

# The 2018 Opportunity Index and 2019 Preview for Selected Indicators: Technical Supplement

## Introduction

The Opportunity Index is a composite measure that draws upon important economic, educational, health, and community-related indicators of opportunity. The Index was launched in 2011 and has since been updated regularly. It provides insight into the multidimensional nature of opportunity in the United States. The indicators are broken down geographically to measure opportunity for individual states and counties, as well as aid policymakers and other stakeholders as they work to increase opportunity in our nation.

The Index was first launched in 2011, and Child Trends led a structural change in 2017 affecting a number of its indicators and dimensions. The 2018 Opportunity Index was jointly developed by Child Trends and the Forum for Youth Investment's Opportunity Nation campaign.

The Opportunity Index continues to incorporate the important structural updates made in 2017, including the newest dimension (Health), and a number of indicator updates (detailed information on those updates can be found in the [2017 Technical Supplement](#)). For this Index release, we have also disaggregated several indicators at the national level by race/ethnicity, and gender (for 12 indicators, data were available disaggregated by race/ethnicity; for 10 indicators, data were available disaggregated by gender). This analysis begins an examination of what disparities persist across the various facets of opportunity, which will continue in future editions of the Opportunity Index.

Because the data comprising the Opportunity Index are released at varying points in the year, this release represents a *complete* 2018 Index (i.e., all indicators were updated as expected) and a *partial* 2019 report (because some indicator data were not available at the time of this release). We were able to calculate Opportunity Scores, Opportunity Grades, and Dimension Scores for the 2018 data, but not for 2019. Partial 2019 data is not currently available on the Opportunity Index website, but can be requested on [opportunityindex.org](https://opportunityindex.org) (<https://opportunityindex.org/request-data/>).

## Structure of the Opportunity Index

The Opportunity Index summarizes statistics on opportunity across four dimensions: Economy, Education, Health, and Community. Each dimension includes three to seven indicators—the specific measurements used to quantify opportunity.

One important use of the Opportunity Index is to track progress over time across indicators, dimensions, and overall opportunity. However, updates made to the Index in 2017 necessitate a caution about comparing data from different years. While data for the 2016 Opportunity Index were recalculated to incorporate the updated Index structure and are therefore appropriate for comparison with more recent data, direct comparisons of Opportunity Scores, Opportunity Grades, or Dimension Scores with those from previous years of the Index (2011 to 2015) are inadvisable.

The table on the following page shows the structure of the Opportunity Index. Indicators that have 2019 Index data for this report are shown in *italics*.

DIMENSION	INDICATOR	DESCRIPTION
Economy	JOB	Unemployment rate (percentage of the population ages 16 and older who are not working but available for and seeking work)
	WAGES	Median household income (in 2010 dollars)
	POVERTY	Percentage of the population below the federal poverty level (the amount of pretax cash income considered adequate for an individual or family to meet basic needs)
	INCOME INEQUALITY	80/20 ratio (ratio of household income at the 80th percentile to that at the 20th percentile)
	ACCESS TO BANKING SERVICES	Number of banking institutions (commercial banks, savings institutions, and credit unions) per 10,000 residents
	AFFORDABLE HOUSING	Percentage of households spending less than 30 percent of their income on housing-related costs
	BROADBAND INTERNET SUBSCRIPTION	Percentage of households with subscriptions to broadband internet service
Education	PRESCHOOL ENROLLMENT	Percentage of 3- and 4-year-olds attending preschool
	HIGH SCHOOL GRADUATION	On-time high school graduation rate (percentage of freshmen who graduate in four years)
	POSTSECONDARY EDUCATION	Percentage of adults ages 25 and older with an associate degree or higher
Health	LOW BIRTH WEIGHT	Percentage of infants born weighing less than 5.5 pounds
	HEALTH INSURANCE COVERAGE	Percentage of the population (under age 65) without health insurance coverage
	DEATHS RELATED TO ALCOHOL/DRUG USE AND SUICIDE	Deaths attributed to alcohol or drug poisoning, or suicide (age-adjusted rate per 100,000 population)
Community	VOLUNTEERING	Percentage of adults (ages 18 and older) who reported they volunteered during the previous year <b>[national and state-level only]</b>
	VOTER REGISTRATION	Percentage of adults ages 18 and older who are registered to vote <b>[national and state-level only]</b>
	YOUTH DISCONNECTION	Percentage of youth (ages 16–24) not in school and not working
	VIOLENT CRIME	Incidents of violent crime reported to law enforcement agencies (per 100,000 population)
	ACCESS TO PRIMARY HEALTH CARE	Number of primary care physicians (per 100,000 population)
	ACCESS TO HEALTHY FOOD	Number of grocery stores and produce vendors (per 10,000 population)
	INCARCERATION	Number of people incarcerated in jail or prison (per 100,000 population 18 and older) <b>[national and state-level only]</b>

## Opportunity Index Data Sources

The indicators that comprise the Opportunity Index are derived from a number of sources: data and statistics released by the Federal government (including the Census Bureau, U.S. Department of Labor, U.S. Department of Education, U.S. Department of Justice, U.S. Department of Health and Human Services, and the Centers for Disease Control and Prevention), and statistics provided by County Health Rankings, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.

**A note on data lag:** Because it takes time for agencies to validate and prepare their data for public release, the indicators comprising the Opportunity Index are subject to data lags of varying length. The lags are detailed in the “Data Years” section for each indicator.

### Economy

**Indicator:** Unemployment rate

**Definition:** The total number of people without jobs who actively looked for work within the four weeks preceding the April survey, and were available to take a job, as a percentage of the total number in the labor force (those working or unemployed but seeking work).

**Source:** Bureau of Labor Statistics, Local Area Unemployment Statistics and news releases (<http://www.bls.gov/lau/>).

**Note:** Rates are not seasonally adjusted.

**Data Years:** The unemployment rate in the 2018 Opportunity Index refers to April 2018.

**Disaggregation:** This indicator is disaggregated by race/ethnicity and gender in the 2018 Opportunity Index.

**Indicator:** Median household income

**Definition:** The income level that falls at the midpoint of the total distribution of households, ranked from richest to poorest. Household income includes work earnings from jobs or self-employment, as well as income from interest, dividends, rent, Social Security, pension payments,

unemployment compensation, cash welfare benefits, and other forms of money regularly received by any member of the household.

**Source:** U.S. Census Bureau, American Community Survey (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).

**Note:** Because income is not distributed evenly across households, the average (mean) is much higher than the median; thus, the median is generally considered to give a fairer picture of income for a “typical” household. To adjust for inflation and facilitate year-to-year comparisons, income figures in the Opportunity Index are presented in 2010 dollars.

**Data Years:** In the 2018 Opportunity Index, median household income data at the state level refer to 2016; for counties, data refer to the average of 2012–2016. In the 2019 preview, median household income data at the state level refer to 2017; for counties, data refer to the average of 2013–2017.

**Disaggregation:** Because households may include individuals of more than one gender, race, or ethnic background, this indicator is not disaggregated by gender or race/ethnicity.

**Indicator:** Poverty rate

**Definition:** Percentage of people of all ages living with family incomes below the federal poverty line.

**Source:** U.S. Census Bureau, American Community Survey (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).

**Note:** The federal poverty line is the amount of pretax cash income considered adequate for an individual or family to meet basic needs. It is updated annually for inflation, based on Consumer Price Index changes, and is adjusted for family size and composition. In 2016, a four-person family with two children would be considered to live in poverty if it had income less than \$24,339.

**Data Years:** Poverty rate data in the 2018 Opportunity Index for states and the nation refer to 2016; county data refer to the average of 2012–2016. For the 2019 preview, the 2017 poverty threshold was used. A four-person family with two children would be considered to live in poverty if it had

income less than \$24,858. Poverty rate data for states and the nation refer to 2017; county data refer to the average of 2013-2017.

**Disaggregation:** This indicator is disaggregated by race/ethnicity and gender in the 2018 Opportunity Index and 2019 preview.

**Indicator:** 80/20 ratio (ratio of household income at the 80th percentile of income to that of the 20th percentile)

**Definition:** The 80/20 ratio is a measure of income inequality describing the disparity in income between the household at the 80th percentile of income and the household at the 20th percentile. The 80/20 ratio for the United States is 4.9, meaning that the wealthiest fifth of households (those at the 20th percentile) have incomes nearly five times higher than those of households in the poorest fifth (the 80th percentile).

**Source:** U.S. Census Bureau, American Community Survey (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).

**Data Years:** 80/20 ratio data in the 2018 Opportunity Index for states and the nation refer to 2016 income; data for counties use the average of 2012–2016 income. Nation and state data refer to 2017 in the 2019 preview; data for counties refer to the average of 2013-2017.

**Disaggregation:** Because households may include individuals of more than one gender, race, or ethnic background, this indicator is not disaggregated by gender or race/ethnicity.

**Indicator:** Number of banking institutions (commercial banks, savings institutions, and credit unions) per 10,000 residents

**Definition:** The number of commercial banks, savings institutions, and credit unions per 10,000 residents.

**Source:** Child Trends' analysis of data from the U.S. Census Bureau, County Business Patterns (<https://www.census.gov/programs-surveys/cbp.html>), and Population Estimates (<https://www.census.gov/programs-surveys/popest.html>).

**Note:** Banking institutions included in this indicator include those with the following NAICS codes: 522110, 522120, and 522130.

**Data Years:** In the 2018 Opportunity Index, data for this indicator refer to 2016.

**Disaggregation:** Because banking institutions serve individuals of more than one gender, race, or ethnic background, this indicator is not disaggregated by gender or race/ethnicity.

**Indicator:** Households spending less than 30 percent of household income on housing-related costs

**Definition:** The percentage of households spending less than 30 percent of their income on rent and utilities (for households that rent), or on mortgage payments and other housing-related costs, such as real estate taxes or condo fees (for those that own homes).

**Source:** U.S. Census Bureau, American Community Survey (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).

**Note:** A widely accepted cut-off for housing affordability is housing-related costs that are no more than 30 percent of household income. Housing units for which costs and/or household income could not be determined are excluded from the calculation.

**Data Years:** For the nation and states, data refer to 2016; data for counties refer to 2012–2016. In the 2019 preview, nation and state data refer to 2017; for counties, data from 2013–2017 were used.

**Disaggregation:** Because households may include individuals of more than one gender, race, or ethnic background, this indicator is not disaggregated by gender or race/ethnicity.

**Indicator:** Broadband internet subscription

**Definition:** The percentage of households with subscriptions to broadband internet service (including both cable and DSL).

**Source:** U.S. Census Bureau, American Community Survey (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>)

**Data Years:** Broadband internet data in the 2018 Opportunity Index are from 2016, and data for the 2019 preview are from 2017.

**Disaggregation:** Because households may include individuals of more than one gender, race, or ethnic background, this indicator is not disaggregated by gender or race/ethnicity.

## Education

**Indicator:** Preschool enrollment

**Definition:** The percentage of children, ages 3 and 4, enrolled in public or private nursery school, preschool, or kindergarten.

**Source:** U.S. Census Bureau, American Community Survey (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).

**Data Years:** In the 2018 Opportunity Index, data on preschool enrollment for states and the nation refer to 2016; data for counties refer to the average of 2012–2016. The 2019 preview uses national and state-level data from 2017 and county-level data from 2013-2017.

**Disaggregation:** For both the 2018 Opportunity Index and the 2019 preview, this indicator has been disaggregated by gender and racial/ethnic background.

**Indicator:** On-time high school graduation rate

**Definition:** The percentage of high school freshmen who graduate after four years of high school.

**Source:** National and state data are from ED Facts' Adjusted Cohort Graduation Rate (ACGR) (<https://www2.ed.gov/about/inits/ed/edfacts/data-files/index.html>); county data are taken from the Robert Wood Johnson Foundation's County Health Rankings' analysis of school district-level ACGR data from the ED Facts site (<http://www.countyhealthrankings.org/resources/2017-chr-measures-data-sources-and-years>).

**Note:** The ACGR is calculated as "the number of students who graduate in four years with a regular high school diploma, divided by the number of students who form the adjusted cohort of the graduating class. From the beginning of 9th grade (or the earliest high school grade), students who are entering that grade for the first time make up a cohort that is 'adjusted' by adding any students who subsequently transfer into the cohort and

subtracting any students who subsequently transfer out, emigrate to another country or die.”<sup>1</sup> Prior to 2015, the Opportunity Index used a different measure, the Average Freshmen Graduation Rate, that is not comparable to the ACGR. The Department of Education stopped updating the Average Freshman Graduation Rate in 2012, adopting the ACGR as their preference, which is the indicator used in the Index since 2015.

**Data Years:** National and state-level data for this indicator refer to the 2015-16 school year for the 2018 Opportunity Index and the 2016-2017 school year for the 2019 preview. County-level data for the 2018 Index refer to the 2016-2017 school year, and the 2019 preview data is unavailable for counties.

**Disaggregation:** Data for this indicator are disaggregated by racial/ethnic background, but not gender, in the 2019 preview; disaggregated data are not available for the 2018 Opportunity Index.

**Indicator:** Associate degree or higher

**Definition:** The percentage of adults ages 25 and older who have completed an associate degree or higher.

**Source:** U.S. Census Bureau, American Community Survey (<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).

**Data Years:** For the 2018 Index, data for states and the nation refer to 2016; county-level data refer to 2012–2016. The 2019 preview uses national and state-level data from 2017 and county-level data from 2013-2017.

**Disaggregation:** This indicator is disaggregated by race/ethnicity and gender in the 2018 Opportunity Index and the 2019 preview.

## Health

**Indicator:** Low birth weight

**Definition:** The percentage of live births where the infant weighed less than 2,500 grams (approximately 5 lbs., 8 oz.).

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<sup>1</sup> U.S. Department of Education. (2015). *Regulatory Four-Year Adjusted Cohort Graduation Rates - School Year 2013-14, EDFacts Data Documentation*. Washington, DC: U.S. Department of Education. Retrieved from <http://www.ed.gov/edfacts>.

**Source:** CDC WONDER (<https://wonder.cdc.gov/natality-current.html>).

**Data Years:** The 2018 Index data for states and the nation refer to 2016; data for counties refer to the average of 2012–2016. In the 2019 preview, state and nation level data refer to 2017 and, for counties, the average of 2013-2017 is used.

**Disaggregation:** Data disaggregated by mother’s racial/ethnic background are included in the 2018 Index and the 2019 preview.

**Indicator:** Health insurance

**Definition:** The percentage of the population under age 65 not covered by health insurance.

**Source:** American Community Survey

(<http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml>).

**Data Years:** Data for states and the nation refer to 2016 in the 2018 Opportunity Index; data for counties refer to the average of 2012–2016. The 2019 preview uses national and state-level data from 2017 and county-level data from 2013-2017.

**Disaggregation:** Disaggregated data by gender and racial/ethnic background are available for the 2018 Opportunity Index and the 2019 preview. To capture important disparities in senior health insurance coverage, disaggregated data also include individuals over the age of 65.

**Indicator:** Deaths related to alcohol/drug use or suicide (rate per 100,000)

**Definition:** The age-adjusted number of deaths, per 100,000 people, due to poisoning from drugs (including recreational and prescription drugs), or alcohol, or suicide.

**Source:** CDC WONDER (<https://wonder.cdc.gov/ucd-icd10.html>).

**Note:** This indicator refers to several reported underlying causes of death compiled by CDC Wonder. The following ICD-10 codes are included: X40-X45, X60-X84, and Y10-Y15. Age-adjusting accounts for localities’ variation in their age composition.

**Data Years:** In the 2018 Opportunity Index, data for states and the nation refer to 2016; data for counties refer to the average of 2012–2016. State-level and national data for the 2019 preview refer to 2017, and county data

refer to the average of 2013-2017.

**Disaggregation:** This indicator is disaggregated by race/ethnicity and gender in the 2018 Opportunity Index and 2019 preview.

## **Community**

**Indicator:** Volunteering

**Definition:** The percentage of adults ages 18 and older who reported performing volunteer work through or for an organization at any time in the previous year.

**Source:** Child Trends' analysis of data from the U.S. Census Bureau, Current Population Survey, and Volunteering Supplement.

**Note:** Due to sample-size limitations of the survey data, this indicator is calculated at the national and state levels only. Two years of survey responses were pooled to increase the sample available for analysis. This makes for more stable estimates. This indicator was updated slightly for the 2018 Opportunity Index and draws from two survey questions: "In the past 12 months, did you spend any time volunteering for any organization or association?" and "Some people don't think of activities they do infrequently or for children's schools or youth organizations as volunteer activities. In the past 12 months, have you done any of these types of activities?" In 2016 and 2017, the questions this indicator drew from had different wording: "Since September 1 of last year, have you done any volunteer activities through or for an organization?" and "Sometimes people don't think of activities they do infrequently or activities they do for children's schools or youth organizations as volunteer activities. Since September 1 of last year, have you done any of these types of volunteer activities?" Prior to 2016, this indicator relied on the single question, "Since September 1 of last year, have you done any volunteer activities through or for an organization?"

**Data Years:** Data in the 2018 Opportunity Index refer to the average of 2015 and 2017.

**Disaggregation:** Data disaggregated by gender and racial/ethnic background are included in the 2018 Index.

**Indicator:** Voter registration rate

**Definition:** The percentage of the adult population registered to vote.

**Source:** U.S. Census Bureau, Voting and Registration

(<https://www.census.gov/data/tables/time-series/demo/voting-and-registration/p20-580.html>).

**Note:** Historically, voter registration is higher in presidential election years than in midterm election years. This indicator is updated biannually so that each update provides a rolling average that includes the most recent presidential election year and midterm election year. For this reason, data in the 2017 Opportunity Index and the 2018 Opportunity Index are the same: the average of registration rates for 2014 and 2016. Because counties and congressional districts frequently follow different borders, this indicator is calculated at the national and state levels only.

**Disaggregation:** Data disaggregated by gender and some racial/ethnic backgrounds are included in the 2018 Opportunity Index.

**Indicator:** Youth disconnection

**Definition:** The percentage of the population ages 16 to 24 who are not enrolled in school and not working or not currently seeking employment.

**Source:** Child Trends' analysis of data from the U.S. Census Bureau, American Community Survey, PUMS Microdata

(<https://www.census.gov/programs-surveys/acs/data/pums.html>), and custom tabulations for county and county equivalents provided by special arrangement with the U.S. Census Bureau.

**Data Years:** Data in the 2018 Opportunity Index for states and the nation refer to 2016; data for counties refer to the average of 2012–2016. For the 2019 preview, national and state-level data are from 2017, and county-level data are from 2013–2017.

**Disaggregation:** Disaggregated data by gender and racial/ethnic background are included in the 2018 Index.

**Indicator:** Violent crime rate

**Definition:** Total number of violent crimes reported to local law enforcement agencies, per 100,000 people. Violent crimes include homicide,

rape, robbery, and assault.

**Source:** State and national data are from the U.S. Department of Justice, Federal Bureau of Investigation Uniform Crime Reporting, Crime in the U.S. (<https://ucr.fbi.gov/crime-in-the-u.s/>); county data from the County Health Rankings analysis of data from the U.S. Department of Justice, Federal Bureau of Investigation Criminal Justice Information Services. County Health Rankings is a project of the University of Wisconsin Population Health Institute in collaboration with the Robert Wood Johnson Foundation. Crime data are based on report data provided by nearly 17,000 law enforcement agencies (LEAs) across the United States. Due to the number of reporting agencies, there is a reporting lag; not all LEAs report and some data reported may be incomplete.

**Data Years:** Data in the 2018 Opportunity Index for states and the nation refer to 2016; data for counties refer to the average of 2014 to 2016.

**Disaggregation:** Because this indicator represents a population-level rate, data are not disaggregated by gender or race/ethnicity.

**Indicator:** Primary care physicians

**Definition:** Number of primary care physicians per 100,000 people.

**Source:** Bureau of Health Workforce, Area Health Resources Files (<https://datawarehouse.hrsa.gov/data/datadownload.aspx>).

**Note:** State and national statistics for this indicator are derived from the county-level Area Health Resources Files. The number of primary care physicians includes non-federal physicians who are not currently in a residency program and who are younger than age 75.

**Data Years:** Data in the 2018 Opportunity Index refer to 2016.

**Disaggregation:** Because primary care physicians may serve patients of more than one gender or racial/ethnic background, this indicator is not disaggregated by those characteristics.

**Indicator:** Grocery stores and produce vendors

**Definition:** The number of supermarkets, grocery stores, and produce stands per 10,000 residents.

**Source:** Child Trends' analysis of data from the U.S. Census Bureau, County

Business Patterns and Population Estimates Program  
(<http://www.census.gov/econ/cbp/index.html> and  
<http://www.census.gov/popest/>).

**Note:** NAICS codes 445110 (supermarkets and other grocery, except convenience, stores) and 445230 (fruit and vegetable markets) are used to gather the number of supermarkets, grocery stores, and produce stands.

**Data Years:** Data in the 2018 Opportunity Index refer to 2016.

**Disaggregation:** Because grocery stores and produce vendors may serve individuals of more than one gender or racial/ethnic background, this indicator is not disaggregated by those characteristics.

**Indicator:** Incarceration rate

**Definition:** The number of people incarcerated in jails or prisons per 100,000 residents ages 18 and older.

**Source:** Bureau of Justice Statistics, Correctional Populations in the United States (<https://www.bjs.gov/index.cfm?ty=tp&tid=11>).

**Data Years:** Data for this indicator are available at the national and state level only. Data in the 2018 Opportunity Index refer to 2016.

**Disaggregation:** Data disaggregated by gender and racial/ethnic background are included in the 2018 Index.

## Opportunity Index Methodology

Once data for the Opportunity Index have been compiled, Opportunity Scores for states and grades for counties are calculated using three steps:

1. Rescaling indicators
2. Calculating dimension scores
3. Calculating Opportunity Scores and Grades

### Rescaling Indicators

The diverse indicators that comprise the Opportunity Index include percentages, rates, and dollar values. To include them in a composite measure such as the Opportunity Index, each of these statistics is transformed to enable comparisons on a common scale. The Opportunity Index uses a simple rescaling procedure based on the minimum and maximum values obtained for each indicator.<sup>2</sup>

Each state or county's performance on an indicator is compared with the highest and lowest scores obtained on that indicator, excluding outliers (extreme values).<sup>3</sup> The following formula is used to calculate a value from 0 to 100 for each indicator:

$$\text{Observed value rescaled} = \left( \frac{\text{Observed value} - \text{Lowest value}}{\text{Highest value} - \text{Lowest value}} \right) \times 100$$

The indicators in the Opportunity Index vary in their directionality. For example, median household income is an indicator for which higher values are more desirable, but the unemployment rate is better when lower. For

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<sup>2</sup> The natural logs of the data for median household income and violent crime are used in this process to normalize their highly skewed data distributions.

<sup>3</sup> The maximum and minimum values for each indicator are based on an examination of variance and skewness. For indicators with long tails on either or both sides of the normal distribution curve, maximum and minimum values are set to fall within the long tails, with values outside of this range treated as equivalent to the minimum or maximum in the rescaling process.

negative indicators,<sup>4</sup> the rescaling procedure also standardizes their directionality:

$$\text{Observed value rescaled} = 1 - \left( \frac{\text{Observed value} - \text{Lowest value}}{\text{Highest value} - \text{Lowest value}} \right) \times 100$$

This way, for all indicators, higher values are more desirable. The highest and lowest reference values for each indicator are presented below; values outside of this range are top- or bottom-coded:

### Economy

INDICATOR	DESCRIPTION	LOWEST VALUE	HIGHEST VALUE
JOBS	Unemployment rate (percentage of the population ages 16 and older who are not working and are seeking work and available to work)	0.0	16.0
WAGES	Median household income (in 2010 dollars)	\$19,000	\$95,000
POVERTY	Percentage of the population below the federal poverty level	2.0	30.0
INCOME INEQUALITY	80/20 ratio (ratio of household income at the 80th percentile to that at the 20th percentile)	2.0	7.0
ACCESS TO BANKING SERVICES	Number of banking institutions (commercial banks, savings institutions, and credit unions) per 10,000 residents	0.0	10.5
AFFORDABLE HOUSING	Percentage of households spending less than 30 percent of their income on housing-related costs	40.0	95.0
BROADBAND INTERNET SUBSCRIPTION	Percentage of households with subscriptions to broadband internet service	50.0	100.0

<sup>4</sup> Negative indicators include the following: unemployment, poverty level, income inequality, low birth weight, lack of health insurance, deaths from drugs/alcohol or suicide, youth disconnection, violent crime, and incarceration.

## Education

INDICATOR	DESCRIPTION	LOWEST VALUE	HIGHEST VALUE
PRESCHOOL ENROLLMENT	Percentage of 3- and 4-year-olds attending preschool	0.0	100.0
HIGH SCHOOL GRADUATION	On-time high school graduation rate (percentage of freshmen who graduate in four years)	55.0	100.0
POSTSECONDARY EDUCATION	Percentage of adults ages 25 and older with an associate degree or higher	0.0	75.0

## Health

INDICATOR	DESCRIPTION	LOWEST VALUE	HIGHEST VALUE
LOW BIRTH WEIGHT	Percentage of infants born weighing less than 5.5 pounds	4.0	11.5
HEALTH INSURANCE COVERAGE	Percentage of the population (under age 65) without health insurance coverage	0.0	30.0
DEATHS RELATED TO ALCOHOL/DRUG USE AND SUICIDE	Deaths attributed to alcohol or drug poisoning, or suicide (age-adjusted rate per 100,000 population)	0.0	60.0

## Community

THEME	INDICATOR	LOWEST VALUE	HIGHEST VALUE
VOLUNTEERING	Percentage of adults (ages 18 and older) who reported volunteering during the previous year <b>[national and state-level only]</b>	0.0	65.0
VOTER REGISTRATION	Percentage of the population ages 18 and older who are registered to vote <b>[national and state-level only]</b>	35.0	90.0
YOUTH DISCONNECTION	Percentage of youth ages 16–24 not in school and not working	0.0	30.0
VIOLENT CRIME	Incidents of violent crime reported to law enforcement agencies (per 100,000 population)	0.0	12.0
ACCESS TO PRIMARY HEALTH CARE	Number of primary care physicians (per 100,000 population)	0.0	175.0

ACCESS TO HEALTHY FOOD	Number of grocery stores and produce vendors (per 10,000 population)	0.0	6.3
INCARCERATION	Number of people incarcerated in jail or prison (per 100,000 population ages 15–64) <b>[national and state-level only]</b>	300.0	1500.0

## Calculating Dimension Scores

At the state level, the Opportunity Index is made up of 20 indicators across the four dimensions (Economy, Education, Health, and Community). In each dimension, the rescaled values for indicators are averaged to create dimension-level Opportunity Scores, also ranging from 1 to 100. Because data for some indicators are not available at the county level,<sup>5</sup> the county measurement of the Opportunity Index is made up of 17 indicators. As with states, indicators in each dimension are averaged to create dimension-level Opportunity Scores ranging from 0 to 100.

## Calculating Opportunity Scores and Grades

Each state also has an overall Opportunity Score that summarizes performance across the four Index dimensions. To calculate these, a state’s four dimension scores are averaged with equal weighting. Final Opportunity Scores are again represented as values from 0 to 100; these values are used to rank the 50 states and the District of Columbia on the Opportunity Index. To create overall county Opportunity Scores, the four dimension scores are also averaged and weighted equally. Counties are also assigned Opportunity Grades that correspond to their scores, ranging from A+ to F.

In 2011, Opportunity Grade cut-off points were based on the distribution of raw, final numerical outcomes of the 2011 Opportunity Index for counties and county equivalents; groupings were done according to standard deviations above or below the average. The same cut-off points were used to assign Opportunity Grades for the 2012 to 2016 indices, allowing comparison across years.

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<sup>5</sup> These indicators are volunteering, voter registration, and incarceration rate, all within the Community dimension.

However, in 2017, it was necessary to recalculate the relationship between final numerical values and Opportunity Grade assignments because of the significant update to the dimensions and indicators comprising the Opportunity Index. New cut-off points for assigning grades were based on the distribution of numerical scores of the updated Opportunity Index in 2016 for counties and county equivalents.<sup>6</sup> Grades in the 2017 Index were also assigned according to these new cut-off points. Thus, it is valid to compare county grades between the 2016 Index and subsequent indices. However, Opportunity Grades from 2011 to 2015 were based on the 2011 cut-off points. Because of this, county grades from 2011 to 2015 should not be compared with those from the 2016 Index or later indices.

The assignment of county-level Opportunity Grades, based on the standardized scores, is summarized in the table below.

Opportunity Grade	Minimum Standardized Score (rounded)	Maximum Standardized Score (rounded)
A+	80.0	100.0
A	67.5	79.9
A-	64.0	67.4
B+	60.5	63.9
B	57.1	60.4
B-	53.6	57.0
C+	50.1	53.5
C	46.6	50.0
C-	43.1	46.5
D+	39.6	43.0
D	36.2	39.7
D-	32.7	36.1
F	0.0	32.6

## Data Notes

Given the large number of geographic areas and the many indicators that comprise the Opportunity Index, it is not surprising that there are instances of missing data. If a county is missing data for three or more indicators, or for two or more indicators within the same dimension, then an Opportunity

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<sup>6</sup> In 2017, the 2016 Opportunity Index was recalculated using the updated Index structure.

Grade is not calculated for that county.<sup>7</sup> If a county is missing data for one or two indicators, with no more than one missing indicator per dimension, then the rescaled state average is substituted for the missing data point. Of a total of 3,142 counties and county equivalents in the United States, there were 1,077 counties that did not have 2018 Opportunity Grades due to missing or unreliable data. Missing data was highest for the low birth weight and broadband internet indicators.

Most indicators in the Opportunity Index are based on survey data; thus, they are statistical estimates and may be subject to sampling and non-sampling errors. Therefore, differences in dimension scores, Opportunity Scores, and Opportunity Grades between different geographic areas and across different years are not necessarily statistically significant, and comparisons should be made with caution.

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<sup>7</sup> For a county missing data for two or more indicators in the same dimension, a Dimension Score for that dimension is not calculated.

For more information, please visit <http://www.opportunityindex.org> and <http://www.childtrends.org>.