Population Size and Carbon Emissions

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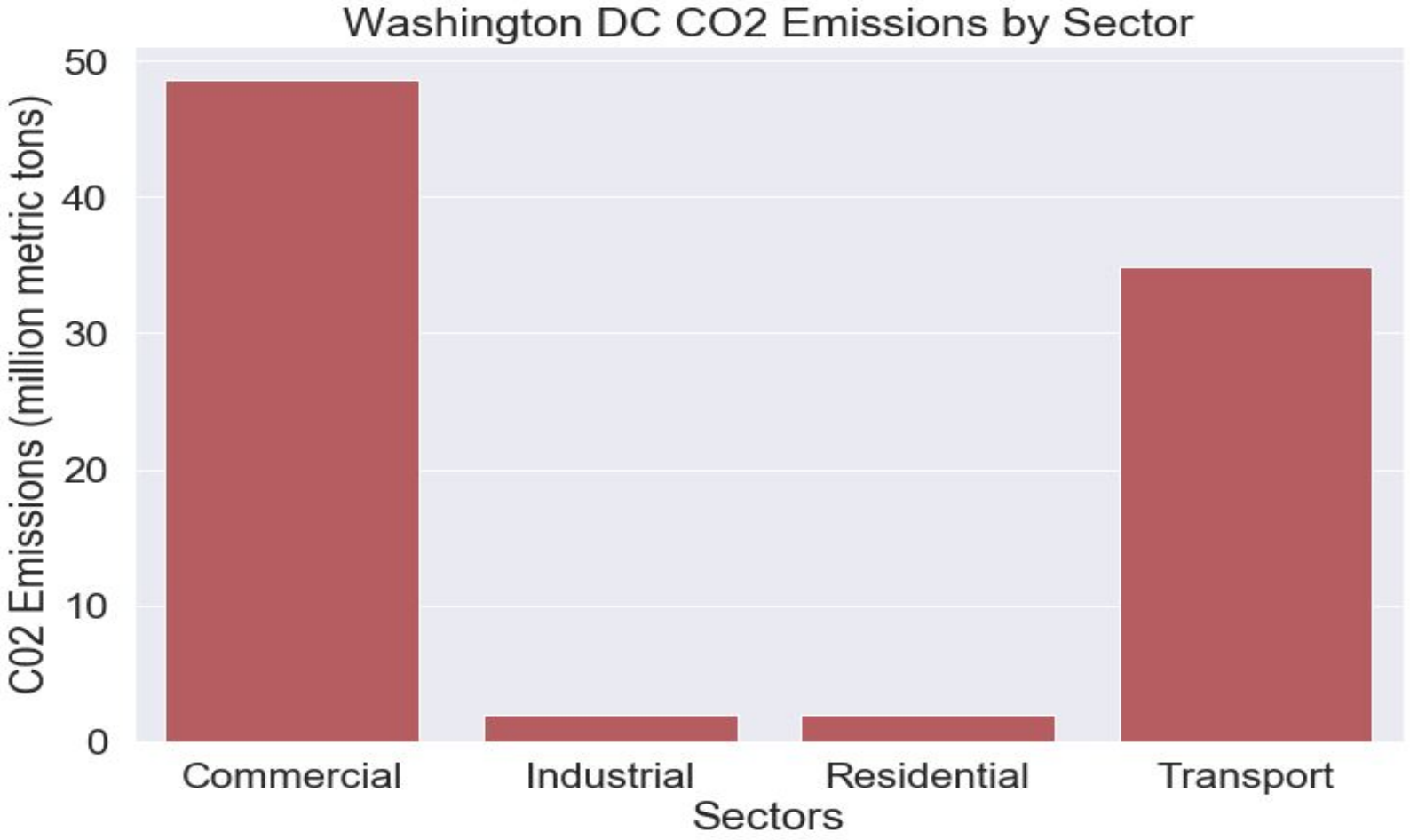
Introduction

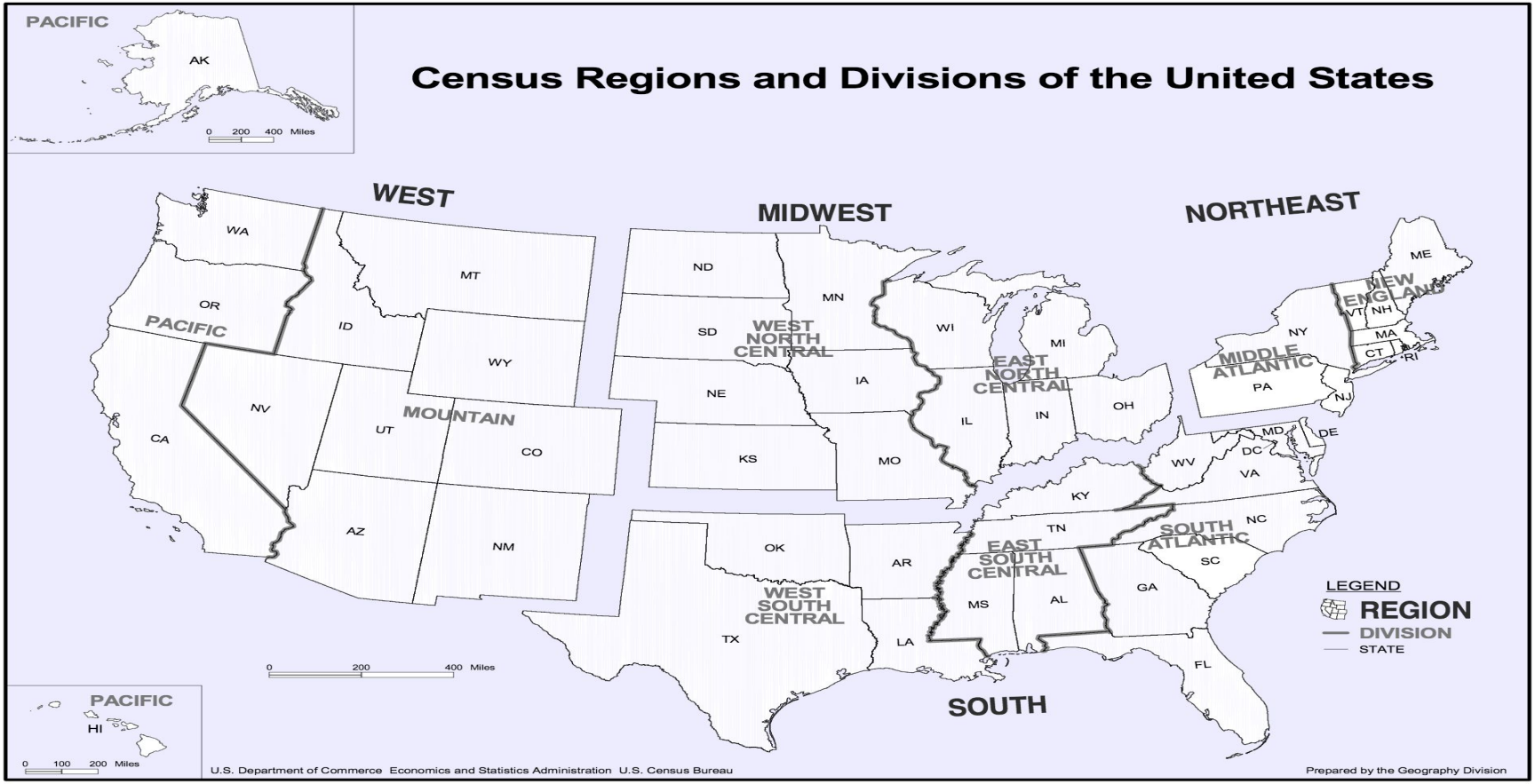
- Human-generated greenhouse gases have contributed greatly to the increase in greenhouse gases globally.
- According to a 2009 study, each child born in the United States will add about 9,441 metric tons of carbon dioxide to the carbon legacy of an average parent.
- The potential savings from reduced reproduction are huge compared to the savings that can be achieved by changes in lifestyle.

Source https://www.biologicaldiversity.org/programs/population_and_sustainability/pdfs/OSUCarbonStudy.pdf

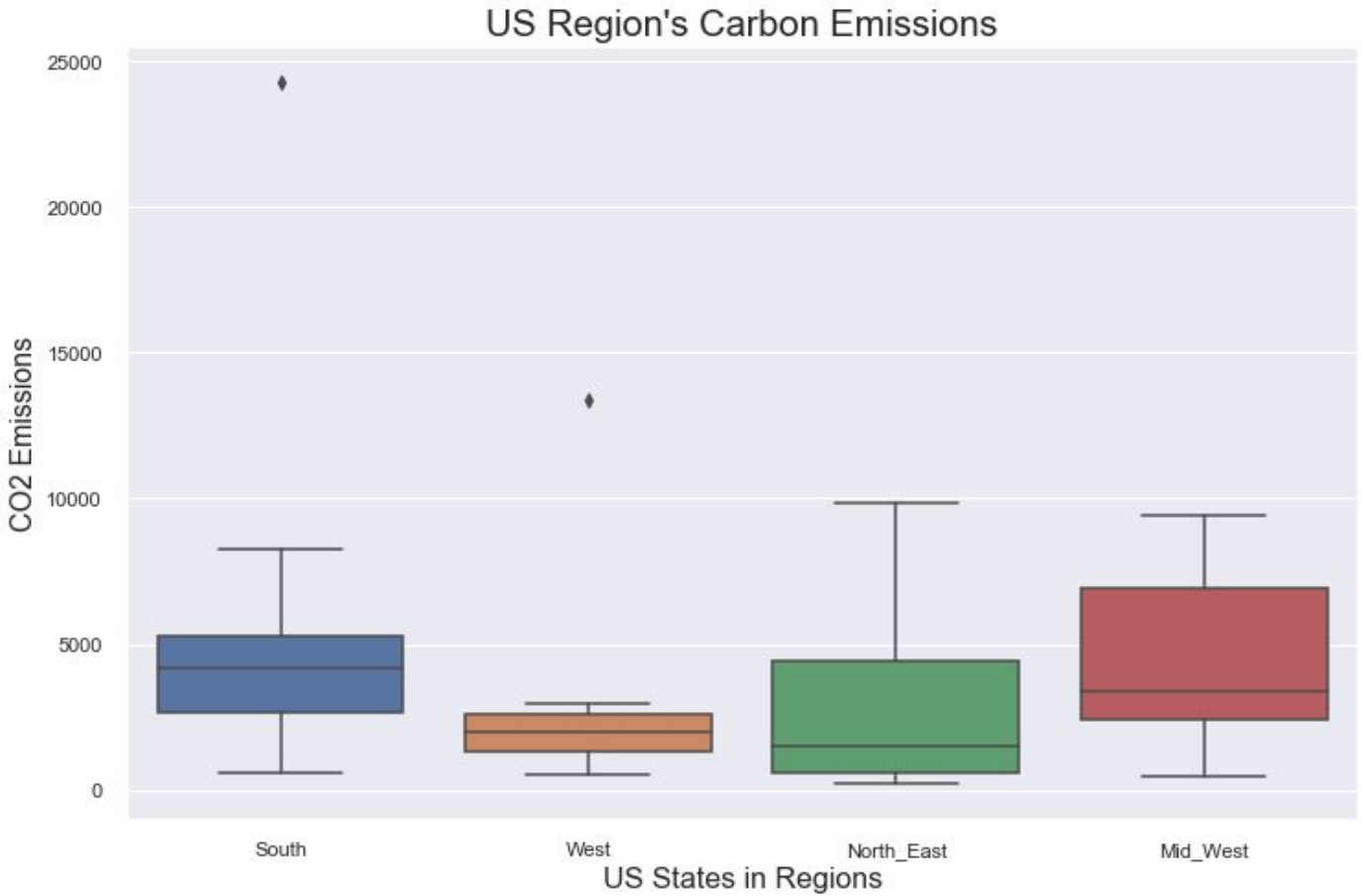
Study

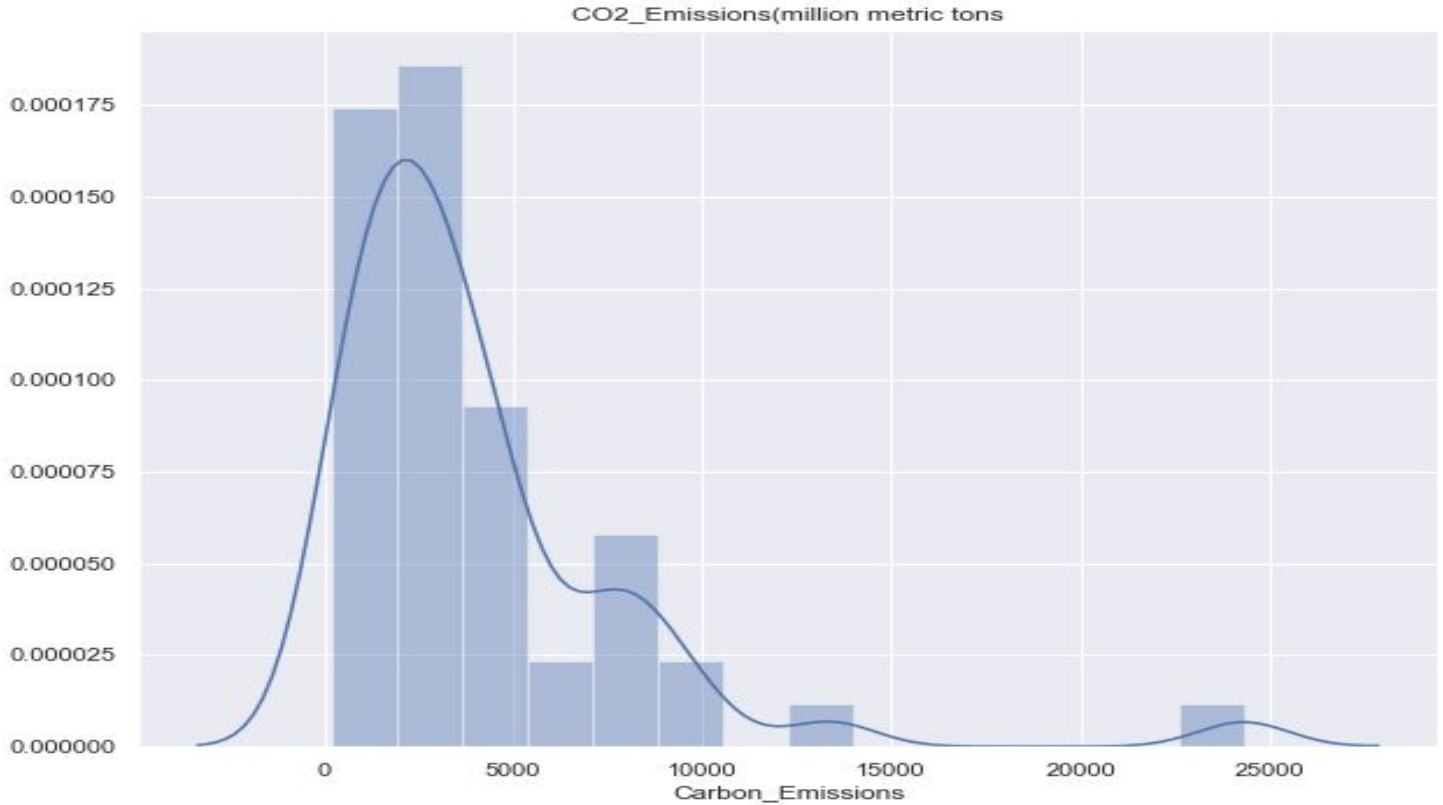
- In Our study we looked at CO2 emissions in US states in relation to to US Population Size by state.
- We gathered Population data for 2018 from the U.S Census Bureau and total carbon emissions for 50 states from 2010 - 2018
- We hypothesized that there is a difference between population size and


Washington DC CO2 Emissions by Sector
C02 Emissions (million metric tons)
50
40
30
20
10
0
Commercial
Industrial
Residential
Transport
Sectors

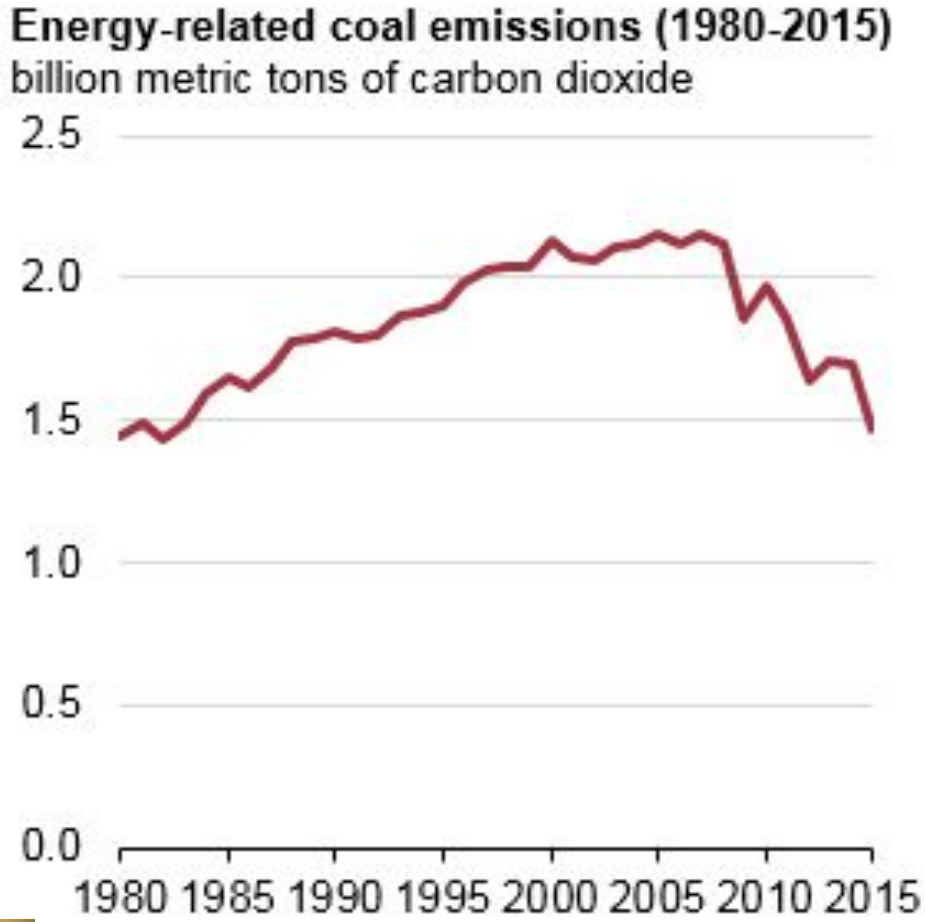


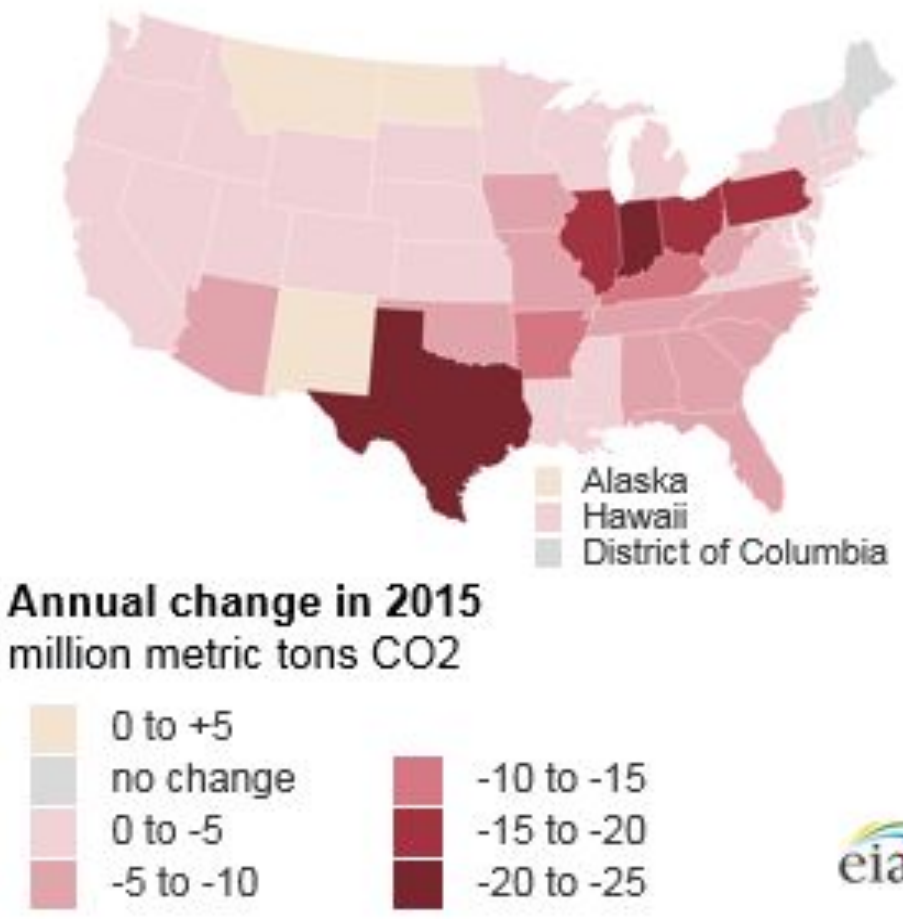
https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf)


US Region's Carbon Emissions
25000
20000
15000
10000
5000
0
CO2 Emissions
South
West
North_East
Mid_West
US States in Regions



Sum carbon emissions distribution by state from 2010 - 2017





Everything is bigger in Texas

Summary

- We did not find a statistically significant difference between the four regions Carbon emissions compared with the State as a whole
- We did not find a statistically significant difference in the relationship between Carbon emission and Population size.
- Our findings confirm the study that suggested Population size is the biggest contributor of CO2 emission compared to other factors such as industrial waste.