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Introduction to Economic and Business Statistics

Homework #3

This assignment requires you to analyze data on US states with Gretl. The dataset ("US-state-data.csv") contains household and family median income, a measure of income inequality (the Gini coefficient), marginal tax rates, health insurance coverage rates, racial and ethnic composition and the percentage of the population that was enslaved in 1820 and 1860.

The goal of this assignment is to help you become familiar with Gretl and to help you learn how to analyze statistics. Please perform the following tasks, print your results and come to class prepared to discuss them.

1. Using the dataset, create scatterplots of:
    a. the Gini coefficient and percentage slave in 1860
    b. the Gini coefficient and percentage of people without health insurance
    c. the Gini coefficient and median income

2. Why do you think states with higher degrees of income inequality tend to:
    a. be states where slaves constituted larger shares of the population in 1860?
    b. have larger percentages of people without health insurance?
    c. have lower median household and family income?

3. If you used the dataset to calculate the average of the median household incomes, why would that average NOT be the median household income in the United States as a whole? Provide two reasons.