

Community Asset Inventory and Rankings Methodology *(Draft)*

Center for Business and Economic Research, Ball State University, Muncie, Indiana

Introduction

The Indiana Community Asset Inventory and Rankings (CAIR) offers a detailed look at the factors that affect the reputation of Indiana's communities, both large and small. It features an interactive website produced by Ball State University, as well as a downloadable/printable report. The purpose of this project is to provide policy makers and residents within Indiana's counties with an objective, data-focused assessment of the factors that influence the quality of life and the economic conditions within each county.

Data

Several studies across many disciplines link specific types of data to long-term prosperity (such as human capital, school performance, government efficiency, quality of place, and health outcomes). Using readily available public data sets, we collected and categorized them into seven clear categories: people, human capital: education, human capital: health, government impact & economy, changeable public amenities, static public amenities and arts, entertainment & recreation. Within these categories, we used a total of 45 factors to determine the grades and points. Each factor's rank is calculated or determined using anywhere from one to five data variables that were acquired from the following sources: American Lung Association, Bureau of Economic Analysis, Bureau of Labor Statistics, County Health Rankings, Geographic information systems data from ESRI, Indiana State Department websites, National Cancer Institute, National Center for Charitable Statistics and the U.S. Census Bureau. See the appendix for the complete list of data variables with their respective data sources.

Methodology

The CAIR provides a detailed asset inventory of variables that describe the educational attainment and health of Hoosier citizens, the performance of K-12 education and local government efficiency and cost, the availability of natural resource and cultural amenities, the level to which these have been augmented by local public investment and private recreational and arts activities.

All the data have been carefully selected from secondary sources and are based on existing research of the factors that contribute to the quality of life of residents through educational attainment and resources, the government, and the assets and activities that make communities livable, vibrant places.

These data have been aggregated to the county level for each of Indiana's 92 counties, with local scores adjusted for population within sub-jurisdictions in each county. A grade has been assigned to each county for those factors that are realistically within the control of public or private entities within a county. Each county is then graded in several areas, with grades ranging from A to F. We grade on a curve; an equal number of A and F grades are given, an equal number of B and D grades are given, and average performers receive C grades. For areas in which a community has no short-term control, such as the presence of naturally occurring assets (such as lakes and rivers) we assign an index number with average being 100 points.

People

Within the People category, five factors were used: population growth, poverty rate, unemployment rate, private foundations revenue per capita and other nonprofit revenue per capita.

- Population growth was calculated by dividing the difference between the 2000 population and the 2010 population by the 2000 population. This was then ranked from highest to lowest.
- The poverty rate was based on the 2009 poverty percent all ages and ranked from lowest to highest.
- The unemployment rate was ranked from lowest to highest.
- Private foundations revenue per capita was calculated by dividing private foundations' revenues by the 2010 population. This was then ranked from highest to lowest.
- Other nonprofit revenue per capita was calculated by dividing all other nonprofits' revenues by the 2010 population. This was then ranked from highest to lowest.

An average of these five rankings was calculated for each county. Then these averages were ranked from lowest to highest and a grade was assigned based on the rank.

Human Capital: Education

Within the Human Capital: Education category, four factors were used: percent of students who passed the ISTEP English section, percent of students who passed the ISTEP math section, educational attainment (highest degree earned) and high school graduation rate.

- The percent of students who passed the ISTEP English section was ranked from highest to lowest.
- The percent of students who passed the ISTEP math section was ranked from highest to lowest.
- Educational attainment of 25 year old & older adults was a multi-step calculation. First, the high school diploma or more variable was calculated by summing the percentages of high school

graduate or equivalent, some college, associate degree, bachelor degree and graduate/professional degree. This was then ranked from highest to lowest. Second, the associate degree or more variable was calculated by summing the percentages of associate degree, bachelor degree and graduate/professional degree. This was also then ranked from highest to lowest. Third, the average educational attainment rank variable was calculated by averaging the high school diploma or more rank and the associate degree or more rank. Finally, this rank average was ranked from 1 to 92.

- High school graduation rate was calculated by dividing number of graduates by the cohort size. This was then ranked from highest to lowest.

An average of these four rankings was calculated for each county. Then these averages were ranked from lowest to highest and a grade was assigned based on the rank.

Human Capital: Health

Within the Human Capital: Health category, 12 factors were used: fertility rate, death rate, premature death rate, poor and fair health rate, poor physical health days, poor mental health days, motor vehicle crash death rate, all cancers incidence rate, lung and bronchus cancers incidence rate, asthma rate, ratio of primary care providers and access to healthy food.

- Fertility rate was ranked from highest to lowest.
- Death rate was ranked from lowest to highest.
- Premature death rate was ranked from lowest to highest.
- Poor or fair health was ranked from lowest to highest.

- The poor physical health days factor was ranked from lowest to highest.
- The poor mental health days factor was ranked from lowest to highest.
- The motor vehicle crash death rate was ranked from lowest to highest.
- The all cancers incidence rate was ranked from lowest to highest.
- The lung and bronchus cancers incidence rate was ranked from lowest to highest.
- The asthma rate was calculated by multiplying the sum of pediatric asthma and adult asthma by 1,000 and then dividing it by the 2008 population. This was then ranked from lowest to highest.
- The ratio of primary care providers was ranked from lowest to highest.
- Access to healthy food was ranked from highest to lowest.

An average of these 12 rankings was calculated for each county. Then these averages were ranked from lowest to highest and a grade was assigned based on the rank.

Government Impact and Economy

Within the Government Impact and Economy category, four factors were used: crimes rate, effective tax rate, main street rate and metropolitan development.

- The crime rate (crimes per capita) was calculated by dividing the sum of violent crimes known to police and property crimes known to police by the 2008 population. This was then ranked from lowest to highest.
- The effective tax rate was calculated by dividing total tax revenues (the sum of five tax variables: County Adjusted Gross Income Tax, County Economic Development Income Tax, County Option Income Tax, Inn Keepers Tax and Property Taxed Final Net Levy) by personal income. This was then ranked from lowest to highest.

- The main street rate was calculated by summing the number of communities within a county participating in the Indiana Main Street program. This was then ranked from highest to lowest.
- Regarding the metropolitan development factor, a dummy variable of 1 was assigned to a county with a Metropolitan Statistical Area (MSA). A dummy variable of 50 was assigned to a county without an MSA.

An average of these three rankings and the dummy variable was calculated for each county. Then these averages were ranked from lowest to highest and a grade was assigned based on the rank.

Changeable Public Amenities

Within the Changeable Public Amenities category, seven factors were used: public parks & recreational areas, historic & cultural sites, fishing & boating areas, camping & RV park areas, hiking/walking trails, beach areas and school grounds.

- The public parks & recreational areas factor was calculated by dividing the acres of public parks & recreational areas by the total acres in the county. This was then ranked from highest to lowest.
- The historic & cultural sites factor was calculated by dividing the acres of historic & cultural sites by the total acres in the county. This was then ranked from highest to lowest.
- The fishing & boating areas factor was calculated by dividing the acres of fishing & boating areas by the total acres in the county. This was then ranked from highest to lowest.
- The camping & RV park areas factor was calculated by dividing the acres of camping & RV park areas by the total acres in the county. This was then ranked from highest to lowest.
- The hiking/walking trails factor was calculated by dividing the acres of hiking/walking trails by the total acres in the county. This was then ranked from highest to lowest.

- The beach areas factor was calculated by dividing the acres of beach areas by the total acres in the county. This was then ranked from highest to lowest.
- The school grounds factor was calculated by dividing the acres of school grounds by the total acres in the county. This was then ranked from highest to lowest.

An average of these seven rankings was calculated for each county. A changeable dimension number was then calculated by subtracting each county's rank average from 100. Then the county's index points were calculated by adding 100 to each county's changeable dimension number and subtracting the changeable dimension average of all counties.

Static Public Amenities

Within the Static Public Amenities category, five factors were used: forest areas, fish and wildlife areas, dedicated nature preserves, bodies of water and shore line.

- The forest areas factor was calculated by dividing the acres of forest areas by the total acres in the county. This was then ranked from highest to lowest.
- The fish and wildlife areas factor was calculated by dividing the acres of fish and wildlife areas by the total acres in the county. This was then ranked from highest to lowest.
- The dedicated nature preserves factor was calculated by dividing the acres of dedicated nature preserves by the total acres in the county. This was then ranked from highest to lowest.
- The bodies of water factor was calculated by dividing the acres of bodies of water by the total acres in the county. This was then ranked from highest to lowest.
- The shore line perimeter in kilometers was ranked from highest to lowest.

An average of these five rankings was calculated for each county. A static dimension number was then calculated by subtracting each county's rank average from 100. Then the county's index points were calculated by adding 100 to each county's static dimension number and subtracting the static dimension average of all counties.

Arts, Entertainment & Recreation

Within the Arts, Entertainment & Recreation category, eight factors were used: per capita personal income, employment per 1,000 people and average compensation per employee; number of marinas, fairgrounds, athletic fields and golf courses; and per capita personal income in accommodation & food services.

- Per capita personal income was calculated by dividing the earnings in the arts, entertainment & recreation industry by the population. This was then ranked from highest to lowest.
- Employment per 1,000 people was calculated by multiplying the employment in the arts, entertainment & recreation industry by 1,000 and then dividing by the population. This was then ranked from highest to lowest.
- Average compensation per employee was calculated by dividing the compensation of employees received in arts, entertainment & recreation industry by the employment in the arts, entertainment & recreation industry. This was then ranked from highest to lowest.
- The marinas factor was calculated by dividing the acres of marinas by the total acres in the county. This was then ranked from highest to lowest.
- The fairgrounds factor was calculated by dividing the acres of fairgrounds by the total acres in the county. This was then ranked from highest to lowest.

- The athletic fields factor was calculated by dividing the acres of athletic fields by the total acres in the county. This was then ranked from highest to lowest.
- The golf courses factor was calculated by dividing the acres of golf courses by the total acres in the county. This was then ranked from highest to lowest.
- Per capita personal income in accommodation & food services was calculated by dividing the earnings in the accommodation & food services industry by the population. This was then ranked from highest to lowest.

An average of these eight rankings was calculated for each county. Then these averages were ranked from lowest to highest and a grade was assigned based on the rank.