

# Socioeconomic Vulnerability in the United States

## Introduction

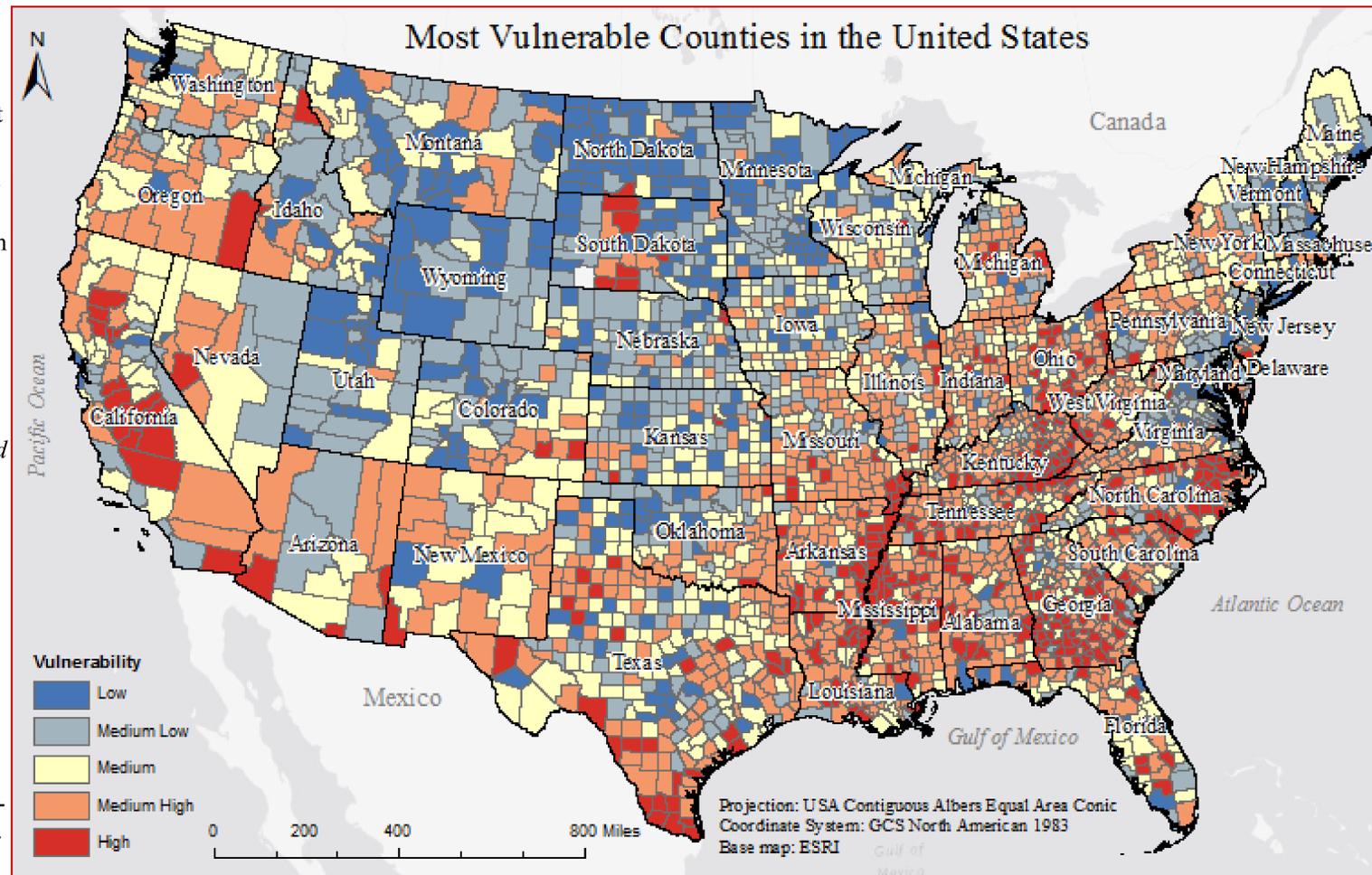
The United States is one of the wealthiest countries in the world, but many places within the United States suffer from low to no economic development or have failed to keep pace with changes occurring in the more affluent areas of the country. More than 40 million people in the United States live in poverty and suffer from lack of housing, poor education access, and/or high unemployment.

## Methodology

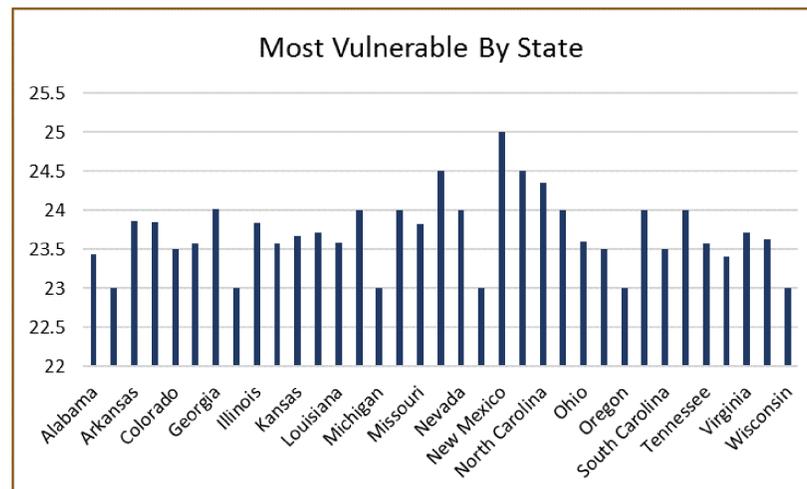
Focusing on the idea that capital markets can be a force for good, this project seeks to determine the following question: *Where are the most socially and financially vulnerable people in the United States?*

To answer this question data was collected at the county level and was used to create a vulnerability index based on six factors: education (% of population with a bachelor's degree), percent of population unemployed, population density, percent of population in renter occupied housing, median income per household size, and total investment. All population data refers to total population in 2010. Each factor was then divided into categories and assigned a score of 1-5 to indicate level of vulnerability, with 1 indicating low vulnerability and 5 indicating high vulnerability. Population density and renter occupied housing were assigned scores using the quantile method. Median income and unemployment were assigned scores using natural breaks. Education and investment were assigned scores using geometric intervals. The data for education, unemployment, population density, renter occupied housing, and median income were available at the county level and did not require additional modifications. The data for investments however is an aggregate of three different data sets: acquisitions and IPOs as reported on CrunchBase, lending, credit issuing, and portfolio management revenues as reported in the Economic Census, and New Market Tax Credit investments as reported by the Community Development Financial Institution Fund. This data was usually reported at the city level so it needed to be aggregated, assigned latitude and longitude coordinates, converted to points, and then merged with the county shape file.

High and low vulnerability was not the same for each factor. A low percent of the population with a bachelor's degree meant that area was more vulnerable. The same is true for median income and investment. On the other hand, high



unemployment, population density, and renter occupied housing meant the population was more vulnerable.



## Conclusions

According to the results from creating a combined vulnerability score, the states in the United States with the greatest proportion of high to medium high vulnerability by county are Kentucky, Tennessee, Arkansas, Mississippi, Ohio, North Carolina, Illinois, Indiana, Ohio, Michigan, West Virginia, California, Oregon, New Mexico and Georgia. Looking at the counties that have a high vulnerability, these tend to be more rural, especially the counties in California and the South East. A policy implication of these results could be to focus on policies that increase investment and encourage education. Because these areas tend to be more rural, it will also be important to think about policies that address the specific needs of rural populations. It may also be more prudent for local lawmakers to focus results that are effective for their communities because national policies may not target the issues that impact the underlying factors of each of the indicators used in this project.

## Limitations

The limitations to this analysis include but are not limited to: social indicators chosen, data used to represent investments in the United States, and availability of data for each county. The social indicators used in this project are not exhaustive and adding more could change the results. Data for investments was difficult to find and is admittedly flawed because it is not comprehensive or complete.

## Sources

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- US Census Bureau. "Economic Census." U.S. Trade with Haiti. Accessed May 07, 2018. <https://www.census.gov/EconomicCensus>.
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- ESRI Data Map10

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