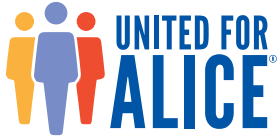


# ALICE IN PENNSYLVANIA: A FINANCIAL HARDSHIP STUDY

LIVE UNITED

2020 PENNSYLVANIA REPORT



United Way  
of Pennsylvania

# ALICE IN THE TIME OF COVID-19



The release of this ALICE Report for Pennsylvania 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 Pennsylvania presents the latest ALICE data available — a point-in-time snapshot of economic conditions across the state in 2018. By showing how many Pennsylvania 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 advocates 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 Pennsylvania 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](https://UnitedForALICE.org/COVID19) for updates.**

# UNITED WAYS AND UNITED FUNDS IN PENNSYLVANIA

## **Centre County United Way**

Clearfield Area United Way  
Clinton County United Way  
Du Bois Area United Way  
The Ellwood City Area United Fund

## **Greater Susquehanna Valley United Way**

Greene County United Way  
Grove City Area United Way  
Huntingdon County United Way  
Kane Area United Fund

## **Lycoming County United Way**

Mansfield Area United Fund  
North Penn Area United Fund

## **Pocono Mountains United Way**

## **Schuylkill United Way**

St. Marys Area United Way  
United Fund of the Corry Area  
United Fund of Warren County  
United Way of Adams County  
United Way of Armstrong County  
United Way of Beaver County

## **United Way of Bedford County**

## **United Way of Berks County**

United Way of Blair County  
United Way of Bradford County

## **United Way of Bucks County**

United Way of Carlisle  
& Cumberland County

## **United Way of Chester County**

## **United Way of Clarion County**

United Way of Columbia  
& Montour County

## **United Way of Erie County**

## **United Way of Franklin County**

United Way of Greater Hazleton

United Way of Greater Philadelphia  
& Southern New Jersey

## **United Way of Indiana County**

United Way of Lackawanna and  
Wayne Counties

## **United Way of Lancaster County**

## **United Way of Lawrence County**

## **United Way of Lebanon County**

United Way of Mercer County

United Way of Mifflin-Juniata

United Way of Mon Valley

United Way of Pike County

United Way of Southern Chester County

## **United Way of Southwestern Pennsylvania**

United Way of the Boyertown Area

United Way of the Bradford Area

## **United Way of the Capital Region**

## **United Way of the Greater Lehigh Valley**

## **United Way of the Laurel Highlands**

United Way of the Shippensburg Area

United Way of the Titusville Region

United Way of Venango County

United Way of Western  
Crawford County

United Way of Wyoming Valley

## **United Way of York County**

United Way Washington County

Wyoming County United Way

Note: In addition to corporate sponsorships, this Report was made possible by the United Ways noted above in bold.

Learn more about ALICE in Pennsylvania: [www.uwp.org/ALICE](http://www.uwp.org/ALICE)

## Acknowledgments

United Ways of Pennsylvania thank our sponsors, partners, and community advocates throughout the state for their support and commitment to this 2020 ALICE Report for Pennsylvania. It is our hope that this Report will help raise awareness of the 39% of households in the state who live in poverty or who are **ALICE** — **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed. 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 Pennsylvania, contact: **Rebecca O'Shea**, [roshea@uwp.org](mailto:roshea@uwp.org), 717-238-7365 x 204.

To access the ALICE data and resources for Pennsylvania, go to [UnitedForALICE.org/Pennsylvania](http://UnitedForALICE.org/Pennsylvania)



# 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 Pennsylvania, 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](https://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 Pennsylvania

**William A. Calo, Ph.D., J.D., M.P.H.**  
*Penn State College of Medicine*

**Vincent Cannizzaro, M.P.P.**  
*The Arthur J. Glatfelter Institute for  
Public Policy, York College of Pennsylvania*

**Scott Davis, M.S.**  
*Pennsylvania Housing Finance Agency*

**Paul R. Flora, M.U.R.P., M.A.**  
*Federal Reserve Bank of Philadelphia*

**Karen Grimm-Thomas, M.S.**  
*Pennsylvania Office of Child Development  
and Early Learning*

**James P. Huguley, M.Ed., Ed.D.**  
*University of Pittsburgh School of Social Work,  
Center on Race and Social Problems*

**Jonathan Johnson, M.S.**  
*The Center for Rural Pennsylvania*

**Ben Marsh, Ph.D.**  
*Bucknell University*

**Teri Ooms, M.B.A.**  
*The Institute for Public Policy  
& Economic Development*

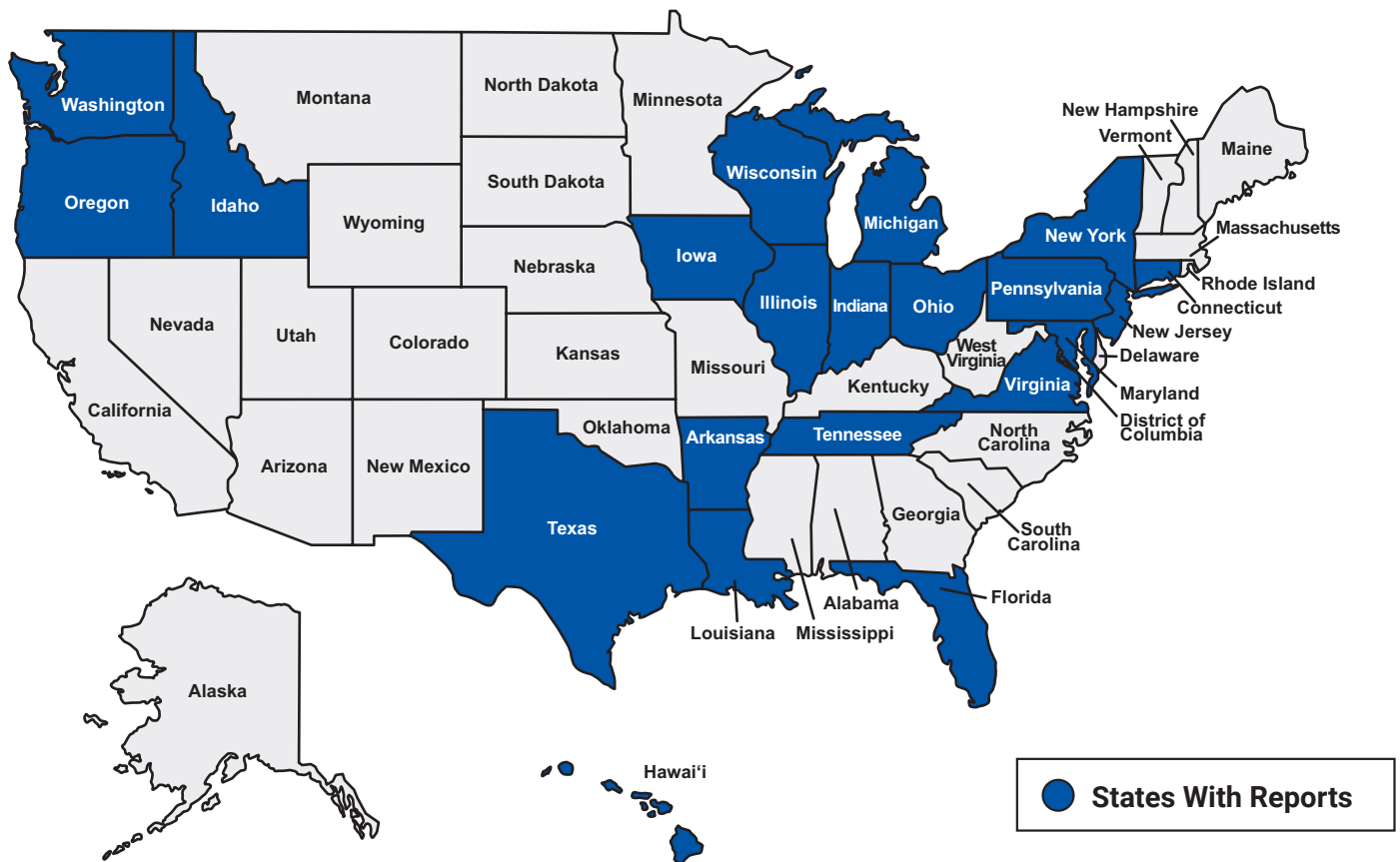
**Adam Scavette, M.S.**  
*Federal Reserve Bank of Philadelphia*

**Berwood A. Yost, M.A.**  
*Floyd Institute for Public Policy, Center for  
Opinion Research, Franklin & Marshall College*

# 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 basic 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 21 states and more than 648 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](https://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 ■ Atlantic Union Bank  
Compare.com ■ Deloitte ■ Entergy ■ Johnson & Johnson ■ JLL ■ Kaiser Permanente ■ Key Bank  
RWJBarnabas Health ■ Robert Wood Johnson Foundation ■ Thrivent Financial Foundation ■ UPS ■ U.S. Venture

# 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](https://UnitedForALICE.org/Methodology)

## This Report includes the following improvements:

**More local variation:** The ALICE 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 Americans<sup>1</sup>), 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+).<sup>2</sup> 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/Pennsylvania](https://UnitedForALICE.org/Pennsylvania)

## 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 Bureau of Labor Statistics' (BLS) Consumer Price Index, which covers all goods and services that families at all income levels buy regularly.

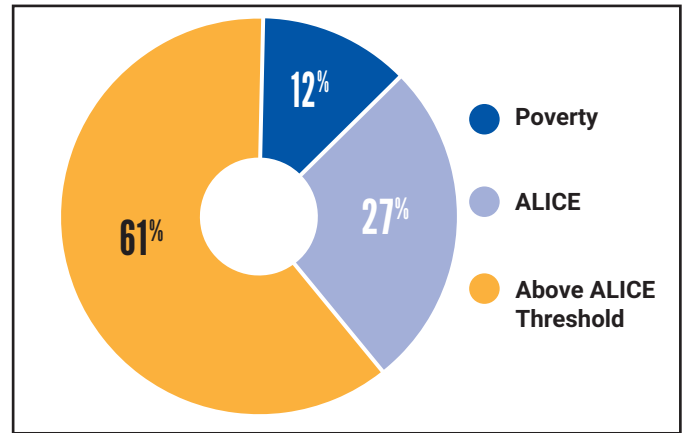
**Data Notes:** The data are estimates; some are geographic averages, others are one- or five-year averages depending on population size. Change-over-time ranges start with 2007, before the Great Recession, then measure change every two years from 2010 to 2018. County-level data remains the primary focus, as state averages mask significant differences between counties. For example, the share of households below the ALICE Threshold in Pennsylvania ranges from 27% in Chester County to 51% in Philadelphia and Potter counties. 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, due to improved sources and calculations, some numbers and percentages at the state and county level may not match those reported in the previous ALICE Report for Pennsylvania.

# TABLE OF CONTENTS

<b>Asset Limited, Income Constrained, Employed</b> .....	1
<b>At-A-Glance: Pennsylvania</b> .....	3
<b>Who Is ALICE?</b> .....	6
Trends: Household Demographics .....	8
<b>The Cost of Living in Pennsylvania</b> .....	10
The ALICE Household Budgets .....	10
The ALICE Essentials Index .....	12
Trends: Cost of Living .....	13
<b>The Changing Landscape of Work in Pennsylvania</b> .....	16
The New Labor Force .....	18
ALICE Jobs: Maintaining the Economy .....	20
Trends: The Landscape of Work .....	22
<b>Next Steps: Data for Action</b> .....	24
Identifying Gaps .....	24
Understanding ALICE: Health, Education, and Social Factors .....	26
The Benefits of Moving Toward INCOME Equity in Pennsylvania .....	27
<b>Appendix</b> .....	31
<b>Endnotes</b> .....	32
Figure 12: Sources .....	44

# ASSET LIMITED, INCOME CONSTRAINED, EMPLOYED

From 2010 to 2018, Pennsylvania showed steady economic improvements according to traditional measures. Unemployment in the state and across the U.S. fell to historic lows, GDP grew, and wages rose slightly. Yet in 2018, eight years after the end of the Great Recession, 39% of Pennsylvania's 5,067,682 households still struggled to make ends meet. And while 12% of these households were living below the Federal Poverty Level (FPL), another 27% – more than twice as many – were **ALICE** households: **A**sset **L**imited, **I**ncome **C**onstrained, **E**mloyed. These households earned above the FPL, but not enough to afford basic household necessities.



This Report provides new data and tools that explain the persistent level of hardship faced by ALICE households, revealing aspects of the Pennsylvania economy not tracked by traditional economic measures. The Report highlights three critical trends:

- **The cost of living is increasing for ALICE households.** From 2007 to 2018, 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 essentials, increased at an average rate of 3.4% annually nationwide over the past decade, while the official rate of inflation was 1.8%.
- **Worker vulnerability is increasing while wages stagnate in ALICE jobs.** By 2018, a near-record-low number of people were reported to be unemployed. However, that low unemployment concealed three 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 2018: A record number of Pennsylvania workers – 56% – were paid by the hour, and 58% of the state's jobs paid less than \$20 per hour.
- **The number of ALICE households is increasing in Pennsylvania** as a result of rising costs and stagnant wages. There are more than twice the number of 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 Pennsylvania, the percentage of households that were ALICE rose from 21% in 2007 to 27% in 2018. By contrast, those in poverty remained at around 13% throughout the period.

This Report provides critical measures that assess Pennsylvania's economy from four perspectives: They track financial hardship over time and across demographic groups; quantify the basic cost of living in Pennsylvania; 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 Pennsylvania GDP would be approximately \$130.2 billion.

This Report and its measures are tools to help advocates increase public awareness, 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 **A**sset **L**imited, **I**ncome **C**onstrained, **E**mployed – 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 basic necessities (housing, child care, food, transportation, health care, and a basic smartphone plan) in Pennsylvania, 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 basic necessities defined by the Household Survival Budget for each county in Pennsylvania. Households **Below the ALICE Threshold** include both ALICE and poverty-level households.

The **ALICE Essentials Index** is a 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](https://UnitedForALICE.org) for more details about ALICE, including:



### Interactive Maps

Data at the state, county, municipal, ZIP code, and congressional district 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



### Jobs Graphs

Details about where ALICE works



### 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.

# AT-A-GLANCE: PENNSYLVANIA

2018 Point-in-Time Data

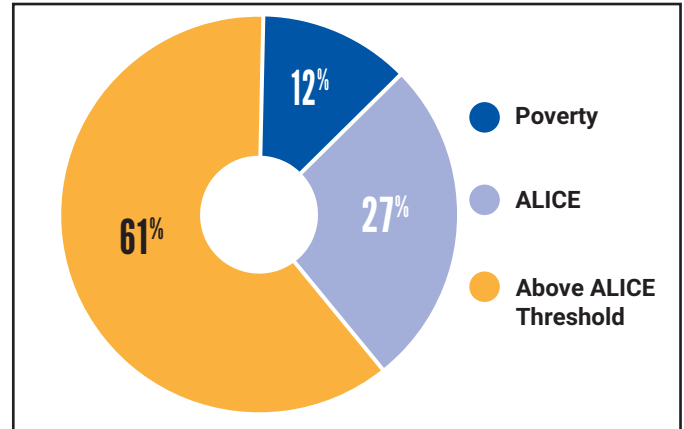
Population: 12,807,060

Number of Counties: 67

Number of Households: 5,067,682

## How many households are struggling?

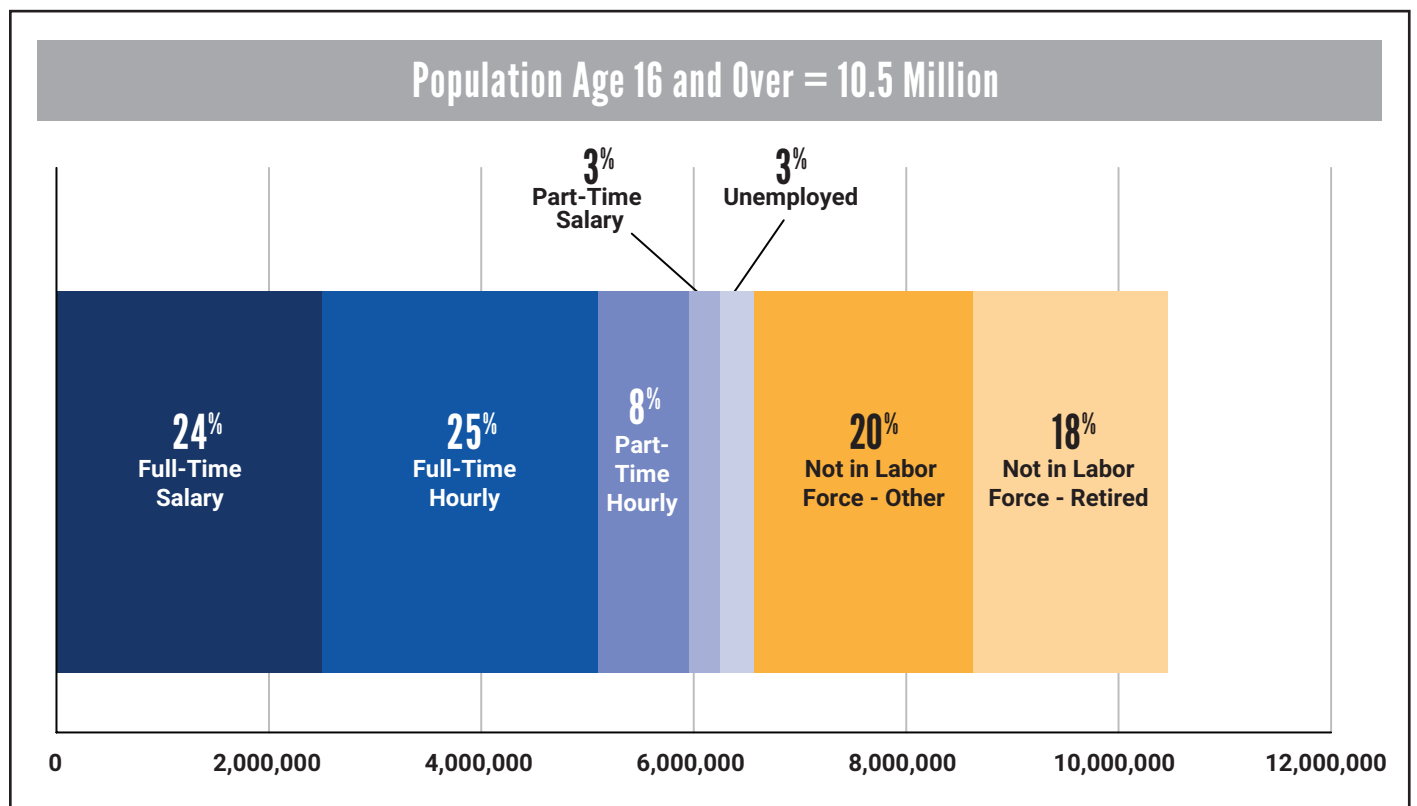
**ALICE**, an acronym for **A**sset Limited, **I**ncome **C**onstrained, **E**mployed, comprises households that earn more than the Federal Poverty Level but less than the basic cost of living for the state (the ALICE Threshold). Of Pennsylvania's 5,067,682 households, 611,043 earned below the Federal Poverty Level (12%) in 2018, and another 1,359,983 (27%) were ALICE.



## What does the Pennsylvania labor force look like?

A 2018 overview of the labor status of Pennsylvania's 10,464,719 working-age adults (people age 16 and over) shows that 63% of adults were in the labor force (blue bars), yet 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, Pennsylvania, 2018



*Note: Data for full- and part-time jobs is only available at the national level; these national rates (51% of full-time workers and 75% of part-time, hourly workers) have been applied to the total Pennsylvania 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 Pennsylvania was \$23,544 for a single adult, \$26,436 for a single senior, and \$69,648 for a family of four in 2018 – significantly more than the Federal Poverty Level of \$12,140 for a single adult and \$25,100 for a family of four.



Household Survival Budget, Pennsylvania Average, 2018			
	SINGLE ADULT	SENIOR (1 ADULT)	2 ADULTS, 1 INFANT, 1 PRESCHOOLER
<b>Monthly Costs</b>			
Housing	\$640	\$640	\$894
Child Care	-	-	\$1,229
Food	\$277	\$236	\$839
Transportation	\$332	\$287	\$789
Health Care	\$187	\$485	\$716
Technology	\$55	\$55	\$75
Miscellaneous	\$178	\$200	\$528
Taxes	\$293	\$300	\$734
<b>Monthly Total</b>	<b>\$1,962</b>	<b>\$2,203</b>	<b>\$5,804</b>
<b>ANNUAL TOTAL</b>	<b>\$23,544</b>	<b>\$26,436</b>	<b>\$69,648</b>
<b>Hourly Wage*</b>	<b>\$11.77</b>	<b>\$13.22</b>	<b>\$34.82</b>

\*Full-time wage required to support this budget

Pennsylvania Counties, 2018		
COUNTY	TOTAL HOUSEHOLDS	% ALICE & POVERTY
Adams	39,570	35%
Allegheny	543,369	38%
Armstrong	27,332	37%
Beaver	73,059	39%
Bedford	19,674	45%
Berks	157,006	35%
Blair	51,096	39%
Bradford	24,812	37%

Pennsylvania Counties, 2018		
COUNTY	TOTAL HOUSEHOLDS	% ALICE & POVERTY
Bucks	239,962	30%
Butler	77,764	33%
Cambria	56,483	43%
Cameron	2,232	44%
Carbon	25,739	42%
Centre	58,514	45%
Chester	192,746	27%
Clarion	15,824	44%

Pennsylvania Counties, 2018		
COUNTY	TOTAL HOUSEHOLDS	% ALICE & POVERTY
Clearfield	31,992	45%
Clinton	14,744	44%
Columbia	26,655	44%
Crawford	34,386	39%
Cumberland	102,243	33%
Dauphin	112,559	41%
Delaware	207,499	33%
Elk	13,727	38%
Erie	109,797	46%
Fayette	56,085	40%
Forest	1,631	46%
Franklin	59,834	33%
Fulton	5,950	42%
Greene	14,211	41%
Huntingdon	16,808	48%
Indiana	33,098	45%
Jefferson	18,465	43%
Juniata	9,404	41%
Lackawanna	88,268	39%
Lancaster	202,490	34%
Lawrence	37,497	44%
Lebanon	54,522	37%
Lehigh	138,586	47%
Luzerne	128,301	41%
Lycoming	44,585	38%
McKean	17,169	41%
Mercer	46,809	42%
Mifflin	19,094	43%
Monroe	55,109	43%

Pennsylvania Counties, 2018		
COUNTY	TOTAL HOUSEHOLDS	% ALICE & POVERTY
Montgomery	313,336	30%
Montour	7,482	39%
Northampton	114,996	40%
Northumberland	38,816	44%
Perry	18,091	38%
Philadelphia	608,233	51%
Pike	21,871	37%
Potter	6,523	51%
Schuylkill	58,458	42%
Snyder	14,716	41%
Somerset	28,796	42%
Sullivan	2,721	41%
Susquehanna	17,347	41%
Tioga	16,178	44%
Union	14,739	47%
Venango	21,915	41%
Warren	17,080	39%
Washington	85,835	36%
Wayne	18,739	41%
Westmoreland	150,368	39%
Wyoming	10,784	39%
York	173,958	32%

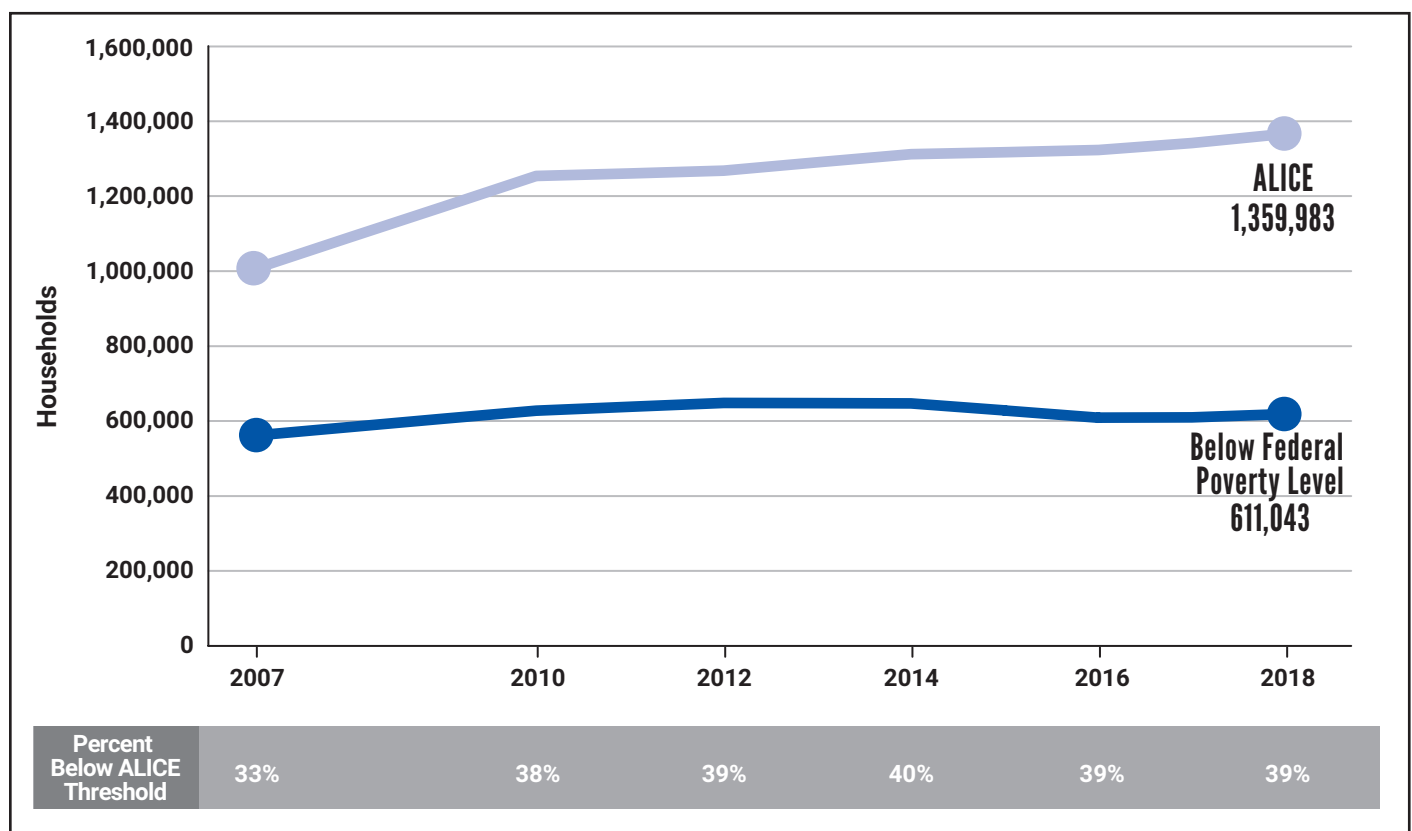
**Sources:** *Point-in-Time Data:* American Community Survey, 2018. *ALICE Demographics:* ALICE Threshold, 2018; American Community Survey, 2018. *Labor Status:* American Community Survey, 2018; Federal Reserve Bank of St. Louis, 2018. *Budget:* AAA, 2018; Agency for Healthcare Research and Quality, 2018; American Community Survey, 2018; Bureau of Labor Statistics, 2018—Consumer Expenditure Surveys; Bureau of Labor Statistics, 2019—Consumer Expenditure Survey; Bureau of Labor Statistics, 2018—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, 2019; Fowler, 2019; Internal Revenue Service, 2020; Internal Revenue Service—FICA, 2020; Medicare.gov; Pennsylvania Department of Education and Human Services; Scarborough, 2018; The Zebra, 2018; U.S. Department of Agriculture, 2018—Official USDA Food Plans; U.S. Department of Housing and Urban Development, 2018—Fair Market Rents; Walczak, 2019. For more details, see the Methodology Overview at [UnitedForALICE.org/Methodology](https://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, child care workers, servers, laborers, and security guards. These types of jobs are vital to keeping Pennsylvania’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 2018 the total number of Pennsylvania households grew by 4%, to 5,067,682 households. When households in poverty alone are considered, financial hardship remained relatively flat during this period, and even improved slightly between 2014 and 2018. However, the trajectory for ALICE households in the state presents a very different picture, one that shows a large and growing number of households that did not benefit from the “recovery” after the Great Recession, and who continue to struggle to make ends meet. The number of ALICE households increased by a substantial 35% (from 1,006,708 to 1,359,983) from 2007 to 2018, with their share of all households rising from 21% to 27%. Overall, the percentage of households living below the ALICE Threshold (ALICE and poverty-level households combined) increased from 33% in 2007 to 39% in 2018 (Figure 1).

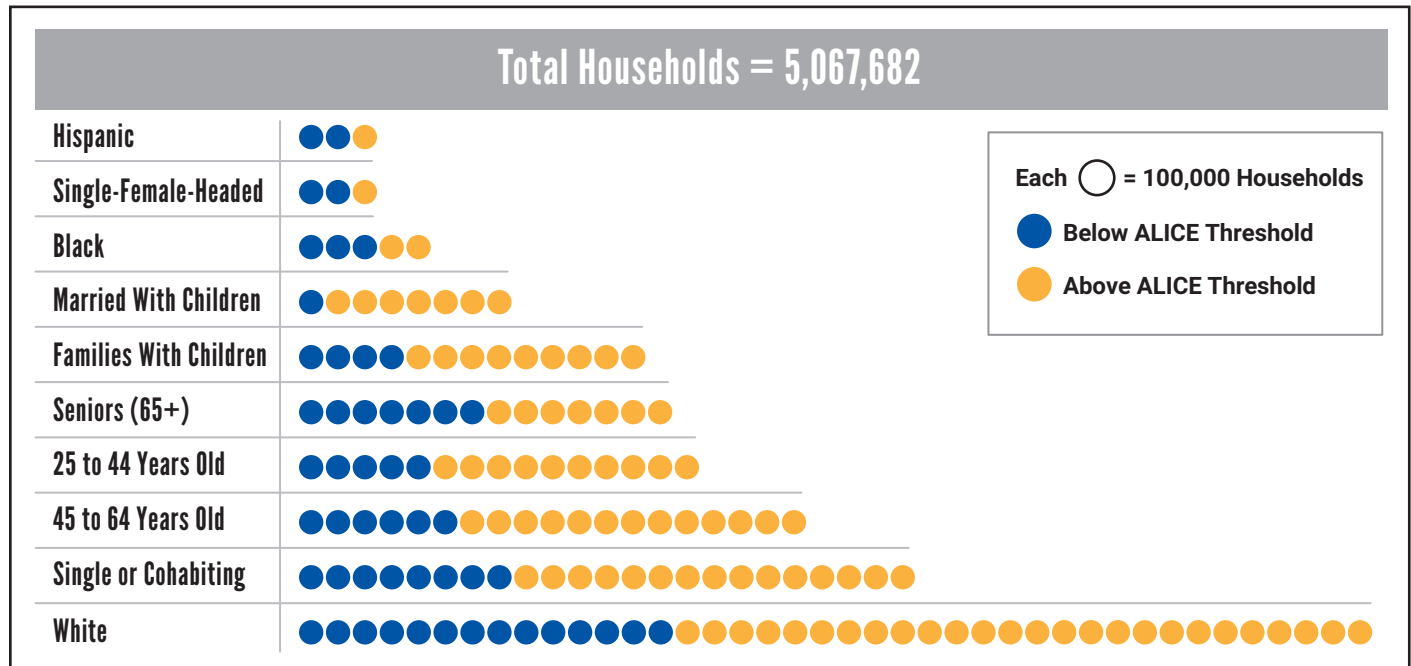
**Figure 1.**  
**Households by Income, Pennsylvania, 2007–2018**



Sources: ALICE Threshold, 2007–2018; American Community Survey, 2007–2018

ALICE households live in every county in Pennsylvania – urban, suburban, and rural – and they include people of all genders, ages, and races/ethnicities, across all household types. Figure 2 shows that in 2018, the largest numbers of households below the ALICE Threshold were in the largest demographic groups in Pennsylvania – namely, households headed by someone in their prime working years (ages 25–64), single or cohabiting households (without children or seniors), and White households. Among families with children – another of the state’s biggest groups – married-parent families were the largest subgroup and accounted for 30% of families with children living below the ALICE Threshold.

**Figure 2.**  
**Household Types by Income, Largest Groups, Pennsylvania, 2018**

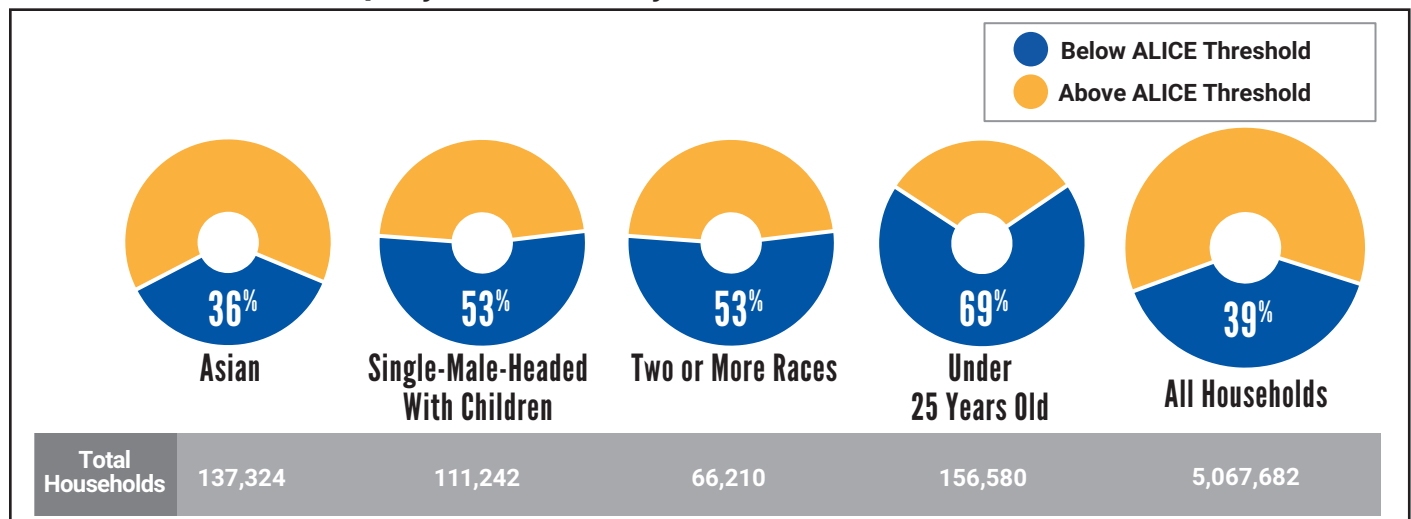


Note: The groups shown in this figure overlap across categories (age, household type, race/ethnicity). Within the race/ethnicity category, all racial categories except Two or More Races are for one race alone. Race and ethnicity are overlapping categories; in this Report, the Asian, Black, Hawaiian (includes 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, 2018; American Community Survey, 2018

Another way to examine the data is to look at the proportion of each group that is below the ALICE Threshold. Overall, 39% of households in Pennsylvania had income below the ALICE Threshold in 2018; but for many groups in the state, this number was disproportionately high. Four of these groups are shown in Figure 2: seniors (51% below the ALICE Threshold), Hispanic households (58%), Black households (60%), and single-female-headed households with children (74%).

Three smaller groups (each with fewer than 160,000 total households), shown in Figure 3, also had a disproportionately high percentage of households below the ALICE Threshold: single-male-headed families with children (53%), households headed by someone of two or more races (53%), and households headed by someone under the age of 25 (69%). Among Asian households – the smallest single-race group with 137,324 households – 36% were below the ALICE Threshold, just under the state average."

**Figure 3.**  
**Smallest Household Groups by Income, Pennsylvania, 2018**



Sources: ALICE Threshold, 2018; American Community Survey, 2018

In addition to these demographic disparities by age, race/ethnicity, and family type, 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.<sup>3</sup>

## 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 Pennsylvania, 11% of households (554,663) were on the cusp of the ALICE Threshold in 2018;** of those, about half earned just above the ALICE Threshold and about half earned just below it.<sup>4</sup> This matters for families, but it can also impact the Pennsylvania economy as a whole: Even a small drop in wages or hours worked, or an unexpected emergency — such as a factory closing, a natural disaster, or a pandemic — 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.

**Pennsylvania is increasingly diverse.** Between 2010 and 2018, the total number of White, non-Hispanic households in Pennsylvania decreased while the number of households of color continued to increase (at a rate of 7% for Black households, 30% for Asian households, and 41% for Hispanic households). Change over time in financial hardship followed a similar trajectory: White households experienced a 1% decrease in the number of households below the ALICE Threshold, while Black households below the ALICE Threshold increased by 13%, Asian households by 39%, and Hispanic households by 45%. All four of the state's largest racial/ethnic groups — including White households — saw an increase in senior households (age 65+) below the ALICE Threshold during this period.<sup>5</sup>

Growing diversity in the state is driven by demographic changes in the state's two largest metropolitan areas. In 2018, there was a 52% chance that two people randomly chosen were of a different race or ethnicity in Pittsburgh; in Philadelphia, that percentage was 71% (both up slightly since 2010).<sup>6</sup> However, it is important to note that while Philadelphia is relatively diverse, it also consistently ranks as one of the most segregated metropolitan areas in the country. Racial and ethnic segregation generates and perpetuates inequities in educational and job opportunities, access to public services, and health outcomes.<sup>7</sup>

**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. In Pennsylvania, the number of married-parent families with children decreased 7% between 2010 and 2018. And although the total number of single or cohabiting adults under age 65 with no children under age 18 decreased slightly in Pennsylvania between 2010 and 2018, by the end of that period, this population made up the largest proportion of the state's households (46%), as well as the largest share of households below the ALICE Threshold (42%). Nationally, the number of cohabiting adults more than doubled between 1996 and 2017, and they tend to have higher levels of education and be more racially diverse today than cohabiting adults 20 years ago.<sup>8</sup>

The aging of the large baby boomer generation is also increasing the number of seniors as more boomers pass age 65. Between 2010 and 2017, the population aged 65 and over grew at a rate over 20 times that of the general Pennsylvania population. In 2018, over 15% of Pennsylvanians were age 65 and over, and it is expected that by 2025 this proportion will increase to more than 20%. These population shifts also impact the number of people available to care for an aging population: It is projected that by 2030, there will be 38 people age 65+ for every 100 working-age people in the state.<sup>9</sup>

Among seniors, there are three trends. First, the White population, which is older than other racial and ethnic groups, will continue to account for an increasing share of seniors. White households headed by someone 65 or older grew

16% between 2010 and 2018, accounting for 32% of White households in 2018. (In comparison, 10% of Hispanic households, 13% of Asian households, and 22% of Black households were headed by someone 65+ in 2018.)<sup>10</sup> Second, having lived through a decade of financial challenges since the Great Recession, more Pennsylvania seniors will become ALICE. (Though without the 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 – many more seniors would fall below the ALICE Threshold.) Older adults with additional expenses or caregiving responsibilities – grandparents caring for their grandchildren, for example – are more likely to face financial hardship. In Pennsylvania in 2018, there were over 81,000 grandparents responsible for the basic needs of their grandchildren under the age of 18. Of these grandparents, almost half (45%) were 60 years of age or older.<sup>11</sup> Third, seniors make up a larger portion of households in rural areas, where they will continue to face additional challenges in access to transportation, health care, and caregiving. A 2020 report on the best and worst places for seniors to live ranked Pennsylvania 20<sup>th</sup> out of 50 states, with a low mental-health-provider rate, low availability of subsidized housing, and a high number of health-care-professional shortage areas driving down the ranking.<sup>12</sup>

**Inequality in income and wealth will continue to rise** as wage growth and job stability in high-wage jobs greatly outpace growth and stability at the lower end. 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 three times more than that of the bottom fifth, from 1979 to 2016.<sup>13</sup> In Pennsylvania, the average income of the top 1% was 21.7 times higher than the average income of the bottom 99% by 2015. These dichotomies are more extreme in some local areas. The most unequal county in Pennsylvania was Montgomery, where in 2015, the top 1% earned on average 31.2 times the average income of the bottom 99%. Perry County had the smallest gap in the state at 8.2%. Even within cities, there are significant income gaps.<sup>14</sup> For example, in Philadelphia between 2009 and 2018, median household incomes rose in 15 neighborhoods and fell in 39, ranging from less than \$20,000 a year in Fairhill to over \$100,000 a year in Schuylkill/SW City Center.<sup>15</sup> In addition to disparities by geography, there are also income gaps by gender and race/ethnicity. In Pittsburgh in 2017, the White-Black gap in income was higher than 85% of similar cities, and White women made 78 cents to every dollar made by White men; Black women made 54 cents to every dollar made by White men.<sup>16</sup> Pennsylvania also has the seventh most regressive tax system in the country: The poorest 20% pay 14% of their income on taxes, while the wealthiest 1% pay 6% of theirs. Regressive tax systems like Pennsylvania's contribute to and perpetuate income inequality.<sup>17</sup>

**“ Pennsylvania has the seventh most regressive tax system in the country: The poorest 20% pay 14% of their income on taxes, while the wealthiest 1% pay 6% of theirs. ”**

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 assets (especially those who have been building assets for generations). ALICE families also face more barriers that, when compounded, create an even bigger wealth gap. These include issues like lower pay for women, racial/ethnic discrimination in homeownership, and student loan debt.<sup>18</sup> For example, in 2018, Pittsburgh had the seventh-largest gap in homeownership between Black and White households among cities with a population over 1 million, with a homeownership rate of 35% for Black households compared to 74% for White households. And while Philadelphia had one of the smallest gaps among large cities, there was still a 28 percentage point difference in the rate of homeownership for these two groups (48% for Black households vs. 76% for White households).<sup>19</sup>



# THE COST OF LIVING IN PENNSYLVANIA

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 Pennsylvania, 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 Pennsylvania. Each budget can be calculated for various household types. See the Appendix at the end of this Report for a summary of the sources used for each budget, or visit [UnitedForALICE.org/Methodology](https://UnitedForALICE.org/Methodology) for more details.

- 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 Pennsylvania is well above the Federal Poverty Level (FPL) for all household sizes and types. 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.

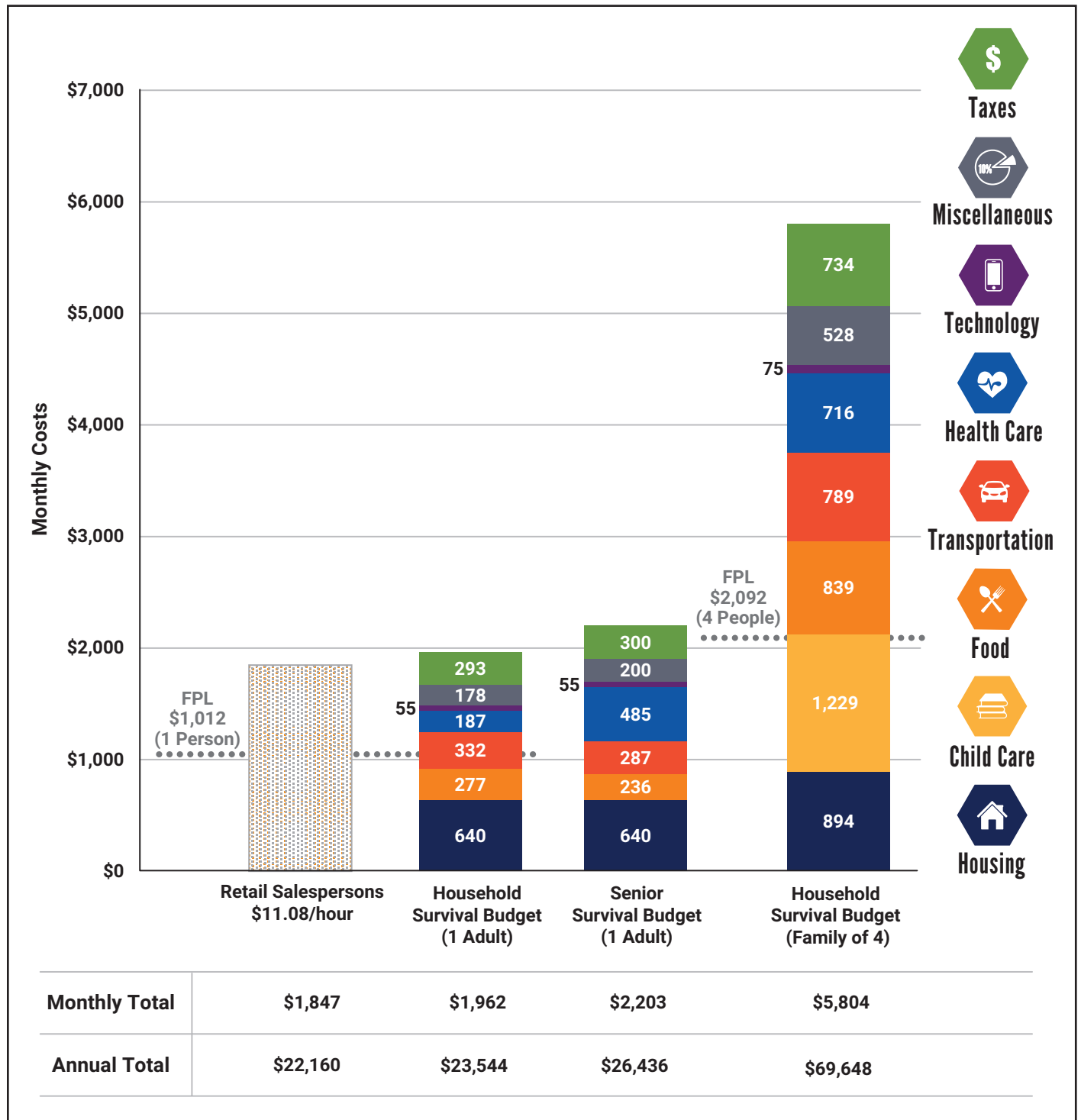
For a single adult, the FPL was \$12,140 per year in 2018, but the average Household Survival Budget in Pennsylvania was \$23,544 per year.<sup>20</sup> The average Senior Survival Budget totaled \$26,436 per year, primarily due to increased health costs. (Despite having Medicare, seniors have greater 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 \$44,484 per year for a single adult.

The gaps are even larger for families. The FPL for a four-person family was \$25,100 in 2018, while the Household Survival Budget for a family with two adults, an infant, and a four-year-old was \$69,648.<sup>21</sup>

The hourly wages needed to support these budgets were \$11.77 for the single adult Survival Budget; \$13.22 for the Senior Survival Budget; and \$34.82 for one worker or \$17.41 each for two workers for the Survival Budget for a family of four. To put these budgets in perspective, the median hourly wage for the most common occupation in Pennsylvania, retail sales, was \$11.08 in 2018, or \$22,160 if full time, year-round — not enough to support any of the ALICE budgets.

The cost of household basics varied significantly by geography, ranging from \$60,248 per year for a family of four in Clearfield County to \$96,330 per year in Chester County. To see the details of each ALICE budget for different household types, and to view a map of cost of living in each Pennsylvania county, visit the Household Budgets page at [UnitedForALICE.org/Pennsylvania](https://UnitedForALICE.org/Pennsylvania)

**Figure 4.**  
**Budget Comparison, Pennsylvania, 2018**



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

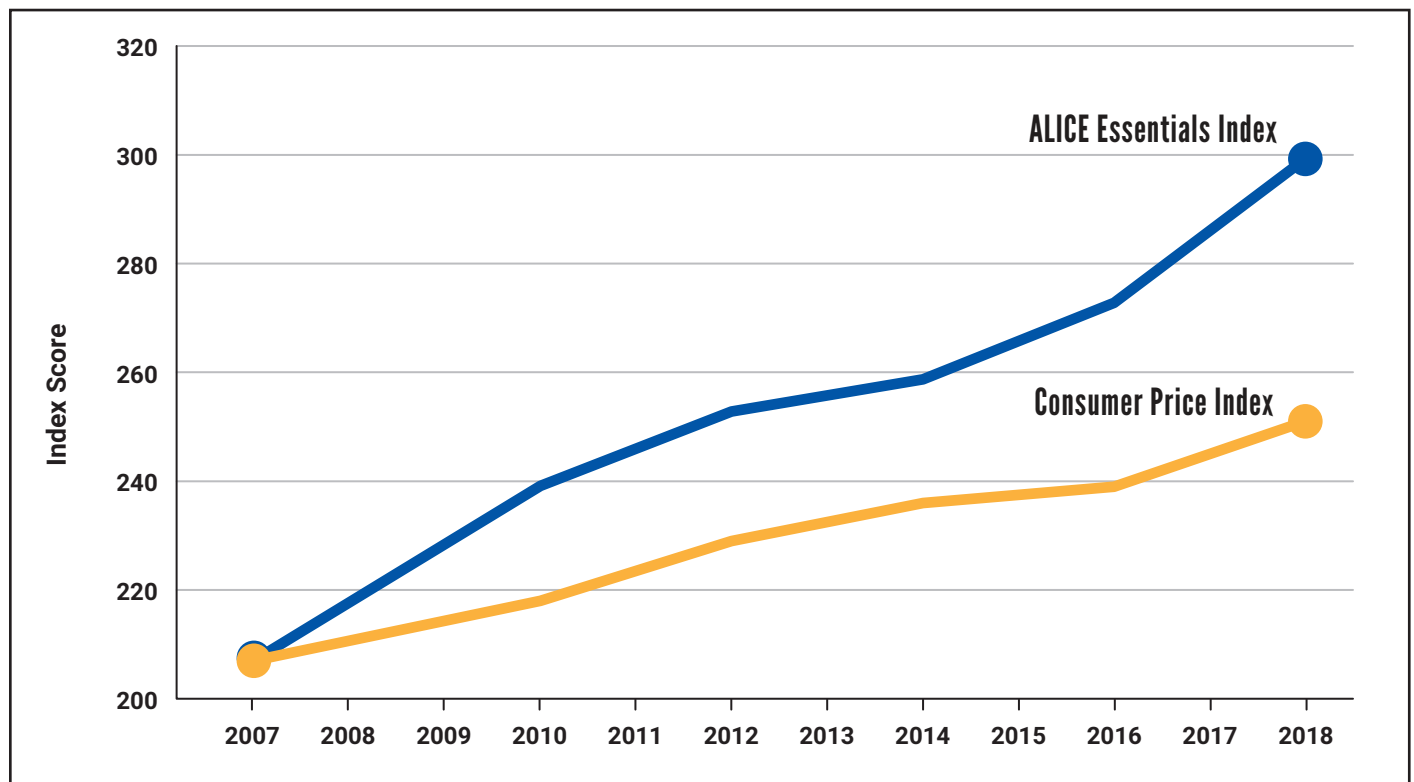
Sources: AAA, 2018; Agency for Healthcare Research and Quality, 2018; American Community Survey, 2018; Bureau of Labor Statistics, 2018—Consumer Expenditure Surveys; Bureau of Labor Statistics, 2019—Consumer Expenditure Survey; Bureau of Labor Statistics, 2018—Occupational Employment Statistics; Centers 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, 2019; Fowler, 2019; Internal Revenue Service, 2020; Internal Revenue Service—FICA, 2020; Medicare.gov; Pennsylvania Department of Education and Human Services; Scarborough, 2018; The Zebra, 2018; U.S. Department of Agriculture, 2018—Official USDA Food Plans; U.S. Department of Housing and Urban Development, 2018—Fair Market Rents; Walczak, 2019. For more details, see the Methodology Overview at [UnitedForALICE.org/Methodology](https://www.unitedforalice.org/methodology)<sup>22</sup>

# 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 BLS Consumer Price Index (CPI). 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.<sup>23</sup> For more detailed information, see the 2020 ALICE Essentials Index Report available at [UnitedForALICE.org/Essentials-Index](https://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 2018, the average annual rate of increase was 3.3% in urban areas and 3.4% in rural areas, while the CPI increased by 1.8%.<sup>24</sup> 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 22% 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, 2007–2018**



Sources: ALICE Essentials Index, 2007–2018; Bureau of Labor Statistics—Consumer Price Index, 2007–2018. For more information, visit [UnitedForALICE.org/Essentials-Index](https://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).<sup>25</sup> But the ALICE Essentials Index shows that from 2007 to 2018, 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.** During the last decade, housing costs have increased significantly in the U.S. as population growth outpaces the supply of available housing. 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.<sup>26</sup> While housing in Pennsylvania continues to be more affordable compared to many other states, costs vary widely across the state. East Stroudsburg and the Scranton–Wilkes-Barre-Hazleton metropolitan statistical area have some of the most affordable homes, while Philadelphia remains the most expensive housing market in the state.<sup>27</sup> Between 2007 and 2017, homeownership rates in Philadelphia neighborhoods decreased as rental rates increased; in 2017, rental rates surpassed homeownership rates for the first time (with 51% renters vs. 49% homeowners). This shift, along with a growing population — mainly in Center City and Northern Liberties/Spring Garden — has contributed to increased demand for affordable housing, and as a result has pushed up the cost of housing. Nearly 54% of renters in Philadelphia are rent burdened (spending at least 30% of their income on rent), compared to 49% nationally. The cost of living is lower in Pennsylvania’s rural counties compared to urban counties (by approximately 8% in 2017), but costs in rural areas have also been increasing over time, largely due to rising housing and transportation costs.<sup>28</sup>

**Commuting times will continue to increase, as will demand for alternative transportation options.**

Limited availability of affordable housing pushes workers farther from their jobs and increases commute times — especially in urban areas — which has a negative impact on health, job retention, and productivity. The average commute time for Pennsylvania workers in 2018 was 27.2 minutes, varying from 18 minutes in Cameron County to 45 minutes in Pike County. With these pressures, there will be increased demand in Pennsylvania to explore new transportation options (e.g., trains and buses, rideshares, and self-driving vehicles).<sup>29</sup>

**“ A 2018 analysis found that 57% of Pennsylvania residents — the 13<sup>th</sup> highest rate in the nation — live in a ‘child care desert,’ with a dearth of available child care providers. ”**

**The child care industry will face new challenges, and so will parents.** In Pennsylvania, the number of families with children decreased 6% between 2010 and 2018, yet the supply of child care providers is still not sufficient to meet demand. A 2018 analysis found that 57% of Pennsylvania residents — the 13<sup>th</sup> highest rate in the nation — live in a “child care desert,” with a dearth of available child care providers. This percentage is even higher for families living in rural areas (73%).<sup>30</sup> The cost of child care relative to family income also continues to increase, with higher rates for child care in urban areas, and a greater reliance on family child care homes in rural areas. In 2018, the average annual costs for center-based care were \$11,560 for an infant and \$21,100 for an infant and a four-year-old.<sup>31</sup> Higher costs for child care may mean ALICE families have to make sacrifices in other areas of the budget, a trend that will have a particular impact on single-parent families, who are more likely to be below the ALICE Threshold. Compounding this issue is the fact that child care workers are ALICE, earning a median hourly wage of \$10.23 in Pennsylvania in 2018.<sup>32</sup> The overall trend, then, is toward fewer families with children but more who are struggling. These issues matter for families and workers, but they also have an impact on the state economy: If the state capped family child care expenditures at 7% of income, it would expand the Pennsylvania economy by 0.8% (totaling \$6.1 billion in new economic activity).<sup>33</sup>

**Food insecurity, a longstanding problem for families with children, is also increasing among young adults and seniors.**

In 2018, households headed by adults under the age of 25 were more likely to be below the ALICE Threshold compared to other age groups in Pennsylvania, and they often struggled to put food on the table. For example, reports consistently

find higher rates of food insecurity among college students. Nationally in 2018, 45% of college students surveyed reported that they were food insecure in the 30 days prior to taking the survey.<sup>34</sup> Locally, a 2017 survey of approximately 6,000 students from eleven colleges and universities in southwestern Pennsylvania found that 29% of respondents experienced food insecurity in the previous year, more than double the national rate of food insecurity reported for adults (12%). Rates of food insecurity were even higher (40% and above) among students of color, first-generation college students, and students who were homeless, had children, or were financially independent.<sup>35</sup> 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. 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 do not eliminate the need for emergency assistance measures, such as food pantries.<sup>36</sup>

**College students across the country are facing greater challenges in meeting living expenses, despite the fact that increasing numbers of students 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.<sup>37</sup> In a recent financial wellness survey, 56% of students reported 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.<sup>38</sup> 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.<sup>39</sup> Students report that two of the major obstacles to academic success are juggling work with school and other responsibilities and difficulty meeting expenses.<sup>40</sup> For more information, see the 2019 United For ALICE Report, *The Consequences of Insufficient Household Income*.

**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.<sup>41</sup> Pennsylvania ranked 24<sup>th</sup> in the Commonwealth Fund’s 2018 survey of state health systems, with issues of affordable hospital use and cost driving down the ranking.<sup>42</sup> And while Pennsylvania performs better than many other states when it comes to health disparities, there remain several persistent gaps in health based on socioeconomic status, race/ethnicity, sexual orientation, and geography. Perhaps most significantly, life expectancy varies across the state, ranging from 76.1 years in Philadelphia County to 82.4 years in neighboring Montgomery County.<sup>43</sup> Additionally, Black Pennsylvanians have significantly higher age-adjusted death rates than White Pennsylvanians for more than 30 health conditions, including heart disease, diabetes, asthma, and nine different types of cancer.<sup>44</sup> These disparities are expected to grow with new but expensive advances in medicine, compounded exposure to environmental hazards and public health crises for many low-income households, and a persistent context of discrimination and institutionalized racism in Pennsylvania and across the country.<sup>45</sup>

**“ Black Pennsylvanians have significantly higher age-adjusted death rates than White Pennsylvanians for more than 30 health conditions, including heart disease, diabetes, asthma, and nine different types of cancer. ”**

**Natural and human-made disasters will continue to impact ALICE households disproportionately.** Across Pennsylvania, the increasing impact of these incidents – from floods and winter storms to pandemics – is felt most acutely by ALICE households and their surrounding communities. With minimal job security and little or no

savings, ALICE families experience the impact of an economic disruption almost immediately as hourly paid workers suffer lost wages right away. ALICE households are more vulnerable during natural disasters as they often live in communities with fewer resources, and their housing is more susceptible to flooding, fire, and other hazards. With no financial cushion, ALICE workers struggle to repair damage, recover from illness, and pay ongoing bills. At the same time, ALICE workers are essential to disaster recovery efforts in both infrastructure repair and health care, and they are often forced to choose between caring for their families and ensuring community recovery. All of these costs are added to the increased risk of physical harm ALICE families face if they cannot afford to flee an oncoming natural disaster or take necessary precautions during a public health crisis.<sup>46</sup>

**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).<sup>47</sup> Unexpected expenses can intensify these impacts. In 2017, only 60% of Pennsylvania 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. Though this was well above the national rate of 42%, it still left more than one-third of Pennsylvanians without any financial cushion. 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.<sup>48</sup>

# THE CHANGING LANDSCAPE OF WORK IN PENNSYLVANIA

ALICE workers play an essential role in Pennsylvania'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.

In 2018 — prior to the COVID-19 pandemic — Pennsylvania appeared to have a robust economic profile, with the nation's sixth-largest economy based on real GDP and a near-record-low unemployment rate (with only 3% of adults actively looking but unable to find work). Three of the state's largest industries (based on contribution to the state GDP) saw employment growth following the Great Recession: financial activities, professional and business services, and education and health services (the latter of which continued to grow steadily, even during the Recession). However, manufacturing, the fourth-largest contributor to the state GDP and traditionally a strong industry in the state, took a major hit during the Recession and never recovered, with employment that remained flat through 2018.<sup>49</sup>

The mix of industries and economic trends also vary between urban and rural areas. Leading up to 2018, metropolitan areas accounted for the majority of economic gains in the state. In Philadelphia, this economic growth was largely fueled by expansion of the life sciences, technology, and higher education sectors (the same was true to a lesser extent in Pittsburgh).<sup>50</sup> The state's rural areas were harder hit by the Great Recession: By 2017, total employment and the number of businesses had not returned to pre-Recession levels, and workers in rural areas were making 28% less per week on average than urban workers. Key industries in rural areas that saw growth during this period (2007-2017) included natural resources and mining, professional and business services, leisure and hospitality, and education and health services, while manufacturing and construction saw the greatest losses.<sup>51</sup> As for the natural resources and mining industry, Pennsylvania remained a leading coal-producing state during this period, but also saw a boom and bust in natural gas extraction, with large companies setting up natural gas rigs throughout the Appalachian Basin starting around 2005, only to begin selling off assets and laying off workers in central and western Pennsylvania by 2018 as supply outstripped demand.<sup>52</sup>

Despite employment gains in key Pennsylvania industries between 2007 and 2018, this period was also marked by stagnant wages, widening income inequality, and overall employment growth driven by an increase in jobs that could not keep up with the increase in the cost of the basic household budget (Figure 6).<sup>53</sup>

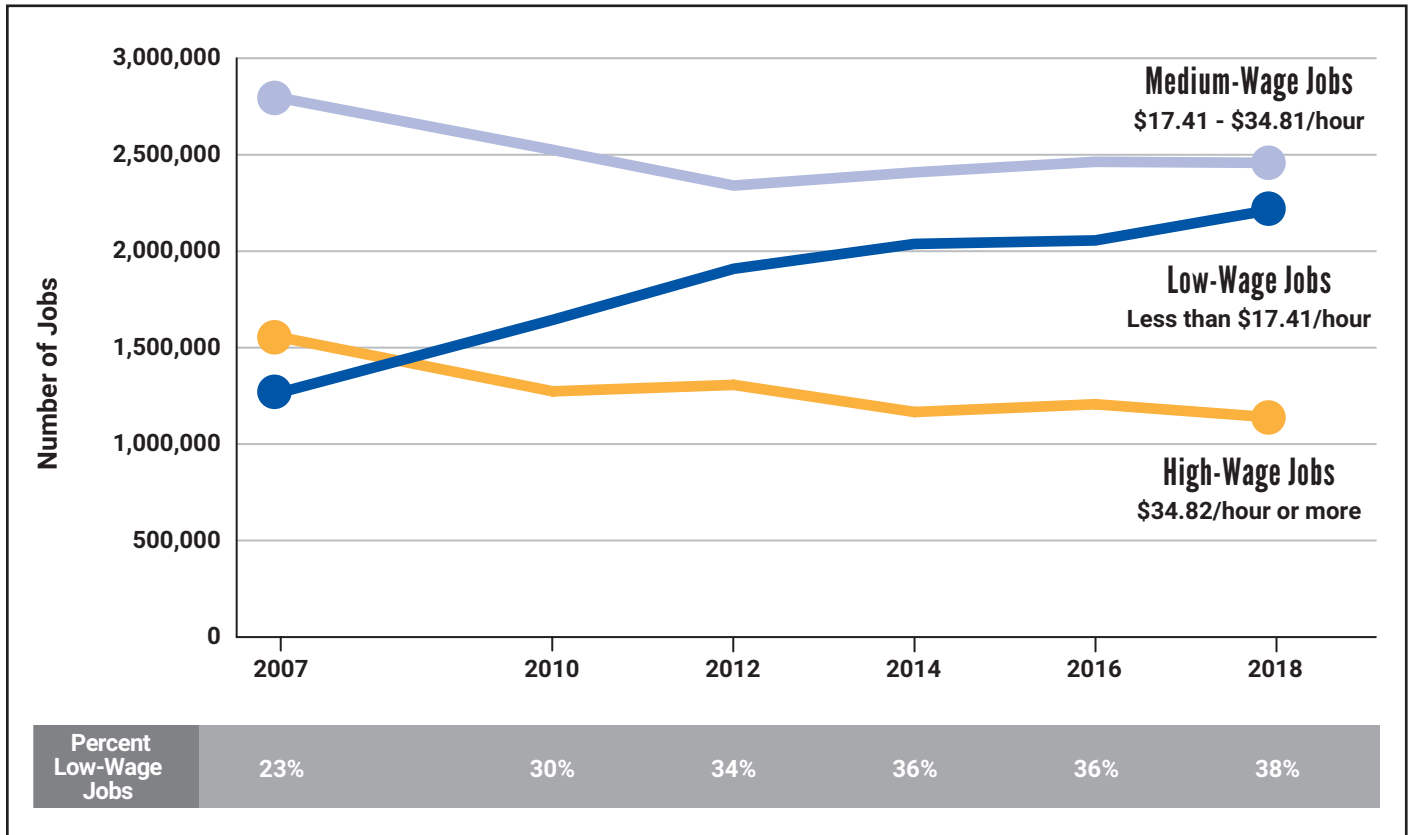
Figure 6 illustrates the following trends in wages compared to the cost of living in Pennsylvania from 2007 to 2018:

- 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 \$11.92 per hour; by 2018, it was less than \$17.41 per hour. The number of low-wage jobs increased by a substantial 75% during that period. 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.

**“ Manufacturing, the fourth-largest contributor to the state GDP and traditionally a strong industry in the state, took a major hit during the Recession and never recovered, with employment that remained flat through 2018. ”**

- Medium-wage jobs (light-blue line) allow two workers to afford a family Household Survival Budget. In 2007, these were jobs that paid between \$11.92 and \$23.83 per hour, per worker; by 2018, wages needed for these jobs were between \$17.41 and \$34.81 per hour, per worker. Although they remained the largest number of jobs in the state, the number of medium-wage jobs decreased by 12% during that period.
- High-wage jobs (gold line) allow one worker to afford a family Household Survival Budget. In 2007, the wage required was \$23.84 per hour or more; by 2018, the wage required had increased to \$34.82 per hour or more. The number of high-wage jobs decreased by 27% during that period.<sup>54</sup>

**Figure 6.**  
**Number of Jobs by Wage Level, Pennsylvania, 2007–2018**



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.

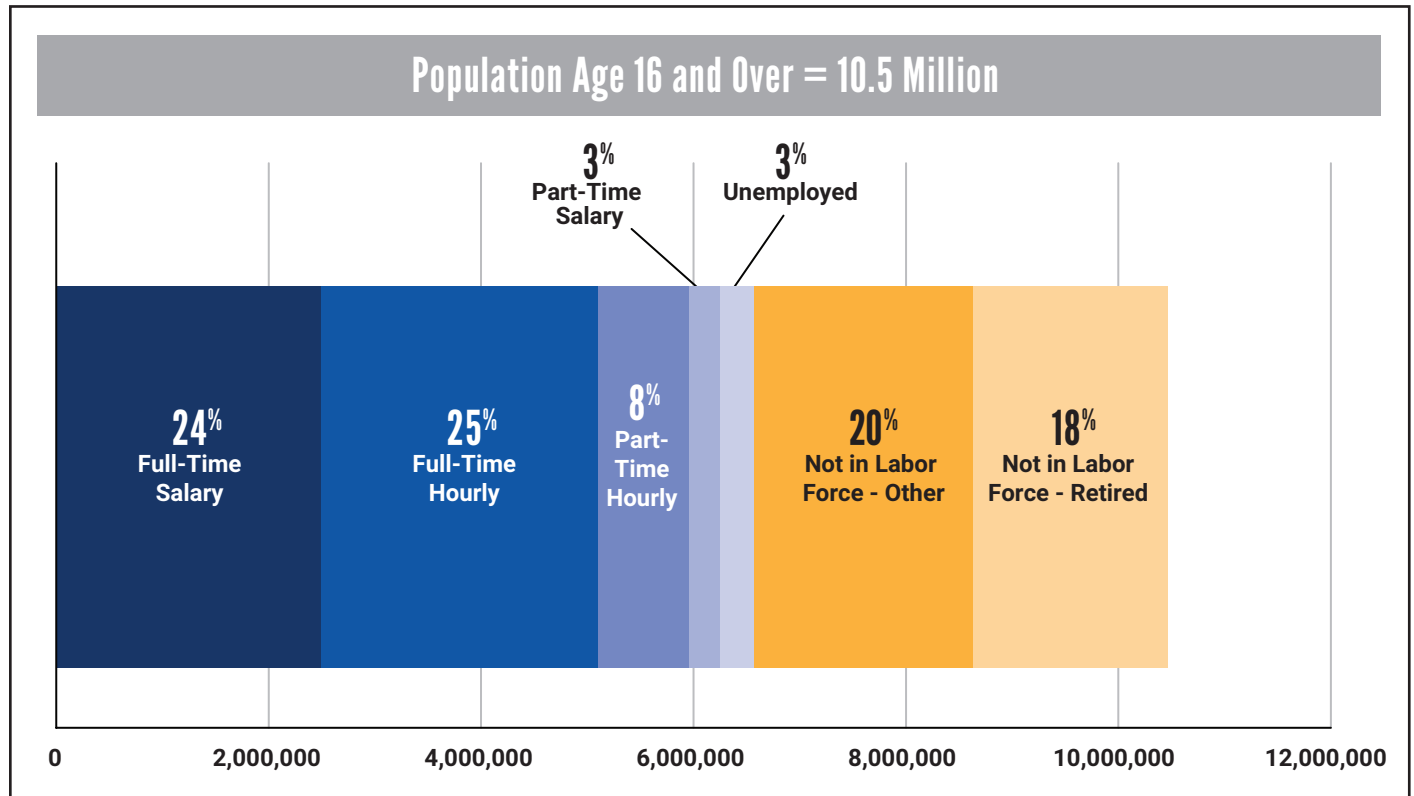
Sources: ALICE Household Survival Budget, 2007–2018; Bureau of Labor Statistics, Labor Force Statistics, 2007–2018—Occupational Employment Statistics



# THE NEW LABOR FORCE

A 2018 overview of the labor status of Pennsylvania’s 10,464,719 working-age adults (people age 16 and over) shows that 63% of adults were in the labor force (blue bars in Figure 7), yet more than half of them were workers who were paid hourly. In addition, 38% of adults were outside the labor force (gold bars).<sup>55</sup>

**Figure 7.**  
**Labor Status, Population Age 16 and Over, Pennsylvania, 2018**



Note: Data for full- and part-time jobs is only available at the national level; these national rates (51% of full-time workers and 75% of part-time workers paid hourly) have been applied to the total Pennsylvania 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, 2018; Federal Reserve Bank of St. Louis, 2018

Though the majority of adults in Pennsylvania were working in 2018 and most households had at least one worker, only 24% 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.<sup>56</sup>

## Hourly Work and 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 nationwide, even traditional jobs are now more likely to be paid by the hour, especially in retail, health care, food service, and construction.<sup>57</sup> Hourly paid 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/month. They are also less likely than salaried workers 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.<sup>58</sup>

Non-traditional and gig workers include people of all races, ethnicities, and genders, across a wide range of ages and geographies. However, nationwide, people who engage in non-traditional work are more likely to be younger (especially temp-agency and online-platform workers), to live in urban areas, and in western states. By gender, men working non-traditional jobs are more likely than women to participate in online-platform-based work and to rely on gig work for their primary source of income; women are more likely to use gig work to supplement their income and to sell goods online. By race, the non-traditional workforce generally mirrors that of the overall workforce; however, there are differences in the type of non-traditional work different groups tend to engage in. For example, White non-traditional workers are more likely to be independent freelancers, consultants, or contractors. Black and Hispanic non-traditional workers are more likely to work with temp agencies or contract companies – non-traditional work arrangements that tend to be lower-paid and less flexible.<sup>59</sup>

Hourly workers are more likely to have multiple sources of income. Traditional measures of employment have focused on the number of jobs held by a worker; for example, BLS estimates that only 5% of workers held two or more jobs in 2018.<sup>60</sup> However, in the modern economy, where many workers have their own small business, are consultants, or are contingent, temporary, freelance, or contract workers, a worker may have many sources of income that are not necessarily considered a “job.” In 2019, nearly half (45%) of working adults reported having a side gig outside of their primary job.<sup>61</sup>

In comparison with hourly workers, salaried workers are paid an annual amount at regular pay periods, and usually receive benefits. Nationally, employers spent an average of 31% of compensation on benefits in 2018; 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.<sup>62</sup> While this is true throughout the economy, it is especially concentrated in lower-wage positions – the jobs most accessible to ALICE.

## Who is Out of the Labor Force?

Of adults 16 years and older in Pennsylvania, 18% were out of the labor force in 2018 because they were retired and another 20% were out of the labor force for other reasons (gold bars in Figure 7). This totals 38% of adults outside the labor force.<sup>63</sup>

Retirees (age 65 and over and not working) are traditionally one of the largest groups of adults out of the labor force. In Pennsylvania in 2018, they accounted for a high percentage, in part due to the baby boomer generation aging into retirement. However, this number did not include the increasing number of seniors who were still working; in 2018, 21% of seniors in Pennsylvania were still in the labor force.<sup>64</sup>

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

- **School:** Nationally, 77% of high school students and 52% of college students did not work in 2018. At these rates, non-working students in Pennsylvania would account for just over one-third (34%) of the state’s working-age adults out of the workforce.<sup>65</sup>
- **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 one-quarter (25%) of those out of the labor force in Pennsylvania in 2018.<sup>66</sup>

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.<sup>67</sup> For women 25 to 54 years old, the most common reason for not working in 2018 was in-home responsibilities – caring for children, but also, as the population of Pennsylvania ages, caring for an aging parent or a family member with a disability or chronic health issue.<sup>68</sup>

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 2018 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.<sup>69</sup>

## 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 Pennsylvania 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.<sup>70</sup> To better understand where ALICE works, we elaborate on Vinsel and Russell's concept by breaking down all occupations in Pennsylvania into two occupational categories, each with two job types: the lower-paying Maintainer occupations, composed of Infrastructor and Nurturer jobs; and the higher-paying Innovator occupations, composed of Adaptor and Inventor jobs.

### DEFINITIONS

#### Maintainer Occupations:

**Infrastructors** 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:

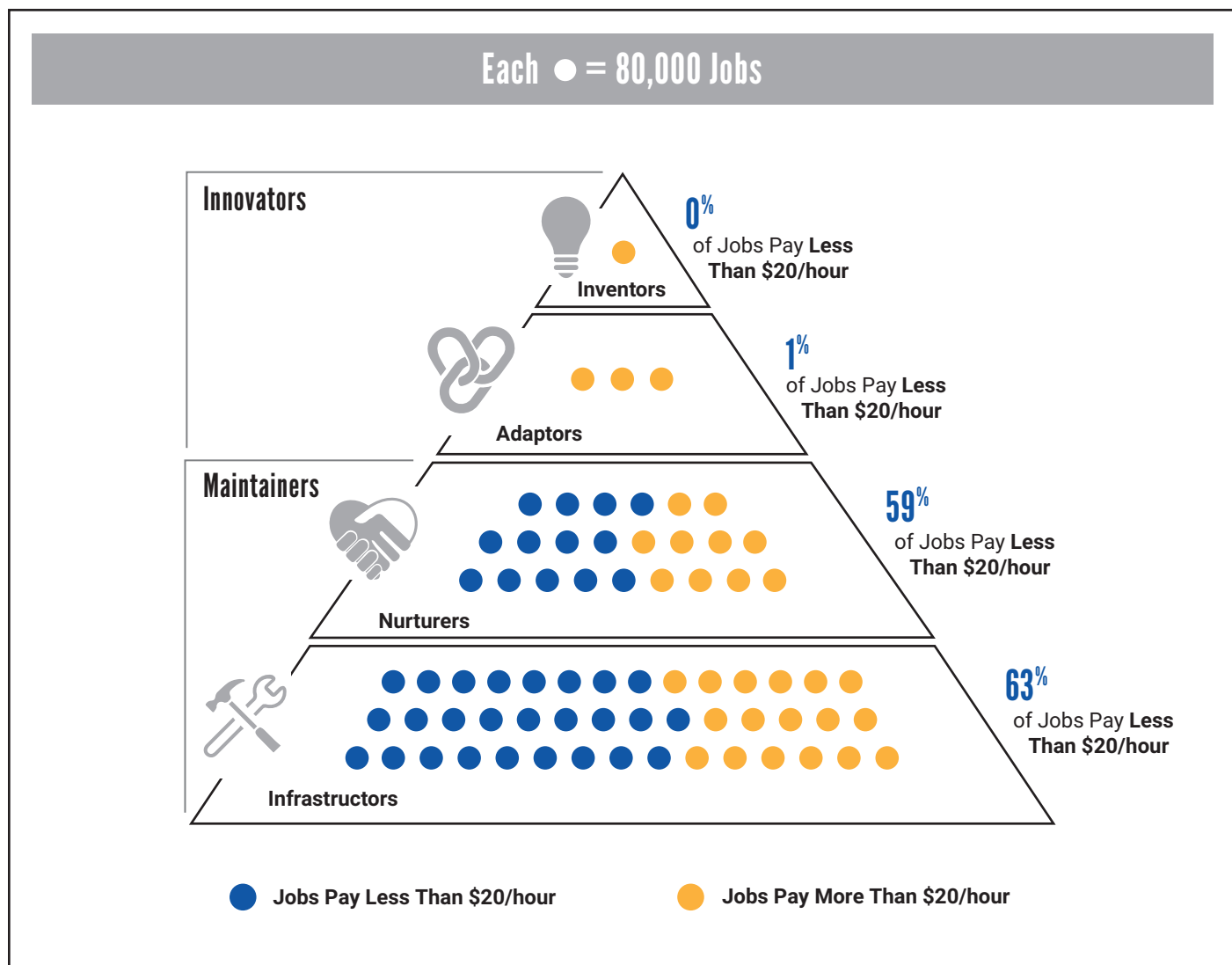
**Adaptors** implement existing tools or processes in new ways, responding to opportunities and changing circumstances (managers, industrial and organizational psychologists, analysts, designers, technicians, and even policymakers).

**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 Pennsylvania are comprised primarily of Maintainer occupations. The single largest industry group in 2018, with 1.3 million employees, was education and health services, which is comprised of Nurturer jobs. The second largest, with 1.1 million employees, was trade, transportation, and utilities, which is comprised of Infrastructor jobs. Both industries have large shares of ALICE workers.<sup>71</sup> There are far fewer jobs in Innovator occupations (Adaptors and Inventors).

When stacked together, Pennsylvania'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 (63% of Infrastructor jobs and 59% 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 \$29,648 less than the family Household Survival Budget of \$69,648. By comparison, almost all Adaptor and Inventor occupations pay more than \$20 per hour.

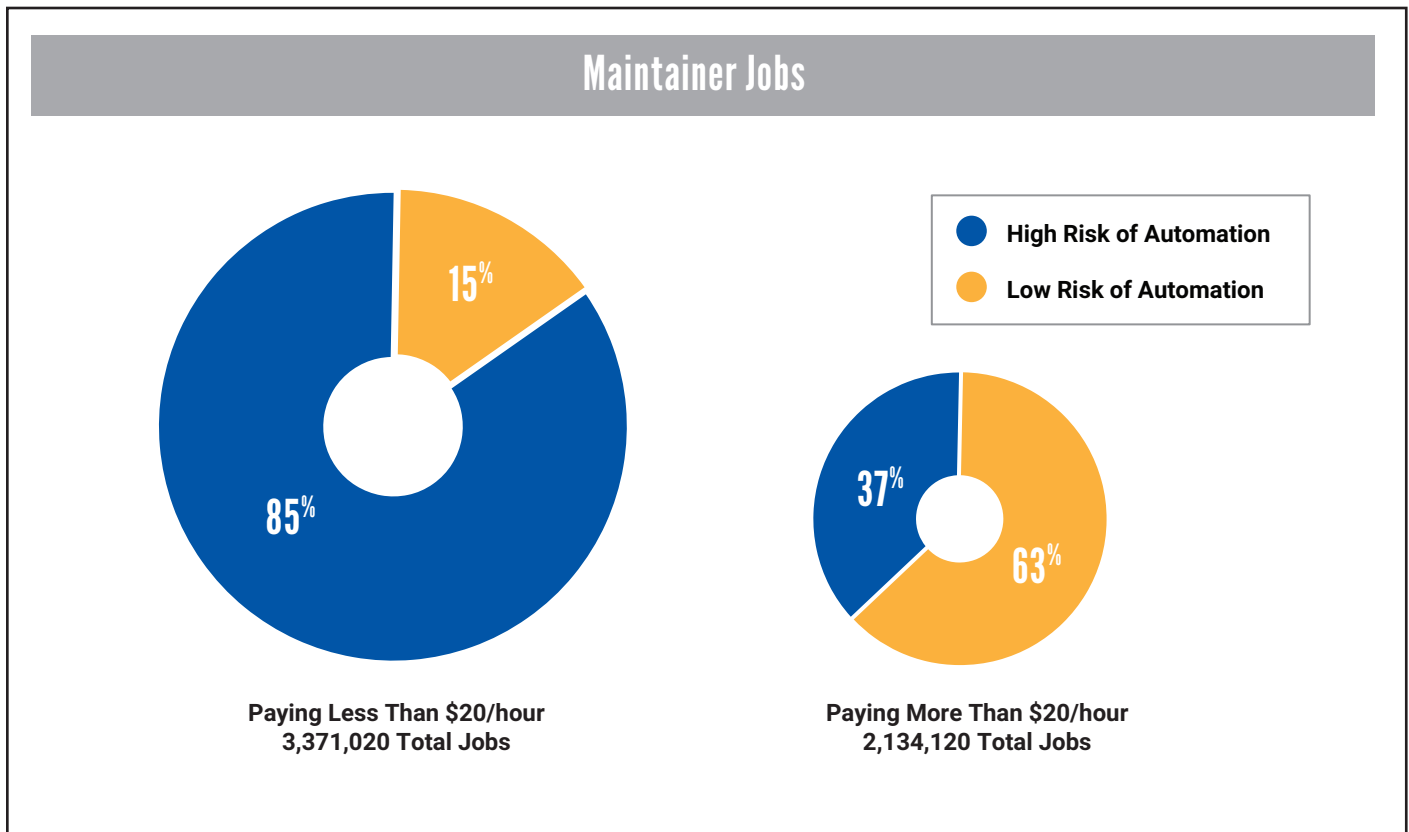
**Figure 8.**  
**Occupations by Wage and Type, Pennsylvania, 2018**



Source: Bureau of Labor Statistics, Labor Force Statistics, 2018—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 85% 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). In Pennsylvania, it is projected that between 2016 and 2026, there will be a net gain of 8,400 jobs due to automation – with 503,500 jobs lost due to displacement and 511,900 jobs added due to income gains. While this is a relatively small net change, it constitutes a shifting of automation among industries. The occupations with the largest projected losses are transportation and material moving; farming, fishing, and forestry; and production. The occupations with the largest projected gains are health care support; sales and related occupations; and building-and-grounds cleaning and maintenance. In the Philadelphia-Camden-Wilmington metropolitan area, approximately 800,000 jobs (18% of all jobs) are at high risk of automation, and high-risk jobs are highly concentrated among young women of color.<sup>72</sup>

**Figure 9.**  
**Occupations by Type and Risk of Automation, Pennsylvania, 2018**



Sources: Bureau of Labor Statistics, 2018—Occupational Employment Statistics; Frey & Osborne, 2013

There are also differences in salary and risk of automation based on the type of Maintainer job. Among Infrastructure jobs, 94% of jobs that pay less than \$20 per hour are at risk of automation, compared to 57% of those that pay more than \$20 per hour. Among Nurturer jobs, the discrepancy is even greater: 65% 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.<sup>73</sup> 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%). In the Philadelphia-Camden-Wilmington metropolitan area, just over 26% of jobs that only require a high school diploma are at high risk of automation, compared to just 1.4% of jobs that require a bachelor’s degree or higher.<sup>74</sup>

## 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.<sup>75</sup> With an increasing number of workers who are self-employed contractors, work in small businesses, or rely on a combination of side gigs, the number of people experiencing gaps in income and going without benefits will also rise. In Pennsylvania, the highest share of workers who are self-employed are found in arts, design, entertainment, sports, and media occupations. In 2018, one in three workers in these occupations was self-employed.<sup>76</sup> As for working a combination of jobs, millennials are leading the way in this trend, 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.<sup>77</sup> These arrangements are more volatile than traditional jobs, and workers bear the brunt of changes in demand, the price of materials, and transportation costs, as well as impacts related to cyberattacks, natural and human-made disasters, and economic downturns.<sup>78</sup>

**The rise of automation will require a workforce with more digital skills.** 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.<sup>79</sup> 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.<sup>80</sup> The benefits of increased technology will include improved accuracy in areas like pharmaceutical pill dispensing, and reduced risk of injury for workers such as warehouse packers and long-distance drivers.<sup>81</sup>

**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. This is especially the case in low-wage Maintainer jobs. Predicted top-growing occupations in Pennsylvania include restaurant workers and home health care providers, which 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 2016 to 2026, the occupation projected to have the largest number of new jobs in Pennsylvania is personal care aides; the median wage for these jobs in 2018 was \$11.62 per hour, which was not enough to support the single-adult, family, or Senior Survival Budgets. Of the state's top 20 growth occupations, 63% will pay less than \$15 per hour, 34% will not require any formal educational credential at all, and 27% will require only a high school diploma.<sup>82</sup>

**“ From 2016 to 2026, the occupation projected to have the largest number of new jobs in Pennsylvania is personal care aides; the median wage for these jobs in 2018 was \$11.62 per hour, which was not enough to support the single-adult, family, or Senior Survival Budgets. ”**

**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, more students will have to work while in school. Nationally, 20% of high school students, 41% of full-time college students, and 82% of part-time college students had a job in 2017.<sup>83</sup> What's more, despite many students being employed, 45% of college students who completed the largest annual survey of basic college needs reported having experienced food insecurity in the previous month, and 56% had experienced housing insecurity in the prior year.<sup>84</sup> 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 Pennsylvania, 65% of college students who graduated in 2018 were in debt with an average loan of \$37,061, a 30% increase from 2010.<sup>85</sup>

# NEXT STEPS: DATA FOR ACTION

The ALICE data highlights significant problems in the Pennsylvania economy in 2018: stagnant wages, a rising cost of living, and 39% 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 advocates 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 2018 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.

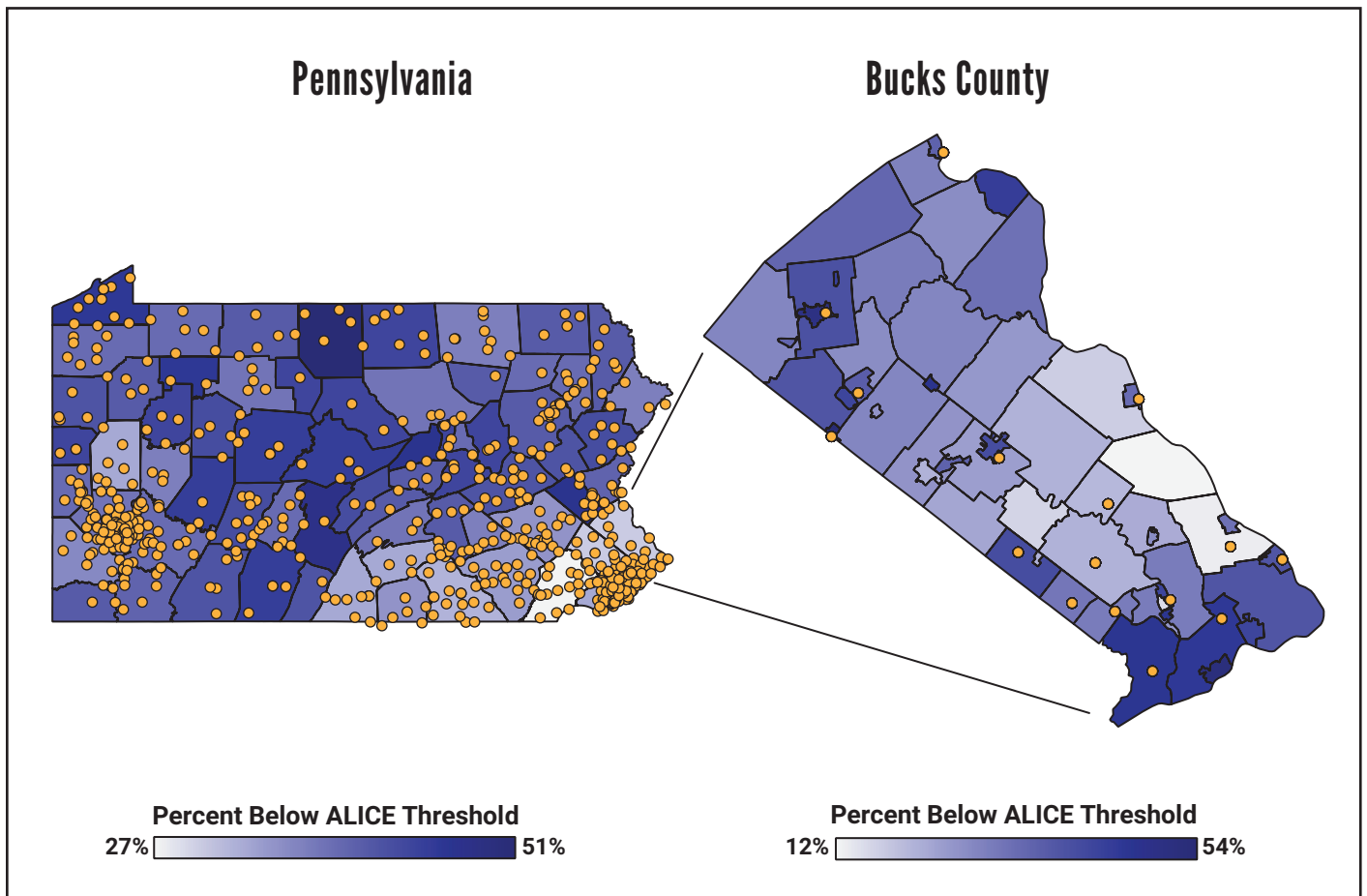
With the ALICE data tools, advocates can map where ALICE lives along with the location of community resources – such as public libraries or disaster-relief services – to identify gaps by town, ZIP code, or county (Figure 10). This data can help answer targeted questions, including the following:

### 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.<sup>86</sup> 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.<sup>87</sup>

There are 627 libraries across Pennsylvania's 67 counties, shown in gold dots in Figure 10 (and in an interactive feature on [UnitedForALICE.org/Pennsylvania](https://UnitedForALICE.org/Pennsylvania)).<sup>88</sup> This data can help advocates 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, and library services (like free computers) could be offered in other public buildings.

**Figure 10.**  
**Library Locations and Households Below ALICE Threshold, Pennsylvania, 2018**



Sources: ALICE Threshold, 2018; American Community Survey, 2018; 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, tornadoes, or severe winter storms 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.<sup>89</sup>

Knowing where ALICE households live can help federal, state, and local governments target preparation, response, and assistance for natural disasters, and help companies 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 quality of the housing stock, and the age composition of the community (with the young and the elderly more dependent on care).<sup>90</sup>



# 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.<sup>91</sup> 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. Advocates 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 answer important questions and target resources where they can have the greatest impact. To see interactive maps of socioeconomic indicators in Pennsylvania, visit our website: [UnitedForALICE.org/Pennsylvania](https://UnitedForALICE.org/Pennsylvania)

**Here is one possible question:**

## Is internet access related to income?

Access to digital technology has exploded over the last three decades: By 2018, 92% of U.S. households owned one or more computing devices and 85% had a broadband internet subscription. In Pennsylvania, the rates were similar: 90% of households owned a computing device and 84% had a broadband internet subscription in 2018.<sup>92</sup> 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 and geography. For many families, lack of access to technology translates directly to a reduction in work and educational opportunities, as well as access to health care 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. Households without internet access are also at greater risk of being undercounted in the 2020 Census, when they may need government programs and services the most.<sup>93</sup>

This high usage of smartphones for a critical task indicates that many low-income households have limited access to the internet at home. In Pennsylvania, 34% of households with income below the ALICE Threshold do not have an internet subscription, compared with only 8% for households above the ALICE Threshold. Rates also vary widely by location: in Forest County in 2018, 36% of households did not have an internet subscription in 2018, compared to 12% in Montgomery County. In general, the counties with the lowest access rates and lowest income are in rural areas, where almost 40% of households below the ALICE Threshold do not have an internet subscription.<sup>94</sup>

Even among households with an internet subscription, access to high-speed broadband internet remains an issue across the state. However, having a broadband internet subscription at home doesn't mean that all household members have access. According to the National Telecommunications and Information Administration, in 2019, only 71.8% of Pennsylvania residents 3 years old and older could access the internet at home despite much higher rates of household internet service. This suggests, for example, that households may not have enough devices for all household members, internet service may be unreliable, or households only have home internet access via cell phones, which are often ill-suited for completing more complicated tasks like school assignments or job applications.<sup>95</sup> In addition, a study by The Center for Rural Pennsylvania found that in 2018, there were no counties in the state where at least half of the population received "broadband" connectivity as defined by the Federal Communications Commission, and speeds are substantially slower in rural counties than in urban counties.<sup>96</sup> In the age of distance learning, this digital divide by geography and income has a particularly negative impact on the state's youngest residents and their families. Identifying these gaps can help businesses, governments, and local communities direct resources and establish strategies to improve equity in internet access.<sup>97</sup>

# THE BENEFITS OF MOVING TOWARD INCOME EQUITY IN PENNSYLVANIA

The strength of the Pennsylvania 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 2018, when the national economy was often described as "strong," the reality was that 1,971,026 Pennsylvania 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 Pennsylvania 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 a hypothetical 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 2018 data, the economic benefit to Pennsylvania of bringing all households to the ALICE Threshold would be approximately \$130.2 billion, meaning that the state GDP would grow by 17% (Figure 11).** This is based on three categories of economic enhancement:

**Earnings:** Pennsylvania's 2018 GDP reflected earnings of \$43.1 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:** \$48 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.<sup>98</sup> 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 Pennsylvania, this increased economic activity would be valued at \$57.5 billion.<sup>99</sup>

**Tax revenue:** Pennsylvania's 2018 GDP reflected tax revenue of \$1.6 billion from the state's households below the ALICE Threshold. Bringing all households to the ALICE Threshold would have a two-fold impact:

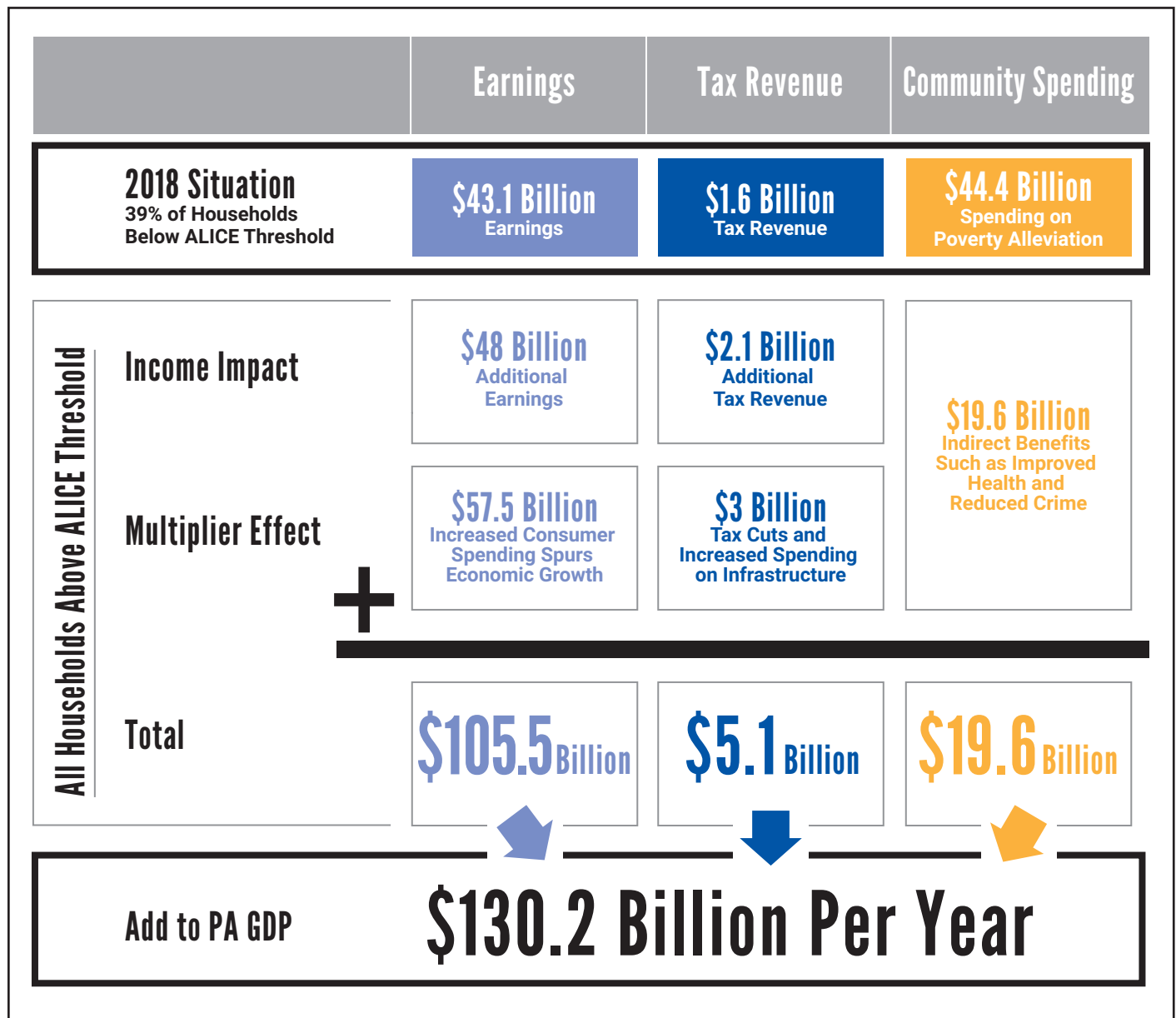
- **Additional tax revenue:** With additional earnings, there would also be additional taxes paid and reduced usage of tax credits such as child care and dependent tax credits, totaling an additional \$2.1 billion in tax revenue for Pennsylvania.
- **Multiplier effect:** Additional state tax revenue 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 \$3 billion in economic activity in Pennsylvania.<sup>100</sup>

**Community spending:** Pennsylvania's 2018 GDP reflected community spending of \$44.4 billion on assistance to the state's households below the ALICE Threshold.<sup>101</sup> 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 \$19.6 billion (or 2.5% of the state GDP, which is the estimated cost of childhood poverty alone).<sup>102</sup> 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.<sup>103</sup>

Figure 11.

## Economic Benefits of Raising All Households to the ALICE Threshold, Pennsylvania, 2018





Sources: ALICE Threshold, 2018; American Community Survey, 2018; Internal Revenue Service—1040, 2018; 2018: Internal Revenue Service—FICA, 2019; McKeever, 2018; National Association of State Budget Officers, 2019; Office of Management and Budget, 2019; Scarborough, 2018; U.S. Department of Agriculture—SNAP, 2019; Urban Institute, 2012; Walczak, 2019<sup>104</sup>

## 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 basic necessities, and how those decisions affect their broader communities. By contrast, Figure 12 outlines the improvements that all Pennsylvania families and their communities would experience if policies were implemented that moved all households above the ALICE Threshold.<sup>105</sup>

**Figure 12.**  
**The Benefits of Sufficient Income**

If households have sufficient income for...	Impact on ALICE	Impact on the Community
 <b>Safe, Affordable Housing</b>	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
 <b>Quality Child Care and Education</b>	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)
 <b>Adequate Food</b>	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
 <b>Reliable Transportation</b>	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
 <b>Quality Health Care</b>	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, fewer communicable diseases, improved workplace productivity, decreased wealth-health gap
 <b>Reliable Technology</b>	Improved access to job opportunities, expanded access to health information and tele-health services, increased job and academic performance	Decreased “digital divide” in access to technology by income, increased opportunities for civic participation
 <b>Savings</b>	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.<sup>106</sup>

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.<sup>107</sup> 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.<sup>108</sup> Strengthening communities by strengthening ALICE families means a higher quality of life for all.

# APPENDIX

## Summary of Sources Used in ALICE Household Budgets

BUDGET CATEGORY	HOUSEHOLD SURVIVAL BUDGET	HOUSEHOLD STABILITY BUDGET	SENIOR SURVIVAL BUDGET
<b>Housing</b>	U.S. Department of Housing and Urban Development (HUD) Fair Market Rent (40 <sup>th</sup> percentile) for an efficiency, one-bedroom, or two-bedroom apartment (based on family size), adjusted in metropolitan areas, using the American Community Survey (ACS)	HUD Median Rent for single adults and single parents, and a moderate house with a mortgage for a two-parent family, as reported by the ACS	Same as Household Survival Budget
<b>Child Care</b>	Registered Family Child Care Homes (using state-specific sources)	Licensed and accredited center for an infant and a preschooler (using state-specific sources)	None
<b>Food</b>	U.S. Department of Agriculture (USDA) Thrifty Food Plan, by age, with county variation from Feeding America	USDA Moderate Food Plan plus one meal out per month as reported by the Consumer Expenditure Survey (CES)	Same as Household Survival Budget, but reflect more specific costs by age (65+)
<b>Transportation</b>	Operating costs for a car (based on average daily miles by age, cost per mile, license, fees, and insurance costs, from The American Automobile Association and Federal Highway Administration), or public transportation where viable as reported by the CES	For families, costs are for leasing one car and for gas and maintenance for two cars. For single adults, costs are for leasing, gas, and maintenance for one car as reported by the CES	Same as Household Survival Budget, but reflect more specific costs by age (65+)
<b>Health Care</b>	Health insurance premiums based on employer-sponsored health insurance as reported by the Medical Expenditure Panel Survey (MEPS), plus out-of-pocket costs by age and region from the CES	Health insurance premiums based on employer-sponsored health insurance as reported by MEPS plus out-of-pocket costs by age and region from the CES	Cost of Medicare Part A & B, out-of-pocket costs by age (65+) and region, plus out-of-pocket average spending for the top five chronic diseases as reported by the U.S. Centers for Medicare and Medicaid Services
<b>Technology</b>	Consumer Report's lowest-cost smartphone plan for each adult in a household	Consumer Report's lowest-cost smartphone plan for each adult in a household and basic home internet service reported by Telogical Systems	Same as Household Survival Budget
<b>Taxes</b>	Federal, state, and local taxes from the Internal Revenue Service (IRS) and Tax Foundation	Federal, state, and local taxes from the IRS and Tax Foundation	Same as Household Survival Budget
<b>Savings</b>	None	To ensure stability over time, monthly savings set at 10% of budget	None
<b>Miscellaneous</b>	Cost overruns, estimated at 10% of budget	Cost overruns, estimated at 10% of budget	Same as Household Survival Budget

For more details, see the Methodology Overview at [UnitedForALICE.org/Methodology](https://UnitedForALICE.org/Methodology)

# 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. (2018). *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 cis-gender 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, 2<sup>nd</sup> 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](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 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.

5 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. (2018). *1-year and 5-year estimates*. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>

6 McPhillips, D. (2020, January 22). How racially and ethnically diverse is your city? *U.S. News and World Report*. Retrieved from <https://www.usnews.com/news/cities/articles/2020-01-22/measuring-racial-and-ethnic-diversity-in-americas-cities>

7Acs, G., Pendall, R., Treskon, M., Khare, A. (2017, March). *The cost of segregation*. Urban Institute. Retrieved from [https://www.urban.org/sites/default/files/publication/89201/the\\_cost\\_of\\_segregation\\_final.pdf](https://www.urban.org/sites/default/files/publication/89201/the_cost_of_segregation_final.pdf)

8 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>

9 American Community Survey. (2018). *1-year and 5-year estimates*. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>

DeMaria, K. (2016). Mapping our community: Older adult population projected to grow by two-thirds by 2030. *Cascade, 91*, Spring 2016. Federal Reserve Bank of Philadelphia. Retrieved from [https://www.philadelphiafed.org/community-development/publications/cascade/91/06\\_mapping-our-community](https://www.philadelphiafed.org/community-development/publications/cascade/91/06_mapping-our-community)

Pennsylvania State Data Center. (2018, July 10). Population characteristics and change: 2010 to 2017. PennState Harrisburg. Retrieved from <https://pasdc.hbg.psu.edu/Data/Research-Briefs/PA-Population-Estimates>

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>

Vitner, M., & Dougherty, C. (2019, August 20). *Pennsylvania 2019 midyear outlook*. Wells Fargo Securities Economics Group. Retrieved from <https://www08.wellsfargomedia.com/assets/pdf/commercial/insights/economics/regional-reports/pa-midyear-outlook-20190820.pdf>

10 American Community Survey. (2018). *1-year estimates*. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>

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/>

11 American Community Survey. (2018). *1-year estimates*. [Table S1002: Grandparents]. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/table?q=S10&d=ACS%201-Year%20Estimates%20Subject%20Tables&tid=ACST1Y2018.S1002>

Mather, M. (2015, November 4). Effects of the Great Recession on older Americans' health and well-being. Population Reference Bureau. Retrieved from <https://www.prb.org/todays-research-aging-great-recession-2/>

12 2020 senior living report: Senior living in Pennsylvania. (n.d.). Retrieved from <https://www.caring.com/senior-living/pennsylvania>

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>

13 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](https://www.cbpp.org/research/poverty-and-inequality/a-guide-to-statistics-on-historical-trends-in-income-inequality#_ftnref1)

14 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/>

15 Lubrano, A. (2019, December 19). Philadelphia a city of extremes: High incomes, high poverty, report shows. *The Philadelphia Inquirer*. Retrieved from <https://www.inquirer.com/news/poverty-median-household-income-philadelphia-temple-university-graduate-hospital-20191219.html>

16 Howell, J., Goodkind, S., Jacobs, L. A., Branson, D., & Miller, L. (2019). *Pittsburgh's inequality across gender and race*. City of Pittsburgh's Gender Equity Commission. Retrieved from [https://apps.pittsburghpa.gov/redtail/images/7109\\_Pittsburgh's\\_Inequality\\_Across\\_Gender\\_and\\_Race\\_09\\_18\\_19.pdf](https://apps.pittsburghpa.gov/redtail/images/7109_Pittsburgh's_Inequality_Across_Gender_and_Race_09_18_19.pdf)

17 Institute on Taxation and Economic Policy. (2018, October). *Who pays? A distributional analysis of the tax system in all 50 states*. Retrieved from <https://itep.org/wp-content/uploads/whopays-ITFP-2018.pdf>

18 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/>

19 Anderson, D. (2020, June 30). Minneapolis, Milwaukee & Salt Lake City have the lowest black homeownership rates in the U.S., with just one-quarter of black families owning their home. *Redfin*. Retrieved from <https://www.redfin.com/blog/black-homeownership-rate-across-united-states/>

20 U.S. Department of Health and Human Services. (2018). 2018 poverty guidelines. Retrieved from <https://aspe.hhs.gov/2018-poverty-guidelines>

21 U.S. Department of Health and Human Services. (2018). 2018 poverty guidelines. Retrieved from <https://aspe.hhs.gov/2018-poverty-guidelines>

22 AAA. (2018). *Your driving costs: How much are you really paying to drive?* Retrieved from [https://exchange.aaa.com/wp-content/uploads/2018/09/18-0090\\_2018-Your-Driving-Costs-Brochure\\_FNL-Lo-5-2.pdf](https://exchange.aaa.com/wp-content/uploads/2018/09/18-0090_2018-Your-Driving-Costs-Brochure_FNL-Lo-5-2.pdf)

Agency for Healthcare Research and Quality. (2018). *2018 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\\_7/2018/tviic2.pdf](https://meps.ahrq.gov/data_stats/summ_tables/insr/state/series_7/2018/tviic2.pdf) ; [https://meps.ahrq.gov/data\\_stats/summ\\_tables/insr/state/series\\_7/2018/tviid2.pdf](https://meps.ahrq.gov/data_stats/summ_tables/insr/state/series_7/2018/tviid2.pdf) ; [https://meps.ahrq.gov/data\\_stats/summ\\_tables/insr/state/series\\_7/2018/tviie2.pdf](https://meps.ahrq.gov/data_stats/summ_tables/insr/state/series_7/2018/tviie2.pdf)  
Note: 2007 data not available; average of 2006 and 2008 used instead

American Community Survey. (2018). *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. (2018). Consumer expenditure surveys (CES) [2017-18 MSA tables]. U.S. Department of Labor. Retrieved from <http://www.bls.gov/cex/csxmsa.htm#y1112>

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, 2017–2018. Consumer Expenditure Survey, 2019*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/cex/2018/CrossTabs/agebyinc/x45to54.PDF>

Bureau of Labor Statistics. (2018). Occupational employment statistics: May 2018 state occupational employment and wage estimates–Pennsylvania. U.S. Department of Labor. Retrieved from [https://www.bls.gov/oes/2018/may/oes\\_pa.htm](https://www.bls.gov/oes/2018/may/oes_pa.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](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](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](https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf)

Feeding America. (2019). *Map the Meal Gap 2019: A report on county and congressional district food insecurity and county food cost in the United States in 2017*. Retrieved from <https://www.feedingamerica.org/sites/default/files/2019-05/2017-map-the-meal-gap-full.pdf>

Fowler, B. (2019, May 23). *Best low-cost cell-phone plans*. Consumer Reports.

Internal Revenue Service. (2020, January 8). *1040 and 1040-SR: Instructions*. Retrieved from <https://www.irs.gov/pub/irs-pdf/i1040gi.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>

Pennsylvania Department of Education and Human Services. (2018). Market Rate Survey data, 2007–2018. Correspondence with Aaron McMahan, Data and Policy Specialist, Bureau of Finance, Administration and Planning. January 2019. Office of Child Development and Early Learning.

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. (2018). *The state of auto insurance 2018*. Retrieved from <https://www.thezebra.com/state-of-insurance/auto/2018/>

U.S. Department of Agriculture. (2018). *Official USDA food plans*. Retrieved from <https://fns-prod.azureedge.net/sites/default/files/CostofFoodJun2018.pdf>

U.S. Department of Agriculture. (2018). *Official USDA Alaska and Hawaii Thrifty Food Plans*. Retrieved from <https://fns-prod.azureedge.net/sites/default/files/AKH11stHalf2018.pdf>

U.S. Department of Housing and Urban Development. (2018). *Fair market rents*. Office of Policy Development and Research. Retrieved from [https://www.huduser.gov/portal/datasets/fmr.html#2018\\_data](https://www.huduser.gov/portal/datasets/fmr.html#2018_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/cpihom.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](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](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 Charette, A., Herbert, C., Jakobovics, 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](https://www.jchs.harvard.edu/sites/default/files/projecting_trends_in_severely_cost-burdened_renters_final.pdf)

Federal Reserve Bank of Philadelphia. (n.d.). Rental housing affordability data tool. Retrieved from <https://www.philadelphiafed.org/community-development/housing-data-dashboard>

The Pew Charitable Trusts. (2019, April). *Philadelphia 2019: The state of the city*. Retrieved from [https://www.pewtrusts.org/-/media/assets/2019/10/sotc\\_2019.pdf](https://www.pewtrusts.org/-/media/assets/2019/10/sotc_2019.pdf)

27 Wardle, L. (2019, January 5). This Pa. city has some of the most affordable homes in the world. PennLive. Retrieved from [https://www.pennlive.com/life/2017/01/affordable\\_housing\\_pa\\_2016.html](https://www.pennlive.com/life/2017/01/affordable_housing_pa_2016.html)

28 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](http://www.jchs.harvard.edu/sites/default/files/jchs-housing_americas_older_adults_2014_1.pdf)

Louie, K. K. T. & Kurre, J. A. (2018, May). *Analysis of cost-of-living data for Pennsylvania Counties* [Executive summary]. The Center for Rural Pennsylvania. Retrieved from <https://www.rural.palegislature.us/documents/reports/Cost-of-Living-Exec-Sum-2018.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>

- 29 American Community Survey. (2018). *1-year estimates*. [Table S0801: Commuting characteristics by sex]. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/table?q=S08&d=ACS%201-Year%20Estimates%20Subject%20Tables&tid=ACST1Y2018.S0801>
- Kneebone, E., & Holmes, N. (2015, March 24). The growing distance between people and jobs in metropolitan America. Retrieved from <https://www.brookings.edu/research/the-growing-distance-between-people-and-jobs-in-metropolitan-america/>
- 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>
- 30 Note: A child care desert is any census tract with more than 50 children under age 5 that contains either no child care providers or so few options that there are more than three times as many children as licensed child care slots.
- Malik, R., Hamm, K., Schochet, L., Nova, C., Workman, S., & Jessen-Howard, S. (2018, December 6). *America's child care deserts in 2018*. Center for American Progress. Retrieved from <https://www.americanprogress.org/issues/early-childhood/reports/2018/12/06/461643/americas-child-care-deserts-2018/>
- 31 Child Care Aware of America. (2019). *The U.S. and the high price of child care: An examination of a broken system*. Retrieved from <https://www.childcareaware.org/our-issues/research/the-us-and-the-high-price-of-child-care-2019/>
- 32 Note: This Report uses median hourly income when reporting wages for occupations. For comparison, the mean (average) hourly wage for a child care worker was \$11.02 in 2018.
- Bureau of Labor Statistics. (2018). Occupational employment statistics: May 2018 state occupational employment and wage estimates—Pennsylvania. U.S. Department of Labor. Retrieved from [https://www.bls.gov/oes/2018/may/oes\\_pa.htm](https://www.bls.gov/oes/2018/may/oes_pa.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>
- 33 Economic Policy Institute. (2019, July). The cost of child care in Pennsylvania. Retrieved from <https://www.epi.org/child-care-costs-in-the-united-states/#/PA>
- 34 Goldrick-Rab, S., Baker-Smith, C., Coca, V., Looker, E., & Williams, T. (2019, April). *College and university basic needs insecurity: A national #RealCollege survey report*. Retrieved from [https://hope4college.com/wp-content/uploads/2019/04/HOPE\\_realcollege\\_National\\_report\\_digital.pdf](https://hope4college.com/wp-content/uploads/2019/04/HOPE_realcollege_National_report_digital.pdf)
- Bron, 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>
- 35 Cross, A. (2018, August). *The campus cupboard study: Needs assessment of collegiate food insecurity in Southwestern Pennsylvania* [Executive Summary]. Retrieved from <https://drive.google.com/file/d/1JmxyfSVWdy92CfxCTECPcE-b337wT15/view>
- 36 Bron, 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., & Gundersen, 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](https://www.feedingamerica.org/sites/default/files/2019-06/The%20State%20of%20Senior%20Hunger%20in%202017_F2.pdf)
- Ziliak, J. P., & Gundersen, 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>
- 37 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>
- 38 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>
- 39 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>
- 40 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](https://www.risc.college/sites/default/files/2019-01/RISC_2019_report_natl.pdf)
- 41 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](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>
- 42 Radley, D. C., McCarthy, D. & Hayes, S. L. (2018, May). *2018 scorecard on state health system performance*. The Commonwealth Fund. Retrieved from [https://interactives.commonwealthfund.org/2018/state-scorecard/files/Radley\\_State\\_Scorecard\\_2018.pdf](https://interactives.commonwealthfund.org/2018/state-scorecard/files/Radley_State_Scorecard_2018.pdf)
- 43 University of Wisconsin Population Health Institute. (2020). Pennsylvania – life expectancy. County Health Rankings and Roadmaps. Retrieved from <https://www.countyhealthrankings.org/app/pennsylvania/2020/measure/outcomes/147/data>
- 44 Pennsylvania Department of Health. (n.d.). Minority health statistics, minority health disparities reports. Retrieved from <https://www.health.pa.gov/topics/HealthStatistics/MinorityHealthStatistics/Pages/Minority-Health-Statistics.aspx>
- 45 Anderson, K. F. (2013, January 16). Diagnosing discrimination: Stress from perceived racism and the mental and physical health effects. *Sociological Inquiry*, 83(1). Retrieved from <https://doi.org/10.1111/j.1475-682X.2012.00433.x>
- NAACP. (2017, November). *Fumes across the fence-line*. Clean Air Task Force. Retrieved from [http://www.catf.us/wp-content/uploads/2017/11/CATF\\_Pub\\_FumesAcrossTheFenceLine.pdf](http://www.catf.us/wp-content/uploads/2017/11/CATF_Pub_FumesAcrossTheFenceLine.pdf)
- Peter G. Peterson Foundation. (2020, April). *Why are Americans paying more for health care?* Retrieved from <https://www.pgpf.org/blog/2020/04/why-are-americans-paying-more-for-healthcare>
- Ross, T. (2013, August). *A disaster in the making addressing the vulnerability of low-income communities to extreme weather*. Center for American Progress. Retrieved from <https://www.americanprogress.org/wp-content/uploads/2013/08/LowIncomeResilience-3.pdf>
- 46 Boustan, L. P., Yanguas, M. L., Kahn, M., & Rhode, P. W. (2017, July 1). As the rich move away from disaster zones, the poor are left behind. *Grist*. Retrieved from <https://grist.org/article/as-the-rich-move-away-from-disaster-zones-the-poor-are-left-behind/>
- California Institute of Technology. (2018). *Scientific consensus: Earth's climate is warming*. Retrieved from <https://climate.nasa.gov/scientific-consensus/>
- Commonwealth of Pennsylvania. (n.d.). Disasters and emergencies. Retrieved from <https://www.pa.gov/guides/disasters-and-emergencies/>
- Krause, E., & Reeves R. V. (2017, September 18). *Hurricanes hit the poor the hardest*. Brookings Institution. <https://www.brookings.edu/blog/social-mobility-memos/2017/09/18/hurricanes-hit-the-poor-the-hardest/>
- Lavizzo-Mourey, R. (2015). *In it together – building a culture of health: 2015 president's message*. Robert Wood Johnson Foundation. Retrieved from <https://www.rwjf.org/en/library/annual-reports/presidents-message-2015.html>
- Mutter, J. C. (2015). *The disaster profiteers: How natural disasters make the rich richer and the poor even poorer*. New York, NY: St. Martin's Press.
- 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/>
- 47 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>
- 48 Federal Deposit Insurance Corporation. (2018, October). Table E.2 rates of saving for unexpected expenses or emergencies by State, 2015–2017. In *FDIC National Survey of Unbanked and Underbanked Households, Appendix Tables*. Retrieved from <https://www.fdic.gov/householdsurvey/2017/2017appendix.pdf>
- Karlan, D., Ratan, A. L., & Zinman, 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/roiw.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](https://www.pewtrusts.org/~media/assets/2015/10/emergency-savings-report-1_artfinal.pdf)
- 49 Center for Workforce Information & Analysis. (2019, August). *Economic review of Pennsylvania, 2018*. Retrieved from [https://www.workstats.dli.pa.gov/Documents/ETA%20Reports/ETA\\_Report.pdf](https://www.workstats.dli.pa.gov/Documents/ETA%20Reports/ETA_Report.pdf)
- Federal Reserve Bank of St. Louis. (n.d.). All employees: Manufacturing in Pennsylvania. Retrieved from <https://fred.stlouisfed.org/series/PAMFG>
- Federal Reserve Bank of St. Louis. (n.d.). All employees: Total nonfarm in Pennsylvania. Retrieved from <https://fred.stlouisfed.org/series/PANA>
- Federal Reserve Bank of St. Louis. (n.d.). Education and health services in Pennsylvania. Retrieved from <https://fred.stlouisfed.org/series/PAEDUH>
- Federal Reserve Bank of St. Louis. (n.d.). Financial activities in Pennsylvania. Retrieved from <https://fred.stlouisfed.org/series/PAFIRE>
- Federal Reserve Bank of St. Louis. (n.d.). Professional and business services in Pennsylvania. Retrieved from <https://fred.stlouisfed.org/series/PAPBSV>
- Federal Reserve Bank of St. Louis. (n.d.). Real total gross domestic product for Pennsylvania. Retrieved from <https://fred.stlouisfed.org/series/PARGSP>
- Federal Reserve Bank of St. Louis. (n.d.). Unemployment rate in Pennsylvania. Retrieved from <https://fred.stlouisfed.org/series/PAUR>
- 50 Vitner, M., & Dougherty, C. (2019, August 20). *Pennsylvania 2019 midyear outlook*. Wells Fargo Securities Economics Group. Retrieved from <https://www08.wellsfargomedia.com/assets/pdf/commercial/insights/economics/regional-reports/pa-midyear-outlook-20190820.pdf>

- 51 Center for Rural Pennsylvania. (2018, March). *Nine years and counting: Rural Pennsylvania's economy after the Great Recession*. Retrieved from <https://www.rural.palegislature.us/documents/factsheets/rural-economy-march2018.pdf>
- 52 Brasier, K., Chandler, R., Glenna, L., Hesse, A., Kelsey, T., Monnat, S., et. al. (2017, March). *The Marcellus Shale impacts study wave 2: Chronicling social and economic change in northern and southwestern Pennsylvania*. The Center for Rural Pennsylvania. Retrieved from [https://www.rural.palegislature.us/documents/reports/Marcellus\\_Wave\\_2\\_Final\\_Report\\_2017.pdf](https://www.rural.palegislature.us/documents/reports/Marcellus_Wave_2_Final_Report_2017.pdf)
- Bushman, J. (2020, July 14). *Pennsylvania impact fee and natural gas trends*. Center for Energy Policy & Management, Washington & Jefferson College, Independent Fiscal Office. Retrieved from <http://www.ifo.state.pa.us/download.cfm?file=Resources/Documents/WJ-Presentation-Natural-Gas-7-14-20.pdf>
- Center for Rural Pennsylvania. (2018, March). *Nine years and counting: Rural Pennsylvania's economy after the Great Recession*. Retrieved from <https://www.rural.palegislature.us/documents/factsheets/rural-economy-march2018.pdf>
- Krauss, C. (2019, December 11). Natural gas boom fizzles as a U.S. glut sinks profits. *The New York Times*. Retrieved from <https://www.nytimes.com/2019/12/11/business/energy-environment/natural-gas-shale-chevron.html>
- 53 Bureau of Labor Statistics. (n.d.). Economy at a glance: Pennsylvania. U.S. Department of Labor. Retrieved from <https://www.bls.gov/eag/eag.pa.htm>
- 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/>
- 54 Bureau of Labor Statistics. (2018). Occupational employment statistics: May 2018 state occupational employment and wage estimates—Pennsylvania. U.S. Department of Labor. Retrieved from [https://www.bls.gov/oes/2018/may/oes\\_pa.htm](https://www.bls.gov/oes/2018/may/oes_pa.htm)
- 55 American Community Survey. (2018). *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 2018 annual averages. U.S. Department of Labor. Retrieved from <https://www.bls.gov/lau/staadata.txt>
- 56 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. (2018). *Employed full time: Workers paid hourly rates: Wage and salary workers: 16 years and over*. Retrieved from <https://fred.stlouisfed.org/series/LEU0253126800A>
- 57 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>
- 58 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 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>
- 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>
- 59 Bureau of Labor Statistics. (2018, June 7). Contingent and alternative employment arrangements—May 2017 [News release]. Retrieved from <https://www.bls.gov/news.release/pdf/conemp.pdf>
- Gig Economy Data Hub. (n.d.). Who participates in the gig economy? Cornell University and the Aspen Institute. Retrieved from <https://www.gigeconomydata.org/basics/who-participates-gig-economy>
- Gitis, B., Holtz-Eakin, D., & Rinehart, W. (2017, January 10). *The gig economy: Research and policy implications of regional, economic, and demographic trends*. American Action Forum. Retrieved from <https://www.americanactionforum.org/research/gig-economy-research-policy-implications-regional-economic-demographic-trends/>
- Farrell, D., Greig, F., & Hamoudi, A. (2018, September). *The online platform economy in 2018: Drivers, workers, sellers, and lessons*. JP Morgan Chase & Co. Retrieved from <https://www.jpmorganchase.com/corporate/institute/document/institute-ope-2018.pdf>
- Freelancers Union & Upwork. (2017). *Freelancing in America: 2017*. Retrieved from <https://s3.amazonaws.com/fuwt-prod-storage/content/FreelancingInAmericaReport-2017.pdf>
- 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 <https://www.mckinsey.com/featured-insights/employment-and-growth/independent-work-choice-necessity-and-the-gig-economy#>
- MBO Partners. (2019). *The state of independence in America: 2019: The changing nature of the American workforce*. Retrieved from <https://s29814.pcdn.co/wp-content/uploads/2019/06/MBO-SOI-2019.pdf>

Robles, B., & McGee, M. (2016). *Exploring online and offline informal work: Findings from the Enterprising and Informal Work Activities (EIWA) survey*. Finance and Economics Discussion Series 2016-089. Washington: Board of Governors of the Federal Reserve System. Retrieved from <https://www.federalreserve.gov/econresdata/feds/2016/files/2016089pap.pdf>

60 Bureau of Labor Statistics. (2019, January 18). *Multiple jobholders by selected characteristics*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/cps/cpsaat36.htm>

61 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>

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

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>

McFeely, S., & Pendell, R. (2018, August 16). What workplace leaders can learn from the real big economy. *Gallup*. Retrieved from <https://www.gallup.com/workplace/240929/workplace-leaders-learn-real-gig-economy.aspx>

62 Bureau of Labor Statistics. (December 2018). *Employer costs for employee compensation*. U.S. Department of Labor. Retrieved from [https://www.bls.gov/news.release/archives/ecec\\_03192019.pdf](https://www.bls.gov/news.release/archives/ecec_03192019.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/>

63 Bureau of Labor Statistics. (2018). Occupational employment statistics: May 2018 state occupational employment and wage estimates–Pennsylvania. U.S. Department of Labor. Retrieved from [https://www.bls.gov/oes/2018/may/oes\\_pa.htm](https://www.bls.gov/oes/2018/may/oes_pa.htm)

64 American Community Survey. (2018). *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>

65 Bureau of Labor Statistics. (2019, April 25). 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>

66 American Community Survey. (2018). *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](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>

67 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](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/CTRF2015TyndallTransportationPolicyPlanning.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://nwlcc.org/wp-content/uploads/2015/08/collateral\\_damage\\_scheduling\\_fact\\_sheet.pdf](https://nwlcc.org/wp-content/uploads/2015/08/collateral_damage_scheduling_fact_sheet.pdf)

68 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>

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/>

- 69 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>
- 70 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>
- 71 Bureau of Labor Statistics. (n.d.). Economy at a glance: Pennsylvania. U.S. Department of Labor. Retrieved from <https://www.bls.gov/eag/eag.pa.htm>
- 72 Ding, L., Leigh, E. W., & Harker, P. (2018, October). *Automation and regional employment in the third Federal Reserve District*. Federal Reserve Bank of Philadelphia. Retrieved from <https://philadelphiafed.org/-/media/community-development/publications/special-reports/automation-and-regional-employment.pdf>
- Pennsylvania’s State System of Higher Education. (2018, October). *Evaluating the potential impacts of automation and the gig economy in Pennsylvania*. Retrieved from <https://public.analytics.oei.pashe.edu/StateSystemEdHub/Insights/WorkforceNeedsAssessment/Pennsylvania-Gig-AI-10082018.pdf>
- 73 Bureau of Labor Statistics. (2018). Occupational employment statistics: May 2018 state occupational employment and wage estimates–Pennsylvania. U.S. Department of Labor. Retrieved from [https://www.bls.gov/oes/2018/may/oes\\_pa.htm](https://www.bls.gov/oes/2018/may/oes_pa.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](https://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf)
- 74 Ding, L., Leigh, E. W., & Harker, P. (2018, October). *Automation and regional employment in the third Federal Reserve District*. Federal Reserve Bank of Philadelphia. Retrieved from <https://philadelphiafed.org/-/media/community-development/publications/special-reports/automation-and-regional-employment.pdf>
- 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](https://www.brookings.edu/wp-content/uploads/2019/01/2019_01_BrookingsMetro_Automation-AI_Report_Muro-Maxim-Whiton-FINAL-version.pdf)
- 75 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>
- 76 Pennsylvania’s State System of Higher Education. (2018, October). *Evaluating the potential impacts of automation and the gig economy in Pennsylvania*. Retrieved from <https://public.analytics.oei.pashe.edu/StateSystemEdHub/Insights/WorkforceNeedsAssessment/Pennsylvania-Gig-AI-10082018.pdf>
- 77 Dixon, A. (2019, June 5). Survey: Nearly 1 in 3 side hustlers needs the income to stay afloat. *Bankrate*. Retrieved from <https://www.bankrate.com/personal-finance/side-hustles-survey-june-2019/>
- 78 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](https://www.hamiltonproject.org/assets/files/workers_and_the_online_gig_economy.pdf)
- Eden, P., & Gaggl, 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](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](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>
- 79 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>
- 80 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](http://www3.weforum.org/docs/WEF_White_Paper_Technology_Innovation_Future_of_Production_2017.pdf)

- 81 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](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](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)
- 82 Bureau of Labor Statistics. (2018). Occupational employment statistics: May 2018 state occupational employment and wage estimates–Pennsylvania. U.S. Department of Labor. Retrieved from [https://www.bls.gov/oes/2018/may/oes\\_pa.htm](https://www.bls.gov/oes/2018/may/oes_pa.htm)
- Bureau of Labor Statistics. (2019). *Occupational outlook handbook*. U.S. Department of Labor. Retrieved from <https://www.bls.gov/ooh/>
- Center for Workforce Information & Analysis. (2019, August). *Economic review of Pennsylvania, 2018*. Retrieved from [https://www.workstats.dli.pa.gov/Documents/ETA%20Reports/ETA\\_Report.pdf](https://www.workstats.dli.pa.gov/Documents/ETA%20Reports/ETA_Report.pdf)
- Pennsylvania Department of Labor & Industry. (2020). Projections, Occupational/Industries, 2018-28 long-term occupational projections [table]. Retrieved from <https://www.workstats.dli.pa.gov/Products/employment-projections/Pages/default.aspx>
- 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](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>
- 83 Bureau of Labor Statistics. (2019). *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](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](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](https://nces.ed.gov/programs/digest/d18/tables/dt18_303.10.asp)
- 84 Goldrick-Rab, S., Baker-Smith, C., Coca, V., Looker, E., & Williams, T. (2019). *College and university basic needs insecurity: A national #RealCollege survey report*. Retrieved from [https://hope4college.com/wp-content/uploads/2019/04/HOPE\\_realcollege\\_National\\_report\\_digital.pdf](https://hope4college.com/wp-content/uploads/2019/04/HOPE_realcollege_National_report_digital.pdf)
- 85 Project on Student Debt. (2018). *Student debt and the class of 2018*. The Institute for College Access and Success. Retrieved from <https://ticas.org/wp-content/uploads/2019/09/classof2018.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>
- 86 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](http://www.ala.org/news/sites/ala.org/news/files/content/0415_StateAmlib_0.pdf)
- 87 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>
- 88 The Institute of Museum and Library Services. (2019). *Public libraries survey*. Retrieved from <https://www.ims.gov/research-evaluation/data-collection/public-libraries-survey>
- 89 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/>
- 90 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/>
- 91 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>

92 American Community Survey. (2018). *5-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/>

93 American Community Survey. (2018). *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>

94 Data calculated by applying the ALICE Threshold income levels to internet data from the American Community Survey. (2018). *5-year estimates* [Table S2801: Types of computers and internet subscriptions]. U.S. Census Bureau. Retrieved from <https://data.census.gov/cedsci/>

95 National Telecommunications and Information Administration. (2020, June 10). *Digital nation data explorer*. United States Department of Commerce. Retrieved from <https://www.ntia.doc.gov/data/digital-nation-data-explorer#sel=wiredHighSpeedAtHome&demo=&pc=count&disp=both>

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/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/>

Anderson, M., & Perrin, A. (2018, October 26). *Nearly one-in-five teens can't always finish their homework because of the digital divide*. 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/>

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>

96 Meinrath, S. D., Bonestroo, H., Bullen, G., Jansen, A., Mansour, S., Mitchell, C., et. al. (2019, June). *Broadband availability and access in rural Pennsylvania*. The Center for Rural Pennsylvania. Retrieved from [https://www.rural.palegislature.us/broadband/Broadband\\_Availability\\_and\\_Access\\_in\\_Rural\\_Pennsylvania\\_2019\\_Report.pdf](https://www.rural.palegislature.us/broadband/Broadband_Availability_and_Access_in_Rural_Pennsylvania_2019_Report.pdf)

97 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>

98 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>

99 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>

100 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., Karabarbounis, M., Kudryak, 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>

101 American Community Survey. (2018). *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). *Local income taxes in 2019*. Tax Foundation. Retrieved from <https://taxfoundation.org/local-income-taxes-2019/>

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

102 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](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. (2018). Total gross domestic product for Pennsylvania. Retrieved from <https://research.stlouisfed.org/fred2/series/PANGSP>

103 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](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>

104 Internal Revenue Service. (n.d.). *1040 and 1040-SR: Instructions*. Retrieved from <https://www.irs.gov/pub/irs-pdf/i1040gi.pdf>

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. (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, 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>

105 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/>

106 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>

107 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>

108 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](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-Maqbool.etal.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/doi/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](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](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/abs/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](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](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.healthsystemstracker.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/RWJPhysiciansSurveyExecutiveSummary.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>

Wolf, 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](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.irp.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. & Boivie, 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](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](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 2009–2020 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.*