price Index (CPI) from the BLS. While the CPI covers a large group of goods and services that urban consumers buy regularly (housing, food and beverages, transportation, medical care, apparel, recreation, education, and communication services), the ALICE Essentials Index includes only essential household items (housing, child care, food, transportation, health care, and a smartphone plan). The ALICE Essentials Index is also calculated for both urban and rural areas, while the CPI only tracks inflation based on a select number of metropolitan (urban) counties.²³ For more detailed information, see the 2020 ALICE Essentials Index Report available at UnitedforALICE.org/Essentials-Index.

Across the country, the ALICE Essentials Index has increased faster than the CPI over the last decade (Figure 5). From 2007 to 2019, the average annual rate of increase was 3.3% in urban areas and 3.1% in rural areas, while the CPI increased by 1.8%.²⁴ This difference is primarily due to the fact that the costs of basics, especially housing and health care, have increased, while the costs of other items — notably manufactured goods, from apparel to cars — have remained relatively flat. And while basic household goods were 18% to 24% more expensive in urban areas than in rural areas, those costs increased at nearly the same rate in both areas during this period.

Figure 5.

Consumer Price Index and ALICE Essentials Index, United States, 2007–2019



Sources: ALICE Essentials Index, 2007–2019; Bureau of Labor Statistics—Consumer Price Index, 2007–2019. For more information, visit UnitedforALICE.org/Essentials-Index.

The difference between these two cost-of-living measures is more than an academic question. The CPI is used to measure inflation and monitor monetary policy. It also determines the rate at which a wide range of government program levels and benefits are increased, including Social Security, veterans' and Federal Civil Service retirees' benefits, government assistance programs, the FPL, income tax brackets, and tax credits like the Earned Income Tax Credit (EITC).²⁵ But the ALICE Essentials Index shows that from 2007 to 2019, the CPI considerably underestimated the increase in the cost of living for ALICE households across the country.

TRENDS: COST OF LIVING

The cost of living for ALICE is growing significantly in both urban and rural areas, often driven by the cost of housing. Over the past decade, housing costs have greatly increased as population growth outpaces the supply of affordable housing. In Michigan, rising costs in urban areas – notably the metropolitan areas of Grand Rapids and Detroit – are due to increasing demand for low-cost, urban rental units (especially among millennials and seniors). The affordability of housing varies considerably across the state. In order for housing to be deemed affordable, costs including mortgage or rent should not exceed 30% of the owner or renter's income. In a recent analysis of Michigan's 20 largest cities, housing costs (including mortgage payments, homeowner's insurance, and utilities) did not exceed 20% of the median income of homeowners in any of the cities. However, 70% of the cities were unaffordable for renters, with Flint, Detroit, Dearborn, Warren and Grand Rapids deemed the least affordable – renters spent between 36% and 50% of income on rent.²⁶ Nationwide, households that are severely rent burdened (with rent accounting for more than 50% of their income) are projected to grow by at least 11%, to 13.1 million households, by 2025.²⁷

Unreliable transportation and associated costs

increase financial hardship. ALICE households require reliable transportation in order to reach jobs, schools and child care, health care, stores, and more. Yet access to transportation is a significant barrier for many ALICE families. While public transportation is often more economical than owning a vehicle, it is not readily available in many parts of the U.S – and most of Michigan.²⁸

Detroit, the Motor City, was the first large U.S. city to have its own transit system. But over the decades, the system has faced myriad challenges, including competing political agendas, lack of funding, population decline, and ongoing disputes between the city and surrounding suburbs. Compounding these issues, the city's fragmented transportation system – composed of several independent providers – has resulted in a largely piecemeal approach to transit improvement and left certain areas with little to no access.²⁹

Because public transportation is not a viable option in most of the state, owning or leasing a vehicle is often necessary. A car is the most common asset in Michigan and across the country, but many lower-income families must buy lower-priced, used vehicles that are usually less fuel-efficient, tend to break down, and need more frequent repairs, which incurs expenses beyond the transportation costs in the Household Survival Budget. Another significant expense is the cost of auto insurance. In 2020, Michigan's average annual auto insurance premium was the most expensive in the country at \$3,096, compared to the national rate of \$1,548. Rates were more than double the state average in Detroit, with an average annual premium of \$6,208.³⁰ The high cost of owning, maintaining, and insuring a vehicle is prohibitive for many lower-income households. Transportation challenges are far-reaching as they can lead to tardiness or absenteeism at work; missed medical, dental, or social service appointments; limited child care and school options; and limited access to healthy food.³¹ These factors further push ALICE families to the brink of financial instability and make it harder to catch up. These pressures will increase demand for both traditional and new public transportation options (e.g., trains and buses, rideshares, and self-driving vehicles).³²

“Safe, reliable, and high-quality child care is critical to helping Michigan's economy get back on track following the pandemic. ”

The child care industry will face new challenges, and so will parents. Safe, reliable, and high-quality child care is critical to helping Michigan's economy get back on track following the pandemic. Even before COVID-19, parents struggled to access suitable child care. The cost of home-based child care is the most expensive budget item in the family household survival budget for a family of four (Figure 4). The cost of center-based child care for two children in Michigan is even higher, at approximately \$18,600 per year. Despite the high costs of care, less than 20,000 families in Michigan received financial assistance for child care in 2019.³³ Higher costs are especially challenging for single-parent families who rely on one income and consistent child care to participate in the workforce. Yet affordability is just one of

the barriers to quality child care: 44% of Michigan residents lived in a “child care desert” in 2018 (defined as areas that lack any child care provider, or so few that there are more than three children for every spot).³⁴

At the same time that ALICE households struggle to find and pay for child care, providers themselves struggle to earn enough to support their families. Low-paid child care workers are also ALICE, earning a median hourly wage of \$11.13 in Michigan in 2019.³⁵ And these jobs are at risk: In Michigan, the number of families with children fell 10% from 2010 to 2019. As the number of families with children declines it will be more difficult for child care centers to stay in business, eliminating jobs for these ALICE workers and making child care both harder to find and more expensive, especially in less populated areas. The overall trend, then, is toward fewer families with children but more who are struggling.

Food insecurity, a longstanding problem for families with children, is also increasing among young adults and seniors. Lack of access to affordable and nutritious food has become a common experience on college campuses throughout the nation. A 2019 survey of nearly 167,000 students from 227 two- and four-year colleges across the U.S. found that rates of food insecurity ranged from 42% to 56% at two-year schools, and from 33% to 42% at four-year schools. Students who are typically marginalized in the higher education system, including Black and Indigenous students, part-time students, returning citizens, and students attending two-year versus four-year colleges, are at higher risk for food insecurity.³⁶

“In Michigan in 2019, 14% of adults age 60 and older had experienced food insecurity in the prior twelve months.”

Michigan is no exception. Michigan State University reports that more than 30% of the students on their Michigan campus struggle with food insecurity and that more than 6,000 students visit the MSU Student Food Bank on an annual basis.³⁷ According to Debt.org, the costs of a 3-meals-a-day food plan have nearly doubled over the past decade to approximately \$18.75 a day, causing many students to forgo formal meal plans and get by on less expensive but unpredictable and often unhealthier options.³⁸

There is also growing food insecurity at the other end of the age spectrum, with a projected 8 million food-insecure seniors nationwide by 2050. In Michigan in 2019, 14% of adults age 60 and older had experienced food insecurity in the prior twelve months.³⁹ Food insecurity is often associated with other physical and mental health issues: Compared to other seniors, food-insecure seniors are more than twice as likely to have depression, 91% more likely to have asthma, 66% more likely to have had a heart attack, and 57% more likely to have congestive heart failure. Public benefits help, but many are underutilized and do not eliminate the need for emergency assistance measures, such as food pantries.⁴⁰ A 2019 University of Michigan Poll on Healthy Aging found that only 10% of older adults (age 50–80) in a national representative sample received Supplemental Nutrition Assistance Program (SNAP) benefits, and only 2% of adults age 60 and over participated in congregate meal programs in their local community. Even fewer respondents (1%) participated in home delivery programs such as Meals on Wheels.⁴¹

College students across the country are facing greater challenges in meeting living expenses, despite the fact that increasing numbers are working full or part time. Students often rely on multiple sources of financial support, including financial aid, student loans, and assistance from parents or other family members, to cover their living expenses. Yet even with these types of financial help, many students need to work while in school; in particular, more than two-thirds of students enrolled in community colleges work full or part time.⁴² In a recent financial wellness survey, 56% of students report paying for college using money from their current employment, and 31% of students pay for college with credit cards, leading to accumulation of increased debt.⁴³ Working long hours to earn more income comes at a price, as it can interfere with academic performance and ultimately the likelihood of obtaining a degree.⁴⁴ Students report that two of the major obstacles to academic success are juggling work with school and other responsibilities, and difficulty meeting expenses.⁴⁵

The COVID-19 pandemic is creating even greater challenges for college students. Temple University's Hope Center for College, Community, and Justice surveyed 38,602 students on campuses in 26 states, including Michigan's Grand Rapids Community College and Eastern Michigan University, between April and May of 2020, and found that 58% of all students surveyed were experiencing some basic-needs insecurity (i.e., food, housing). It is not surprising that greater rates of basic-needs insecurity are associated with the loss of a job, or reduction in hours or pay. Thirty-three percent of students at two-year schools and 42% of students at four-year schools reported they had lost a job they held prior to the pandemic.⁴⁶

Gaps in health based on demographic, environmental, and socioeconomic factors will continue to grow.

Volatility in health insurance availability and coverage, increasing out-of-pocket costs – even for those with employer-sponsored programs – and shortages of health care providers (especially in rural areas) make it harder for many families to get the health care they need.⁴⁷ Michigan ranked 27th in the Commonwealth Fund's 2020 survey of state health systems, which cited problems with avoidable hospital use and cost, and lifestyle factors among individuals – including risks posed by obesity, self-reported poor health, and drug-related illness and death.⁴⁸ Multiple clinical, environmental, and socioeconomic factors impact health status and quality of life, with considerable variation from one county to the next. For example, as reported in the 2020 County Health Rankings, the number of children living in poverty is an important measure of both current and future opportunities for health, as a strong and healthy start is critical for both children and the communities where they live. The share of children in poverty in Michigan ranged from 6% in Livingston County to a high of 36% in Lake County.⁴⁹

In addition to socioeconomic status, significant health disparities exist across groups with respect to age, gender, race/ethnicity, and ability, and these often persist across the life span. According to a 2019 AARP Report, older Black Michiganders (age 50 and over) fare worse than their White peers on a number of health issues, including higher prevalence of diabetes and high blood pressure, and lower likelihood of having health insurance, following up on medical care, and using telehealth services.⁵⁰

These health disparities and longstanding health inequities have contributed to the disproportionate impact the pandemic is having on Black and Hispanic adults, who are respectively 1.9 and 2.3 times more likely to die from COVID-19 as White adults.⁵¹ Michigan has the fourth highest COVID-19 mortality rate for Black adults in the country, with Wayne County, specifically Detroit, having the highest percentage of cases and deaths.⁵²

Financial instability will mean additional costs for ALICE households. The costs of financial instability are cumulative and intensify over time. Skimping on essentials, from food to health care, leads to greater long-term problems (see United For ALICE's 2019 Report, *The Consequences of Insufficient Household Income*). Failure to pay bills on time results in fees, penalties, and low credit scores, which in turn increase interest rates, insurance rates, and costs for other financial transactions (from check-cashing fees to payday cards).⁵³ Unanticipated expenses can intensify these impacts. In 2019, only 67% of Michigan households had set aside any money in the prior 12 months that could be used for unexpected expenses or emergencies such as illness or the loss of a job – a rate that was higher than the national rate of 64% but still left nearly one-third of Michiganders economically vulnerable. And without enough income to cover current and unexpected expenses, ALICE households cannot save for future expenses like education, retirement, or a down payment on a house.⁵⁴

“As reported in the 2020 County Health Rankings, the share of children living in poverty in Michigan ranged from 6% in Livingston County to a high of 36% in Lake County.”

THE CHANGING LANDSCAPE OF WORK IN MICHIGAN

ALICE workers play an essential role in Michigan's economy but have not benefited from many of the state's recent economic gains — a reality that is not captured by traditional economic measures. This section breaks down labor force data in new ways, and in so doing highlights the challenges ALICE workers face: the declining power of wages to keep up with the cost of living, greater dependence on hourly wages, a large number of adults out of the labor force, and increased economic risk for workers.

Following the Great Recession, Michigan had the veneer of a strong economy, with a steadily rising GDP and a record-low unemployment rate (only 3% of adults were actively looking but unable to find work). Despite increasing diversification, manufacturing remains the state's largest industry, constituting 21% of the state GDP and accounting for one of every six private-sector employees.⁵⁵ Yet in 2019, economic growth slowed as a result of the General Motors auto workers' strike, the trade war, flat auto sales, and job cuts at Ford and General Motors.⁵⁶

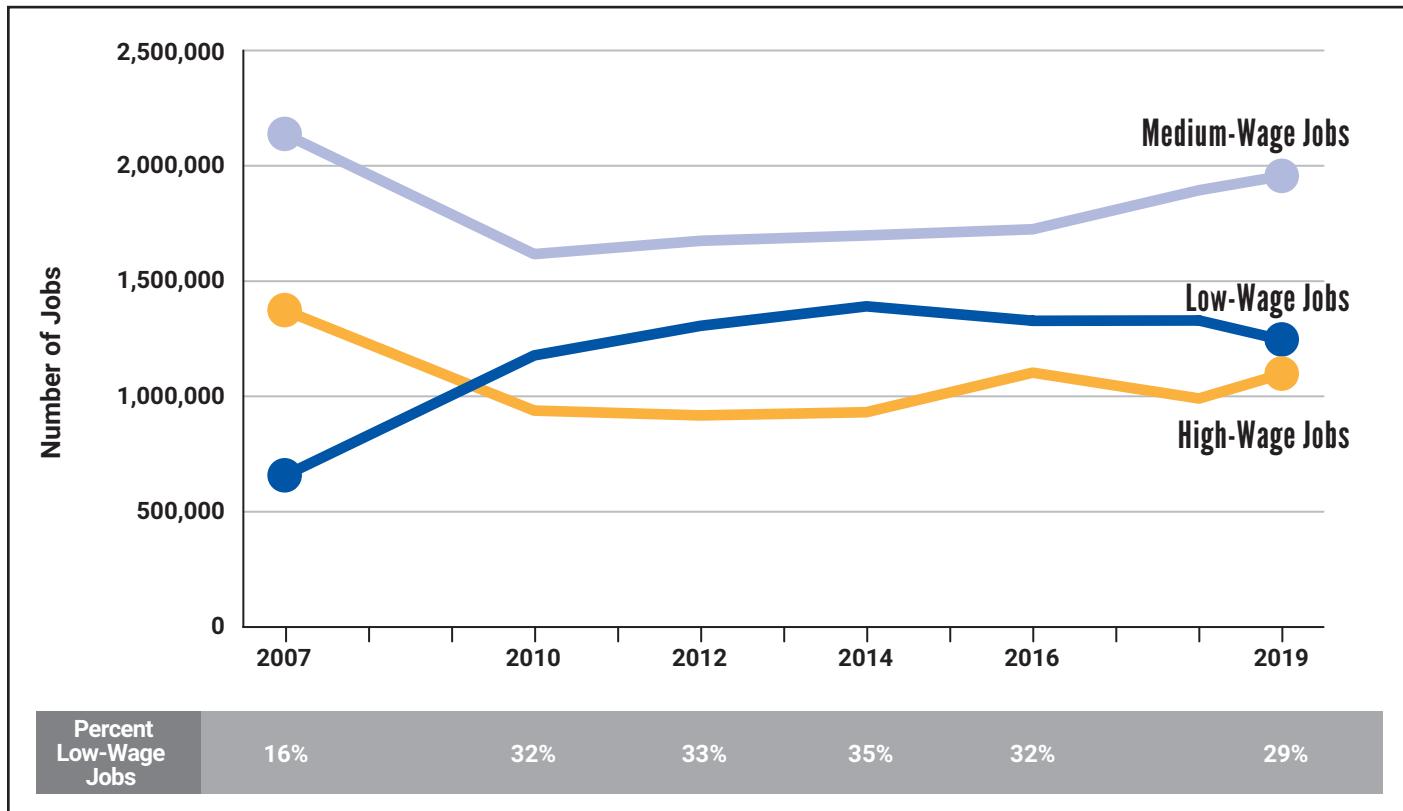
The top growth sectors – government, professional and business services, and leisure and hospitality – were predicted to experience growth of only 0.6% in 2020. But even those low expectations were shattered early in the year when the pandemic hit, impacting the education and health services and the leisure and hospitality sectors particularly hard. Michigan has suffered some of the highest numbers of job losses and COVID-related deaths in the country. Several factors will influence how quickly the state will be able to recover.⁵⁷ High- and middle-wage earners can expect nearly complete job recovery, while lower-wage workers are expected to suffer long-term loss of jobs and wages.⁵⁸

HOUSEHOLD COSTS OUTPACING WAGES

Prior to the pandemic, the period between 2009 and 2019 was marked by widening income inequality and an increase in low-wage jobs that could not keep up with the rising cost of the basic household budget. Figure 6 illustrates the following trends in wages compared to the cost of living in Michigan from 2007 to 2019:

- Low-wage jobs (dark-blue line) are defined as those paying less than the wage needed for two workers to afford the family Household Survival Budget (which includes costs for two adults, an infant, and a four-year-old). In 2007, this was less than \$11.75 per hour; by 2019, it was less than \$16.03 per hour. The number of low-wage jobs nearly doubled, increasing by 90% during that period, and accounted for more than 1.2 million jobs in Michigan in 2019. This shows that, even with two earners working full time, it is not only possible but common for households to fall below the ALICE Threshold.
- Medium-wage jobs (light-blue line) allow two workers to afford a family Household Survival Budget. In 2007, these were jobs that paid between \$11.75 and \$23.49 per hour, per worker; by 2019, wages needed for these jobs were between \$16.03 and \$32.05 per hour, per worker. The number of medium-wage jobs fell sharply during the Great Recession, then rebounded between 2010 and 2019, resulting in an overall decrease of 8% from 2007 to 2019.
- High-wage jobs (gold line) allow one worker to afford a family Household Survival Budget. In 2007, the wage required was \$23.50 per hour or more; by 2019, the wage required had increased to \$32.06 per hour or more. The number of high-wage jobs decreased by 20% during that period.⁵⁹

Figure 6.
Number of Jobs by Wage Level, Michigan, 2007–2019



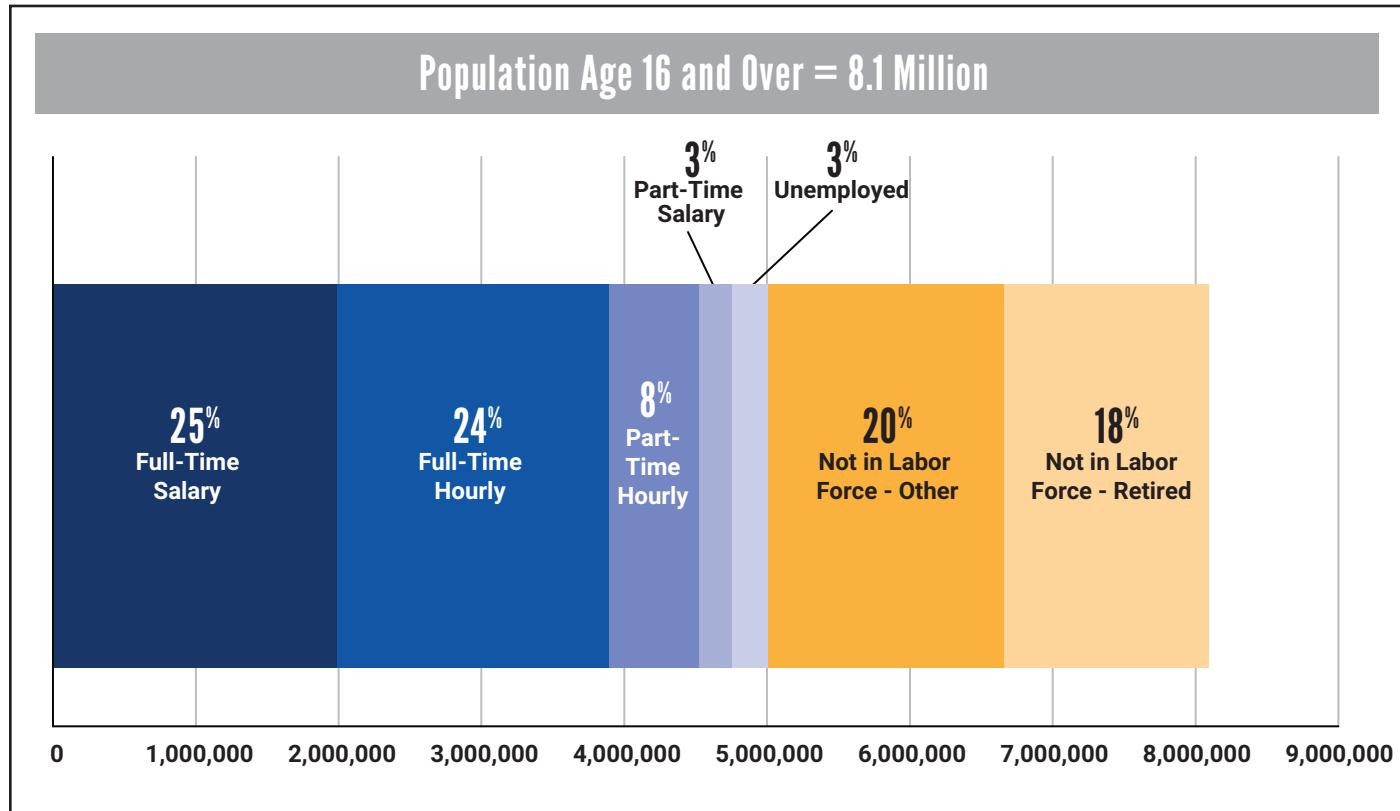
Note: Wage levels are defined by their relation to the Household Survival Budget. Dark blue = Job cannot support family Household Survival Budget with two earners. Light blue = Job supports family Household Survival Budget with two earners. Gold = Job supports family Household Survival Budget with one earner.

Sources: ALICE Household Survival Budget, 2007–2019; Bureau of Labor Statistics, Labor Force Statistics, 2007–2019—Occupational Employment Statistics

INSIDE THE LABOR FORCE

A 2019 overview of the labor status of Michigan's 8,090,968 working-age adults (people age 16 and over) shows that 63% of adults were in the labor force (blue bars in Figure 7), yet slightly more than half of them were workers who were paid hourly. In addition, 38% of adults were outside the labor force (gold bars).⁶⁰

Figure 7.
Labor Status, Population Age 16 and Over, Michigan, 2019



Note: Data for full- and part-time jobs is only available at the national level; these national rates (49% of full-time workers and 73% of part-time workers paid hourly) have been applied to the total Michigan workforce to calculate the breakdown shown in this figure. Full-time represents a minimum of 35 hours per week at one or more jobs for 48 weeks per year. Many percentages are rounded to whole numbers, sometimes resulting in percentages totaling 99% or 101%.

Sources: American Community Survey, 2019; Federal Reserve Bank of St. Louis, 2019

Though the majority of adults in Michigan were working in 2019 and most households had at least one worker, only 25% of working-age adults had the security of a full-time job with a salary. The rest were paid hourly and/or worked part time.⁶¹

Hourly Work and the Gig Economy

The Gig Economy Defined

Hourly paid workers, consultant or contingent workers, temporary workers, freelancers, and contractors make up the rapidly expanding corps of non-traditional workers referred to as the gig economy.

Employers' increasing reliance on hourly workers is typically associated with freelance gig-economy jobs (like rideshare driving or on-demand delivery), but even traditional jobs are now more likely to be paid by the hour, especially in retail, health care, food service, and construction.⁶² While gig workers include people of all races, ethnicities, and genders, across a wide range of ages and geographies, nationwide they are generally younger (especially online-platform workers) and to live in urban areas and western states (where many online platforms were launched).⁶³ These workers are more likely to have fluctuations in income, with frequent schedule changes and variation in the number of hours available for work each week and/or month. And they are less likely to receive benefits such as health insurance, paid time off, family leave, or retirement benefits, especially if they work fewer than 30 hours per week at a single job.⁶⁴

Nationally, employers spent an average of 31% of compensation on benefits in 2019; not providing these represents significant savings to the employer. As a result, even traditional jobs are morphing as employers shift the financial risk of changes in supply and demand to employees.⁶⁵ While this is true throughout the economy, it is especially concentrated in lower-wage positions — the jobs most accessible to ALICE.

Even before the start of the pandemic, gig workers were not eligible for traditional unemployment benefits. The economic impact of the pandemic, with millions of workers losing their jobs, brought the lack of these benefits into stark relief. In March 2020, the CARES Act extended unemployment benefits to gig workers, who were now eligible for Pandemic Unemployment Assistance (PUA) benefits. While PUA provided a safety net for gig workers, there were also numerous challenges in Michigan, including reporting problems, identity theft and fraudulent claims, and a backlog of claims processing throughout 2020, leaving many to fall through the cracks.⁶⁶

Going without health care benefits, sick leave, or paid time off is especially challenging during the pandemic. Many hourly and other non-traditional workers have been forced to either continue working, putting themselves and their families at risk of contracting COVID-19, or to forgo jobs and necessary income during a period of heightened competition. Despite the increased health risks and financial uncertainty, gig workers continue to provide essential on-demand services such as ride-share, groceries delivery, child care, and home care services to those sheltering in place.⁶⁷

Who is Out of the Labor Force?

The unemployment rate, or the percent of adults who are actively looking for work, is a widely reported economic measure. Yet it only tells part of the story; a close look at working-age adults who are out of the labor force contributes to a better understanding of the strength of the labor market.⁶⁸ In 2019, of adults 16 years and older in Michigan, 38% were out of the labor force, 18% were retired, and 20% were not looking for work for other reasons (gold bars in Figure 7).⁶⁹

Retirees (age 65 and over and not working) are traditionally one of the largest groups of adults out of the labor force. In Michigan in 2019, they accounted for a high percentage (18%), in part due to the baby boomer generation aging into retirement. However, this percentage did not include the increasing number of seniors who were still working; in 2019, 19% of seniors in Michigan were still in the labor force.⁷⁰

Those under 65 and not working were out of the labor force for a variety of reasons, the two most common being:

- **School:** Nationally, 78% of high school students and 50% of college students did not work in 2019. At these rates, non-working students in Michigan would account for one-third (33%) of the state's working-age adults out of the workforce.⁷¹
- **Health:** Adults with one or more health issues – an illness or disability that makes it difficult to get to work, perform some job functions, or work long hours – accounted for just over one-quarter (26%) of those out of the labor force in Michigan in 2019.⁷²

The remainder of adults were out of the labor force for other reasons, including scheduling conflicts, family caregiving responsibilities, or limited access to transportation or child care.⁷³

In a 2019 survey of U.S. households, reasons for not working differed somewhat according to gender. For women 25 to 54 years old, the most common reason for not working in 2019 was in-home responsibilities – caring for children and family obligations – whereas men in the same age group more often cited their own personal health issues or trouble finding work as the main reason for not working.⁷⁴

These adults who were out of the workforce were not included in the state's low unemployment rate, which only counts adults actively looking for work. In previous periods of low unemployment, employers have had to offer much higher wages to attract workers back into the labor force or away from other businesses. However, in the 2019 economy, those out of the labor force proved to be a large reserve of potential workers able to be drawn back into the labor force with only slightly higher wages – in effect, keeping wages low.⁷⁵

THE DETROIT ECONOMY

By 2019, Detroit had made major progress in recovering from the Great Recession and the exodus of manufacturing jobs and people from the city. Attracting young, college-educated residents helped stabilize Detroit's population loss and even sparked some economic renewal after years of decline. Some were predicting that the city would even be a key driver of the state's economic growth; yet in that year, according to the BLS, the city's unemployment rate (9%) was still more than double the statewide rate (4%).

When the pandemic hit in March 2020, Detroit was impacted more than any other area of the state, and as a result the city will struggle to regain momentum over the next few years. One of the most racially segregated metropolitan areas in the country, Detroit has seen bifurcated job growth, with high-paying jobs often filled by largely White suburban in-commuters while predominantly Black city residents work in low-wage and low-skilled jobs. Labor force participation remains stubbornly low, with many residents facing multiple barriers to finding work, such as low educational attainment, little to no work experience, lack of transportation, or having a chronic health issue or disability. City residents also face disproportionately high expenses for housing, utilities, child care, auto insurance, and property taxes. The cumulative impact of all these factors is that families are unable to save or build assets, leaving them most vulnerable during a crisis such as the pandemic.

ALICE JOBS: MAINTAINING THE ECONOMY

While national conversations about work often focus on the economic importance of the “innovation” sector and its high-paying jobs, the reality is that the smooth functioning of the national and Michigan economies relies on a much larger number of occupations that build and repair the infrastructure and educate and care for the past, current, and future workforce. The workers in these jobs are described as “Maintainers” by technology scholars Lee Vinsel and Andrew Russell, and they are primarily ALICE.⁷⁶ To better understand where ALICE works, we elaborate on Vinsel and Russell’s concept by breaking down all occupations in Michigan into two categories, each with two job types: the lower-paying Maintainer occupations, composed of Instructor and Nurturer jobs; and the higher-paying Innovator occupations, composed of Adaptor and Inventor jobs.

DEFINITIONS

Maintainer Occupations:

Instructors build and maintain the physical economy (construction, maintenance, management, administration, manufacturing, agriculture, mining, transportation, retail).

Nurturers care for and educate the workforce (health and education, food service, arts, tourism, hospitality).

Innovator Occupations:

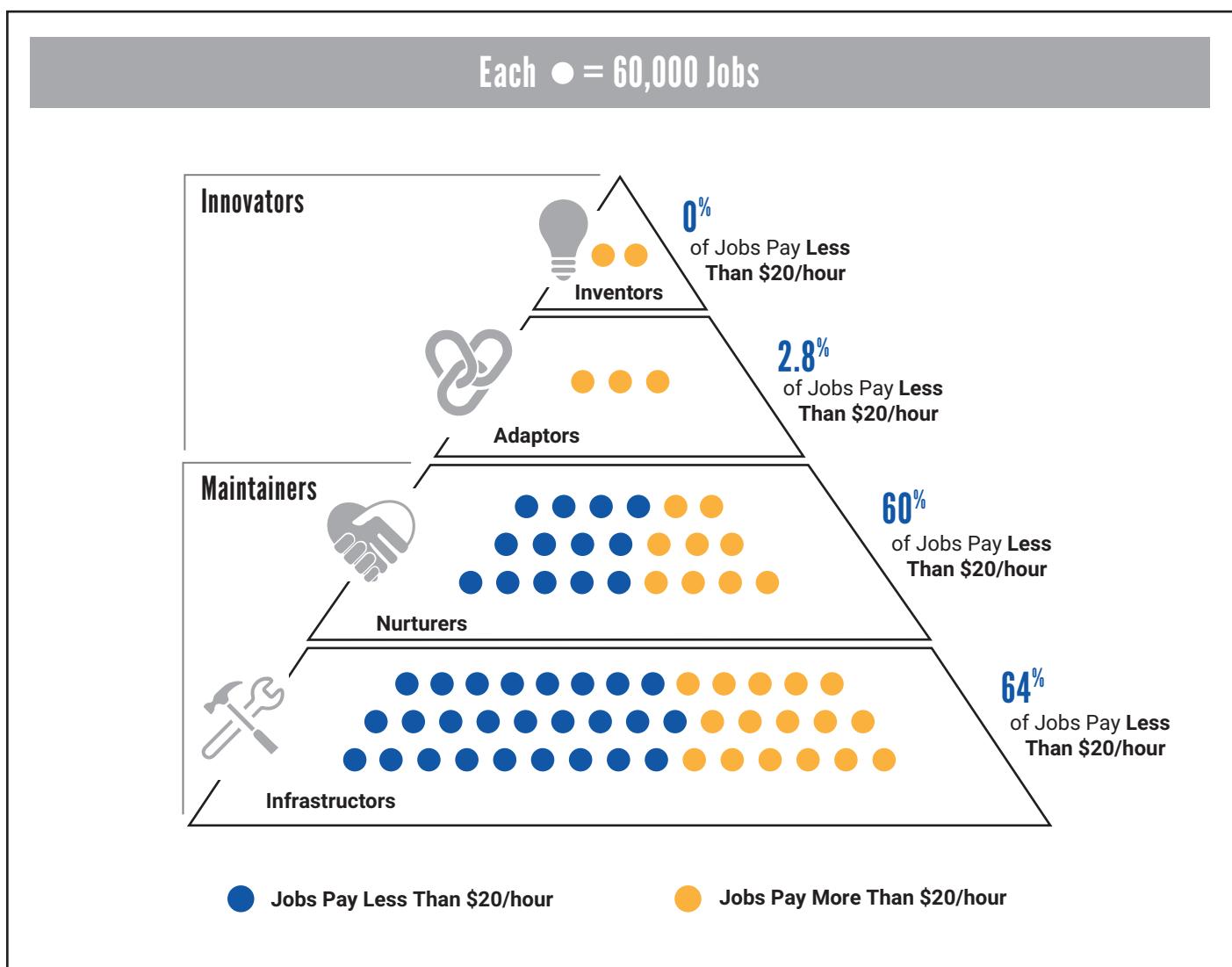
Adaptors implement existing tools or processes in new ways, responding to opportunities and changing circumstances (managers, industrial and organizational psychologists, analysts, designers, technicians, and even policymakers).

Inventors devise new processes, appliances, machines, or ideas. Before World War II, most inventors were independent entrepreneurs. Today, they are most likely engineers and scientists working in research & development, and, in some cases, higher education.

The largest employment sectors in Michigan are Maintainer occupations. The single largest industry in 2019, with 794,100 employees, was trade, transportation, and utilities, which is comprised of Instructor jobs. The second largest, with 681,300 employees, was education and health services, which is comprised of Nurturer jobs. Both industries have large shares of ALICE workers.⁷⁷ As shown in Figure 8, there are far fewer jobs in Innovator occupations (Adaptors and Inventors).

When stacked together, Michigan’s occupations form a pyramid that reveals the critical role of Maintainer jobs – the jobs most accessible to ALICE – in the state economy (Figure 8). The majority of Maintainer jobs (64% of Instructor jobs and 60% of Nurturer jobs) pay less than \$20 per hour – a wage that, if full time, year-round, provides a maximum annual salary of \$40,000, or \$24,116 less than the family Household Survival Budget of \$64,116. By comparison, almost all Adaptor and Inventor occupations pay more than \$20 per hour.

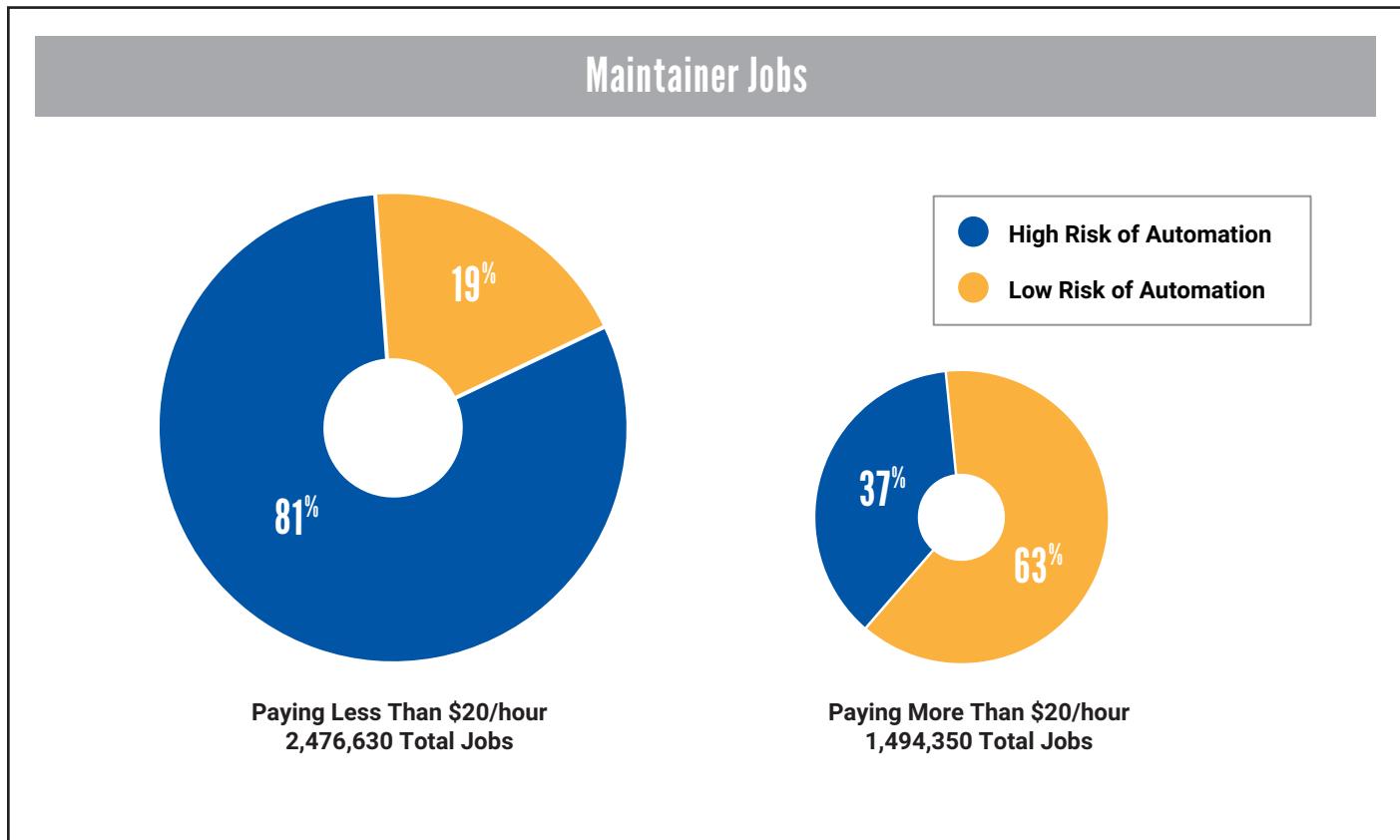
Figure 8.
Occupations by Wage and Type, Michigan, 2019



Source: Bureau of Labor Statistics, *Labor Force Statistics, 2019—Occupational Employment Statistics*

The precarious nature of ALICE workers' jobs is reinforced by the powerful relationship between low wages and the high risk of jobs becoming automated (defined as having a greater than 50% chance of being replaced by technology in the next decade). Jobs that pay less than \$20 per hour are more likely to be replaced by technology compared to higher-paying jobs. This is especially true for Maintainer occupations, where most jobs pay less than \$20 per hour and 81% of these low-paying jobs are at a high risk of automation. By comparison, only 37% of Maintainer jobs that pay more than \$20 per hour are at that level of risk (Figure 9).

Figure 9.
Occupations by Type and Risk of Automation, Michigan, 2019



Sources: Bureau of Labor Statistics, 2019—Occupational Employment Statistics; Frey & Osborne, 2013

There are also differences in salary and risk of automation based on the type of Maintainer job. Among Infrastructor jobs, 91% of jobs that pay less than \$20 per hour are at risk of automation, compared to 56% of those that pay more than \$20 per hour. Among Nurturer jobs, the discrepancy is even greater: 62% of jobs that pay less than \$20 per hour are at risk of automation, compared with 3% of those that pay more than \$20 per hour.⁷⁸ Education level also impacts risk of automation; nationally, the risk for jobs that require only a high school diploma (55%) is more than double the risk for jobs that require a bachelor's degree (24%).⁷⁹

TRENDS: THE LANDSCAPE OF WORK

Economic growth will be led by the non-traditional work and small businesses of the gig economy. As much as 94% of U.S. net employment growth in the last decade has come from alternative or contingent labor, according to a National Bureau of Economic Research report.⁸⁰ The use of temporary workers began in Detroit just after World War II with the introduction of Kelly Girl: temporary workers who provided clerical support for area businesses. Temp workers continued to be employed cyclically in times of need. Following the Great Recession, the use of contract workers became a widespread practice in a range of industries – particularly the auto industry, with full-time union workers working alongside temporary workers on the assembly line.⁸¹ The use of contracted workers gives employers more flexibility to hire up or down in response to economic shifts, however, most contracted jobs remain concentrated in lower-wage positions.⁸²

Millennials are leading the way in the trend toward non-traditional work, with 48% nationally saying they earn income on the side (i.e., in addition to what they consider their primary employment), compared to 28% of baby boomers.⁸³ This shift will increase the number of people experiencing gaps in income and going without benefits. Finally, these arrangements are more volatile than traditional jobs, and workers bear the brunt of changes in consumer demand, the price of materials, and transportation costs, as well as impacts related to natural and human-made disasters, and economic downturns.⁸⁴

The rise of automation will require a workforce with more digital skills. With a large concentration of manufacturing jobs, Michigan is more susceptible to automation. But rather than being replaced outright, many jobs, across all job types, will require an increasing ability to incorporate new technologies, work with data, and make data-based decisions.⁸⁵ This is especially

true of the automotive industry in Michigan. A decade after the automotive industry crisis, General Motors, Chrysler and Ford have emerged as industry leaders ready to develop the next generation of vehicles. Their success will depend on a host of issues, including how well they adapt to quickly evolving consumer demands, new technologies, stricter environmental regulations, and competition from other transportation providers like rideshare services.⁸⁶ ALICE workers will need to gain new skills rapidly, and that will require more on-the-job training, more flexibility to change career paths, and different kinds of education providers.⁸⁷ The benefits of increased technology will include improved accuracy, better quality control, and reduced risk of injury for workers.⁸⁸

The number of low-wage jobs will continue to increase, despite automation. Even though most jobs will change and evolve with demand as well as technology, it may not be economical or effective to automate certain jobs. For example, low-wage Maintainer jobs in areas like education and health care require employees to be on-site and often involve relational skills that are difficult or impossible to automate (although these workers will still have to learn to work with technology). From 2018 to 2028, the occupation projected to have the largest number of new jobs in Michigan is Personal Care Aides; the median wage for these jobs in 2019 was \$11.58 per hour, which was not enough to support the single-adult, senior, or family Household Survival Budgets. Of the state's top 20 growth occupations, 50% will pay less than \$15 per hour, 21% will not require any formal educational credential at all, and 33% will require only a high school diploma.⁸⁹

Students will continue to be a significant part of the labor force. As more families face financial hardship and the cost of college continues to rise in Michigan, more students will have to work while in school.⁹⁰ Nationally, 22% of high school students, 45% of full-time college students, and 87% of part-time college students had a job in 2019.⁹¹ What's more, despite many students being employed, 39% of college students nationwide who completed the 2019 annual survey of basic college needs reported having experienced food insecurity in the previous month, and 46% had experienced housing insecurity in the prior year.⁹² And even with more students working, student debt will continue to increase as more students from lower-income families attend college and costs continue to rise. In Michigan, 59% of college graduates in 2019 were in debt, with an average loan of \$30,677, a 19% increase from 2010.⁹³ While increasing the percentage of residents with a college degree is important for economic growth in the state overall, benefits are minimized when graduates are burdened by severe student loan debt, far into the future.⁹⁴

“In Michigan, 59% of college graduates in 2019 were in debt, with an average loan of \$30,677, a 19% increase from 2010.”

NEXT STEPS: DATA FOR ACTION

The ALICE data highlights significant problems in the Michigan economy in 2019: stagnant wages, a rising cost of living, and 38% of the state's households unable to afford even the most basic budget. However, this data can also be used to generate solutions to these problems that help ALICE households and create equity across communities. The measures of cost of living, financial hardship, and changes in the labor force presented in this Report can help stakeholders ask the right questions and make data-driven decisions. This data can help policymakers and community organizations identify gaps in community resources, and it can guide businesses in finding additional ways to assist their workforce and increase productivity – both in times of economic growth and in periods of economic recovery.

This section of the Report maps the 2019 ALICE data, showing gaps in resources to help direct assistance and fill immediate needs. When analyzed in relation to broader data on health, education, and social factors, these maps help focus solutions on underlying causes of hardship, and they also highlight areas of success.

IDENTIFYING GAPS

ALICE households often live in areas with limited community resources, making it even more difficult to make ends meet. The lack of some resources has immediate and direct costs. For example, without public transportation or nearby publicly funded preschools, ALICE families pay more for transportation and child care. Other costs, such as the consequences of limited access to health care providers, open space, or libraries, accumulate over time.

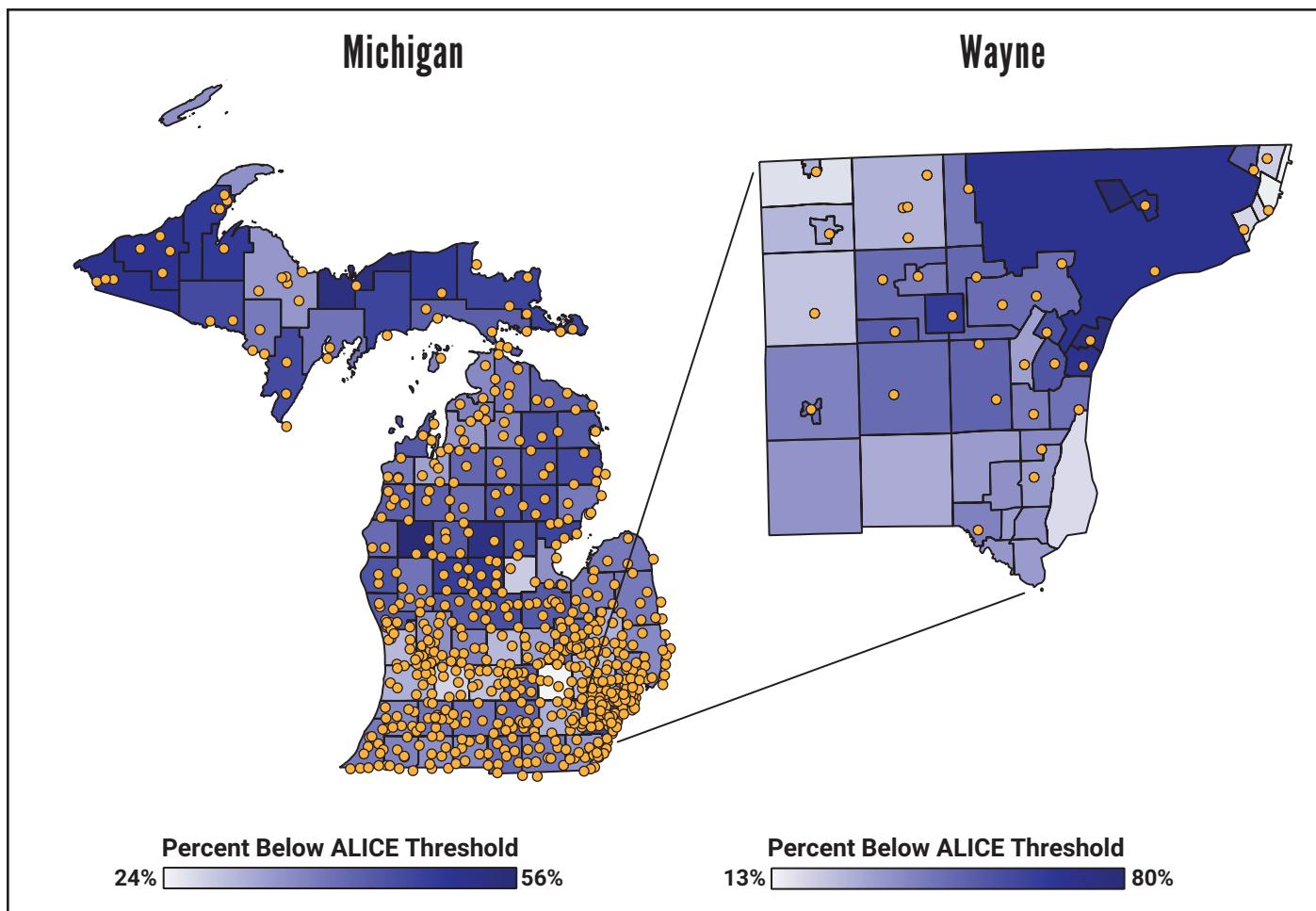
With the ALICE data tools, stakeholders can map where ALICE lives along with the location of community resources – such as public libraries or disaster-relief services – to identify gaps by town, ZIP code, or county (Figure 10). This data can help stakeholders answer targeted questions, including the following:

Do ALICE households have access to libraries?

Access to public libraries is especially important for ALICE families because libraries provide information on social services and job opportunities, free internet and computer access, and a range of free programs, community meetings, and even 3-D printers. After a natural disaster, libraries serve as second responders, providing electricity, internet access, charging stations, heat or air conditioning, and current information on recovery efforts.⁹⁵ In lower-income communities, the library can provide a safe and inclusive place for individuals and families. A 2019 Gallup Poll found that lower-income households (earning less than \$40,000 per year) visit the library more frequently than average- and higher-income households.⁹⁶

There are 619 libraries across Michigan's 83 counties, shown in gold dots in Figure 10 (and in an interactive feature on [UnitedforALICE.org /Michigan](https://UnitedforALICE.org/Michigan)).⁹⁷ This data can help stakeholders identify where there are gaps in needed services (such as in areas with a high percentage of ALICE households but few or no libraries) and what type of intervention might be most helpful. For example, areas with a small population but a high percentage of ALICE households may benefit more from mobile library services than a new brick-and-mortar building, or library services (like free computers) could be offered in other public buildings.

Figure 10.
Library Locations and Households Below ALICE Threshold, Michigan, 2019



Sources: ALICE Threshold, 2019; American Community Survey, 2019; The Institute of Museum and Library Services, 2019

Are the needs of ALICE households met after a natural disaster?

Mapping where ALICE households live in relation to the impact of natural disasters, such as floods, hurricanes, severe winter storms, and public health crises can help first and second responders meet critical needs. Disasters directly threaten the homes of ALICE families since more affordable housing is often located in vulnerable areas. The jobs where ALICE works are also more at risk, since low-wage and hourly paid jobs are more likely to be interrupted or lost. In addition, ALICE households have few or no savings for an emergency to begin with, and their communities often have fewer resources to assist households.⁹⁸

Prior to the COVID-19 pandemic, one of the worst public health crises to strike Michigan was the Flint Water crisis. Beginning in 2014, when the city was in a severe financial crisis, officials switched the water source for the city of Flint to the Flint River in an effort to reduce costs. Despite claims that the water was making people sick, residents' voices were repeatedly ignored by the federal, state, and local agencies that were supposed to help, including the Environmental Protection Agency, the Michigan Department of Health and Human Services, the Flint Department of Public Works, and the emergency management team appointed by the governor. The results were catastrophic: Pregnant women and children were exposed to dangerously high levels of lead, a Legionnaire's disease outbreak caused several deaths, and many residents became ill from the presence of E. coli, other bacteria, and additional toxins in the water.⁹⁹

The Flint water crisis exemplifies how natural disasters inflict the greatest harm on communities that have historically been under-resourced and vulnerable to discrimination: In 2019, the median income in Flint was \$28,813: 53% of the population was Black, 36% of households lived in poverty, and another 28% of households were ALICE. It should be no surprise, then, that the COVID-19 pandemic also disproportionately impacts lower-income communities of color – in numbers of cases, hospitalizations, and related deaths; numbers of jobs lost; and increasing rates of unemployment. Identifying communities that have been historically underserved, and those that are currently experiencing financial hardship, can help government agencies be better prepared to act during times of crisis.¹⁰⁰

Knowing where ALICE households live can help federal, state, and local governments target response and recovery assistance for natural disasters, and help utility companies, insurers, and others plan where to deploy their workforce and support. Because ALICE households and communities do not have the same resources as their wealthier counterparts, namely insurance or savings, they will need more assistance over a longer period of time to recover. Strategies will vary by rural or urban context, the demographic composition of the community (with the young and the elderly more dependent on care), and other factors such as the quality of the housing stock and proximity to flood zones.¹⁰¹

UNDERSTANDING ALICE: HEALTH, EDUCATION, AND SOCIAL FACTORS

In most contexts, having a low income is associated with lower levels of education, higher rates of unemployment, and poorer health.¹⁰² Communities that have been able to disrupt that association can provide important insights on how to change environments or policy to support ALICE households. By tracking where ALICE lives with other indicators, it is possible to identify counties that have overcome a challenge or bucked a trend. Stakeholders can then learn from these examples and adapt those solutions to their own areas.

Tracking relationships between ALICE households and other variables at the county level – in areas such as technology or health – can also help stakeholders ask important questions and target resources where they can have the greatest impact. To see interactive maps of socioeconomic indicators in Michigan, visit our website: UnitedforALICE.org/Michigan.

Here are two possible questions:

Is internet access related to income?

Access to digital technology has exploded over the last three decades: By 2019, 93% of U.S. households owned a computing device and 86% had a broadband internet subscription. In Michigan, the rates were very similar: 92% owned a computing device and 86% had a broadband internet subscription in 2019.¹⁰³ Technology has also become more important for work, education, community participation, and, crucially, disaster response and recovery.

But access to technology still varies by income. In Michigan, 31% of households with income below the ALICE Threshold did not have an internet subscription in 2019, compared with only 8% for households above the ALICE Threshold. For many families, lack of access translates directly to reduced job and educational opportunities, health care access, and financial tools. For example, low-income adults are more likely to use their phones to search and apply for jobs; nationally, 32% of smartphone users with income below \$30,000 have applied for a job on their phone, compared with 7% of smartphone users with income above \$75,000. Although smartphone technology is constantly improving, many tasks are still more difficult to complete on the small screen of a smartphone as opposed to a computer (e.g., word processing, filling out applications, editing spreadsheets), and many websites still do not have a mobile version, making navigation time-consuming and difficult, or sometimes impossible.¹⁰⁴

Rates also vary somewhat by location: Overall, in 2019, the counties with the lowest access rates and lowest incomes in the state are in rural areas, where 34% of households below the ALICE Threshold did not have an internet subscription that same year, compared to 30% of households below the ALICE Threshold in urban areas.¹⁰⁵ However, certain lower-income neighborhoods and populations disproportionately lack internet access. In Detroit, 70% of school-age children did not have internet access in their home in 2019, placing these students at a significant disadvantage compared to their peers that were digitally connected.¹⁰⁶ Identifying these gaps can help businesses and governments provide more resources to libraries, establish training centers, and expand access to low-cost internet plans.¹⁰⁷

The COVID-19 pandemic has brought increasing attention to the digital divide among households in Michigan. Ensuring that access is evenly distributed throughout the state is a critical component of economic recovery for the state.¹⁰⁸

Are drug overdoses driven by income?

Michigan, like many states across the country, has experienced an increase in drug overdose deaths over the last decade, largely due to an increase in deaths from opioid use. In 2017, the opioid epidemic was declared a National Public Health Emergency in response to the unprecedented increase in the number of overdose deaths across the U.S.; Michigan was no exception.¹⁰⁹ The total number of annual drug overdose deaths in Michigan more than doubled from 2007 to 2017, increasing from 1,236 to 2,694.¹¹⁰ In 2018, overall overdose deaths declined for the first time since 2012 to 2,591 deaths, largely driven by a decrease in drug overdoses related to heroin and commonly prescribed painkillers such as oxycodone and hydrocodone.¹¹¹

Overdose deaths have touched all regions of Michigan, but the southeastern portion of the Lower Peninsula has been hardest hit, especially Wayne and Macomb counties. Cities with the highest drug-overdose death rates from 2013 to 2015 included Lincoln Park (3.3 deaths per 1,000 patients), Ecorse (3.2) and New Baltimore (3.1). The cities with the highest total number of overdose deaths in the same period were Detroit (447) and Grand Rapids (138).¹¹²

Several national studies have suggested that counties with the worst economic prospects have the highest rates of substance use disorders and overdose-related hospitalizations and deaths. Yet that relationship varies across states, as people of all incomes, geographies, ages, and races/ethnicities suffer from substance use disorders.¹¹³ From 2017 to 2018, overdose death rates among White Michigan residents decreased by 6.5%; at the same time, rates among Black residents increased by 14.7%.¹¹⁴ Yet in 2018, while some of the highest numbers of overdose deaths occurred in counties that also had a high percentage of households below the ALICE Threshold, overall, there was not a significant relationship between income (defined by the percentage of households below the ALICE Threshold) and drug overdose deaths across Michigan's counties.

Understanding which communities have been hardest hit by substance use disorders can help planners and stakeholders see the complex ways in which addiction and financial hardship interact. Although economic standing is not always a risk factor for drug addiction in Michigan, the consequences of addiction hit low-income families harder. The impact of addiction and substance-use disorders on families often means a decline in their financial position, causing many families to remain or become ALICE. A family's income may be reduced if addiction impairs an adult's ability to work, and these families often have substantial health care costs. For example, methadone treatment for opioid users costs about \$500 per month; inpatient rehabilitation facilities for substance-use treatment can range from \$6,000 to \$20,000 per month. And lower-income families may not have access to such treatment programs, which only prolongs and compounds the outcomes of addiction. Substance-use disorders take a toll on the stability of families and marriages, on parenting, and on the physical and mental health of family members.¹¹⁵ For all of these reasons, there can be huge value for community stakeholders in mapping where ALICE lives with drug overdose deaths to identify communities that have the greatest need but the fewest resources to address addiction-related problems.¹¹⁶

THE BENEFITS OF MOVING TOWARD EQUITY IN MICHIGAN

The strength of the Michigan economy is inextricably tied to the financial stability of its residents. The more people who participate in a state's economy, the stronger it will be. In 2019, when the national economy was often described as "strong," the reality was that 1.5 million Michigan households – more than one-third of all households in the state – struggled to support themselves. If all households earned enough to meet their basic needs, not only would each family's hardship be eased, but the Michigan economy would also benefit substantially. This is true in times of economic growth, and it becomes even more important during a period of crisis and recovery.

To better understand the extent to which financial hardship is a drain on a state's economy, this section provides an estimate of the benefits of raising the income of all households to the ALICE Threshold. While lifting family income would be an enormous undertaking, the statewide benefits of doing so make a compelling case for pointing both policy and investment toward that goal.

Based on 2019 data, the economic benefit to Michigan of bringing all households to the ALICE Threshold would be approximately \$97.9 billion, meaning that the state GDP would grow by 18% (Figure 11). This is based on three categories of economic enhancement:

Earnings: Michigan's 2019 GDP reflected earnings of \$31.8 billion by the state's households below the ALICE Threshold. Bringing all households to the ALICE Threshold would have a two-fold impact:

- **Additional earnings:** \$36.5 billion statewide.
- **Multiplier effect:** Studies show that almost all additional wages earned by low-wage workers are put back into the economy through increased consumer spending, which in turn spurs business growth.¹¹⁷ Building on economic calculations used by Moody's Analytics, this estimate assumes an economic multiplier of 1.2, meaning that a \$1 increase in compensation to low-wage workers leads to a \$1.20 increase in economic activity. In Michigan, this increased economic activity would be valued at \$43.9 billion.¹¹⁸

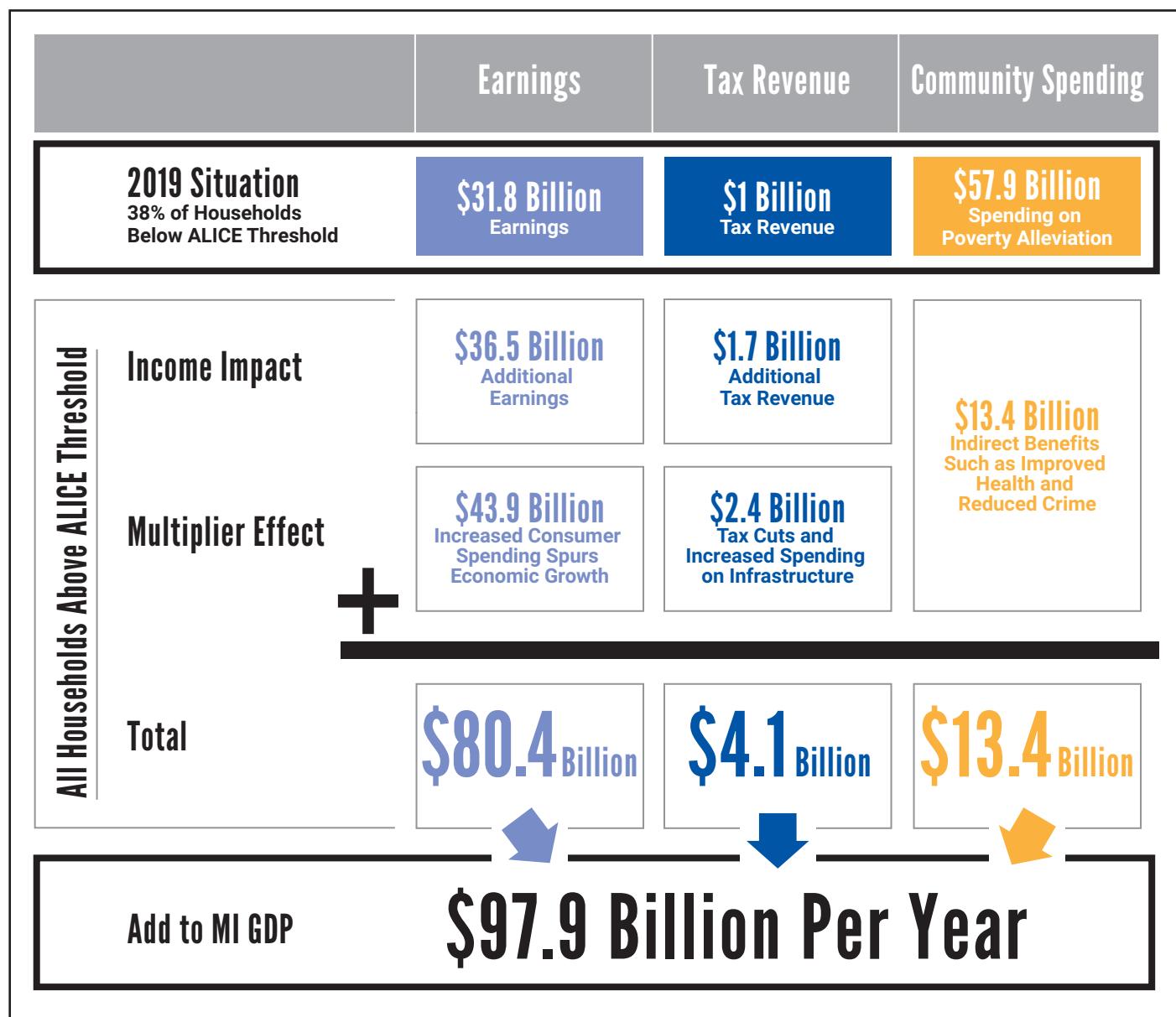
Tax revenue: Michigan's 2019 GDP reflected tax revenue of \$1.0 billion from the state's households below the ALICE Threshold. Bringing all households to the ALICE Threshold would have a two-fold impact:

- **Additional tax revenue:** With additional earnings, there would also be additional taxes paid and reduced usage of tax credits such as EITC for low-income earners, totaling an additional \$1.7 billion in tax revenue for Michigan.
- **Multiplier effect:** Additional state tax revenue gives state and local governments the opportunity to make investments that matter most to the well-being of residents and businesses – from tax cuts for small businesses to improvements in infrastructure, including health care and education – that can yield a high return on investment. Based on work by the Congressional Budget Office and Moody's Analytics, the estimated multiplier is 1.44, which would mean an added \$2.4 billion in economic activity in Michigan.¹¹⁹

Community spending: Michigan's 2019 GDP reflected community spending of \$57.9 billion on assistance to the state's households below the ALICE Threshold.¹²⁰ When all households can meet their basic needs, this spending can be reallocated to projects and programs that help families and communities thrive, not just survive.

- **Indirect benefits:** Added value to the state GDP would come in the form of indirect benefits associated with increased financial stability. These benefits include improved health (and reduced health care expenditures), reduced crime and homelessness, and greater community engagement. Figure 11 uses the very conservative estimate of an added \$13.4 billion (or 2.5% of the state GDP, which is the estimated cost of childhood poverty alone).¹²¹ This is still far short of the total indirect benefits of bringing all households to the ALICE Threshold, as it does not include benefits for adults or factor in the direct impact of redeploying private and nonprofit spending currently used to alleviate poverty.¹²²

Figure 11.
Economic Benefits of Raising All Households to the ALICE Threshold, Michigan, 2019



Sources: ALICE Threshold, 2019; American Community Survey, 2019; Internal Revenue Service—1040, 2019; Internal Revenue Service—EITC, 2019; Internal Revenue Service—FICA, 2019; McKeever, 2018; National Association of State Budget Officers, 2020; Office of Management and Budget, 2020; Scarboro, 2018; U.S. Department of Agriculture—SNAP, 2019; Urban Institute, 2012; Walczak, 2019¹²³

Benefits for Households and Local Communities

In addition to the economic benefits to the state if all households had income above the ALICE Threshold, there would be a significant number of positive changes for families and their communities. Our 2019 companion Report, *The Consequences of Insufficient Household Income*, outlines the tough choices ALICE and poverty-level families make when they do not have enough income to afford household basics, and how those decisions affect their broader communities. By contrast, Figure 12 outlines the improvements that all Michigan families and their communities would experience if policies were implemented that moved all households above the ALICE Threshold.¹²⁴

Figure 12.

The Benefits of Sufficient Income

If households have sufficient income for...	Impact on ALICE Households	Impact on the Community
 Safe, Affordable Housing	Improved health through safer environments and decreased stress, improved educational performance and outcomes for children, greater stability for household members, a means to build wealth for homeowners	Less traffic, lower health care costs, better maintained housing stock, lower crime rates, less spending on homelessness/social services
 Quality Child Care and Education	Improved academic performance, higher lifetime earnings, higher graduation rates, improved job stability/access for parents, better health	Decreased racial/ethnic and socioeconomic performance gaps, decreased income disparities, high return on investment (especially for early childhood education)
 Adequate Food	Decreased food insecurity, improved health (especially for children and seniors), decreased likelihood of developmental delays and behavioral problems in school	Lower health care costs, improved workplace productivity, less spending on emergency food services
 Reliable Transportation	Improved access to job opportunities, school and child care, health care, retail markets, social services, and support systems (friends, family, faith communities)	Fewer high-emissions vehicles on the road, more diverse labor market, decreased income disparities
 Quality Health Care	Better mental and physical health (including increased life expectancy), improved access to preventative care, fewer missed days of work/school, decreased need for emergency services	Decreased health care spending and need for emergency services, fewer communicable diseases, improved workplace productivity, decreased wealth-health gap
 Reliable Technology	Improved access to job opportunities, expanded access to health information and telemedicine services, increased job and academic performance	Decreased "digital divide" in access to technology by income, increased opportunities for civic participation
 Savings	Ability to withstand emergencies without impacting long-term financial stability and greater asset accumulation over time (e.g., interest on savings; ability to invest in education, property, or finance a secure retirement)	Greater charitable contributions, less spending on emergency health, food, and senior services

Note: For sources, see Figure 12: Sources, following the Endnotes for this Report

In addition to the benefits listed above, greater financial stability and having basic needs met can reduce the anxiety that comes from struggling to survive, or not having a cushion for emergencies. It also leaves more time to spend with loved ones and to give back to the community – all of which contribute to happiness and improved life satisfaction.¹²⁵

Having money saves money: Having enough income means that households can build their credit scores and avoid late fees, predatory lending, and higher interest rates.¹²⁶ That, in turn, means that ALICE families have more resources to use to reduce risks (e.g., by purchasing insurance), stay healthy (e.g., by getting preventative health care), or save and invest in education or assets that could grow over time (e.g., buying a home or opening a small business). Instead of a downward cycle of accumulating fees, debt, and stress, families can have an upward cycle of savings and health that makes them even better able to be engaged in their communities and, in turn, enjoy a reasonable quality of life.

For communities, this leads to greater economic activity, greater tax revenue, lower levels of crime, and fewer demands on the social safety net, allowing more investment in vital infrastructure, schools, and health care.¹²⁷ Strengthening communities by strengthening ALICE families means a higher quality of life for all.

ENDNOTES

1 Kaiser Family Foundation. (n.d.). Health Insurance Coverage of the Total Population. Retrieved from <https://www.kff.org/other/state-indicator/total-population/>

2 American Community Survey. (2019). 1-year estimates. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>

3 Note: Collectively, LGBTQ+ people are more likely to live in poverty compared to straight, cisgender people. However, there are important within-group differences. For example, transgender people and bisexual cisgender women experience the highest rates of poverty, while gay cisgender men – particularly those in married couples – are less likely to have low-incomes than other LGBTQ+ groups.

Badgett, M. V. L., Choi, S. K., & Wilson, B. D. M. (2019 October). *LGBT poverty in the United States: A study of differences between sexual orientation and gender identity groups*. University of California Los Angeles School of Law, Williams Institute. Retrieved from <https://williamsinstitute.law.ucla.edu/wp-content/uploads/National-LGBT-Poverty-Oct-2019.pdf>

Ballard, J., Wieling, E., Solheim, C., & Dwanyen, L. (2016). *Immigrant and Refugee Families, 2nd Edition*. University of Minnesota Libraries Publishing. Retrieved from <https://open.lib.umn.edu/immigrantfamilies/>

Goodman, N., Morris, M., & Boston, K. (2017, February 8). *Financial inequality: Disability, race, and poverty in America*. National Disability Institute. Retrieved from <https://www.nationaldisabilityinstitute.org/wp-content/uploads/2019/02/disability-race-poverty-in-america.pdf>

Pettit, B., Sykes, B. (2017). *State of the union 2017: Incarceration*. The Stanford Center on Poverty and Inequality. Retrieved from https://inequality.stanford.edu/sites/default/files/Pathways_SOTU_2017_incarceration.pdf

University of Wisconsin Institute for Research on Poverty. (2020, May). Connections among poverty, incarceration, and inequality. *Fast Focus Research/Policy Brief No. 48-2020*. Retrieved from <https://www.irp.wisc.edu/resource/connections-among-poverty-incarceration-and-inequality/>

Wolla, S. A., & Sullivan, J. (2017, January). Education, income, and wealth. *Page One Economics, Federal Reserve Bank of St. Louis*. Retrieved from <https://research.stlouisfed.org/publications/page1-econ/2017/01/03/education-income-and-wealth/>

4 McPhillips, D. (2020, Jan 22). A new analysis finds growing diversity in U.S. Cities. *U.S. News and World Reports*. Retrieved from <https://www.usnews.com/news/cities/articles/2020-01-22/americas-cities-are-becoming-more-diverse-new-analysis-shows>

5 Frey, W. (2018, December 18). Black-white segregation edges downward since 2000, census shows. Brookings Institute. Retrieved from <https://www.brookings.edu/blog/the-avenue/2018/12/17/black-white-segregation-edges-downward-since-2000-census-shows/>

6 U.S. Census Bureau. Quick facts: Allen Park city, Michigan; Highland Park city, Michigan; River Rouge city, Michigan; Detroit city, Michigan; Michigan. Retrieved from: <https://www.census.gov/quickfacts/fact/table/allenparkcitymichigan.hIGHLANDPARKCITYMICHIGAN.rIVERROUGECITYMICHIGAN.dETROITCITYMICHIGAN.MI/PST045219>

7 Households on the cusp are defined as those with income in the Census income bracket above and below the ALICE Threshold. Income brackets begin with less than \$10,000/year; they increase in \$5,000 intervals from \$10,000 to \$50,000/year; then they extend to \$50,000–\$60,000/year, \$60,000–\$75,000/year, \$75,000–\$100,000/year, \$100,000–\$125,000/year, and \$125,000–\$150,000/year.

8 Note: Racial/ethnic percentages in this section represent households, not population level statistics.

9 AARP. (2019) Disrupting disparities: A continuum of care for Michiganders 50 and older. Retrieved from <https://aarp-states.brightspotcdn.com/e1/01/462cbadceb72654cd57b63bb407e/aarp-report-disrupting-disparities.pdf>

10 Note: All racial categories except Two or More Races are for one race alone. Race and ethnicity are overlapping categories; in this report, the Asian, Black, Hawaiian (includes other Pacific Islanders), and Two or More Races groups may include Hispanic households. The White group includes only White, non-Hispanic households. The Hispanic group may include households of any race. Because household poverty data is not available for the American Community Survey's race/ethnicity categories, annual income below \$15,000 is used as a proxy.

American Community Survey. (2019). 1-year and 5-year estimates. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>

11 Gurrentz, B. (2019, April 12). *Cohabitation over the last 20 years: Measuring and understanding the changing demographics of unmarried partners, 1996-2017*. U.S. Census Bureau. Retrieved from <https://www.census.gov/library/working-papers/2019/demo/SEHSD-WP2019-10.html>

12 Laitner, B. (2018, June 8). Michigan is aging faster than the rest of the U.S. – here's why. *Detroit Free Press*. Retrieved from <https://www.freep.com/story/news/local/michigan/wayne/2018/06/08/michiganders-100-years-old-senior-tide-coming-first-michigan-2025/675828002/>

Rubenstein, E. S. (2017). *How millennials are slowing U.S. population growth and enhancing sustainability*. Negative Population Growth. Retrieved from <https://npg.org/wp-content/uploads/2017/11/MillennialsEnhancingSustainability-FP-2017.pdf>

Vespa, J. (2018, March 13). *The U.S. joins other countries with large aging populations*. U.S. Census Bureau. Retrieved from <https://www.census.gov/library/stories/2018/03/graying-america.html>

13 National Rural Health Association. (2013, February). *Elder health in rural America*. Retrieved from <https://www.ruralhealthweb.org/getattachment/Advocate/Policy-Documents/ElderHealthinRuralAmericaFeb2013.pdf.aspx?lang=en-US>

14 2021 senior living report: Senior living in Michigan. (n.d.). Retrieved from <https://www.caring.com/senior-living/michigan>

AARP Public Policy Institute and the National Alliance for Caregiving. (2015, June). *Caregiving in the U.S.* National Alliance for Caregiving. Retrieved from <https://www.aarp.org/content/dam/aarp/ppi/2015/caregiving-in-the-united-states-2015-report-revised.pdf>

- Hartman, R. M., & Weierbach, F. M. (2013, February). *Elder health in rural America*. National Rural Health Association. Retrieved from <https://www.ruralhealthweb.org/getattachment/Advocate/Policy-Documents/ElderHealthinRuralAmericaFeb2013.pdf.aspx?lang=en-US>
- Schaeffer, K. (2019, July 30). *The most common age among whites in U.S. is 58 – more than double that of racial and ethnic minorities*. Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2019/07/30/most-common-age-among-us-racial-ethnic-groups/>
- 15 Desilver, D. (2018, August 7). *For most U.S. workers, real wages have barely budged in decades*. Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2018/08/07/for-most-us-workers-real-wages-have-barely-budged-for-decades/>
- Economic Policy Institute. (2020). *The unequal states of America: Income inequality in the United States*. Retrieved from <https://www.epi.org/multimedia/unequal-states-of-america/>
- Stone, C., Trisi, D., Sherman, A., & Taylor, R. (2019, August 21). *A guide to statistics on historical trends in income inequality*. Center on Budget and Policy Priorities. Retrieved from https://www.cbpp.org/research/poverty-and-inequality/a-guide-to-statistics-on-historical-trends-in-income-inequality#_ftnref1
- 16 Richards, R. (2016, July 26). Time to end income inequality. Michigan League for Public Policy. Retrieved from <https://mlpp.org/time-to-end-income-inequality/>
- Sommeiller, E. & Price, M. (2018, July 19). *The new gilded age: Income inequality in the U.S. by state, metropolitan area, and county*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/the-new-gilded-age-income-inequality-in-the-u-s-by-state-metropolitan-area-and-county/>
- 17 Clemens, A. (2019, October 24). *GDP 2.0: Measuring who prospers when the U.S. economy grows*. Washington Center for Equitable Growth. Retrieved from <https://equitablegrowth.org/gdp-2-0-measuring-who-prospers-when-the-u-s-economy-grows/>
- Urban Institute. (2017, October 5). *Nine charts about wealth inequality in America (updated)*. Retrieved from <http://apps.urban.org/features/wealth-inequality-charts/>
- 18 Board of Governors of the Federal Reserve. (2020, September 28). Disparities in wealth by race and ethnicity in the 2019 Survey of Consumer Finances. Retrieved from <https://www.federalreserve.gov/econres/notes/feds-notes/disparities-in-wealth-by-race-and-ethnicity-in-the-2019-survey-of-consumer-finances-20200928.htm>
- 19 University of Michigan. (2020, November 20). U-M economists: Michigan slowly emerges from COVID-19 recession, income inequality concerns rise. Retrieved from <https://news.umich.edu/u-m-economists-michigan-slowly-emerges-from-covid-19-recession-income-inequality-concerns-rise/>
- 20 U.S. Department of Health and Human Services. (2019). 2019 poverty guidelines. Retrieved from <https://aspe.hhs.gov/2019-poverty-guidelines>
- 21 U.S. Department of Health and Human Services. (2019). 2019 poverty guidelines. Retrieved from <https://aspe.hhs.gov/2019-poverty-guidelines>
- 22 AAA. (2019). *Your driving costs: How much are you really paying to drive?* Retrieved from <https://www.aaa.com/AAA/common/AAR/files/AAA-Your-Driving-Costs.pdf>
- Agency for Healthcare Research and Quality. (2019). *2019 Medical Expenditure Panel Survey-insurance component [Table VII.C.2; Table VII.D.2; Table VII.E.2]*. U.S. Department of Health and Human Services. Retrieved from https://meps.ahrq.gov/data_stats/summ_tables/insr/state/series_7/2019/tviic2.pdf ; https://meps.ahrq.gov/data_stats/summ_tables/insr/state/series_7/2019/tviid2.pdf ; https://meps.ahrq.gov/data_stats/summ_tables/insr/state/series_7/2019/tviiie2.pdf
Note: 2007 data not available; average of 2006 and 2008 used instead
- American Community Survey. (2019). *1-year and 5-year estimates*. [Table B25064: Median gross rent (dollars)]; [Table B08301: Means of transportation to work]. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>
- Bureau of Labor Statistics. (2019). Consumer expenditure surveys (CES) [2018-19 MSA tables]. U.S. Department of Labor. Retrieved from <http://www.bls.gov/cex/csxmsa.htm>
- Bureau of Labor Statistics. (2019). *Table 3224. Consumer units with reference person age 35 to 44 by income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2018-2019*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/cex/2019/CrossTabs/agebyinc/x35to44.PDF>
- Bureau of Labor Statistics. (2019). *Table 3234. Consumer units with reference person age 45 to 54 by income before taxes: Average annual expenditures and characteristics, Consumer Expenditure Survey, 2018-2019*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/cex/2019/CrossTabs/agebyinc/x45to54.PDF>
- Bureau of Labor Statistics. (2019). Occupational employment statistics: May 2019 state occupational employment and wage estimates—Michigan. U.S. Department of Labor. Retrieved from https://www.bls.gov/oes/2019/may/oes_mi.htm
- Centers for Medicare & Medicaid Services. (2016). *2016 Medicare Current Beneficiary Survey annual chartbook and slides* [Table 5.1a - Total Expenditures Among All Medicare Beneficiaries by Source of Payment, 2016]. Retrieved from <https://www.cms.gov/Research-Statistics-Data-and-Systems/Research/MCBS/Data-Tables-Items/2016Chartbook>
- Centers for Medicare & Medicaid Services. (2019, December 5). Medicare utilization and payment section. Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/CMSProgramStatistics/2017/2017_Utilization.html#Medicare%20Part%20A%20and%20Part%20B%20Summary
Note: Data are only available up to 2017, therefore there is a lag of one year; for example, 2018 ALICE data uses the 2017 data
- Centers for Medicare & Medicaid Services. (2019, November 27). Chronic conditions [Spending county level: All beneficiaries, 2007–2017]. Retrieved from https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/CC_Main.html
Note: Data are only available up to 2017, therefore there is a lag of one year; for example, 2018 ALICE data uses the 2017 data
- Federal Highway Administration. (2017). Summary of travel trends: 2017 National Household Travel Survey. U.S. Department of Transportation. Retrieved from https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf
- Feeding America. (2020). *Map the Meal Gap 2020: A report on county and congressional district food insecurity and county food cost in the United States in 2018*. Retrieved from <https://www.feedingamerica.org/sites/default/files/2020-06/Map%20the%20Meal%20Gap%202020%20Combined%20Modules.pdf>

- Fowler, B. (2019, May 23). Best low-cost cell-phone plans. *Consumer Reports*. Retrieved from <https://www.consumerreports.org/cell-phone-service-providers/best-low-cost-cell-phone-plans/>
- Internal Revenue Service. (n.d.). *1040 and 1040-SR: Instructions*. Retrieved from <https://www.irs.gov/pub/irs-pdf/f1040gi.pdf>
- Internal Revenue Service. (2020, January 3). Topic no. 751 Social Security and Medicare withholding rates. Retrieved from <https://www.irs.gov/taxtopics/tc751>
- Medicare.gov. (n.d.). *Part B costs*. Centers for Medicare & Medicaid Services. Retrieved from <https://www.medicare.gov/your-medicare-costs/part-b-costs>
- Public Policy Associates. (2018). *Child care market rate study*. Michigan Department of Education. Retrieved from https://www.michigan.gov/documents/mde/MRS_Final_Rpt_620152_7.pdf
- Scarboro, M. (2018, March). *State individual income tax rates and brackets for 2018*. Tax Foundation. Retrieved from <https://files.taxfoundation.org/20180315173118/Tax-Foundation-FF576-1.pdf>
- The Zebra. (2020). *The state of auto insurance 2020*[Annual auto insurance rates by level of coverage by state for 2019]. Retrieved October 10, 2020 from <https://www.thezebra.com/state-of-insurance/auto/2020/>
- U.S. Department of Agriculture. (2019). *Official USDA food plans*. Retrieved from <https://fns-prod.azureedge.net/sites/default/files/media/file/CostofFoodJun2019.pdf>
- U.S. Department of Agriculture. (2019). *Official USDA Alaska and Hawaii Thrifty Food Plans*. Retrieved from <https://fns-prod.azureedge.net/sites/default/files/media/file/AKHI1stHalf2019.pdf>
- U.S. Department of Housing and Urban Development. (2019). *Fair market rents*. Office of Policy Development and Research. Retrieved from https://www.huduser.gov/portal/datasets/fmr.html#2019_data
- Walczak, J. (2019, July). Local income taxes in 2019. Tax Foundation. Retrieved from <https://files.taxfoundation.org/20190730170302/Local-Income-Taxes-in-20191.pdf>
- 23 Bureau of Labor Statistics. (2019, April 25). Consumer Price Index frequently asked questions. U.S. Department of Labor. Retrieved from <https://www.bls.gov/cpi/questions-and-answers.htm>
- Bureau of Labor Statistics. (2018). The Consumer Price Index. In *Handbook of Methods*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/opub/hom/pdf/cphom.pdf>
- Bureau of Labor Statistics. (n.d.). *Consumer Price Index historical tables for U.S. city average*. U.S. Department of Labor. Retrieved from https://www.bls.gov/regions/mid-atlantic/data/consumerpriceindexhistorical_us_table.htm
- 24 Bureau of Labor Statistics. (n.d.) CPI inflation calculator. U.S. Department of Labor. Retrieved from https://www.bls.gov/data/inflation_calculator.htm
- 25 Bureau of Labor Statistics. (2019, April 25). Consumer Price Index frequently asked questions. U.S. Department of Labor. Retrieved from <https://www.bls.gov/cpi/questions-and-answers.htm>
- Ng, M., & Wessel, D. (2017, December 7). *The Hutchins Center explains: The chained CPI*. Brookings Institution. Retrieved from <https://www.brookings.edu/blog/up-front/2017/12/07/the-hutchins-center-explains-the-chained-cpi/>
- U.S. Department of Veterans Affairs. (2019, November 26). Compensation: Benefit rates. Retrieved from <https://www.benefits.va.gov/compensation/rates-index.asp#cola>
- 26 McGill, C. (2019, August 29). Most and least affordable cities in Michigan for homeowners and renters. ValuePenguin. Retrieved from <https://www.valuepenguin.com/most-and-least-affordable-cities-michigan-homeowners-renters>
- 27 Charette, A., Herbert, C., Jakabovics, A., Marya, E. T., & McCue, D. T. (2015). *Projecting trends in severely cost-burdened renters: 2015–2025*. Joint Center for Housing Studies of Harvard University. Retrieved from https://www.jchs.harvard.edu/sites/default/files/projecting_trends_in_severely_cost-burdened_renters_final.pdf
- Joint Center for Housing Studies of Harvard University. (2014). *Housing America's older adults: Meeting the needs of an aging population*. Retrieved from http://www.jchs.harvard.edu/sites/default/files/jchs-housing_americas_older_adults_2014_1.pdf
- Scally, C. P., & Gilbert, B. (2018, October 1). Rural communities need more affordable rental housing. *Urban Wire: Housing and Housing Finance, the blog of the Urban Institute*. Retrieved from <https://www.urban.org/urban-wire/rural-communities-need-more-affordable-rental-housing>
- 28 American Public Transportation Association. (n.d.). Public transportation facts. Retrieved from <https://www.apta.com/news-publications/public-transportation-facts/>
- 29 Gifford, D. (2020, April 20). Detroit's 5 biggest transit misses. *Curbed*. Retrieved from <https://detroit.curbed.com/2020/4/20/21224917/detroit-regional-transit-past-streetcars-subway>
- 30 The Zebra. (2020). *The state of auto insurance 2020*[Annual auto insurance rates by level of coverage by state for 2019]. Retrieved October 10, 2020 from <https://www.thezebra.com/state-of-insurance/auto/2020/>
- 31 Duranton, G., & Puga, D. (2014). The growth of cities. *Handbook of Economic Growth*, 2, 771–853. Retrieved from <https://www.sciencedirect.com/science/article/pii/B9780444535405000057>
- Jiao, J., Miró, J., & McGrath, N. (2017, November 3). Why the “Uberization” of public transit is good for cities. *Houston Chronicle*. Retrieved from <http://www.houstonchronicle.com/local/gray-matters/article/Why-the-Uberization-of-public-transit-is-good-12329605.php>
- Robert Wood Johnson Foundation. (2012, October 25). How does transportation impact health? *Health Policy Snapshot Series*. Retrieved from <https://www.rwjf.org/en/library/research/2012/10/how-does-transportation-impact-health-.html>
- Stiglic, M., Agatz, N., Savelsbergh, M., & Gradiran, M. (2018, February). Enhancing urban mobility: Integrating ride-sharing and public transit. *Computers and Operations Research*, 90(no. C), 12–21. Retrieved from <https://dl.acm.org/citation.cfm?id=3165324.3165603>

van Ommeren, J., & Gutiérrez-i-Puigarnau, E. (2011, January 11). Are workers with a long commute less productive? An empirical analysis of absenteeism. *Regional Science and Urban Economics*, 41(1), 1–8. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0166046210000633>

32 Duranton, G., & Puga, D. (2014). The growth of cities. *Handbook of Economic Growth*, 2, 771–853. Retrieved from <https://www.sciencedirect.com/science/article/pii/B9780444535405000057>

Jiao, J., Miró, J., & McGrath, N. (2017, November 3). Why the “Uberization” of public transit is good for cities. *Houston Chronicle*. Retrieved from <http://www.houstonchronicle.com/local/gray-matters/article/Why-the-Uberization-of-public-transit-is-good-12329605.php>

Robert Wood Johnson Foundation. (2012, October 25). How does transportation impact health? *Health Policy Snapshot Series*. Retrieved from <https://www.rwjf.org/en/library/research/2012/10/how-does-transportation-impact-health-.html>

Stiglic, M., Agatz, N., Savelsbergh, M., & Gradisar, M. (2018, February). Enhancing urban mobility: Integrating ride-sharing and public transit. *Computers and Operations Research*, 90(no. C), 12–21. Retrieved from <https://dl.acm.org/citation.cfm?id=3165324.3165603>

van Ommeren, J., & Gutiérrez-i-Puigarnau, E. (2011, January 11). Are workers with a long commute less productive? An empirical analysis of absenteeism. *Regional Science and Urban Economics*, 41(1), 1–8. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0166046210000633>

33 Michigan League for Public Policy. 2021 budget priority: Help parents with low wages find affordable child care. Retrieved from <https://mlpp.org/wp-content/uploads/2019/07/2021-budget-priority-child-care-pat.pdf>

34 Child Care Aware of America. (n.d.). Child care access in Michigan. Retrieved from <https://childcaredeserts.org/2018/index.html?state=MI>

35 Bureau of Labor Statistics. (2019). Occupational employment statistics: May 2019 state occupational employment and wage estimates—Michigan U.S. Department of Labor. Retrieved from https://www.bls.gov/oes/2019/may/oes_mi.htm

Vespa, J., Lewis, J. M., & Kreider, R. M. (2013, August). *America's families and living arrangements: 2012: Population characteristics*. U.S. Census Bureau. Retrieved from <https://www.census.gov/prod/2013pubs/p20-570.pdf>

36 Baker-Smith, C., Coca, V., Goldrick-Rab, S., Looker, E., Richardson, B., & Williams, T. (2020, February). #RealCollege 2020: Five years of evidence on campus basic needs insecurity. The Hope Center. Retrieved from https://hope4college.com/wp-content/uploads/2020/02/2019_RealCollege_Survey_Report.pdf

37 University of Michigan. (n.d.). Food savvy Friday: Food insecurity on campus & in our community. Retrieved from <https://mbc.studentlife.umich.edu/2020/10/23/food-savvy-friday-food-insecurity-on-campus-in-our-community/>

Michigan State University (n.d.). MSU student food bank: Food security fact sheet. Retrieved from <https://foodbank.msu.edu/about/FoodSecurityFactSheet.pdf>

38 Fay, B. (2018, March 7) Dining costs eating up college students' budget. [Debt.org](#). Retrieved from <https://www.debt.org/blog/dining-costs-eating-up-college-students-budget/>

Slagter, M. (2019, November 5). Food insecurity a growing challenge for EMU, University of Michigan students. *MLive*. Retrieved from <https://www.mlive.com/news/ann-arbor/2019/11/food-insecurity-a-growing-challenge-for-emu-university-of-michigan-students.html>

39 America's Health Rankings. (2021). Public health impact: Food insecurity - Seniors. United Health Foundation. Retrieved from https://www.americashealthrankings.org/explore/senior/measure/food_insecurity_sr/state/MI

40 Broton, K. M., & Goldrick-Rab, S. (2017, December 7). Going without: An exploration of food and housing insecurity among undergraduates. *Educational Researcher*, 47(2), 121–133. Retrieved from <https://doi.org/10.3102/0013189X17741303>

Feeding America. (2020). Senior hunger poses unique challenges. Retrieved from <https://www.feedingamerica.org/hunger-in-america/senior-hunger-facts>

Worthington, J., & Mabli, J. (2017). *Emergency food pantry use among SNAP households with children*. Mathematica Policy Research. Retrieved from <https://www.mathematica-mpr.com/our-publications-and-findings/publications/emergency-food-pantry-use-among-snap-households-with-children>

Ziliak, J. P., & Gunderson, C. (2019, May). *State of senior hunger in America in 2017*. Feeding America. Retrieved from https://www.feedingamerica.org/sites/default/files/2019-06/The%20State%20of%20Senior%20Hunger%20in%202017_F2.pdf

Ziliak, J. P., & Gunderson, C. (2017, August). *The health consequences of senior hunger in the United States: Evidence from the 1999–2014 NHANES*. Feeding America. Retrieved from <https://www.feedingamerica.org/sites/default/files/research/senior-hunger-research/senior-health-consequences-2014.pdf>

41 Leung, C., Malani, P., Singer, D., Kirch, M., Solway, E., Kullgren, J., et al. (2020) *How food insecurity affects older adults*. University of Michigan National Poll on Healthy Aging. Retrieved from <https://www.healthagingpoll.org/report/how-food-insecurity-affects-older-adults>

42 Beer, A. & Bray, J. B. (2019). *The college-work balancing act*. Washington, D.C. Association of Community College Trustees. Retrieved from: <https://www.acct.org/product/college-work-balancing-act-2019>

43 Klepfer, K., Cornett, C., Flethcher, C., & Webster, J. (2019). *Student financial wellness survey: Fall 2018 semester results*. Trellis Company. Retrieved from <https://www.trelliscompany.org/wp-content/uploads/2019/06/Fall-2018-SFWS-Report.pdf>

44 Beer, A. & Bray, J. B. (2019). *The college-work balancing act*. Washington, D.C. Association of Community College Trustees. Retrieved from: <https://www.acct.org/product/college-work-balancing-act-2019>

45 Porter, S.R. & Umbach, P.D. (2019). *What challenges to success do community college students face?* Percontor, LLC. Retrieved from: https://www.risc.college/sites/default/files/2019-01/RISC_2019_report_natl.pdf

46 Goldrick-Rab, S., Coca, V., Kienzl, G., Welton, C.R., Dahl, S., Magnolia, S. (2020). #REALCollege during the pandemic: New evidence on basic needs insecurity and student well-being. Retrieved from https://hope4college.com/wp-content/uploads/2020/10/Hopecenter_RealCollegeDuringthePandemic_Reupload.pdf

47 Association of American Medical Colleges. (2019, April). *2019 update: The complexities of physician supply and demand: Projections from 2017–2032*. Retrieved from https://www.aamc.org/system/files/c/2/31-2019_update - the_complexities_of_physician_supply_and_demand - projections_from_2017-2032.pdf

Farrell, D., & Greig, F. (2017, September). *Paying out-of-pocket: The healthcare spending of 2 million US families*. JPMorgan Chase Institute. Retrieved from <https://institute.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/institute/pdf/institute-healthcare.pdf>

Inserro, A. (2018, August 9). Enrollment in high-deductible health plans continues to grow. *The American Journal of Managed Care*. Retrieved from <https://www.ajmc.com/newsroom/enrollment-in-highdeductible-health-plans-continues-to-grow>

48 Radley, D. C., Collins, S.R., & Baumgartner, J.C. (n.d.). *2020 scorecard on state health system performance*. The Commonwealth Fund. Retrieved from <https://2020scorecard.commonwealthfund.org/>

49 University of Wisconsin Population Health Institute. (2020). County health rankings and roadmaps: Michigan. Retrieved from <https://www.countyhealthrankings.org/app/michigan/2020/overview>

50 AARP. (2019) Disrupting disparities: A continuum of care for Michiganders 50 and older. Retrieved from <https://aarp-states.brightspotcdn.com/e1/01/462cbadceb72654cd57b63bb407e/aarp-report-disrupting-disparities.pdf>

51 Center for Disease Control and Prevention. (2021, February 18). Risk for covid-19 infection, hospitalization, and death by race/ethnicity. Retrieved from <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html>

52 Rashawn, R., Morgan, J., Wileden, L. Elizondo, S. & Wiley-Yancy, D. (2021, March 2). Examining and addressing COVID-19 racial disparities in Detroit. Brooking Institute. Retrieved from <https://www.brookings.edu/research/examining-and-addressing-covid-19-racial-disparities-in-detroit/>

53 Federal Reserve System. (2019, May). *Report on the economic well-being of U.S. households in 2018*. Retrieved from <https://www.federalreserve.gov/publications/files/2018-report-economic-well-being-us-households-201905.pdf>

54 Federal Deposit Insurance Corporation. (2020, October). E.15 Rates of Saving for Unexpected Expenses or Emergencies by State, 2015–2019. In *How America Banks: Household Use of Banking and Financial Services, Appendix Tables*. Retrieved from https://economicinclusion.gov/downloads/2019_FDIC_Unbanked_HH_Survey_Appendix.pdf

Karlan, D., Ratan, A. L., & Zimman, J. (2014, March). Savings by and for the poor. *The Review of Income and Wealth*, 60(1), 36–78. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1111/riow.12101>

The Pew Charitable Trusts. (2015, October). *The role of emergency savings in family financial security: How do families cope with financial shocks?* Retrieved from https://www.pewtrusts.org/~media/assets/2015/10/emergency-savings-report-1_artfinal.pdf

55 Stansell, J. & Gielczyk, B. (2020, January). *Economic outlook and revenue estimates for Michigan*. FY 2019–20 through FY 2021–22. Michigan House of Representatives, House Fiscal Agency. Retrieved from https://www.house.mi.gov/hfa/PDF/RevenueForecast/Economic_Outlook_and_Revenue_Estimates_Jan2020.pdf

Federal Reserve Bank of St. Louis (2021). Real total Gross domestic product for Michigan. Retrieved from <https://fred.stlouisfed.org/series/MIRGSP>

56 Sanchez, M. (2019, December 22). Michigan economic outlook: after ‘disappointing’ year, Michigan economy poised to grow in 2020. MiBiz. Retrieved from <https://mibiz.com/sections/finance/michigan-economic-outlook-after-disappointing-year-michigan-economy-poised-to-grow-in-2020>

University of Michigan. (2019, November 22). Michigan’s economy weathers a challenging year. Retrieved from <https://news.umich.edu/michigans-economy-weathers-a-challenging-year>

57 Austin, J.C., & Hershbein, B. (2020, June 4). Why COVID-19 hit Michigan so hard. Brookings Institute. Retrieved from <https://www.brookings.edu/blog/the-avenue/2020/06/04/why-covid-19-hit-michigan-so-hard/>

Dye, R. & Sanabria, D. (2019, November 8). November 2019 Michigan economic outlook. Comerica Bank. Retrieved from <https://www.comerica.com/insights/economic-commentary/state-indexes-outlooks/michigan/november2019michiganeconomicoutlook.html>

Keenan T. (2020, November 6). Special Report: 2021 Michigan economic forecast – pandemic pitfalls. DBusiness Magazine. Retrieved from <https://www.dbusiness.com/business-commentary/special-report-2021-michigan-economic-forecast-pandemic-pitfalls/>

University of Michigan. (2020, November 20). U-M economists: Michigan slowly emerges from COVID-19 recession, income inequality concerns rise. Retrieved from <https://news.umich.edu/u-m-economists-michigan-slowly-emerges-from-covid-19-recession-income-inequality-concerns-rise/>

University of Michigan. (2019, November 22). Michigan’s economy weathers a challenging year. Retrieved from <https://news.umich.edu/michigans-economy-weathers-a-challenging-year/#:~:text=Michigan's%20gross%20domestic%20product%20fell,then%20another%200.9%25%20in%202021.&text=%E2%80%9CThere%20are%20two%20major%20reasons.Michigan%20economy%2C%E2%80%9D%20Grimes%20said.>

58 University of Michigan. (2020, November 20). U-M economists: Michigan slowly emerges from COVID-19 recession, income inequality concerns rise. Retrieved from <https://news.umich.edu/u-m-economists-michigan-slowly-emerges-from-covid-19-recession-income-inequality-concerns-rise/>

59 Bureau of Labor Statistics. (2019). Occupational employment statistics: May 2019 state occupational employment and wage estimates—Michigan. U.S. Department of Labor. Retrieved from https://www.bls.gov/oes/2019/may/oes_mi.htm

60 American Community Survey. (2019). 1-year estimates. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>

Bureau of Labor Statistics. (n.d.). States and selected areas: Employment status of the civilian noninstitutional population, 1976 to 2019 annual averages. U.S. Department of Labor. Retrieved from <https://www.bls.gov/lau/stadata.txt>

61 Bureau of Labor Statistics. (2019, January 18). Wage and salary workers paid hourly rates with earnings at or below the prevailing Federal minimum wage by selected characteristics. In *Labor Force Statistics from the Current Population Survey*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/cps/cpsaat44.htm>

- Federal Reserve Bank of St. Louis. (2019). *Employed full time: Workers paid hourly rates: Wage and salary workers: 16 years and over*. Retrieved from <https://fred.stlouisfed.org/series/LEU0253126800A>
- 62 Goldren, L. (2016, December 5). *Still falling short on hours and pay*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/still-falling-short-on-hours-and-pay-part-time-work-becoming-new-normal/>
- Gould, E. (2020, February 20). *State of Working America Wages 2019*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/swa-wages-2019/>
- Kossek, E. E. & Lautsch, B. A. (2018, May 7). Hourly workers need flexibility the most, but are often the least likely to get it. *Harvard Business Review*. Retrieved from <https://hbr.org/2018/05/hourly-workers-need-flexibility-the-most-but-are-often-the-least-likely-to-get-it>
- 63 Gig Economy Data Hub (n.d.) Who participates in the gig economy? Cornell University and the Aspen Institute. Retrieved from <https://www.gigconomydata.org/basics/who-participates-gig-economy#there-is-not-a-single-typical-gig-worker>
- 64 Eisenberg, R. (2019, February 18). How well is the gig economy working for gig workers? *Forbes*. Retrieved from <https://www.forbes.com/sites/nextavenue/2019/02/18/how-well-is-the-gig-economy-working-for-gig-workers/#4255bb9b3f0a>
- Katz, L. F., & Krueger, A. B. (2018, November 13). The rise and nature of alternative work arrangements in the United States, 1995–2015. *ILR Review*, 72(2), 382–416. Retrieved from <https://scholar.harvard.edu/lkatz/publications/rise-and-nature-alternative-work-arrangements-united-states-1995-2015>
- Manyika, J., Lund, S., Bughin, J., Robinson, K., Mischke, J., & Mahajan, D. (2016, October). *Independent work: Choice, necessity, and the gig economy*. McKinsey Global Institute. Retrieved from <http://www.mckinsey.com/global-themes/employment-and-growth/independent-work-choice-necessity-and-the-gig-economy>
- U.S. Government Accountability Office. (2015, April 20). *Contingent workforce: Size, characteristics, earnings, and benefits*. Retrieved from <http://www.gao.gov/assets/670/669766.pdf>
- 65 Bureau of Labor Statistics. (2019, June). *Employer costs for employee compensation*. U.S. Department of Labor. Retrieved from https://www.bls.gov/news.release/archives/ecec_09172019.pdf
- U.S. Department of Labor. (n.d.). *Compliance assistance – Wages and the Fair Labor Standards Act (FLSA)*. Retrieved from <https://www.dol.gov/whd/flsa/>
- 66 Horsley, S. (2020, September 17). Millions of gig workers depend on new unemployment program, but fear it'll end soon. Michigan Radio. Retrieved from <https://www.michiganradio.org/post/millions-gig-workers-rely-new-federal-lifeline-they-now-fear-it-will-end>
- Lavietes, M. & McCoy, M. (2020, October 2020). Waiting for work: Pandemic leaves U.S. gig workers clamoring for jobs. Reuters. Retrieved from <https://www.reuters.com/article/us-biggerpicture-health-coronavirus-gigw/waiting-for-work-pandemic-leaves-u-s-gig-workers-clamoring-for-jobs-idUSKBN2741DM>
- Oosting, J. (2020, June 24). Big benefits claims a 'perfect storm' for unemployment fraud in Michigan. Bridge Michigan. Retrieved from <https://www.bridgemedia.com/michigan-government/big-benefits-claims-perfect-storm-unemployment-fraud-michigan>
- 67 The Fairwork Project. (2020, September). The gig economy and covid-19: Looking ahead. Retrieved from <https://fairwork/wp-content/uploads/sites/97/2020/09/COVID-19-Report-September-2020.pdf>
- Herrera, L., Justie, B., Koonse, T., & Waheed, S. (2020). *Worker ownership, COVID-19, and the future of the gig economy*. UCLA: Institute for Research on Labor and Employment. Retrieved from <https://escholarship.org/uc/item/3h60d754>
- 68 Hoevelmann, K. (2020, August 19). The labor force participation rate, explained [blog post]. Federal Reserve Bank of St. Louis. Retrieved from <https://www.stlouisfed.org/open-vault/2020/august/labor-force-participation-rate-explained>
- 69 Bureau of Labor Statistics. (2019). Occupational employment statistics: May 2019 state occupational employment and wage estimates—Michigan. U.S. Department of Labor. Retrieved from https://www.bls.gov/oes/2019/may/oes_mi.htm
- 70 American Community Survey. (2019). *1-year estimates*. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>
- Bureau of Labor Statistics. (2013, December). Labor force projections to 2022: the labor force participation rate continues to fall. *Monthly Labor Review*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/opub/mlr/2013/article/pdf/labor-force-projections-to-2022-the-labor-force-participation-rate-continues-to-fall.pdf>
- Vespa, J. (2018, March 13). *The U.S. joins other countries with large aging populations*. U.S. Census Bureau. Retrieved from <https://www.census.gov/library/stories/2018/03/graying-america.html>
- 71 Bureau of Labor Statistics. (2020, April 28). College enrollment and work activity of high school graduates news release [press release]. U.S. Department of Labor. Retrieved from <https://www.bls.gov/news.release/hsqec.htm>
- 72 American Community Survey. (2019). *1-year estimates*. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>
- Board of Governors of the Federal Reserve System. (2019, May). *Report on the economic well-being of U.S. households in 2018*. Retrieved from <https://www.federalreserve.gov/publications/files/2018-report-economic-well-being-us-households-201905.pdf>
- McAlpine, D. D., & Warner, L. (2004). *Barriers to employment among persons with mental illness: A review of the literature*. Center for Research on the Organization and Financing of Care for the Severely Mentally Ill, Institute for Health, Health Care Policy, and Aging Research, Rutgers, the State University. Retrieved from http://dri.uiuc.edu/research/p01-04c/final_technical_report_p01-04c.pdf
- National Alliance on Mental Illness. (2014, July). *Road to recovery: Employment and mental illness*. Retrieved from <https://www.nami.org/about-nami/publications-reports/public-policy-reports/roadtorecovery.pdf>
- 73 da Costa, P. N. (2018, January 27). There's a major hurdle to employment that many Americans don't even think about — and it's holding the economy back. *Business Insider*. Retrieved from <https://www.businessinsider.com/lack-of-transport-is-a-major-obstacle-to-employment-for-americas-poor-2018-1>

Rall, J. (2015, May). *Getting to work: Effective state solutions to help people with transportation challenges access jobs*. National Conference of State Legislatures. Retrieved from http://www.ncsl.org/Portals/1/Documents/transportation/Work_Job_Access_0515.pdf.pdf

Saldivia, G. (2018, September 20). Stuck in traffic? You're not alone. New data show American commute times are longer. *NPR*. Retrieved from <https://www.npr.org/2018/09/20/650061560/stuck-in-traffic-youre-not-alone-new-data-show-american-commute-times-are-longer>

Tyndall, J. (2015). *Waiting for the R train: Public transportation and employment*. Retrieved from Canadian Transportation Research Forum: <http://ctrf.ca/wp-content/uploads/2015/05/CTRFTyndallTransportationPolicyPlanning.pdf>

Watson, L., Frohlich, L., & Johnston, E. (2014, April). *Collateral damage: Scheduling challenges for workers in low-wage jobs and their consequences*. National Women's Law Center. Retrieved from https://nwlc.org/wp-content/uploads/2015/08/collateral_damage_scheduling_fact_sheet.pdf

74 Board of Governors of the Federal Reserve System. (2020, May). *Report on the economic well-being of U.S. households in 2019, featuring supplemental data from April 2020*. Retrieved from <https://www.federalreserve.gov/publications/files/2019-report-economic-well-being-us-households-202005.pdf>

Hipple, S. F. (2015). People who are not in the labor force: why aren't they working? *Beyond the Numbers: Employment & Unemployment*, 4(15). U.S. Bureau of Labor Statistics. Retrieved from <https://www.bls.gov/opub/btn/volume-4/pdf/people-who-are-not-in-the-labor-force-why-arent-they-working.pdf>

McCarthy, N. (2017, August 21). Why millions of Americans stay out of the workforce. *Statista*. Retrieved from <https://www.statista.com/chart/10754/why-millions-of-americans-stay-out-of-the-workforce/>

75 Bivins, J. (2018). *The fuzzy line between "employed" and "not in the labor force" and what it means for job creation strategies and the Federal Reserve*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/the-fuzzy-line-between-unemployed-and-not-in-the-labor-force-and-what-it-means-for-job-creation-strategies-and-the-federal-reserve/>

Frazis, H. (2017, May). Employed workers leaving the labor force: An analysis of recent trends. *Monthly Labor Review*. U.S. Department of Labor. Retrieved from <https://doi.org/10.21916/mlr.2017.16>

76 Vinsel, L., & Russell, A. (2016, April 7). Hail the maintainers: Capitalism excels at innovation but is failing at maintenance, and for most lives it is maintenance that matters more. *Aeon*. Retrieved from <https://aeon.co/essays/innovation-is-overvalued-maintenance-often-matters-more>

77 Bureau of Labor Statistics. (n.d.). Economy at a glance: Michigan. U.S. Department of Labor. Retrieved from https://www.bls.gov/eag/eag_mi.htm

78 Bureau of Labor Statistics. (2019). Occupational employment statistics: May 2019 state occupational employment and wage estimates—Michigan. U.S. Department of Labor. Retrieved from https://www.bls.gov/oes/2019/may/oes_mi.htm

Frey, C., & Osborne, M. (2013, September 17). *The future of employment: How susceptible are jobs to computerisation?* Oxford Martin School, University of Oxford. Retrieved from https://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf

79 Muro, M., Maxim, R., & Whiton, J. (2019). *Automation and artificial intelligence: How machines are affecting people and places*. Metropolitan Policy Program at Brookings. Retrieved from https://www.brookings.edu/wp-content/uploads/2019/01/2019.01_BrookingsMetro_Automation-AI_Report_Muro-Maxim-Whiton-FINAL-version.pdf

80 Katz, L. F., & Krueger, A. B. (2018, November 13). The rise and nature of alternative work arrangements in the United States, 1995–2015. *ILR Review*, 72(2), 382–416. Retrieved from <https://scholar.harvard.edu/lkatz/publications/rise-and-nature-alternative-work-arrangements-united-states-1995-2015>

81 Tong, S. (2018, November 15). How temp workers became the norm in America. *Marketplace*. Retrieved from <https://www.marketplace.org/2018/11/15/how-great-recession-helped-normalize-use-temp-workers/>

82 Houseman, S. & Heinrich, C.J. (2015, May 1). *Temporary help employment in recession and recovery*. Upjohn Institute Working Paper 15-227. W.E. Upjohn Institute for Employment Research. Retrieved from https://research.upjohn.org/cgi/viewcontent.cgi?article=1244&context=up_workingpapers

83 Dixon, A. (2019, June 5). Survey: Nearly 1 in 3 side hustlers need the income to stay afloat. *Bankrate*. Retrieved from <https://www.bankrate.com/personal-finance/side-hustles-survey-june-2019/>

84 Board of Governors of the Federal Reserve System. (2019, May). *Report on the economic well-being of U.S. households in 2018*. Retrieved from <https://www.federalreserve.gov/publications/files/2018-report-economic-well-being-us-households-201905.pdf>

Dokko, J., Mumford, M., & Schanzenbach, D. W. (2015, December). *Workers and the Online Gig Economy*. The Hamilton Project. Retrieved from https://www.hamiltonproject.org/assets/files/workers_and_the_online_gig_economy.pdf

Eden, P., & Gagnl, M. (2015, November). *On the welfare implications of automation*. World Bank Group. Retrieved from <http://documents.worldbank.org/curated/en/2015/11/25380579/welfare-implications-automation>

Freelancers Union & Upwork. (2017). *Freelancing in America: 2017*. Retrieved from <https://s3.amazonaws.com/fuwt-prod-storage/content/FreelancingInAmericaReport-2017.pdf>

Katz, L. F., & Krueger, A. B. (2018, November 13). The rise and nature of alternative work arrangements in the United States, 1995–2015. *ILR Review*, 72(2), 382–416. Retrieved from <https://scholar.harvard.edu/lkatz/publications/rise-and-nature-alternative-work-arrangements-united-states-1995-2015>

Manyika, J., Lund, S., Bughin, J., Robinson, K., Mischke, J., & Mahajan, D. (2016, October 10). *Independent work: Choice, necessity, and the gig economy*. McKinsey Global Institute. Retrieved from <http://www.mckinsey.com/global-themes/employment-and-growth/independent-work-choice-necessity-and-the-gig-economy>

Torpey, E., & Hogan, A. (2016, May). Working in a gig economy. *Career Outlook*. Bureau of Labor Statistics, U.S. Department of Labor. Retrieved from https://www.bls.gov/careeroutlook/2016/article/what-is-the-gig-economy.htm?view_full

Tran, M., & Sokas, R. (2017, April). The gig economy and contingent work: An occupational health assessment. *Journal of Occupation and Environmental Medicine*, 59(4), e63–e66. Retrieved from https://journals.lww.com/joem/FullText/2017/04000/The_Gig_Economy_and_Contingent_Work_An.20.aspx

U.S. Government Accountability Office. (2015, April 20). *Contingent workforce: Size, characteristics, earnings, and benefits*. Retrieved from <https://www.gao.gov/assets/670/669766.pdf>

85 Manyika, J., Chui, M., Miremadi, M., Bughin, J., George, K., Wilimott, P., & Dewhurst, M. (2017). *A future that works: Automation, employment, and productivity*. McKinsey Global Institute. Retrieved from <https://www.mckinsey.com/~media/mckinsey/featured%20insights/Digital%20Disruption/Harnessing%20automation%20for%20a%20future%20that%20works/MGI-A-future-that-works-Executive-summary.ashx>

Burtka, A.T. (2020, January 19). Michigan will be more impacted by AI and automation than most states: Are we ready? Crain's Detroit Business. Retrieved from <https://www.craintsdetroit.com/special-report/michigan-will-be-more-impacted-ai-and-automation-most-states-are-we-ready>

86 Neavling, S. (2019, June 26). Michigan's auto industry is gearing up for cars of the future. Detroit Metro Times. Retrieved from <https://www.metrotimes.com/detroit/how-michigans-auto-industry-is-gearing-up-for-cars-of-the-future/Content?oid=21981850>

Public Sector Consultants. (2019). *Michigan's automotive industry: 2019 economic contribution*. MICHauto. Retrieved from http://www.detroitchamber.com/wp-content/uploads/2019/08/Approved_MICHauto-Economic-Contribution-Study_web.pdf

87 Organisation for Economic Co-operation and Development. (2016, December). *Skills for a digital world. Policy brief on the future of work*. Retrieved from <https://www.oecd.org/els/emp/Skills-for-a-Digital-World.pdf>

World Economic Forum. (2017). *Technology and innovation for the future of production: Accelerating value creation* [white paper]. Retrieved from http://www3.weforum.org/docs/WEF_White_Paper_Technology_Innovation_Future_of_Production_2017.pdf

88 Bond, J. (2017, January). AGVs roll into a new role. *Modern Materials Handling*. Retrieved from https://www.mmh.com/article/agvs_roll_into_a_new_role/agvs

McKinsey Global Institute. (2017). *A future that works: Automation, employment and productivity*. Retrieved from https://www.mckinsey.com/~media/McKinsey/Global%20Themes/Digital%20Disruption/Harnessing%20automation%20for%20a%20future%20that%20works/MGI-A-future-that-works_Full-report.ashx

89 Bureau of Labor Statistics. (2019). Occupational employment statistics: May 2019 state occupational employment and wage estimates—Michigan. U.S. Department of Labor. Retrieved from https://www.bls.gov/oes/2019/may/oes_mi.htm

Bureau of Labor Statistics. (2019). *Occupational outlook handbook*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/ooh/>

Michigan Bureau of Labor Market Information and Strategic Initiatives. (2018). Occupation wage and employment projections [*Detailed occupations*]. Retrieved from <https://milmi.org/DataSearch/OCCPROJ>

Muro, M., Maxim, R., Whiton, J., & Hathaway, I. (2019). *Automation and artificial intelligence: How machines are affecting people and places*. Metropolitan Policy Program at Brookings. Retrieved from https://www.brookings.edu/wp-content/uploads/2019/01/2019.01_BrookingsMetro_Automation-AI_Report_Muro-Maxim-Whiton-FINAL-version.pdf

Vinsel, L., & Russell, A. (2016). Hail the maintainers: Capitalism excels at innovation but is failing at maintenance, and for most lives it is maintenance that matters more. *Aeon*. Retrieved from <https://aeon.co/essays/innovation-is-overvalued-maintenance-often-matters-more>

90 Granville, P., Miller, K., and Mishory, J. (2019, September 6). Michigan's college affordability crisis. The Century Foundation. Retrieved from <https://tcf.org/content/report/michigans-college-affordability-crisis/?agreed=1>

91 Bureau of Labor Statistics. (2020, April 28). College enrollment and work activity of high school graduates news release [press release]. U.S. Department of Labor. Retrieved from <https://www.bls.gov/news.release/hsgec.htm>

National Center for Education Statistics. (2018). Table 503.20. Percentage of college students 16 to 24 years old who were employed, selected years, October 1970 through 2017. *In Digest of Education Statistics*. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_503.20.asp

National Center for Education Statistics. (2018). Table 503.10. Percentage of high school students age 16 and over who were employed, selected years, 1970 through 2017. *In Digest of Education Statistics*. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_503.10.asp

National Center for Education Statistics. (2018). Table 303.10. Total fall enrollment in degree-granting postsecondary institutions, selected years, 1947 through 2028. *In Digest of Education Statistics*. Retrieved from https://nces.ed.gov/programs/digest/d18/tables/dt18_303.10.asp

92 Baker-Smith, C., Coca, V., Goldrick-Rab, S., Looker, E., Richardson, B., & Williams, T. (2020, February). #RealCollege 2020: Five years of evidence on campus basic needs insecurity. The Hope Center. Retrieved from https://hope4college.com/wp-content/uploads/2020/02/2019_RealCollege_Survey_Report.pdf

93 Schak, J.O., Wong, N., Fung, A., & Ahlman, L. (2020, October). *Student debt and the class of 2019, 15th annual report*. The Institute for College Access and Success. Retrieved from <https://ticas.org/wp-content/uploads/2020/10/classof2019.pdf>

U.S. Department of Education. (2018). *Distribution of Federal Pell Grant program funds by institution*. Retrieved from <https://www2.ed.gov/finaid/prof/resources/data/pell-institution.html>

U.S. Department of Education. (2017). *FY 2015 cohort default rates by state/territory*. Retrieved from <http://www2.ed.gov/offices/OSFAP/defaultmanagement/staterates.pdf>

94 Granville, P., Miller, K. and Mishory, J. (2019, September 6). Michigan's Affordability Crisis. Retrieved from <https://tcf.org/content/report/michigans-college-affordability-crisis/?agreed=1>

95 Rosa, K. (Ed.). (2015, April). *The state of America's libraries 2015 (American Libraries Digital Supplement)*. American Library Association. Retrieved from: http://www.ala.org/news/sites/ala.org.news/files/content/0415_StateAmLib_0.pdf

- 96 McCarthy, J. (2020, January 24). In U.S., library visits outpaced trips to movies in 2019. *Gallup*. Retrieved from <https://news.gallup.com/poll/284009/library-visits-outpaced-trips-movies-2019.aspx>
- 97 The Institute of Museum and Library Services. (2019). *Public libraries survey*. Retrieved from <https://www.imls.gov/research-evaluation/data-collection/public-libraries-survey>
- 98 Krause, E. & Reeves, R. V. (2017, September 18). *Hurricanes hit the poor the hardest*. Brookings Institution. Retrieved from <https://www.brookings.edu/blog/social-mobility-memos/2017/09/18/hurricanes-hit-the-poor-the-hardest/>
- NASA. (2018). Scientific consensus: Earth's climate is warming. Retrieved from <https://climate.nasa.gov/scientific-consensus/>
- 99 Sanburn, J. (2016, March 23). Series of government failures blamed for Flint water crisis. *Time*. Retrieved from <https://time.com/4269300/flint-task-force-report-water-crisis/>
- 100 Denchak, M. (2018, November 8). Flint water crisis: Everything you need to know. Natural Resources Defense Council. Retrieved from <https://www.nrdc.org/stories/flint-water-crisis-everything-you-need-know>
- Kennedy, M. (2016, April 20). Lead-laced water in Flint: A step-by-step look at the makings of a crisis. *The Two-Way*. Retrieved from <https://www.npr.org/sections/thetwo-way/2016/04/20/465545378/lead-laced-water-in-flint-a-step-by-step-look-at-the-makings-of-a-crisis>
- Smith, M., Bosman J., Davey, M. (2019), April 25). Flint's water crisis started 5 years ago. It's not over. *The New York Times*. Retrieved from <https://www.nytimes.com/2019/04/25/us/flint-water-crisis.html>
- U.S Census Bureau. (2019). Michigan quick facts. Retrieved from <https://www.census.gov/quickfacts/flintcitymichigan>
- 101 Oxfam America. (2009). *Exposed: Social vulnerability and climate change in the U.S. Southeast*. Retrieved from <https://www.oxfamamerica.org/explore/research-publications/exposed-social-vulnerability-and-climate-change-in-the-us-southeast/>
- 102 Choi, L. (2009). Financial stress and its physical effects on individuals and communities. *Community Development Investment Review*, 5(3). Retrieved from <http://www.frbsf.org/community-development/files/choi.pdf>
- Hill, C. B. (2015, June 10). *Income inequality and higher education*. American Council on Education. Retrieved from <https://www.acenet.edu/the-presidency/columns-and-features/Pages/Income-Inequality-and-Higher-Education.aspx>
- Lynch, J., Smith, G. D., Harper, S., & Hillemeier, M. (2004). Is income inequality a determinant of population health? Part 2. U.S. national and regional trends in income inequality and age- and cause-specific mortality. *Milbank Quarterly*, 82(2), 355–400. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/15225332>
- National Conference of State Legislatures. (2018, July 17). Barriers to work: Low-income, unemployed and dislocated workers. Retrieved from <https://www.ncsl.org/research/labor-and-employment/barriers-to-work-low-income-unemployed-and-dislocated-workers.aspx>
- Sum, A., Khatiwada, I., & Palma, S. (2010, February). *Labor underutilization problems of U.S. Workers across household income groups at the end of the Great Recession*. Center for Labor Market Studies, Northeastern University. Retrieved from <http://www.uvm.edu/~fmagdoff/employment%20Jan.12.11/Labor%20Utilization%20Studies.pdf>
- U.S. Department of Education. (2015). *A matter of equity: Preschool in America*. Retrieved from <https://www2.ed.gov/documents/early-learning/matter-equity-preschool-america.pdf>
- 103 American Community Survey. (2019). 1-year estimates [Table S2801: Types of computers and internet subscriptions]. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>
- Anderson, M. (2017, March 22). *Digital divide persists even as lower-income Americans make gains in tech adoption*. Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2017/03/22/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>
- 104 American Community Survey. (2019). 5-year estimates [Table S2801: Types of computers and internet subscriptions]. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>
- Perrin, A. (2017, June 28). *10 facts about smartphones as the iPhone turns 10*. Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2017/06/28/10-facts-about-smartphones/>
- Perrin, A. (2017, May 19). *Digital gap between rural and nonrural America persists*. Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2017/05/19/digital-gap-between-rural-and-nonrural-america-persists/>
- Ryan, C. (2018, August). *Computer and internet use in the United States: 2016*. American Community Survey Reports. Retrieved from <https://www.census.gov/content/dam/Census/library/publications/2018/acs/ACS-39.pdf>
- 105 Data calculated by applying the ALICE Threshold income levels to internet data from the American Community Survey. (2019). 5-year estimates [Table S2801: Types of computers and internet subscriptions]. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>
- 106 Drawing Detroit. (2020, June 22). COVID puts digital divide on display. Retrieved from <http://www.drawingdetroit.com/covid-puts-digital-divide-on-display/>
- Peñarroyo, C., Lindquist, S., & Miller, R. (2019). Mapping Detroit's digital divide. University of Michigan. Retrieved from <https://www.urbanlab.umich.edu/project/mapping-detroits-digital-divide/>
- 107 Becker, S., Crandall, M. D., Fisher, K. E., Kinney, B., Landry, C., & Rocha, A. (2010). *Opportunity for all: How the American public benefits from internet access at U.S. libraries*. Institute of Museum and Library Services. Retrieved from <https://staging.community-wealth.org/sites/clone.community-wealth.org/files/downloads/report-becker-et-al.pdf>

Horrigan, J. (2018, September 24). *Home internet access for low-income household helps people manage time, money, and family schedules*. Technology Policy Institute. Retrieved from <https://techpolicyinstitute.org/2018/09/24/home-internet-access-for-low-income-household-helps-people-manage-time-money-and-family-schedules/>

Horrigan, J. B. (2016, September 9). Library usage and engagement. In *Libraries 2016*. Pew Research Center. Retrieved from <https://www.pewinternet.org/2016/09/09/library-usage-and-engagement/>

Smith, A. (2015, April 1). Usage and attitudes toward smartphones. In *U.S. Smartphone Use in 2015*. Pew Research Center. Retrieved from <https://www.pewinternet.org/2015/04/01/chapter-two-usage-and-attitudes-toward-smartphones/#job%20seeking>

108 Achtenberg, K. (2020, October 8). Gov. Whitmer announces initiatives to increase high-speed internet across Michigan [press release]. Michigan Economic Development Corporation. Retrieved from

109 Haffajee, R. L., & Frank, R. G. (2018). Making the Opioid Public Health Emergency Effective. *JAMA psychiatry*, 75(8), 767–768. <https://doi.org/10.1001/jamapsychiatry.2018.0611>

110 Kaiser Family Foundation (n.d.). State health facts. Drug overdose death rate. Retrieved from <https://www.kff.org/state-category/health-status/?state=MI>

111 Michigan.gov. Opioid Resources. Overdose deaths decrease slightly in 2018, the first decline in six years [press release]. https://www.michigan.gov/opioids/0.9238,7-377-88143_88334-513063--00.html

112 APPRISS Health. (2018, March 29). *Statewide Opioid Assessment: Michigan*. Retrieved from [https://www.michigan.gov/documents/lara/BPL_ApprissStatewideOpioidAssessemntMICHIGAN_03-29-2018_620258_7.pdf](https://www.michigan.gov/documents/lara/BPL_ApprissStatewideOpioidAssessemmentMICHIGAN_03-29-2018_620258_7.pdf)

113 Dasgupta, N., Beletsky, L., & Ciccarone, D. (2018, February). Opioid crisis: No easy fix to its social and economic determinants. *AJPH Perspectives*, 108(2), 182–186. Retrieved from <https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2017.304187>

Ghertner, R., & Groves, L. (2018, September). *The opioid crisis and economic opportunity: Geographic trends and economic opportunity*. U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Retrieved from <https://aspe.hhs.gov/system/files/pdf/259261/ASPEEconomicOpportunityOpioidCrisis.pdf>

Oquendo, M. A., & Volkow, N. D. (2018, April 26). Suicide: A silent contributor to opioid-overdose deaths. *New England Journal of Medicine*, 378, 1567–1569. Retrieved from <https://www.nejm.org/doi/full/10.1056/NEJMmp1801417>

Rossen, L. M., Bastian, B., Warner, M., Khan, D., & Chong, Y. (2019). *Drug poisoning mortality: United States, 1999–2017*. National Center for Health Statistics. Retrieved from <https://www.cdc.gov/nchs/data-visualization/drug-poisoning-mortality/index.htm>

Ruhm, C. J. (2018, January). Deaths of despair or drug problems? National Bureau of Economic Research. Retrieved from <https://www.nber.org/papers/w24188.pdf>

114 Michigan.gov. Opioid Resources. Overdose deaths decrease slightly in 2018, the first decline in six years [press release]. https://www.michigan.gov/opioids/0.9238,7-377-88143_88334-513063--00.html

115 Daley, D. C., Smith, E., Balogh, D., & Toscaloni, J. (2018). Forgotten but not gone: The impact of the opioid epidemic and other substance use disorders on families and children. *Commonwealth, A Journal of Pennsylvania Politics and Policy*, 20, (2–3). Retrieved from <https://tupjournals.temple.edu/index.php/commonwealth/article/view/189>

Juergens, J. (2020). *Cost of drug and alcohol rehab*. Addiction Center. Retrieved from <https://www.addictioncenter.com/rehab-questions/cost-of-drug-and-alcohol-treatment/>

National Institute on Drug Abuse. (2018). *Medications to treat opioid use disorder: How much does opioid treatment cost?* Retrieved from <https://www.drugabuse.gov/publications/research-reports/medications-to-treat-opioid-addiction/how-much-does-opioid-treatment-cost>

Scholl, L., Seth, P., Kariisa, M., Wilson, N., & Baldwin, G. (2019). Drug and opioid-involved overdose deaths – United States, 2013–2017. *Morbidity and Mortality Weekly Report*, 67, 1419–1427. Retrieved from <https://www.cdc.gov/mmwr/volumes/67/wr/mm67512e1.htm>

116 amfAR. (2018). Opioid & health indicators database: Michigan opioid epidemic. Retrieved from <https://opioid.amfar.org/MI>

Florence, C. S., Zhou, C., Luo, F., & Xu, L. (2016, October). The economic burden of prescription opioid overdose, abuse, and dependence in the United States, 2013. *Medical Care*, 54(10), 901–906. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/27623005>

Kneebone, E., & Allard, S. W. (2017, September 25). *A nation in overdose peril: Pinpointing the most impacted communities and the local gaps in care*. Brookings Institution. Retrieved from <https://www.brookings.edu/research/pinpointing-opioid-in-most-impacted-communities/>

Krueger, A. B. (2017). Where have all the workers gone? An inquiry into the decline of the U.S. labor force participation rate (BPEA Conference Drafts, September 7–8, 2017). *Brookings Papers on Economic Activity*. Retrieved from https://www.brookings.edu/wp-content/uploads/2017/09/1_krueger.pdf

117 Congressional Budget Office. (2019, July 8). *The effects on employment and family income of increasing the federal minimum wage*. Retrieved from <https://www.cbo.gov/publication/55410>

Cooper, D., & Hall, D. (2013, March 13). *Raising the federal minimum wage to \$10.10 would give working families, and the overall economy, a much-needed boost*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/bp357-federal-minimum-wage-increase/>

From Poverty to Opportunity: How a Fair Minimum Wage Will Help Working Families Succeed. Hearings before the U.S. Senate Committee on Health, Education, Labor, and Pensions. (Testimony of Heather Boushey, *Understanding how raising the federal minimum wage affects income inequality and economic growth*). Retrieved from <https://www.help.senate.gov/imo/media/doc/Boushey3.pdf>

Zandi, M. (2011, April 14). At last, the U.S. begins a serious fiscal debate. Moody's Analytics. Retrieved from <https://www.economy.com/dismal/analysis/free/198972>

118 Note: While there are increased costs to employers for paying higher wages – which may be passed on to consumers – these impacts primarily occur when wages are increased for jobs with wages well above the Household Survival Budget (See Congressional Budget Office, 2019).

Blinder, A., & Zandi, M. (2010, July 27). *How the Great Recession was brought to an end*. Retrieved from <https://www.economy.com/mark-zandi/documents/End-of-Great-Recession.pdf>

Congressional Budget Office. (2019, July 8). *The effects on employment and family income of increasing the federal minimum wage*. Retrieved from <https://www.cbo.gov/publication/55410>

Cooper, D., & Hall, D. (2013, March 13). *Raising the federal minimum wage to \$10.10 would give working families, and the overall economy, a much-needed boost*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/bp357-federal-minimum-wage-increase/>

Cooper, D., & Hall, D. (2012, August 14). *How raising the federal minimum wage would help working families and give the economy a boost*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/ib341-raising-federal-minimum-wage/>

Zandi, M. (2011, April 14). At last, the U.S. begins a serious fiscal debate. Moody's Analytics. Retrieved from <https://www.economy.com/dismal/analysis/free/198972>

Zandi, M. (2010, December 8). U.S. macro outlook: Compromise boosts stimulus. Moody's Analytics. Retrieved from <https://economy.com/dismal/analysis/free/195470>

119 Note: *The tax calculations include only state taxes, not federal or local. The Congressional Budget Office estimates the impact of tax cuts targeted at lower- and middle-income people and achieved without borrowing as high as 1.5; Zandi estimates the multiplier for increased infrastructure spending at 1.44. This calculation uses the conservative estimate of 1.44.*

Bolstering the economy: Helping American families by reauthorizing the Payroll Tax Cut and UI Benefits. Hearings before the U.S. Congress Joint Economic Committee (2012) (Testimony of Mark M. Zandi). Retrieved from <https://www.economy.com/mark-zandi/documents/2012-02-07-JEC-Payroll-Tax.pdf>

Congressional Budget Office. (2014, November). *How CBO analyzes the effects of changes in federal fiscal policies on the economy*. Retrieved from <https://www.cbo.gov/sites/default/files/113th-congress-2013-2014/reports/49494-FiscalPolicies.pdf>

Duper, B., Karabarounis, M., Kudlyak, M., & Saif Mehkari, M. (2019). *Regional Consumption Responses and the Aggregate Fiscal Multiplier*. Federal Reserve Bank of San Francisco. Retrieved from <https://www.frbsf.org/economic-research/files/wp2018-04.pdf>

120 American Community Survey. (2019). 1-year estimates. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>

National Association of State Budget Officers. (2019). *State expenditure report: Fiscal years 2017–2019*. Retrieved from <http://www.nasbo.org/mainsite/reports-data/state-expenditure-report>

Office of Management and Budget. (2017). *Analytical perspectives: Budget of the U.S. government: Fiscal year 2018*. Retrieved from <https://www.gpo.gov/fdsys/pkg/BUDGET-2018-PER/pdf/BUDGET-2018-PER.pdf>

Scarboro, M. (2018). *State individual income tax rates and brackets for 2018*. Tax Foundation. Retrieved from <https://taxfoundation.org/state-individual-income-tax-rates-brackets-2018/>

U.S. Department of Agriculture. (n.d.). SNAP data tables [State level participation and benefits]. Retrieved from <http://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap>

U.S. Office of Management and Budget. (2019). Aid to State & Local Governments. In *Fiscal Year 2018 Analytical Perspectives Budget of the U.S. Government*. Retrieved from <https://www.gpo.gov/fdsys/browse/collectionGPO.action?collectionCode=BUDGET>

Walczak, J. (2019, July 30). *Local income taxes in 2019*. Tax Foundation. Retrieved from <https://taxfoundation.org/local-income-taxes-2019/>

Walczak, J., & Drenkard, S. (2018, February 13). *State and local sales tax rates 2018*. Tax Foundation. Retrieved from <https://taxfoundation.org/state-and-local-sales-tax-rates-2018/>

121 The National Academies of Sciences, Engineering, and Medicine analyzes the cost of childhood poverty and estimates that reversing it would add 5.4% to the state GDP. To be conservative, this analysis uses Holzer's estimate that childhood poverty costs 2.5% of GDP in related health and criminal justice expenses.

Holzer, H. J., Schanzenbach, D. W., Duncan, J. D., & Ludwig, J. (2007, January 24). *The economic costs of poverty in the United States: Subsequent effects of children growing up poor*. Center for American Progress. Retrieved from https://cdn.americanprogress.org/wp-content/uploads/issues/2007/01/pdf/poverty_report.pdf

McLaughlin, M., & Rank, M. R. (2018). Estimating the economic cost of childhood poverty in the United States. *Social Work Research*, 42(2), 73–83. Retrieved from doi:10.1093/swr/svy007

National Academies of Sciences, Engineering, and Medicine. (2019). Consequences of child poverty. In G. Duncan & S. Le Menestrel (Eds.), *A Roadmap to Reducing Child Poverty* (pp. 67–96). Washington, DC: The National Academies Press. Retrieved from <https://www.nap.edu/read/25246/chapter/5#89>

Federal Reserve Bank of St. Louis. (2019). Total gross domestic product for Michigan. Retrieved from <https://research.stlouisfed.org/fred2/series/MINGSP>

122 Carroll, S. J., & Erkut, E. (2009). *The benefits to taxpayers from increases in students' educational attainment*. RAND Corporation. Retrieved from https://www.rand.org/content/dam/rand/pubs/monographs/2009/RAND_MG686.pdf

Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2019). *Household food security in the United States in 2018*. U.S. Department of Agriculture. Retrieved from <https://www.ers.usda.gov/webdocs/publications/94849/err-270.pdf?v=963.1>

Furman, J., & Ruffini, K. (2015, May 11). *Six examples of the long-term benefits of anti-poverty programs*. The White House, President Barack Obama Archives. Retrieved from <https://obamawhitehouse.archives.gov/blog/2015/05/11/six-examples-long-term-benefits-anti-poverty-programs>

Office of Disease Prevention and Health Promotion. (2020). *Social determinants of health*. Healthy People 2020. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>

Virginia Commonwealth University, Center on Society and Health. (2015, February 13). *Education: It matters more to health than ever before*. Retrieved from <https://societyhealth.vcu.edu/work/the-projects/education-it-matters-more-to-health-than-ever-before.html>

Woolf, A., Aron, L., Dubay, L., Simon, S. M., Zimmerman, E., & Luk, K. X. (2015, April). *How are income and wealth linked to health and longevity?* Urban Institute and Center of Society and Health at Virginia Commonwealth University. Retrieved from <https://www.urban.org/sites/default/files/publication/49116/2000178-How-are-Income-and-Wealth-Linked-to-Health-and-Longevity.pdf>

123 Internal Revenue Service. (n.d.). *1040 and 1040-SR: Instructions*. Retrieved from <https://www.irs.gov/pub/irs-pdf/f1040gi.pdf>

Internal Revenue Service. (n.d.). Statistics for 2019 tax returns with EITC. Retrieved from <https://www.eitc.irs.gov/eitc-central/statistics-for-tax-returns-with-eitc/statistics-for-2019-tax-returns-with-eitc>

Internal Revenue Service. (2020, January 3). Topic no. 751 Social Security and Medicare withholding rates. Retrieved from <https://www.irs.gov/taxtopics/tc751>

McKeever, B. S. (2018, December 13). *The nonprofit sector in brief 2018*. Urban Institute, National Center for Charitable Statistics. Retrieved from <https://nccs.urban.org/publication/nonprofit-sector-brief-2018#finances>

National Association of State Budget Officers. (2020). *State expenditure report: Fiscal years 2017–2019*. Retrieved from <http://www.nasbo.org/mainsite/reports-data/state-expenditure-report>

Office of Management and Budget. (2020). *Analytical perspectives: Budget of the U.S. government: Fiscal year 2018*. Retrieved from <https://www.gpo.gov/fdsys/pkg/BUDGET-2020-PER/pdf/BUDGET-2020-PER.pdf>

Scarboro, M. (2018, March). *State individual income tax rates and brackets for 2018*. Tax Foundation. Retrieved from <https://files.taxfoundation.org/20180315173118/Tax-Foundation-FF576-1.pdf>

U.S. Department of Agriculture. (n.d.). SNAP data tables [State level participation and benefits]. Food and Nutrition Service. Retrieved from <http://www.fns.usda.gov/pd/supplemental-nutrition-assistance-program-snap>

Urban Institute. (2012). NCCS Data Web Report Builder, Statistics of Income 990EZc3 Report and 990C3 Report. Data procured from National Center for Charitable Statistics.

Walczak, J. (2019, July). *Local income taxes in 2019*. Tax Foundation. Retrieved from <https://files.taxfoundation.org/20190730170302/Local-Income-Taxes-in-20191.pdf>

124 Chapman, J. & Thompson, J. (2006). *The economic impact of local living wages*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/bp170/>

Reeves, R. V. (2015). *Two anti-poverty strategies*. Brookings Institution. Retrieved from <https://www.brookings.edu/opinions/two-anti-poverty-strategies/>

125 Kahneman, D., & Deaton, A. (2010, September 21). High income improves evaluation of life but not emotional well-being. *Proceedings of the National Academy of Sciences of America*, 107(38), 16489–16493. Retrieved from <https://doi.org/10.1073/pnas.1011492107>

Jebb, A. T., Tay, L., Diener, E., & Shigehiro, O. (2018). Happiness, income satiation and turning points around the world. *Nature Human Behavior*, 2, 33–38. Retrieved from <https://www.nature.com/articles/s41562-017-0277-0>

American Psychological Association. (2017). *Stress and health disparities: Contexts, mechanisms, and interventions among racial/ethnic minority and low-socioeconomic status populations*. APA Working Group on Stress and Health Disparities. Retrieved from <https://www.apa.org/pi/health-disparities/resources/stress-report.pdf>

126 Beard, M. P. (2010). In-depth: Reaching the unbanked and underbanked. Federal Reserve Bank of St. Louis. Retrieved from <https://www.stlouisfed.org/publications/central-banker/winter-2010/reaching-the-unbanked-and-underbanked>

Hahn, R. A., Barnett W. S., Knopf J. A., Truman B. I., Johnson R. L., Fielding J. E., et al. (2016). Early childhood education to promote health equity: A community guide systematic review. *Journal of Public Health Management Practice*, 22(5), E1–8. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/26672406>

McKernan, S.-M., Ratcliffe, C., & Shanks, T. W. (2011). *Is poverty incompatible with asset accumulation?* Urban Institute. Retrieved from <https://www.urban.org/research/publication/poverty-incompatible-asset-accumulation>

127 Amadeo, K. (2019, July). Consumer spending and its impact on the economy. *The Balance*. Retrieved from <https://www.thebalance.com/consumer-spending-definition-and-determinants-3305917>

Chapman, J., & Thompson, J. (2006). *The economic impact of local living wages*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/bp170/>

Office of Policy Development and Research. (2016, Summer). *Neighborhoods and violent crime. Evidence matters: Transforming knowledge into housing and community development policy*. U.S. Department of Housing and Urban Development. Retrieved from <https://www.huduser.gov/portal/periodicals/em/summer16/highlight2.html>

McKenzie, T. L., Moody, J. S., Carlson, J. A., Lopez, N. V., Elder, J. P. (2014). Neighborhood income matters: Disparities in community recreation facilities, amenities, and programs. *Journal of Park and Recreation Administration*, 31(4), 12–22. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4082954/>

FIGURE 12: SOURCES

HOUSING

- Chetty, R., Hendren, N., & Katz, L. F. (2016, April). The effects of exposure to better neighborhoods on children: New evidence from the Moving to Opportunity Experiment. *American Economic Review*, 106(4), 855–902. Retrieved from <https://www.aeaweb.org/articles?id=10.1257/aer.20150572>
- Cunningham, M. K. (2016, June 26). *Reduce poverty by improving housing stability*. Urban Institute. Retrieved from <https://www.urban.org/urban-wire/reduce-poverty-improving-housing-stability>
- Enterprise Community Partners, Inc. (2014). *Impact of affordable housing on families and communities: A review of the evidence base*. Retrieved from <https://homeforallsmc.org/wp-content/uploads/2017/05/Impact-of-Affordable-Housing-on-Families-and-Communities.pdf>
- Goodman, L. (2018, February 21). *Homeownership is still financially better than renting*. Urban Institute. Retrieved from <https://www.urban.org/urban-wire/homeownership-still-financially-better-renting>
- Joint Center for Housing Studies. (2020). The state of the nation's housing 2019. Harvard University. Retrieved from https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_State_of_the_Nations_Housing_2019.pdf
- Litman, T. (2015, March). *Analysis of public policies that unintentionally encourage and subsidize sprawl*. The New Climate Economy and the Victoria Transport Policy Institute. Retrieved from <https://newclimateeconomy.report/workingpapers/wp-content/uploads/sites/5/2016/04/public-policies-encourage-sprawl-nce-report.pdf>
- Maqbool, N., Viveiros, J., & Ault, M. (2015, April). *The impacts of affordable housing on health: A research summary*. Center for Housing Policy. Retrieved from <https://www.rupco.org/wp-content/uploads/pdfs/The-Impacts-of-Affordable-Housing-on-Health-CenterforHousingPolicy-Maqbooletal.pdf>
- National Alliance to End Homelessness. (2015, June 30). *Permanent supportive housing cost study map*. Retrieved from <https://endhomelessness.org/resource/permanent-supportive-housing-cost-study-map/>
- Office of Development and Research. (2014). How housing mobility affects education outcomes for low-income children. *Evidence Matters*. U.S. Department of Housing and Urban Development. Retrieved from <https://www.huduser.gov/portal/periodicals/em/fall14/highlight2.html>
- Rohe, W. M., & Lindblad, M. (2013, August). *Reexamining the social benefits of homeownership after the housing crisis*. Joint Center for Housing Studies, Harvard University. Retrieved from <https://www.jchs.harvard.edu/sites/default/files/hbtl-04.pdf>
- Sullivan, J. (2015, April 21). *How commute issues can dramatically impact employee retention*. TLNT. Retrieved from <https://www.tlnt.com/how-commute-issues-can-dramatically-impact-employee-retention/>
- Taylor, L. (2018, June 7). *Housing and health: An overview of the literature*. *Health Affairs Health Policy Brief*. Retrieved from <https://www.healthaffairs.org/do/10.1377/hpb20180313.396577/full/>
- The Economist. (2018, June 7). *The stark relationship between income inequality and crime*. Retrieved from <https://www.economist.com/graphic-detail/2018/06/07/the-stark-relationship-between-income-inequality-and-crime>
- Wright, B., Li, G., Weller, M., & Vartanian, K. (2016, February). *Housing and health: Exploring the intersection between housing and health care*. Enterprise Community Partners and Center for Outcomes Research and Education. Retrieved from <https://www.enterprisecommunity.org/download?fid=5703&nid=4247>
- United States Interagency Council on Homelessness. (2017). *Ending chronic homelessness in 2017*. Retrieved from https://www.usich.gov/resources/uploads/asset_library/Ending_Chronic_Homelessness_in_2017.pdf

CHILD CARE

- Alliance for Excellent Education. (2019). *The graduation effect*. Retrieved from <http://impact.all4ed.org/>
- American Psychological Association. (2019). *Education and socioeconomic status*. Retrieved from <https://www.apa.org/pi/ses/resources/publications/education>
- Auguste, B.G., Hancock, B., & Laboissiere, M. (2009). *The economic cost of the U.S. education gap*. McKinsey & Company. Retrieved from <https://www.mckinsey.com/industries/social-sector/our-insights/the-economic-cost-of-the-us-education-gap>
- Child Care Aware of America. (2019). *The US and the high cost of child care: An examination of a broken system*. Retrieved from <https://usa.childcareaware.org/advocacy-public-policy/resources/research/costofcare/>
- Garcia, E. & Weiss, E. (2017, September 27). *Education inequalities at the school starting gate*. Economic Policy Institute. Retrieved from <https://www.epi.org/publication/education-inequalities-at-the-school-starting-gate/>
- Garcia, J. L., Heckman, J. J., Leaf, D. E., & Prados, M. J. (2016, December). *The life-cycle benefits of an influential early childhood program*. National Bureau of Economic Research. Retrieved from <https://www.nber.org/papers/w22993>
- Virginia Commonwealth University, Center on Society and Health. (2015, February 13). *Why education matters to health: Exploring the causes*. Retrieved from <https://www.aecf.org/resources/overstressed-kids/>

FOOD

- Berkowitz, S. A., Basu, S., Meigs, J. B., & Selgman, H. K. (2018). Food insecurity and health care expenditures in the United States, 2011–2013. *Health Services Research*, 53(3), 1600–1602. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1111/1475-6773.12730>
- Bhargava, V., & Lee, J. S. (2016). Food insecurity and health care utilization among older adults in the United States. *Journal of Nutrition in Gerontology and Geriatrics*, 35(3), 177–192. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/27559853>
- Feeding America & Oxfam America. (2014). *From paycheck to pantry: Hunger in working America*. Retrieved from <https://www.feedingamerica.org/sites/default/files/research/hunger-in-working-america/from-paycheck-to-pantry.pdf>
- Food Research and Action Center. (2017). *The impact of poverty, food insecurity, and poor nutrition on health and well-being*. Retrieved from <http://frac.org/wp-content/uploads/hunger-health-impact-poverty-food-insecurity-health-well-being.pdf>
- French, S.A., Tangney, C.C., Crane, M.M. et al. (2019). Nutrition quality of food purchases varies by household income: the SHoPPER study. *BMC Public Health*, 19(231). <https://doi.org/10.1186/s12889-019-6546-2>
- Johnson, A. D., & Markowitz, A. J. (2017, March 21). Association between household food insecurity in early childhood and children's kindergarten skills. *Child Development*, 89(2). Retrieved from <https://doi.org/10.1111/cdev.12764>
- Loopstra, R., & Lalor, D. (2017). *Financial insecurity, food insecurity, and disability: The profile of people receiving emergency food assistance from The Trussell Trust Foodbank Network in Britain*. The Trussell Trust. Retrieved from https://www.trusselltrust.org/wp-content/uploads/sites/2/2017/06/UO_exec_summary_final_02_04_online.pdf
- McLaughlin, K. A. Green, J. G. Alegria, M., & Costello, E. J. (2012, December). Food insecurity and mental disorders in a national sample of U.S. adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 51(12), 1293–1303. Retrieved from <https://www.sciencedirect.com/science/article/pii/S0890856712007265>
- RTI International. (2014). *Current and prospective scope of hunger and food security in America*. Retrieved from http://www.rti.org/sites/default/files/resources/full_hunger_report_final_07-24-14.pdf

TRANSPORTATION

- Beiler, M. O., & Mohammed, M. (2016). Exploring transportation equity: Development and application of a transportation justice framework. *Transportation research part D: transport and environment*, 47, 285–298. Retrieved from <https://doi.org/10.1016/j.trd.2016.06.007>
- Dawkins, C., Jeon, J. S., & Pendall, R. (2015). Transportation access, rental vouchers, and neighborhood satisfaction: Evidence from the moving to opportunity experiment. *Housing Policy Debate*, 25(3), 497–530. Retrieved from <https://doi.org/10.1080/10511482.2014.986662>
- Institute for Transportation and Development Policy. (2019, May 23). The high cost of transportation in the United States. Transportation Matters. Retrieved from <https://www.itdp.org/2019/05/23/high-cost-transportation-united-states/>
- Martens, K. (2016). *Transport justice: Designing fair transportation systems*. New York: Routledge.
- Robert Wood Johnson Foundation. (2012, October 25). *How does transportation impact health?* Retrieved from <https://www.rwjf.org/en/library/research/2012/10/how-does-transportation-impact-health-.html>
- Sullivan, J. (2015, April 21). *How commute issues can dramatically impact employee retention*. TLNT. Retrieved from <https://www.tlnt.com/how-commute-issues-can-dramatically-impact-employee-retention/>
- Young, L., Irvin, E., & Shankar, P. (2019, September). *Equity and smart mobility*. Institute for Sustainable Communities and the Center for Neighborhood Technology. Retrieved from <https://www.cnt.org/sites/default/files/publications/Equity-and-Smart-Mobility-Report.pdf>
- Zhao, F., & Gustafson, T. (2013, February). Transportation needs of disadvantaged populations: Where, when, and how? *FTA Report No. 0030*. Federal Transit Administration. Retrieved from https://www.transit.dot.gov/sites/fta.dot.gov/files/FTA_Report_No._0030.pdf

HEALTH CARE

- Centers for Disease Control and Prevention. (2016). *Emergency department visits*. Retrieved from <https://www.cdc.gov/nchs/fastats/emergency-department.htm>
- Claxton, G., Sawyer, B., & Cox, C. (2019, April 14). How affordability of health care varies by income among people with employer coverage. *Access & Affordability, Peterson-KFF Health System Tracker*. Retrieved from <https://www.healthsystemtracker.org/brief/how-affordability-of-health-care-varies-by-income-among-people-with-employer-coverage/>
- DeLia, D., & Lloyd, K. (2014, July). *Sources of variation in avoidable hospital use and cost across low-income communities in New Jersey*. Rutgers Center for State Health Policy. Retrieved from <http://www.cshp.rutgers.edu/downloads/10470.pdf>
- Dickman, S. L., Himmelstein, D. U., & Woolhandler, S. (2017). Inequality and the health-care system in the USA. *The Lancet*, 389(10077), 1431–1441.
- Golberstein E. (2015). The effects of income on mental health: evidence from the social security notch. *The Journal of Mental Health Policy and Economics*, 18(1), 27–37. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4494112/>

McMorrow, S., Kenney, G. M., & Goin, D. (2014). Determinants of receipt of recommended preventive services: implications for the Affordable Care Act. *American Journal of Public Health*, 104(12), 2392–2399. <https://doi.org/10.2105/AJPH.2013.301569>

Powell, A. (2016, February 22). The costs of inequality: Money = quality healthcare = longer life. *Harvard Gazette*. Retrieved from <https://news.harvard.edu/gazette/story/2016/02/money-quality-health-care-longer-life/>

Robert Wood Johnson Foundation. (2011, December 1). *Health care's blind side: The overlooked connection between social needs and good health: Summary of findings from a survey of America's physicians*. Retrieved from <http://www.rwjf.org/files/research/RWJFPhysiciansSurveyExecutiveSummary.pdf>

Witters, D., & Liu, D. (2013, May 7). In U.S., poor health tied to big losses for all job types. *Gallup*. Retrieved from <http://www.gallup.com/poll/162344/poor-health-tied-big-losses-jobtypes.aspx>

Woolf, S.H., Aron, L., Dubay, L., Simon, S.M., Zimmerman, E., & Luk, K.X. (2015, April). *How are income and wealth linked to health and longevity?* Urban Institute. Retrieved from <https://www.urban.org/sites/default/files/publication/49116/2000178-How-are-Income-and-Wealth-Linked-to-Health-and-Longevity.pdf>

TECHNOLOGY

Anderson, M., & Perrin, A. (2018, October 26). *Nearly one-in-five teens can't always finish their homework because of the digital divide*. Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2018/10/26/nearly-one-in-five-teens-cant-always-finish-their-homework-because-of-the-digital-divide/>

Anderson, M. (2019, May 7). *Digital divide persists even as lower-income Americans make gains in tech adoption*. Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2017/03/22/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>

Children's Hospital of Los Angeles. (2019). *mHealth*. Retrieved from <https://www.himss.org/library/mhealth>

Office of Policy Development and Research. (2016). *Community development and the digital divide*. U.S. Department of Housing and Urban Development. Retrieved from <https://www.huduser.gov/portal/periodicals/em/fall16/highlight1.html>

Pew Research Center. (2019, June 12). *Mobile fact sheet*. Retrieved from <https://www.pewinternet.org/fact-sheet/mobile/>

Rideout, V., & Katz, V. (2016, Winter). *Opportunity for all? Technology and learning in lower-income families. A report of the families and media project*. The Joan Ganz Cooney Center at Sesame Workshop. Retrieved from http://joanganzcooneycenter.org/wp-content/uploads/2016/01/jgcc_opportunityforall.pdf

Smith, A. (2013, April 25). *Civic engagement in the digital age*. Pew Research Center. Retrieved from <https://www.pewinternet.org/2013/04/25/civic-engagement-in-the-digital-age/>

Smith, A. (2015, April 1). Usage and attitudes toward smartphones. In *U.S. smartphone use in 2015*. Pew Research Center. Retrieved from <https://www.pewinternet.org/2015/04/01/chapter-two-usage-and-attitudes-toward-smartphones/#job%20seeking>

SAVINGS

Blank, R. M., & Barr, M. S. (Eds.). (2009). *Insufficient funds: Savings, assets, credit, and banking among low-income households*. New York: Russell Sage Foundation.

Collins, J. M., & Gjertson, L. (2013). Emergency savings for low-income consumers. *Focus*, 30(1), 12–17. Retrieved from <https://www.ipr.wisc.edu/publications/focus/pdfs/foc301c.pdf>

Econsult Solutions, Inc. (ESI). (2018, January 18). *ESI examines the impact of insufficient retirement savings on Pennsylvania*. Pennsylvania Treasury. Retrieved from <https://patreasury.gov/pdf/Impact-Insufficient-Retirement-Savings.pdf>

Helm, S., Serido, J., Ahn, S.Y., Ligon, V., & Shim, S. (2019, November). Materialist values, financial and pro-environmental behaviors, and well-being. *Emerald Insight*. Retrieved from <https://www.emerald.com/insight/content/doi/10.1108/YC-10-2018-0867/full/html>

Krieger, J., Carter, G., Burr, M., & Collins, J.M. (2017, January). *The case for reducing poverty among seniors: Encouraging savings for retirement by people in Wisconsin: Projected reductions in Wisconsin state expenditures*. La Follette School of Public Affairs, the University of Wisconsin–Madison, and AARP. Retrieved from <https://lafollette.wisc.edu/images/publications/otherpublications/AARP-The-Case-for-Reducing-Poverty-Among-Seniors.pdf>

Levins, N. (2016, April). *Why cities should care about family financial security*. Urban Institute. Retrieved from <https://www.urban.org/features/why-cities-should-care-about-family-financial-security>

Mutchler, J., Li, Y., & Roldán, N.V. (2019). *Living below the line: Economic insecurity and older Americans, insecurity in the states 2019*. Center for Social and Demographic Research on Aging at the University of Massachusetts Boston. Retrieved from <https://scholarworks.umb.edu/demographyofaging/40/>

Poterba, J. M., & Venti, S. F. (2001). Preretirement cashouts and foregone retirement saving: Implications for 401(k) asset accumulation. In D. A. Wise (Ed.), *Themes in the Economics of Aging* (pp. 23–58). Chicago: University of Chicago Press. Retrieved from <https://www.nber.org/chapters/c10320>

Rhee, N. & Bovie, I. (2015, March). *The continuing retirement savings crisis*. National Institute on Retirement Savings. Retrieved from https://www.nirsonline.org/wp-content/uploads/2017/07/final_rsc_2015.pdf

Wang, L., & Graddy, E. (2008). Social capital, volunteering, and charitable giving. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 19(1), 23. Retrieved from https://www.researchgate.net/publication/226255124_Social_Capital_Volunteering_and_Charitable_Giving

ALICE is a registered trademark of the United Way of Northern New Jersey.

© Copyright 2009–2021 United Way of Northern New Jersey. All rights reserved.

No further use, copying, dissemination, distribution, or publication is permitted without the express written permission
of United Way of Northern New Jersey.