

Food Environment Atlas- Report

OBJECTIVE OF OUR ANALYSIS-

The Food environment Atlas captures significant factors— store/restaurant proximity, food prices, food and nutrition assistance programs and community characteristics (interaction that influence food choices and diet quality). The scope of our project was underpinned on these broad categories of food environment factors:

Food Choices: Indicators of the community's access to and purchase of healthy, affordable food such as access and proximity to a grocery store; number of food stores and restaurants; expenditures on fast foods; food and nutrition assistance program participation; food prices; food taxes; and availability of local foods.

Health and Well-Being: Indicators of the community's success in maintaining healthy diets such as: food insecurity; diabetes and obesity rates; and physical activity levels.

Community Characteristics: Indicators of community characteristics that might influence the food environment such as: demographic composition; income and poverty; population loss; metro-nonmetro status; natural amenities; and recreation and fitness centers.

KEY INSIGHTS FROM OUR ANALYSIS-

1. While predicting the **Percentage change in Adult Obesity Rate from 2008 to 2013**, we observed that the following factors were the most influential :
 - a. Percentage change in Adult Diabetes Rate from 2008 to 2013.
 - b. Price of Soda/National Average (in 2010)
 - c. Chips and Pretzel sales tax,vending.
 - d. Asian Demographic,low access to store.
 - e. White Demographic,low access to store.
 - f. Number of SNAP online applicants in 2009.
 - g. Recreation and Fitness Facilities in 2009.
 - h. Percentage of population 65 years and older in 2010.
 - i. SNAP authorized stores/1000 population in 2012.
 - j. Percentage change in Household Food Insecurity in 2010-12 to 2013-15
 - k. Percentage of Households with very low Food Insecurity.

- l. Expenditure per Capita ,fast-food,2012
- m. Expenditure per Capita,restaurants,2012

2. While predicting the **Percentage change in Adult Diabetes Rate from 2008 to 2013**, we observed that the following factors were the most influential:

- a. Percentage change in Adult Diabetes Rate from 2008 to 2013.
- b. Price of low-fat milk/price of sodas in 2010.
- c. Black Demographic,low access to store.
- d. Number of SNAP online applicants in 2009.
- e. SNAP participants(% of eligible population) in 2013.
- f. SNAP participants(% of eligible population) in 2008.
- g. Percentage of Black demographic in the county,in 2010.
- h. Percentage of population 65 years and older in 2010.
- i. Number of Grocery stores in the county/1000 population, in 2009.
- j. Child Food insecurity(% households,multiple year average) 2003-11.
- k. Expenditure per Capita ,fast-food,2012
- l. Expenditure per Capita,restaurants,2012

3. While analyzing the **Poverty Rate** in 2015, we observed that the cause of poverty was closely linked to the low household income, which is very obvious. But, it was also closely connected to the Access and Assistance factors, Such as Access and availability of SNAP benefits, Access to stores and other facilities. The poverty rate was observed more in southern states like Texas, Arizona and New Mexico. Decision Tree algorithm also showed that Low Access to Stores of Black Population was one of the major causes of Poverty.

4. Next, we proceeded to analyze the impact of the Supplemental Nutrition Assistance Program (**SNAP**) in ensuring adequate food-assistance for the population belonging to low-income groups. We found out that most SNAP's benefactors lived far away from SNAP-authorized stores, thereby causing the SNAP's total redemptions to drop over time. We recommend opening greater number of SNAP authorized stores in larger geographies (such as Texas), to ensure consistency in the # of stores/ Landmass.