# Migrating Poverty: Foreign-Born Residents \& Poverty Rates 

By:<br>Juan Sebastian Caputi

Submitted in partial fulfillment of the requirements for the degree of Bachelor of Arts in Economics
from Washington \& Jefferson College
Fall 2021


#### Abstract

This study analyzes the different determinants of poverty, including the number of the foreign-born residents, economic measurements, and social factors, and how are they shown in the 3,128 counties in America. The study aims to provide a clear explanation of the relationship between the numbers of foreign-born residents and the share of the population living under the poverty status. Similar to Rupasingha \& Goetz' study, this paper does not find a relationship between foreign-born residents and poverty rates.


## Introduction

Foreign-born residents experience different challenges after their arrival to the United States. Among these challenges, foreign-born residents and their families face the need of learning or perfect a new language (Dávila, 2008). Along these lines, some of them have skills that don't transfer into the labor market and end up in lower-paying jobs (Thorstensson Dávila, 2008). In other words, a licensed doctor in another country has enough knowledge to be a licensed doctor in the United States, however, the license doesn't transfer therefore the immigrant can't practice here in the states. Forcing the immigrant to get re-evaluated as a doctor, a process that takes time, and is costly to immigrants. These challenges make it harder for immigrants to earn the same income as an American and be more susceptible to poverty. This paper aims to discuss the relationship between foreign-born residents and poverty rates experienced at the county level, controlling for factors that are determinants of poverty in previous research.

To define poverty, the Census Bureau has determined a poverty line or threshold equivalent to three times the cost of the minimum food diet, the minimum amount of food needed by an individual or family, established in 1963. This threshold is adjusted for the inflation experienced in the past years, and also varies depending on the size and composition of the family household. In 2019, the poverty threshold for a family of four was $\$ 25,760$ (Census, 2019). Out of $328,231,337$ people recorded by the census as the total population of the United States in 2019, 39.5 million people had an income lower than the poverty threshold established. In the United States, a total of 255,000 people died of poverty in the year 2000 (Galea, 2011). However, when finding the determinants of poverty, there are two-way relationships that can be considered as causes or effects of poverty. For example, high levels of malnutrition have negative physiological and mental effects on the population, limiting individuals' capacity and
making them more susceptible to poverty. Crime has been used to determine poverty rates in previous research. Apart from finding evidence to support the relationship between low education, higher unemployment, and higher shares of female-headed households as determinants of poverty, Azih uses crime as a determinant of poverty in his research. Now, crime can be seen as a two-way relationship with poverty rates since one could argue that poverty rates are caused by higher crime rates, but others might argue that higher crime rates come along with higher poverty rates. For this reason, crime will be excluded as a possible determinant factor of poverty rates in this study, and so will malnutrition.

For this reason, this study consisted of a regression between the foreign-born residents present in a county and the poverty rates present in the county, while controlling for the determinants of poverty that were found in previous research. These control variables include economic factors and social demographics along with these counties. To account for economic impacts on poverty rates, this study controls for the median income, income inequality, and the unemployment rate, and the social demographics this study controls for the racial distribution, household structure, and educational attainment. In addition to this, this study uses a dummy variable to account for the different regions of a county. The use of this dummy variable is because poverty isn't spread evenly across the United States due to the geographical characteristics of the region. Results found that the share of foreign-born residents has no relationship with the poverty rates, but some controlling variables had the same result as previously found. Except for the share of female householders with kids, which unexpectedly was negatively related to poverty rates, which means that as we saw higher populations of female-headed households, we also saw higher poverty rates.

## Literature Review

Previous research has been done on poverty, especially in attempts of finding the determinants of poverty in an attempt to end poverty. Research has found that higher poverty rates have been directly correlated to higher unemployment rates, and as the unemployment rate goes higher so do the poverty rates (Hoynes, 2006). Hoynes also found that as factors like the real weekly wage were increasing the poverty rates were decreasing. He labels these variables as labor market opportunities due to them measuring the percentage of the unemployed population and the average weekly wage. Two factors that tell you how easy it is to get a job and on average how well-paid this job is going to be. When concluding his study, Hoynes claims that changes in labor market opportunities predict changes in the poverty rate and that the lack of improvement in poverty rates is due to the stagnant growth in median wages and increasing inequality. Rupasingha et al (2007) find similar findings to Hoynes. Instead of using the unemployment rate they use the employment rate, which in their study was significant to the $1 \%$ level and indicated that those counties with higher employment rates were associated with lower poverty rates. At the same time, he measures income inequality, which was also statistically significant, and indicated that those counties that experienced higher levels of income inequality were associated with higher poverty rates. Finally, Levernier (2000), accounted for only employment in his study, along the lines of Hoynes (2006) and Rupasingha \& Goetz (2007) he finds that employment growth is related to poverty rates, and as we experience higher employment growth we also experience lower poverty rates. This is because as more people are working, more people have a steady income and are less likely to fall under the poverty line.

Social and ethnic factors are found as important determinants of poverty in US counties (Rupasingha \& Goetz, 2007). The results showed that when it comes to age, those counties with
larger shares of children (0-17) and young adults (18-24), are associated with higher poverty rates. The same applies to race as the results showed that counties with higher shares of non-African-Americans are associated with higher poverty rates. Along these lines, Levernier (2000) also only focuses on the share of the black or African American population present in each county, leaving the other ethnic groups out of the regression. He also finds that a higher share of the population of the black or African American race is associated with higher poverty rates. Rupasingha and Goetz don't use the other ethnic groups in each county, but they use a measurement that accounts for a county's diversity. In their results, they show that those counties with higher levels of diversity were associated with higher levels of poverty rates. However, the measure that was used only reflects the probability that two people were drawn randomly from the county's population belonging to different ethnic groups, not the ethnic distribution.

One of the biggest determinants of poverty was the household structure, a variable used by Levernier (2000). Levernier finds that higher poverty rates are associated with single-female family headship and lower educational attainment levels. He explains that those counties with higher rates of female-headed households were related to higher poverty rates. A common finding in previous research (Hoynes, 2006) (Levernier, 2000). As best explained by Levernier (2000) this is due to the number of members in a household. A female householder with kids is going to struggle to get an income to support her family, therefore there is going to be a higher percentage of this household under the poverty line.

Educational attainment was also associated with lower poverty rates in the previous study. Levernier (2000) found that those counties with a higher share of the population with a 4-year college degree were associated with lower poverty rates. At the same time, counties with higher shares of the population attaining at least high school were related to lower poverty rates as well
(Hoynes, 2006). Education is a strong determinant of poverty status. When comparing households, those who were habited by families in which the head has less than high school education, 31.3 percent are below the poverty line, compared with just 9.6 percent of those whose head has high school education attained (Hoynes,2006). Rupasingha and Goetz also had similar findings. They find that a higher percentage of the population with some college and a higher percentage of the population with a college degree was associated with lower poverty rates.

The foreign-born population has been increasing in the past years. Back in 2003, the United States hit an all-time high, where $11.1 \%$ of the total population residing was foreign-born, excluding 1960 where the percentage of the total population that was foreign-born was $11.6 \%$ (Chang, 2003). Nowadays it is estimated that $13.7 \%$ of the population is foreign-born, which is even higher than the all-time high mentioned by Chang (Census). In Chang (2003) it is determined that higher shares of foreign-born population increase poverty rates, and this was due to $33 \%$ of the foreign-born population not attaining high school education. Chang (2003) finds that the low-skilled foreign-born residents are related to higher poverty rates for the entire population, along with even higher poverty rates for the foreign-born population.

The foreign-born population's relationship with poverty rates has been claimed to be existent and has also been claimed to be nonexistent. Hoynes (2006) finds that the foreign-born population isn't significant to poverty rates, and therefore has no relationship with them. He argues this is due to the small foreign-born population, and how the size of it doesn't let it have a significant impact on the poverty rates. On the other hand, the higher shares of the foreign-born populations were associated with higher poverty rates in Rupasingha and Goetz (2007). The findings show that in a metro area the higher the foreign-born population is the higher the
poverty rates are going to be, however when it comes to those non-metro areas the foreign-born population isn't significant and there isn't enough evidence to claim a relationship.

## Data \& Methodology

All data for this study was gathered from the US Census Bureau and The County Health Rankings Data. The data were obtained over the 3,128 counties in the USA to account for better and more descriptive analysis for each area. This study uses 5-year estimate data for the years 2015-2019.

Using data from 2019, this study explores the relationship between the share of the population of a county that is foreign-born and the poverty rate present in the county. At the same time, this study also aims to define the difference between the counties that have more recent foreign-born populations against those counties with foreign-born populations that have been in that location for a longer time. The previous study performed on the relationship between poverty and the foreign-born population tends to favor the position that the foreign-born population has either no effect on poverty rates or harms poverty rates and increases them (Oberman, 2015 \& Raphael, 2009). However, I expect the model to show the opposite. I hypothesize that those counties with higher numbers of foreign-born residents relative to their population will have on average higher percentages of the population living under the poverty line. To test my hypothesis and get a better understanding of how much of the variation in poverty rates across these counties can be explained by the share of the foreign-born population a regression was performed. Previous findings are used as control variables like the unemployment rate, median income, income inequality, educational attainment, household structure, and racial distribution.

The dependent variable in this regression is the poverty rate. Poverty rates are determined by the Census Bureau as the percentage of the population living under the poverty line, which is equivalent to three times the cost of the minimum food diet established in 1963 by Molly Orshanky. This measurement has been used since 1963 by the Census Bureau and has been adjusted for inflation throughout the years to give a better image of the poverty rates. The threshold varies for family size and composition, and those families whose income is lower than the threshold are considered to be under the poverty line.

To measure the foreign-born population, this study uses two variables collected from the Census. To account for the total foreign-born residents in a county, the percentage of the total population that is foreign-born is used. By capturing the entire foreign-born population, we can account for those who arrived at the county years ago, and those who have recently migrated to a certain county. I expect to see that those counties with a higher percentage of the population being foreign-born individuals will be related to a higher percentage of the population under poverty status. However, after a certain amount of time, I expect the challenges present for immigrants to diminish and become less and less present in foreign-born residents' lives, reducing poverty rates. To account for this time, the second variable of interest measures the percentage of the foreign-born population that arrived after 2010. I expect to see that in those counties where a higher percentage of the foreign-born population arrived after 2010 will be related to higher poverty rates. In other words, I expect the relationship between the foreign-born share of the population and the poverty rates to be stronger in those counties with a higher share of their foreign-born residents entering after 2010.

In Levernier's study, demographic factors are used as control variables. This study is no different. The racial distribution in a county is used in this study as four different variables
including the share of the population white, the share of the population black or African American, the share of the population Asian, and the share of the population Hispanic or Latino. The share of the population of the white race was dropped and used in the interpretation to compare counties. I expect those counties with higher shares of black, Asian, and Hispanic populations, relative to the white population, to go along with higher poverty rates. At the same time, another demographic factor that is used in this study as a possible determinant of poverty is education. In previous research education is negatively correlated with poverty rates, meaning that higher levels of educational attainment were related to lower poverty rates (Levernier, 2000). Levernier's study uses the percentage of the population that has attained at the minimum high school education; however, this study uses the percentage of the population that has attained at the minimum a bachelor's degree. I expect that as the share of the county population that has obtained a bachelor's degree or higher increases the share of the county in poverty will be lower. The final demographic control variable measures the difference in household structure across the counties. This study divides households into 5 subdivisions including a married couple, cohabiting couple, single, male householder no spouse/partner with kids, and female householder no spouse/partner present with kids. To account for the correlation between the groups, the share of single households is the omitted group. Household structure changes the income in a household and therefore can determine if a family is considered under the poverty status. Both married and cohabiting households have the potential of earning two incomes in the household, which leads me to hypothesize that counties with higher percentages of the total households being habited by a married or cohabiting couple should be related with lower poverty rates. The share of households that are habited by male householders with no spouse/partner with kids or female householders with no spouse/partner with kids, on the other hand, I expect them to have a
positive relationship with higher poverty rates. This is due to only one parental figure having an income and more mouths to feed making it more feasible to be under the poverty status. Education has been previously negatively related to poverty rates, whereas with higher educational attainment there are lower poverty rates. This study controls for education with the share of the population that has attained a bachelor's degree. I decided to use the bachelor's degree instead of high school completion because I believe that in today's world the lack of a college degree makes it very challenging for an individual to succeed. This measurement will show me exactly what percentage of each county has a bachelor's degree, and therefore what percentage of this county shouldn't be struggling to stay above the poverty line.

The amount of labor participation in a county affects directly the poverty rates (Hoynes, 2006 \& Rupinsgha, 2007), therefore the unemployment rate is used in this model. I expect to see those counties with a higher unemployment rate also have higher poverty rates. This is because as a higher percentage of the population does not have a steady income this same percentage of the population struggles more keeping themselves above the poverty threshold. The median income is also used in this study and to get a better fit for the model the values were logged. The median income should have a negative relationship with poverty rates due to it measuring the median income in a county; the higher the median income the lower the poverty rates should be because people are making more money in that county.

Even though the median income is a good measurement to capture the average wealth in a county, this study uses the income ratio to account for the wealth distribution in the county. It is important to measure the wealth distribution as a measurement of inequality in each county. According to previous research, it is expected for higher-income inequality to be related to
higher poverty rates. This study uses the ratio between the 20th and 80th percentile incomes in a county in the following equation.

The income ratio equals the coefficient between the 80th and 20th percentiles, in other words, it tells us how many times bigger than the 20th percentile income, the 80th percentile income is. Therefore, the higher this ratio is, the more income inequality is present. A more evenly distributed wealth will be represented with a lower ratio. For example, a county with highincome inequality like New York County, New York, which is the second-highest in the country, will be represented by the following equation.

An income ratio of 9.15 is considered very high and means that the 80th percentile income is 9.15 times larger than the 20th percentile income, very unevenly spread. On the other hand, a county with very low-income inequality like Skagway, Alaska, which is the lowest in the country, is represented by the following equation.

As you can see the income ratio is a lot smaller in this county, this is because income is more evenly spread across this county, meaning that people are making around the same amount in this county. A coefficient of 2.56 means that in this county the 80th percentile income is only 2.56 times larger than the 20th percentile income, an indicator of a fair distribution of wealth. For this reason, I expect to see those counties with lower income ratios have lower poverty rates as well.

Results:
The results using the percentage of the population under the poverty threshold as the dependent variable are based on a single regression for the individual data of 3,128 counties
across the year of 2019. Heteroskedasticity was present in my regression, therefore robust standard errors will be used in the table below.

|  | \% Of Population Living Under the Poverty Level <br> (PPUPS) |
| :--- | :---: |
| \% Of Population Foreign Born | 0.004 |
|  | $(0.013)$ |
| \% Of Foreign-Born Population Entered | 0.001 |
| after 2010 | $(0.003)$ |
| Constant | 31.772 |
|  | $(1.941)^{* * *}$ |
| \% Of Population Black or African | $0.0181^{* * *}$ |
| American | $(0.003)$ |
| \% Of Population Asian | $-0.033^{* *}$ |
|  | $(0.0142)$ |
| \% Of Population Hispanic or Latino | $0.0132^{* * *}$ |
|  | 0.0041 |
| Unemployment Rate | -0.0108 |
|  | $(0.147)$ |
| Ln (Median Income) | $-2.824^{* * *}$ |
|  | $(0.202)$ |
| Income Ratio | $0.139^{* * *}$ |
|  | 0.048 |
| \% Of Population with a Bachelor's | $-0.0306^{* * *}$ |
| Degree or Higher | $(0.006)$ |
| Married Couple | $0.0348^{* * *}$ |
|  | $(0.008)$ |
| Cohabiting Couple | $0.033^{*}$ |
|  | $(0.019)$ |
| Rale Householder, No Spouse/Partner | 0.066 |
| with Kids | $(0.046)$ |
| Female Householder, No Spouse/Partner | $-0.113^{* * *}$ |
| with Kids | $(0.020)$ |
| Region (Mid-West) | $-0.477^{* * *}$ |
|  | $(0.065)$ |
| Region (North East) | $-0.681^{* * *}$ |
|  | $(0.077)$ |
|  | $\left(0.0733^{* * *}\right.$ |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |


| Number of Observations | 3,128 |
| :--- | :---: |
| $\mathrm{R}^{2}$ | 0.4917 |
| $\mathrm{~F}(14,3113)$ | 468.44 |

*Note: Robust standard errors for independent variables are shown in parentheses. The symbols *, ${ }^{* *},{ }^{* * *}$ correspond to a $10 \%, 5 \%$, and $1 \%$ level of significance respectively.

There was not enough evidence in my model to support my hypothesis that there is a relationship between the percentage of the population under the poverty level and the foreignborn population when comparing counties; I expected to find that those with higher numbers of foreign-born residents, will also show a higher percentage of the population under the poverty threshold. However, both of my independent variables that took into account foreign-born residents were not significant. Therefore, there is not enough evidence in my model to either say there is a negative or positive relationship between the foreign-born population and poverty. I believe this is due to the size of the foreign-born population not being big enough to have an impact on the poverty rates. Even if these individuals are struggling to be over the poverty threshold, they're not a big enough share of the total population to affect the poverty rates.

A one percentage point increase in the share of the population that is black or African American relative to the white population is associated with a 0.018 percentage point higher poverty rate in the county. At the same time, a one percentage point increase in the share of the population Hispanic or Latino were related with higher poverty rates by 0.013 percentage points on average. Jardin (2011) explained through his study that Hispanic and Black minorities are related to higher poverty rates and that they are largely explained by differing family characteristics of the ethnic groups. Unexpectedly, those counties with higher percentages of Asian populations were related with a 0.033 percentage point lower poverty rate on average. This result goes against my hypothesis.

I hypothesized that when the unemployment rate was shown to be lower, the percentage of the population that is under the poverty threshold should be lower. However, there is not enough evidence to say that there is any sort of relationship between the unemployment rate and poverty, which was unexpected. Following previous research, those counties with lower median incomes will also show a lower relative percentage of their population under the poverty threshold. Poverty rates are on average 0.02824 percentage points lower in those counties with higher median incomes. This goes with my hypothesis, if the median income is higher, the average person is making more money, therefore more people should have the money necessary to cover the poverty threshold. Along the same lines, the income ratio showed a positive relationship significant to the $1 \%$ level, counties with higher income inequality also show poverty rates higher by 0.139 percentage points on average.

Lack of educational attainment and labor market activity is also related to the higher poverty rates expressed in minorities (Jardin, 2011). My results show that educational attainment is indeed significant to the $1 \%$ level and negatively associated with poverty rates. In those counties with higher education by one percentage point, we expect to see lower poverty rates by on average 0.0306 percentage points. This is due to the benefits and advantages education gives an individual. Jardin (2011) explained that higher education provides those individuals who attain it a higher chance of having a high income in the future, therefore preventing poverty.

The results for the household division variables in my regression were indeed significant, stating that there is enough evidence in my model to say that there is a relationship between the household type and the percentage of the population under the poverty threshold. I dropped the single group. Hoynes (2006) explains how changes in family structure and living arrangements were related to higher poverty rates. They argue that poverty rates will be higher because 37.3
percent of the female-headed households were under the poverty status, and so were 22 percent of the Male headed households, while only 8.1 percent of the married couple households were under poverty status. My results show that those counties with 1 percentage points higher married couple households and cohabiting households than single households also present higher poverty rates by on average 0.0348 and 0.033 percentage points respectively. On the other hand, counties with higher Female-headed households than single households by one percentage point, are expected to show lower poverty rates by 0.113 percentage points on average. This result was unexpected and goes against Levernier (2000) where Female-Headed households were related to higher poverty rates. Male-headed households were not significant in my study.

I added a dummy variable to account for the different regions in the country. Out of the four regions determined by the US Census, I dropped the West Region. Relative to the West Region, the poverty rates in counties in the northeast region are on average 0.681 percentage points lower. When comparing it to the Mid-West and South, poverty rates are lower by 0.477 and 0.283 percentage points respectively.

## Conclusion

This study aimed to find a relationship between the different numbers of foreign-born residents and the poverty rates experienced in the counties across the United States of America. Unfortunately, there wasn't enough evidence in my model to establish a relationship between foreign-born residents and poverty rates. Nonetheless, this model found key factors that are present along with high poverty rates. In previous research different demographic factors have been associated with high poverty rates. This paper provides evidence to go with and against some of the determinants established in the past. As determinants of poverty and along the line
of Levernier (2000), this study finds the share of African American or Hispanic populations, lower levels of educational attainment, and higher shares of cohabiting and married households (Levernier, 2000). However, unexpectedly this study found a positive relationship between female-headed households and lower poverty rates, to the extent where those counties that have higher shares of female-headed households also presented lower poverty rates.

This study finds there to be no relationship between the unemployment rate and poverty rates, an idea that goes against Hoynes (2006), where employment is seen as one of the indicators of poverty. Apart from the unemployment rate, the two variables used in this study to account for economic factors were significant to the $1 \%$ level and therefore, related to poverty rates. The median income was negatively related as when we saw higher median incomes, we also saw lower poverty rates. On the other hand, the income ratio was directly related to poverty rates as when we saw a higher income ratio, indicating more income inequality, we also saw higher poverty rates present.

This study wasn't able to find any relationship between foreign-born residents and poverty rates, none the less there is room for more research to be done on this topic. An expansion on this research will include and account for the difference in skill in the groups of foreign-born residents. Foreign-born residents can be divided into categories due to the different expectations of each foreign-born resident. By this, I mean that a recent high school graduate from a different country who is arriving in America to study for his college degree. will be expected to have a different impact on the economy and most likely decrease poverty rates. However, on the other side of the page, we see those immigrants who arrive without any previous educational attainment or savings and therefore struggle to stay away from the poverty status and therefore be expected to increase poverty rates. For future research, the foreign
population will be divided into two groups, the ones who have attained a bachelor's degree and those who have not. I decided to use the bachelor's degree to account for the immense population of the immigrants in the United States that arrived at the United States solely to achieve their higher education. I'm curious to see the relationship between both high-education and low-education immigrants and poverty rates. I believe that the group of high-educated immigrants will have a negative relationship with poverty rates because as it increases, I expect poverty rates to decrease. Some people might argue that higher-educated foreign-born residents could take away the jobs for the American population and therefore create more poverty, however, I believe that the higher-educated foreign-born resident's group and those people who would be losing a job are not competing in the same labor market, therefore poverty rates shouldn't increase. On the other hand, for those immigrants who have not attained a bachelor's degree, I expect to see a direct impact on poverty because as more low-educated immigrants migrate into America, the more poverty there will be. These immigrants would be competing with the American population mentioned above and therefore creating higher poverty rates. However, one might argue that this won't be the case because of the different competition each skill group has when applying for a job. The high skilled foreign-born residents will compete against the high skill Americans, forcing some of those American-born residents to look into a different job market, therefore potentially increasing the poverty rates. I stand in the middle of both statements therefore this future will hopefully explain my doubts and explain the impact of the skilled foreign resident's group and the low-skilled foreign resident's group.

Finally, for a better understanding of the impact of the determinants of poverty in the poverty rates, I want to create a time series study, which will measure the different increases and decreases each independent variable has had, and how poverty rates reacted to it. And through
that study understand how big is the impact of an increase in the foreign-born population in terms of poverty rates, establishing the relationship between the past increase in the foreign-born population and the increase in poverty rates.

## References:

Briggs, V. M. (2003). Immigration and poverty reduction: Policy making on a squirrel wheel. Journal of Economic Issues, 37(2), 325-331.
https://doi.org/10.1080/00213624.2003.11506579
Chang, H. F. (2003). The immigration paradox: Poverty, distributive justice, and liberal egalitarianism. SSRN Electronic Journal. https://doi.org/10.2139/ssrn. 414561

Galea, S., Tracy, M., Hoggatt, K. J., DiMaggio, C., \& Karpati, A. (2011). Estimated deaths attributable to social factors in the United States. American Journal of Public Health, 101(8), 1456-1465. https://doi.org/10.2105/ajph.2010.300086

Gradín, C. (2012). Poverty among minorities in the United States: Explaining the racial poverty gap for blacks and Latinos. Applied Economics, 44(29), 3793-3804. https://doi.org/10.1080/00036846.2011.581219

Hoynes, H., Page, M., \& Stevens, A. (2005). Poverty in america: Trends and explanations. https://doi.org/10.3386/w11681

Levernier, W., Partridge, M. D., \& Rickman, D. S. (2000). The causes of regional variations in U.S. poverty: A cross-county analysis. Journal of Regional Science, 40(3), 473-497. https://doi.org/10.1111/0022-4146.00184

Raphael, S., \& Smolensky, E. (2009). Immigration and poverty in the United States. American Economic Review, 99(2), 41-44. https://doi.org/10.1257/aer.99.2.41

Rupasingha, A., \& Goetz, S. J. (2007). Social and political forces as determinants of poverty: A spatial analysis. The Journal of Socio-Economics, 36(4), 650-671. https://doi.org/10.1016/j.socec.2006.12.021

Siddiqui, F., Salam, R. A., Lassi, Z. S., \& Das, J. K. (2020). The intertwined relationship between malnutrition and poverty. Frontiers in Public Health, 8. https://doi.org/10.3389/fpubh.2020.00453

Takei, I., \& Sakamoto, A. (2011). Poverty among Asian Americans in the 21st Century. Sociological Perspectives, 54(2), 251-276. https://doi.org/10.1525/sop.2011.54.2.251

Thorstensson Dávila, L. (2008). Language and opportunity in the "Land of Opportunity." Journal of Hispanic Higher Education, 7(4), 356-370. https://doi.org/10.1177/1538192708321652

Thurow, L. C. (1967). The causes of poverty. The Quarterly Journal of Economics, 81(1), 39. https://doi.org/10.2307/1879672

Oberman, K. (2015). Poverty and Immigration Policy. The American Political Science Review, 109(2), 239-251. http://www.jstor.org/stable/43654304

## APENDIX A

Variable description and source along summary statistics.

| Variable | Description | Mean | Std. <br> Deviation | Minimum | Maximum |
| :--- | :--- | :--- | :--- | :---: | :---: |
| \% Of Population <br> Living Under <br> the Poverty <br> Level (1) | Percentage of the total <br> population in a county <br> that is currently under <br> the poverty status. | 2.47 | 1.595 | 0.1 | 19.00 |
| \% Of Population <br> Black or African <br> American (1) | Percentage of the total <br> population in a county <br> that is of Black or <br> African American race. | 8.73 | 14.108 | 0.00 | 87.45 |
| \% Of Population <br> Asian (1) | Percentage of the total <br> population in a county <br> that is of Asian race. | 1.43 | 2.897 | 0.00 | 43.98 |


| \% Of Population <br> Hispanic or <br> Latino (1) | Percentage of the total population in a county that is of Hispanic or Latino race. | 9.79 | 13.685 | 0.17 | 97.68 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Unemployment <br> Rate (1) | Percentage of the total population in a county that is currently unemployed. | 5.29 | 2.652 | 0.00 | 27.2 |
| Median Income <br> (1) | Median Income of the total population in a county. | \$53,475.91 | \$14,190.27 | \$21,504.00 | \$142,299.00 |
| Income Ratio (2) | Ratio between the $20^{\text {th }}$ and the $80^{\text {th }}$ percentile incomes in a county. Measures Income inequality. | 4.52 | 0.75 | 2.56 | 10.10 |
| \% Of Population with a <br> Bachelor's <br> Degree or <br> Higher (1) | Percentage of the total population in a county that has attained a Bachelors degree or higher. | 15.06 | 6.273 | 0.00 | 54.58 |
| Married Couple <br> (1) | Percentage of the total households in a county that are headed by a married couple. | 50.55 | 6.815 | 21.27 | 80.39 |
| Cohabiting <br> Couple (1) | Percentage of the total households in a county that are headed by a cohabiting couple. | 5.84 | 1.894 | 0.00 | 17.58 |
| Male <br> Householder, | Percentage of the total households in a county | 1.32 | 0.7512 | 0.00 | 16.81 |


| No <br> Spouse/Partner <br> with Kids (1) | that are headed by a Male without a spouse or partner and has kids. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Female <br> Householder, <br> No <br> Spouse/Partner <br> with Kids (1) | Percentage of the total households in a county that are headed by a <br> Female without a spouse or partner and has kids. | 4.69 | 2.125 | 0.00 | 16.20 |
| \% Of Population Foreign Born (1) | Variable for foreignborn residents. <br> Percentage of the total population that was born in a foreign country. | 4.76 | 5.764 | 0.00 | 53.67 |
| \% Of Foreign- <br> Born Population <br> Entered after <br> 2010 (1) | Percentage of the total foreign-born population that entered after 2010. | 8.31 | 8.814 | 0.00 | 100.00 |
| Region (Mid- <br> West) (1) | Location of the county is in the mid-west region. | 0.332 | 0.471 | 0 | 1 |
| Region (North <br> East) (1) | Location of the county is in the North East region. | 0.071 | 0.256 | 0 | 1 |
| Region (South) <br> (1) | Location of the County is in the South region. | 0.467 | 0.499 | 0 | 1 |

Sources: (1) US Census Bureau, International Database, (2) County Health Rankings

