

Data Appendix

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Data Descriptions

The table below shows the names, descriptions, and source of the data used in this research project.

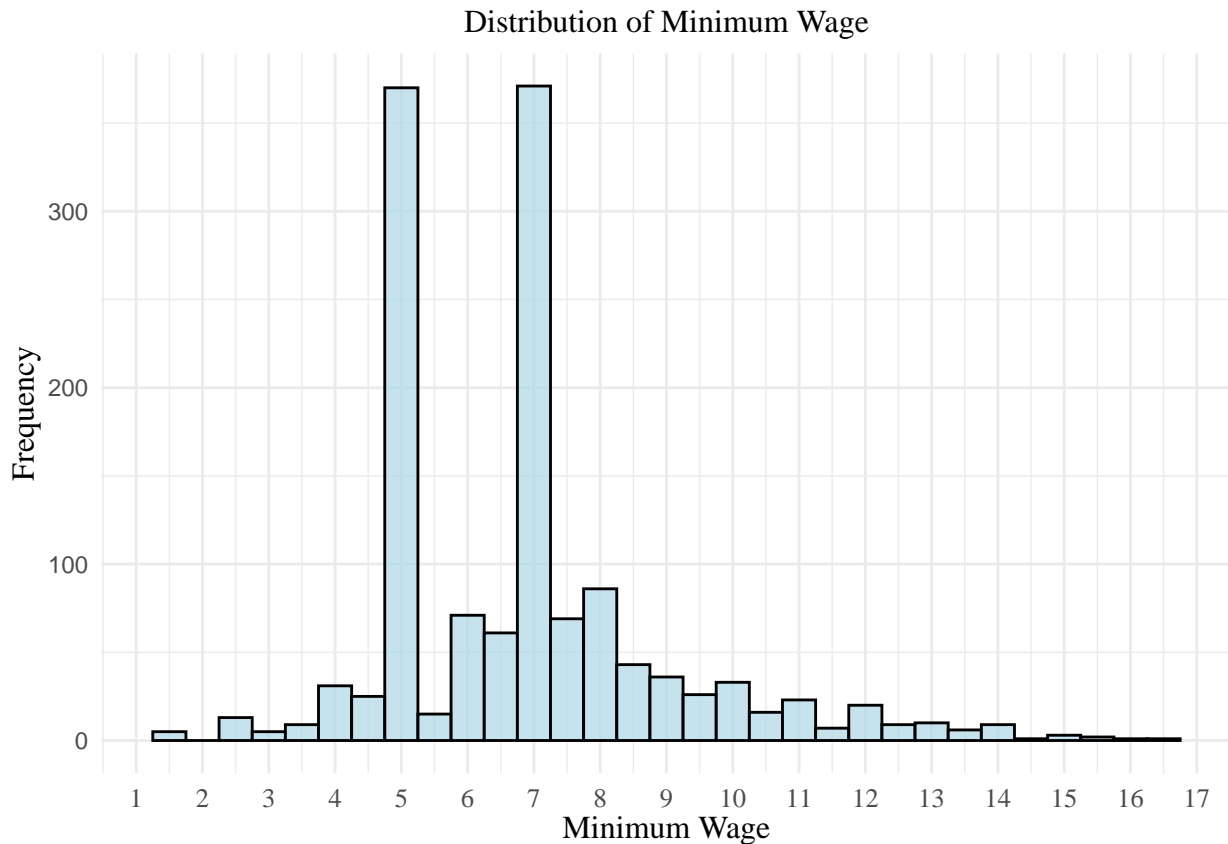
Variable	Description	Source
minimum_wage	In dollars per hour, minimum_wage represents the lowest amount a firm can pay employees. minimum_wage is not seasonally adjusted or adjusted for inflation.	U.S. Department of Labor, retrieved from FRED
avg_corp_income_tax	A tax imposed by U.S. states on income earned by a corporation. Not adjusted for inflation	The Book of the States
progressive_tax	Different states may impose a flat corporate income tax (progressive_tax = 0) which indicates that corporations under the tax law all pay the same tax rate regardless of firm size or income earned. In other cases, a state may impose a progressive tax system (progressive_tax = 1) in which corporations adhere to different tax levels based on firm size or income earned.	The Book of the States
population	In thousands of persons, population represents the number of residential persons living in a state in a given year.	U.S. Census Bureau, retrieved from FRED
avg_unemployment	Expressed as a percent, avg_unemployment is the percent of the labor force in a state that is actively looking for work but unable to find a job.	U.S. Bureau of Labor Statistics
gdp	Annual gross domestic product (GDP) by state and year. It is defined as the monetary value of all goods and services produced in all industries in a state in a given year. This particular measure is in millions of dollars (chained 2017 dollars) It is adjusted for inflation.	U.S. Bureau of Economic Analysis

Minimum Wage

Table 2: Summary Statistics for Minimum Wage

Statistic	N	Mean	St. Dev.	Min	Median	Max
minimum_wage	1,377	7.010	2.144	1.600	7.250	16.500

Table 2 describes the summary statistics for the minimum wage values described in the data. There are zero observations missing.



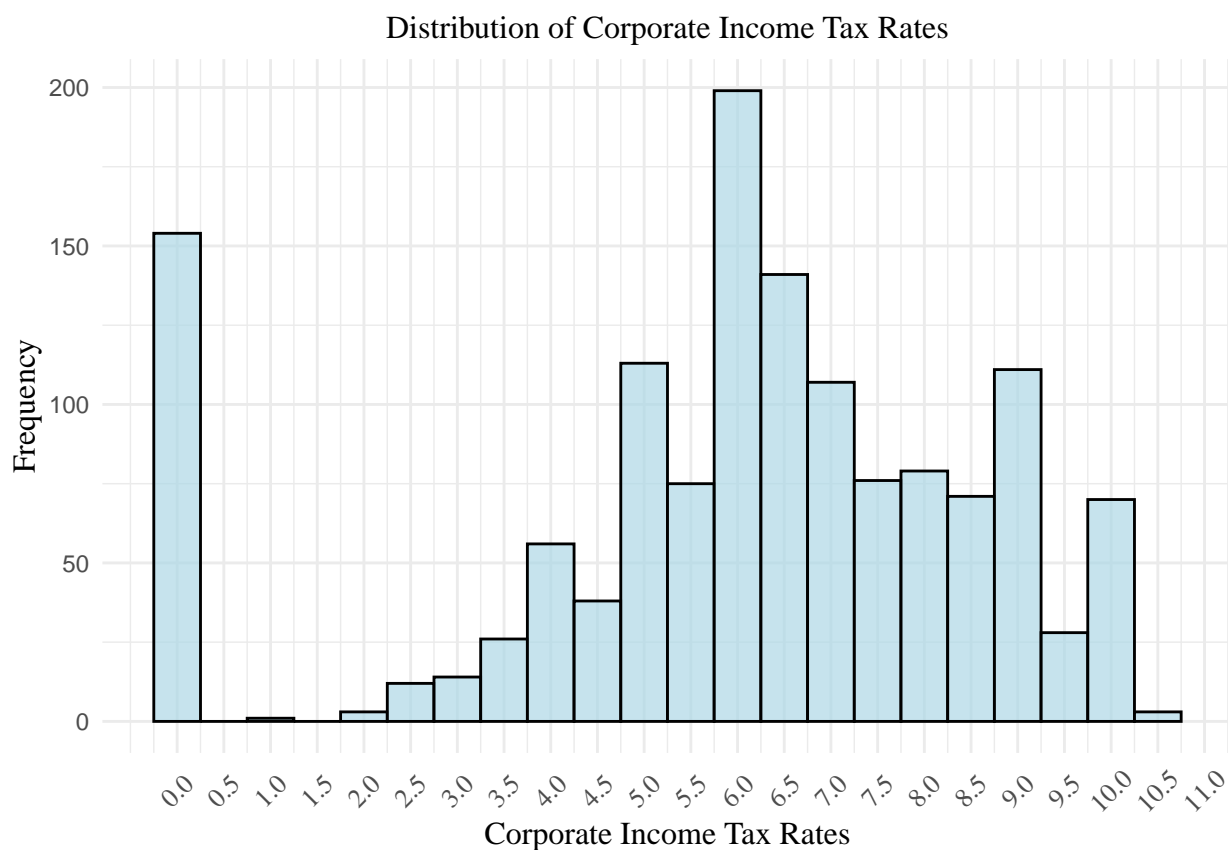
From the distribution of minimum wage, one can see that it follows a relatively normal distribution aside from the two large spikes around 5 dollars per hour and 7 dollars per hour. This is likely due to the fact that some states didn't set their own laws for minimum wage, and followed the federal hourly minimum wage. The federal minimum wage from September 1997 to June 2007 was 5.15, and has remained at 7.25 as of July 2009.

Average Corporate Income Tax

Table 3: Summary Statistics for Corporate Income Tax Rates

Statistic	N	Mean	St. Dev.	Min	Median	Max
avg_corp_income_tax	1,377	5.987	2.703	0.000	6.250	10.750

Table 3 shows the summary statistics for the average corporate income tax rates described in the data. There are zero observations missing.



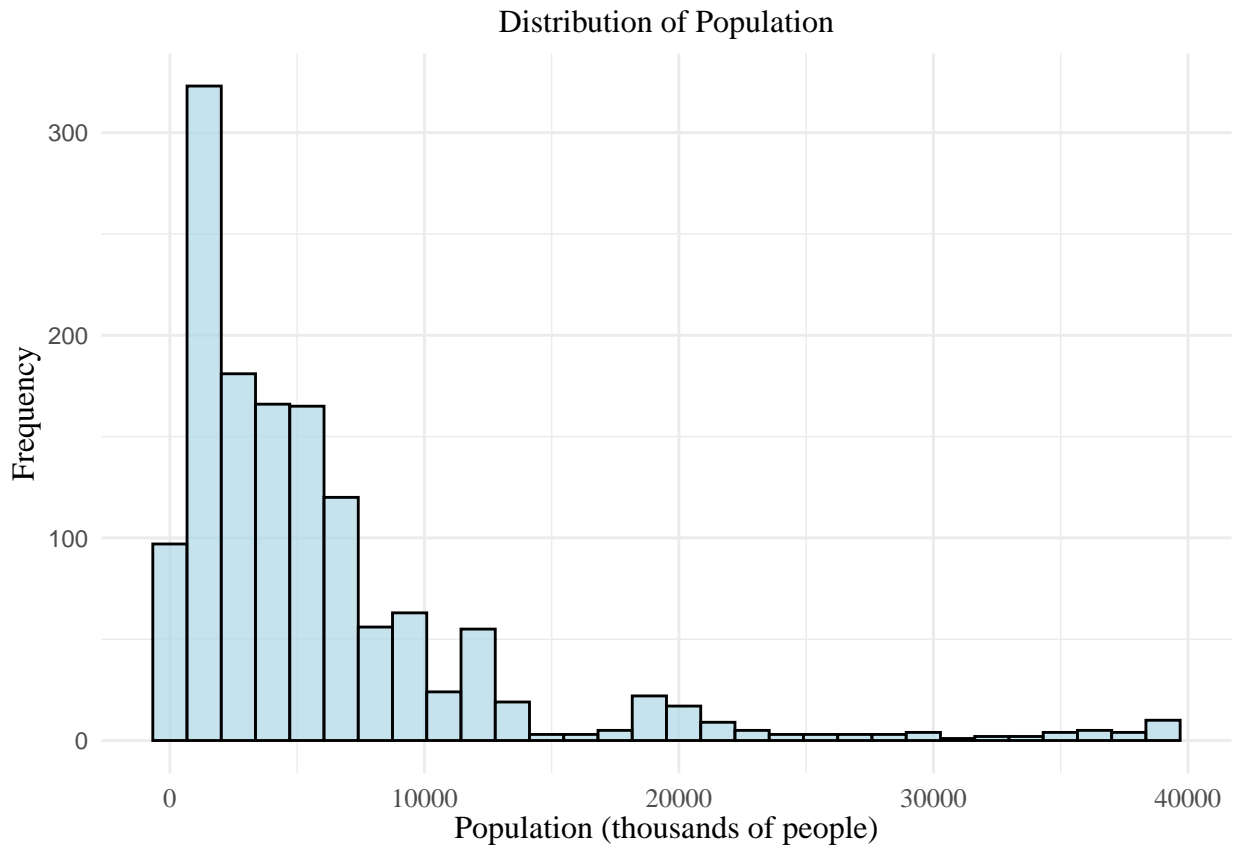
The distribution of corporate income tax rates, as seen above, is relatively normal. The spike at 0% represents those states that don't have a corporate income tax rate. These observations should not be dropped from the data, as they are important in showing the different effect that the policy may have on unemployment rates.

Population

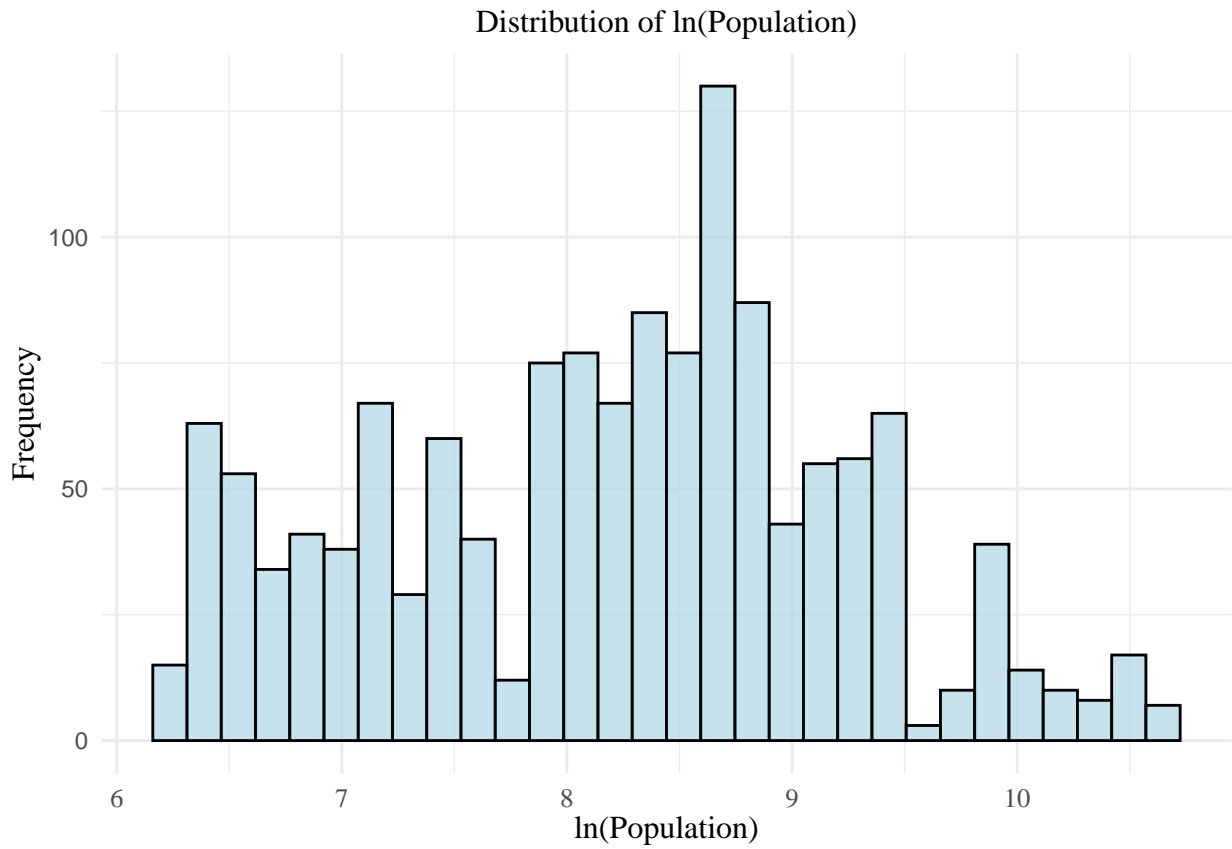
Table 4: Summary Statistics for Population

Statistic	N	Mean	St. Dev.	Min	Median	Max
population	1,377	6,012.697	6,760.456	479.602	4,183.538	39,503.200

Table 4 shows the summary statistics for the average corporate income tax rates described in the data. There are zero observations missing.



The distribution for a state's population in a given year is evidently right skewed. This is likely due to the majority of states having similar populations (such as those in the mid west) and more populated states, such as California, New York, Florida skewing the distribution. The population of these states are important, but because of this skew, the transformation to $\log \text{population}$ was made in order to create a more linear relationship.

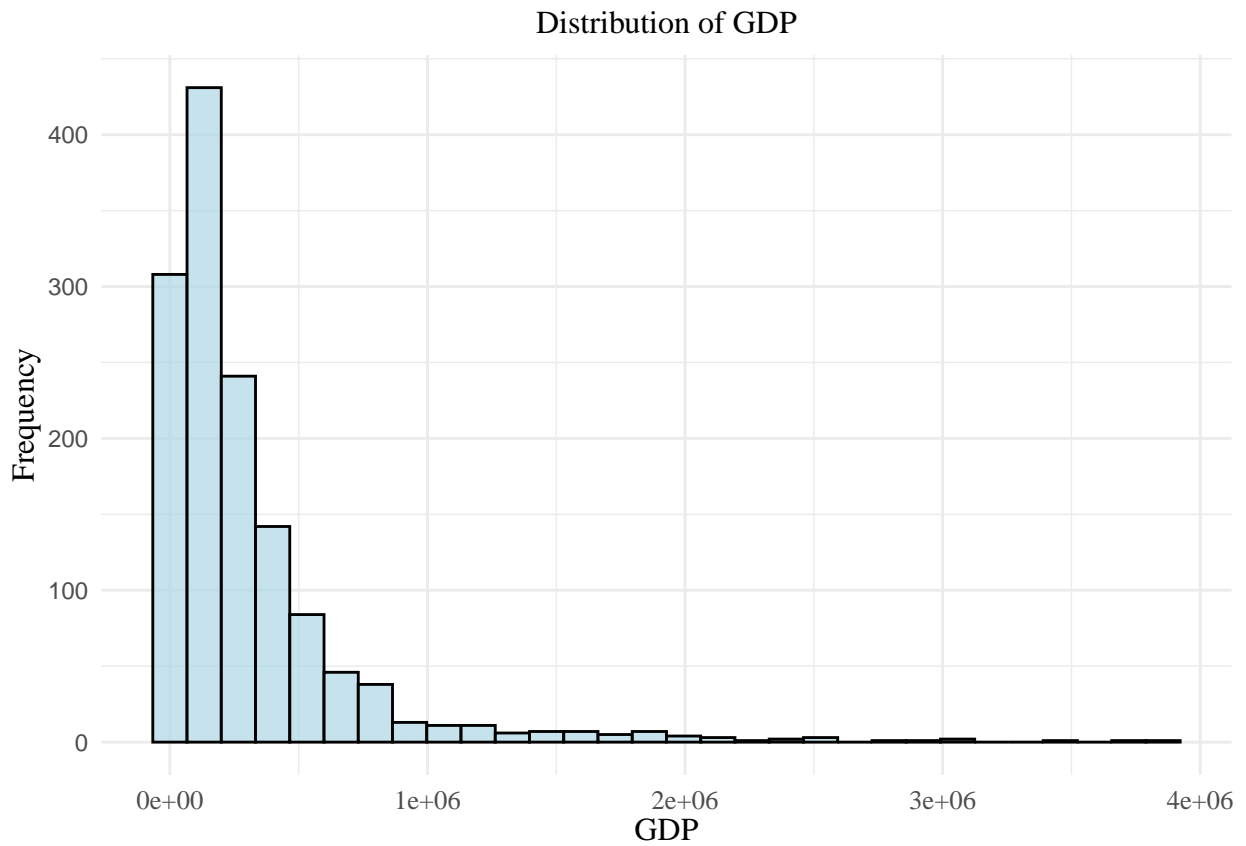


After transforming the population variable, it is much more normally distributed, thus creating a more linear relationship.

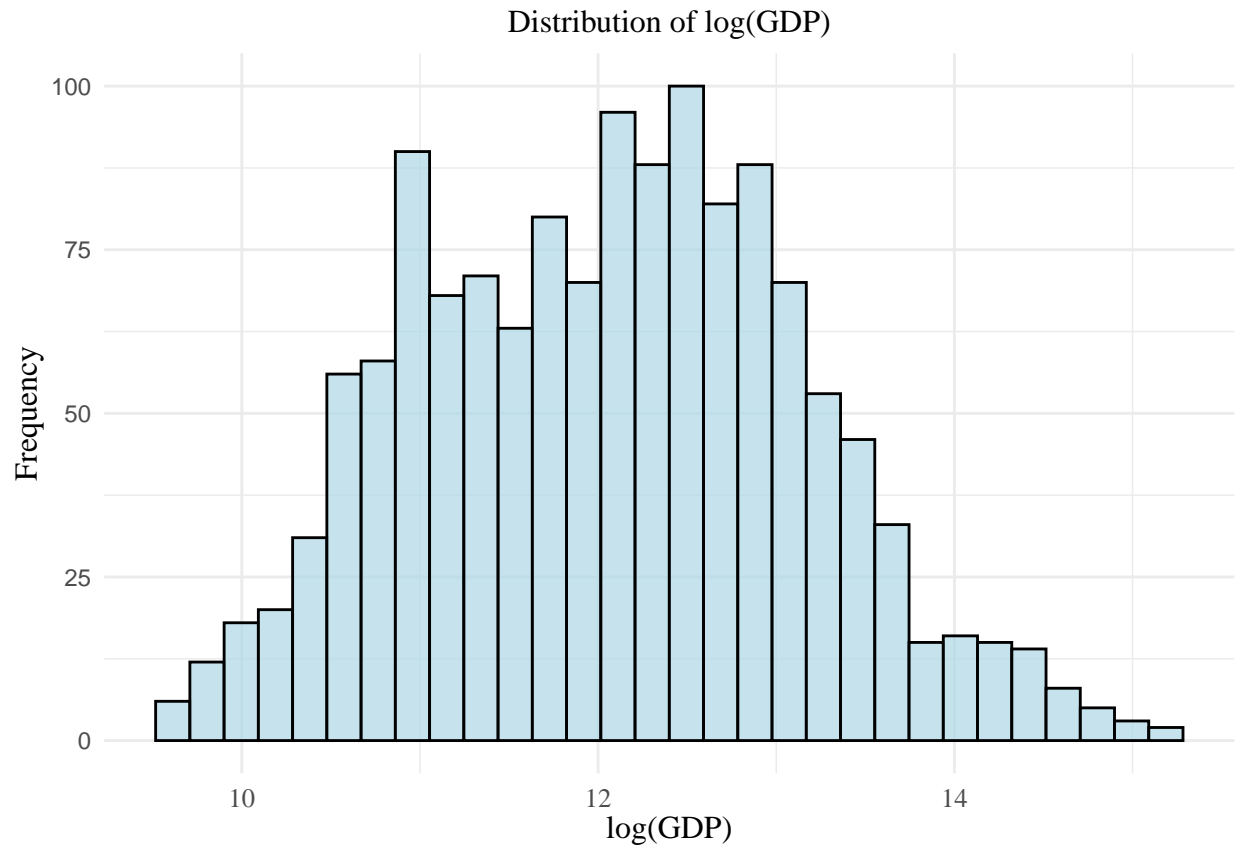
Gross Domestic Product

Table 5: Summary Statistics for Gross Domestic Product

Statistic	N	Mean	St. Dev.	Min	Median	Max
gdp	1,377	312,037.500	419,011.200	14,673.000	179,303.300	3,870,379.000



Similar to other variables, the distribtuion of a state's GDP is also heavily skewed to the right.



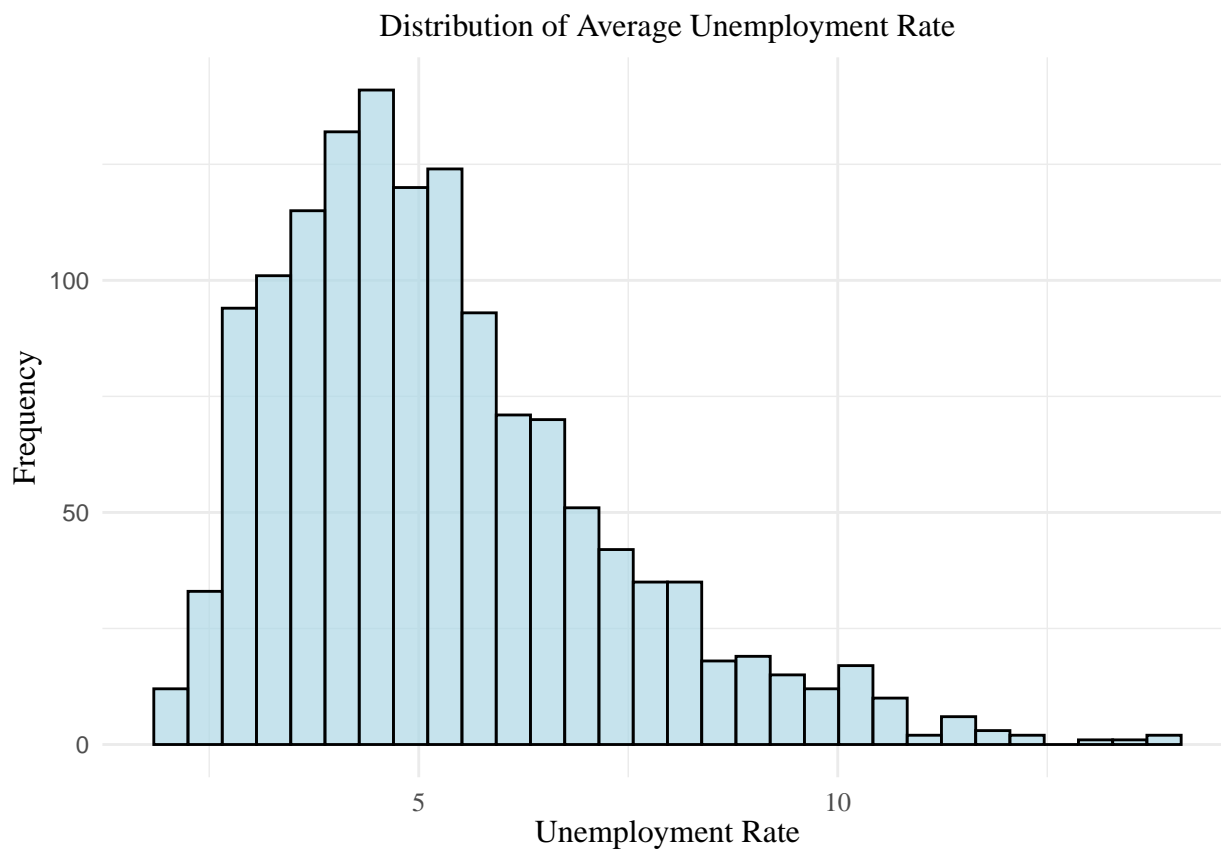
The distribution of `log_gdp` is now more normally distributed, which will lead to more accurate results.

Average Unemployment Rate

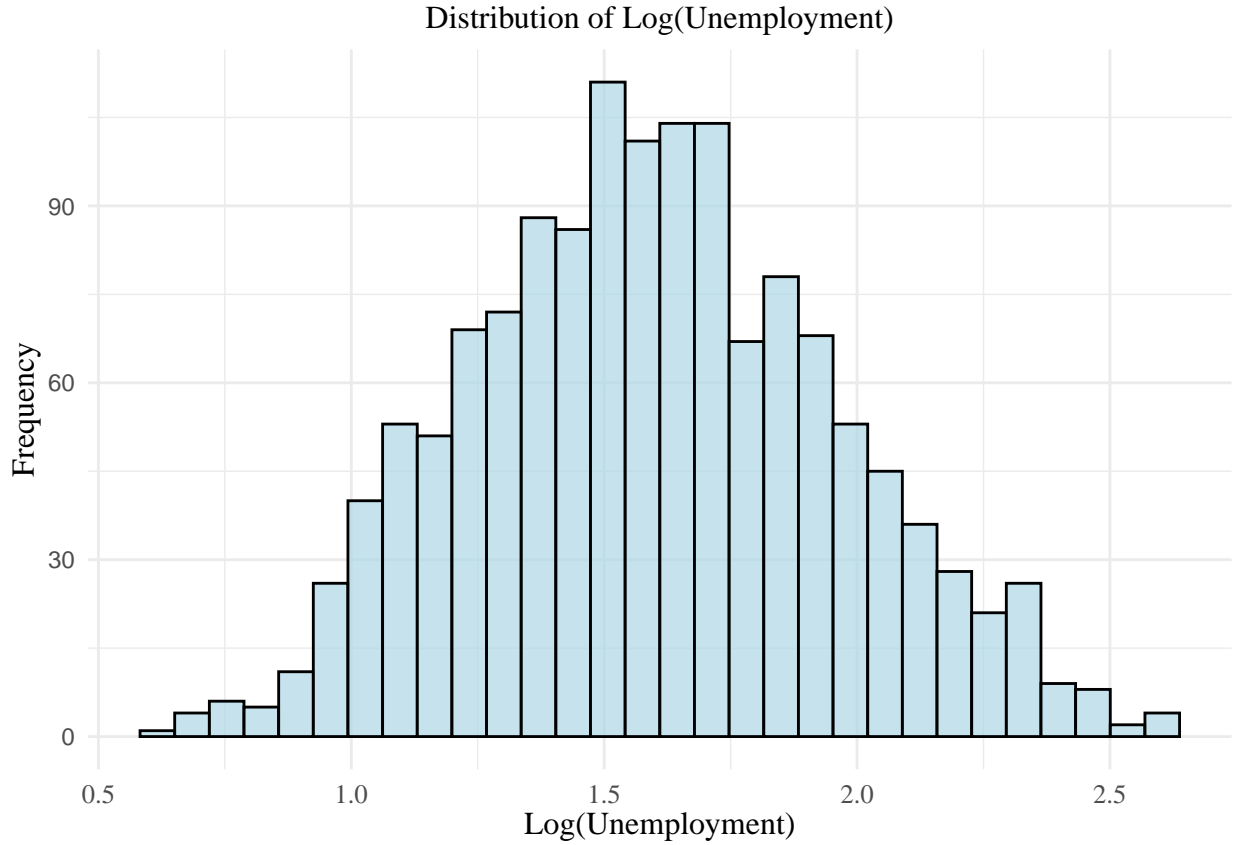
Table 6: Summary Statistics for Average Unemployment

Statistic	N	Mean	St. Dev.	Min	Median	Max
avg_unemployment	1,377	5.273	1.982	1.883	4.917	13.733

Table 6 shows the summary statistics for the average corporate income tax rates described in the data. There are zero observations missing.



The distribution above shows the spread of the unemployment rate by state and year in the data. It is apparent that the data is right skewed, so it was decided to log the unemployment rate to create a more linear relationship.



After taking the log of unemployment rate, the data is much more normally distributed. Thus, the log of unemployment rate will serve as the dependent variable.

Table 7: Summary Statistics for Numeric Variables

Statistic	N	Mean	St. Dev.	Min	Median	Max
minimum_wage	1,377	7.01	2.14	1.60	7.25	16.50
avg_corp_income_tax	1,377	5.99	2.70	0.00	6.25	10.75
avg_unemployment	1,377	5.27	1.98	1.88	4.92	13.73
log_pop	1,377	8.20	1.03	6.17	8.34	10.58
log_gdp	1,377	12.07	1.08	9.59	12.10	15.17