

Methodological Note

Human Development

Human development is about what people can do and be. It is formally defined as the process of improving people's well-being and expanding their freedoms and opportunities. The human development approach emphasizes the everyday experiences of ordinary people, encompassing the range of factors that shape their opportunities and enable them to live lives of value and choice. People with high levels of human development can invest in themselves and their families and live to their full potential; those without find many doors shut and many choices and opportunities out of reach.

The human development concept was developed by the late economist Mahbub ul Haq. In his work at the World Bank in the 1970s, and later as minister of finance in his own country of Pakistan, Dr. Haq argued that existing measures of human progress failed to account for the true purpose of development—to improve people's lives. In particular, he believed that the commonly used measure of gross domestic product failed to adequately measure well-being. Working with Nobel laureate Amartya Sen and other gifted economists, Dr. Haq published the first Human Development Report, commissioned by the United Nations Development Programme in 1990. Measure of America's work is inspired by and rooted in this approach.

The American Human Development Index

The human development approach is extremely broad, encompassing the wide range of economic,

social, political, psychological, environmental, and cultural factors that expand or restrict people's opportunities and freedoms. But the American Human Development Index, like the UN Human Development Index (HDI) upon which it is based, is a comparatively narrow composite measure that combines a limited number of indicators into a single score. The HDI is an easily understood numerical gauge that reflects what most people believe are the basic ingredients of human well-being: good health, access to education, and sufficient income. The value of the HDI ranges from 0 to 10, with a score of 10 being the maximum possible that can be achieved on the aggregate factors that make up the index.

Data Sources

The analysis in this report includes well-being estimates for the entire state of Louisiana and the 64 parishes contained within it. The report also includes special sections on the cities of Baton Rouge, Monroe, New Orleans, and Shreveport, which include well-being estimates by census tract and public use microdata area (PUMA).

The American Human Development Index for *A Portrait of Louisiana 2020* was calculated using several datasets. Mortality data used to calculate life expectancy are from the Centers for Disease Control and Prevention (CDC) and the Louisiana Department of Public Health. The education, earnings, and population data all come from the American Community Survey (ACS), a product of the US Census Bureau. The ACS is an ongoing survey that collects data from a representative percentage of the population every year using standard sampling methods.

For populous groups and places, one year of data is often sufficient to obtain a statistically reliable estimate. For less populous groups and places, one-year estimates are often either unreliable due to small population sizes or simply not available. Therefore, multiyear life expectancy and ACS estimates are used for these smaller groups and geographical areas. Source notes below all tables in *A Portrait of Louisiana 2020* show the exact year or years of data presented.



HEALTH: A long and healthy life is measured using life expectancy at birth.

Life expectancy at birth at the statewide level was calculated by Measure of America using mortality data from the Centers for Disease Control and Prevention and population data from the US Census Bureau and the CDC WONDER Bridged-Race Population Estimates. Estimates for the overall population, men, women, Black, Latino, and white residents use 2017 data. Estimates for Asian residents as well as Black men and women, Latino men and women, and white men and women use 2012–2017 data. Life expectancy at birth at the parish and PUMA level use mortality data obtained with special agreement from the Louisiana Department of Public Health and population data from the US Census Bureau and the CDC WONDER Bridged-Race Population Estimates. Estimates at the parish level use 2012–2017 data and estimates at the PUMA level use 2013–2017 data. To obtain reliable estimates for low population parishes, in some cases adjacent parishes were combined and the resulting life expectancy estimate was applied to each parish in the group. Parishes grouped in this manner are: Caldwell, LaSalle, and Winn; Calcasieu and Cameron; Concordia and Tensas; East Feliciana, West Feliciana, St. Helena, and Pointe Coupee; East Carroll and West Carroll; and Plaquemines and St. Bernard. There was not sufficient mortality data to obtain an estimate for Webster parish.

Life expectancy was calculated using abridged life tables using the Chiang II methodology. These abridged life tables aggregate death numerators and population denominators into age groups, rather than using single years of age as in complete life tables. The aggregated groups are ages under 1, 1–4, 5–9, 10–14...80–84, and 85 and older. The upper age band is capped at 85 and over. Age-specific mortality rates are used within the life table to calculate the probability of a death event at each age interval. These probabilities are then applied to a hypothetical population cohort of newborns. Life expectancy at birth in a geographic area can be defined as an estimate of the average number of years a newborn baby would live if they experienced the particular area’s age-specific mortality rates for that time period throughout their life. There was not enough mortality data to calculate Native American life expectancy.

HDI estimates by census tract in the four sections on specific cities use life expectancy estimates from the US Small-area Life Expectancy Estimates Project (USALEEP) of the National Center for Health Statistics. They use 2010–2015 data and the methodology is explained in detail here <https://www.cdc.gov/nchs/nvss/usaleep/usaleep.html>



EDUCATION: Access to education is measured using two indicators:

net school enrollment for the population ages 3 through 24 and degree attainment for the population ages 25 and older (based on the proportions of the adult population that has earned at least a high school diploma, at least a bachelor’s degree, and a graduate or professional degree). All educational attainment and enrollment figures come from Measure of America analysis of data from the US Census Bureau ACS. Single-year 2018 ACS estimates were used for statewide HDI calculations, and multiyear 2014–2018 estimates were used for parish, PUMA, tract, and Asian and Latino subgroup calculations.



INCOME: A decent standard of living is measured using the median personal earnings of all workers ages 16 and older.

Median personal earnings data come from the US Census Bureau ACS. Single-year 2018 ACS estimates were used for statewide HDI calculations, and multiyear 2014–2018 estimates were used for parish, PUMA, tract, and Asian and Latino subgroup calculations.

YOUTH DISCONNECTION: The youth disconnection rate is the percentage of young people ages 16 to 24 who are neither working nor in school.

While youth disconnection is not a component of the HDI, it is a key measure of community well-being and a featured indicator in this report. Youth disconnection rates were calculated by Measure of America using data from the US Census Bureau ACS. Single-year 2018 ACS data were used for all gender and racial and ethnic groups at the statewide level except Latino men and Latina women, which use multiyear 2014–2018 data. PUMA-level estimates also use multiyear 2014–2018 data. Parish-level estimates are custom tabulations obtained from the US Census Bureau using 2014–2018 data.

Calculating the American Human Development Index

The first step in calculating the HDI is to calculate a subindex for each of the three dimensions separately. This is done in order to put indicators that use different scales—years, dollars, etc.—onto a common scale from 0 to 10. In order to calculate these indices—the health, education, and income indices—minimum and maximum values (goalposts) must be chosen for each underlying indicator. Performance in each dimension is expressed as a value between 0 and 10 by applying the following general formula:

FORMULA
 Dimension Index = $\frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}} \times 10$

Since all three components range from 0 to 10, the HDI, in which all three indices are weighted equally, also varies from 0 to 10, with 10 representing the highest level of human development. The goalposts were determined based on the range of the indicator observed in all possible groupings in the United States, taking into account possible increases and decreases in years to come.

The goalposts for the four principal indicators that make up the American Human Development Index are shown in the table below. To ensure that the HDI is comparable over time, the health and education indicator goalposts do not change from year to year while the income goalposts are only adjusted for inflation using the CPI-U-RS from the Bureau of Labor Statistics. Because earnings data and the earnings goalposts are presented in dollars of the same year, these goalposts reflect a constant amount of purchasing power regardless of the year, making Income Index results comparable over time. In cases where an estimate for a population group or geographic area falls above or below the set goalpost for that indicator, a maximum value of 10 or a minimum value of 0 is imputed for the purposes of calculating the HD Index.

INDICATOR	Maximum value	Minimum value
Life expectancy at birth	90 years	66 years
Educational attainment score	2.0	0.5
Combined net enrollment ratio	95%	60%
Median personal earnings*	\$71,488	\$16,897

*Earnings goalposts were originally set at \$13,000 and \$55,000 in 2005 dollars.

There is a degree of sampling and nonsampling error inherent in data from the Census Bureau’s annual ACS. Not all differences between estimates for two places or groups may reflect a true difference between those places or groups. Comparisons between similar values on any indicator should be made with caution since these differences may not be statistically significant.

Geographic and Population Groups Used in This Report

Public use microdata areas or PUMAs are substate geographic units designated by the US Census Bureau. PUMAs have populations of at least 100,000 and generally less than 200,000. PUMAs used in this report were delineated for the 2010 census and were named by the local State Census Data Center.

Racial and ethnic groups in this report are based on definitions established by the White House Office of Management and Budget (OMB) and used by the US Census Bureau and other government entities. Since 1997 the OMB has recognized five racial groups and two ethnic categories. The racial groups include Native Americans, Blacks, Asians, Native Hawaiians and other Pacific Islanders, and whites. The ethnic categories are Latino and not Latino. People of Latino ethnicity may be of any race. In this report, these racial groups include only non-Latino members of these groups who self-identify with that race group alone and no other. Census data also include some detail on the specific ancestries of the resident population. Detailed race and ancestry data were used to identify members of the largest Asian subgroups and all Latino/Hispanic subgroups in Louisiana for the purposes of this report.

Accounting for Cost-of-Living Differences

Cost of living varies across Louisiana and the country. Any comparisons with other cities or national data in terms of food, shelter, and clothing, therefore, must take this into account. There is currently no suitable nationwide measure, official or not, of the cost of living that could be used as a basis for adjusting for differences across regions. The Consumer Price Index (CPI), calculated by the US Bureau of Labor Statistics, helps in understanding changes in the

EXAMPLE

Calculating the HDI Index for Louisiana



HEALTH Index

Life expectancy at birth for Louisiana is 76.0 years. The Health Index is then:

$$\text{Health Index} = \frac{76.0-66}{90-66} \times 10 = 4.16$$



EDUCATION Index

In 2018, 86.0 percent of Louisiana's residents 25 years and older had at least a high school diploma, 24.3 percent had at least a bachelor's degree, and 8.4 percent had a graduate or professional degree. Therefore, the Educational Attainment score is $0.860+0.243+0.084 = 1.19$. The Educational Attainment Index is then:

$$\text{Educational Attainment Index} = \frac{1.19-0.5}{2.0-0.5} \times 10 = 4.59$$

School enrollment (net enrollment ratio) was 76.4 percent, so the Enrollment Index is:

$$\text{Enrollment Index} = \frac{76.4-60}{95-60} \times 10 = 4.69$$

The Educational Attainment Index and the Enrollment Index are then combined to obtain the Education Index. The Education Index gives a 2/3 weight to the Educational Attainment Index and a 1/3 weight to the Enrollment Index to reflect the relative ease of enrolling students in school as compared with the relative difficulty of completing a meaningful course of education (signified by the attainment of degrees):

$$\text{Education Index} = \frac{2}{3} 4.59 + \frac{1}{3} 4.69 = 4.62$$



INCOME Index

Median personal earnings for the typical worker in Louisiana in 2018 were \$31,192. The Income Index is then:

$$\text{Income Index} = \frac{\log(31,192) - \log(16,897)}{\log(71,488) - \log(16,897)} \times 10 = 4.25$$

HUMAN DEVELOPMENT Index

Once these indices have been calculated, the HDI is obtained by taking the average of the three indices:

$$\text{HDI Index} = \frac{4.16 + 4.62 + 4.25}{3} = 4.35$$

purchasing power of the dollar over time. The CPI is sometimes mistaken for a cost-of-living index, but in fact it is best used as a measure of the change in the cost of a set of goods and services over time in a given place. Additionally, cost-of-living variations within compact regions, such as states or cities or between neighborhoods in the same urban area, are often more pronounced than variations between states and regions. Further, while costs vary across the nation, they are often higher in areas with more community assets that are conducive to higher levels of well-being. For example, neighborhoods with higher housing costs are often places with higher-quality public services such as schools, recreation facilities, and transport systems and safer and cleaner neighborhoods. Thus, to adjust for cost of living would be to explain away some of the factors that the HDI is measuring.

Child and Youth Well-Being Dashboard

Households with Children Under 18 (% of all households) US Census Bureau, American Community Survey, Table C17010, 2018.

Married-Couple Households (% of households with children) US Census Bureau, American Community Survey, Table C17010, 2018.

Female Householder, No Spouse Present (% of households with children) US Census Bureau, American Community Survey, Table C17010, 2018.

Male Householder, No Spouse Present (% of households with children) US Census Bureau, American Community Survey, Table C17010, 2018.

Young Mothers (% of women ages 16 to 24 with children) US Census Bureau, American Community Survey, Public Use Microdata Sample, 2018.

Infant Mortality Rate (number of infant deaths for every 1,000 live births) CDC Wonder, 2017.

Maternal Mortality (number of women who die while pregnant or within 42 days of termination of pregnancy for every 100,000 women) CDC Wonder, 2017.

Low Birth Weight (% of births less than 2,500 grams) CDC Wonder, 2017.

Preschool Enrollment (% of all 3- and 4-year-olds) Louisiana: US Census Bureau, American Community Survey, Public Use Microdata Sample, 2018. US: US Census Bureau, American Community Survey, Table S1401, 2018.

On-Time High School Graduation (% of students who earn a regular diploma within four years) Louisiana: Louisiana Department of Education, 2017–2018. US: National Center for Education Statistics, 2017–2018.

Child Poverty (% of children under 18 in households with incomes below poverty) Louisiana: US Census Bureau, American Community Survey, Public Use Microdata Sample, 2018. US: US Census Bureau, American Community Survey, Table S1701, 2018.

Youth Disconnection (% of youth ages 16 to 24 not in school and not working) Measure of America calculations using US Census Bureau, American Community Survey, Public Use Microdata Sample, 2018.