Preliminary Analysis - Research in Health Economics

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1 Data

This project is looking into the effect of health insurance on health outcomes to answer the question, "does health insurance improve health?" It is using annual survey data on general health trends in USA from the Behavioral Factor Surveillance System (BFRS). In particular, it is using the self-reported health status (GENHLTH) as an indicator of health with a rating of '1' corresponding to 'excellent health' and '5' to 'poor health' while a rating of '7' indicated people who were unsure of their health status. It is using data from 2011, 2012 and 2013 as years before Medicaid expansion and data on years 2014-2019 for years after expansion. For insurance data, it is using data from United States Census Bureau for the years 2012-2019 on the different types health-care coverage being used by the population. It is also using data from the Kaiser Family Foundation to determine the states which have expanded Medicaid and which have not to better compare the impact of Medicaid expansion on health.

2 Data Analysis

Table 1: Insurance Plan Summary Statistics

	Observations	Mean	Standard Deviation	Minimum	Maximum
ins_employer	416	2,126,012.09	2,334,520.92	194,796	13,216,474
ins_direct	416	305,473.19	385,152.23	15,534	2,427,618
ins_medicaid	416	405,643.29	595,766.46	9,975	4,529,147
ins_medicare	416	47,351.12	46,960.78	1,532	235,939
uninsured	416	564,927.45	838,367.35	19,009	5,901,869

Table 1 includes the summary statistics of the data on insurance distribution in the US. It shows that a majority of the population is covered under Employer-Provided Insurance with a mean of and the second-most coverage is provided by Medicaid with a mean of 4.0564329×10^5 over the years and across all states.

Table 2 is showing the average health status rating for a state with Medicaid expansion and without. The average self-reported health status rating is 3.335 with Medicaid expansion and 3.371 without Medicaid expansion. As the mean rating is lower by 0.036 for states with Medicaid expansion, it can be understood that Medicaid expansion corresponds to better self-reported health status.

Table 2: Average Health Status Ratings

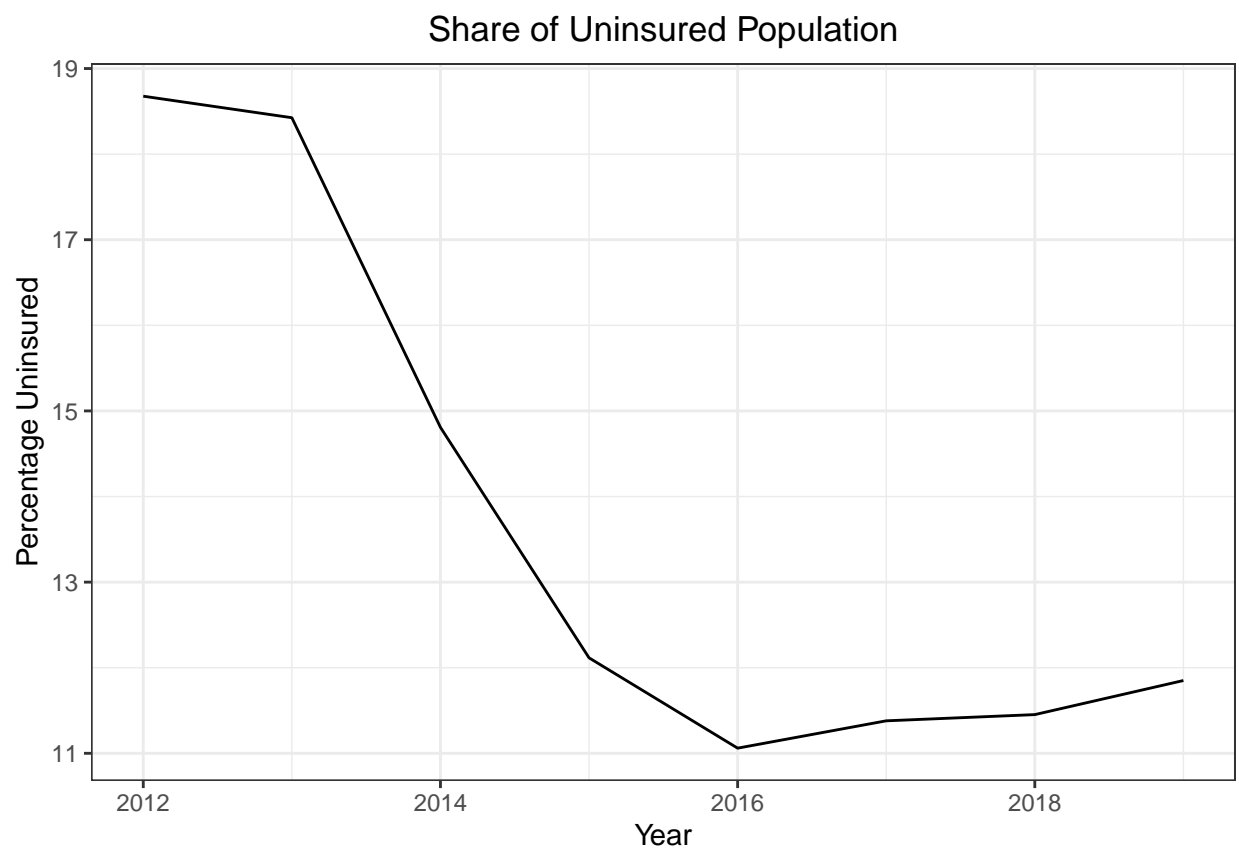| Medicaid Expansion	Observations	Average Health Status	Standard Deviation	Lower Interval	Upper Interval
Yes	6,484	3.335269	1.177124	3.306614	3.363923
No	7,406	3.371067	1.179496	3.306614	3.363923

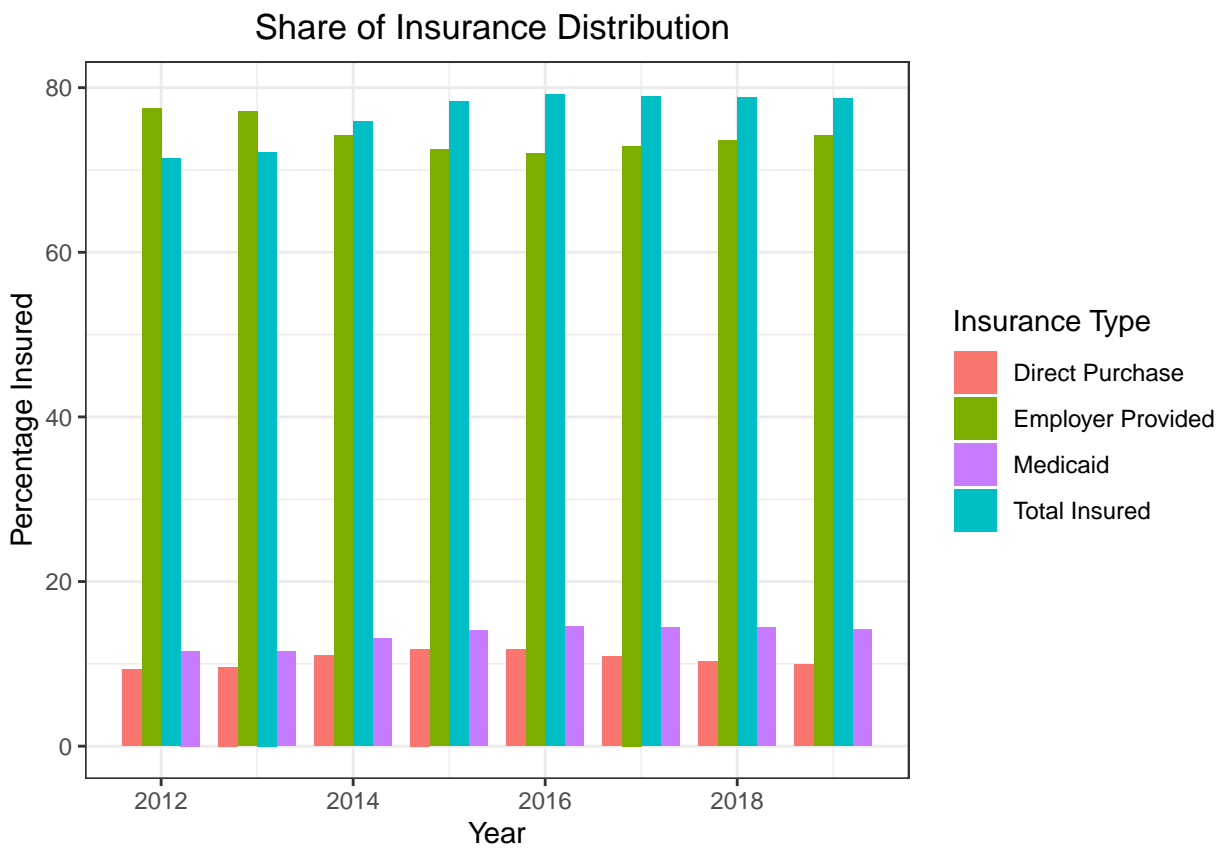Figure 1: Share of Uninsured Population
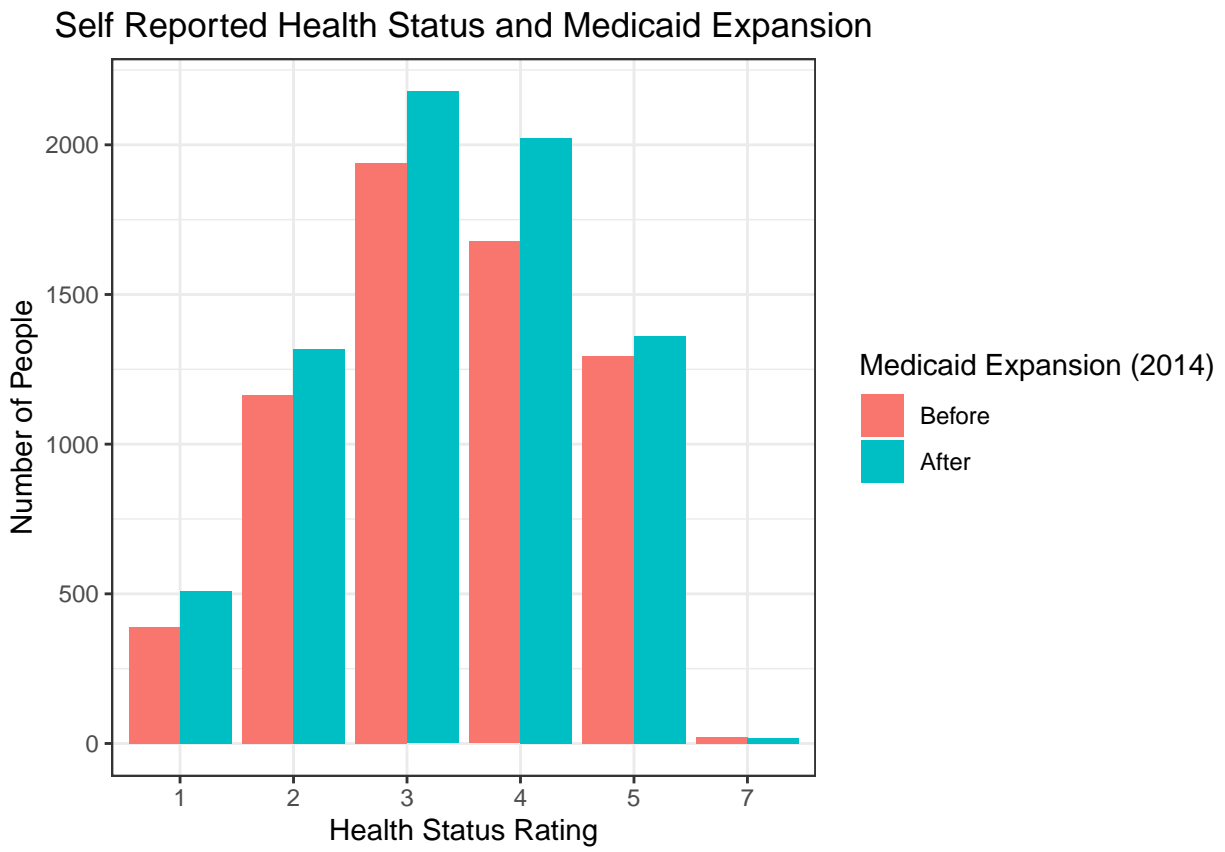
Figure 2: Share of Insurance Distribution
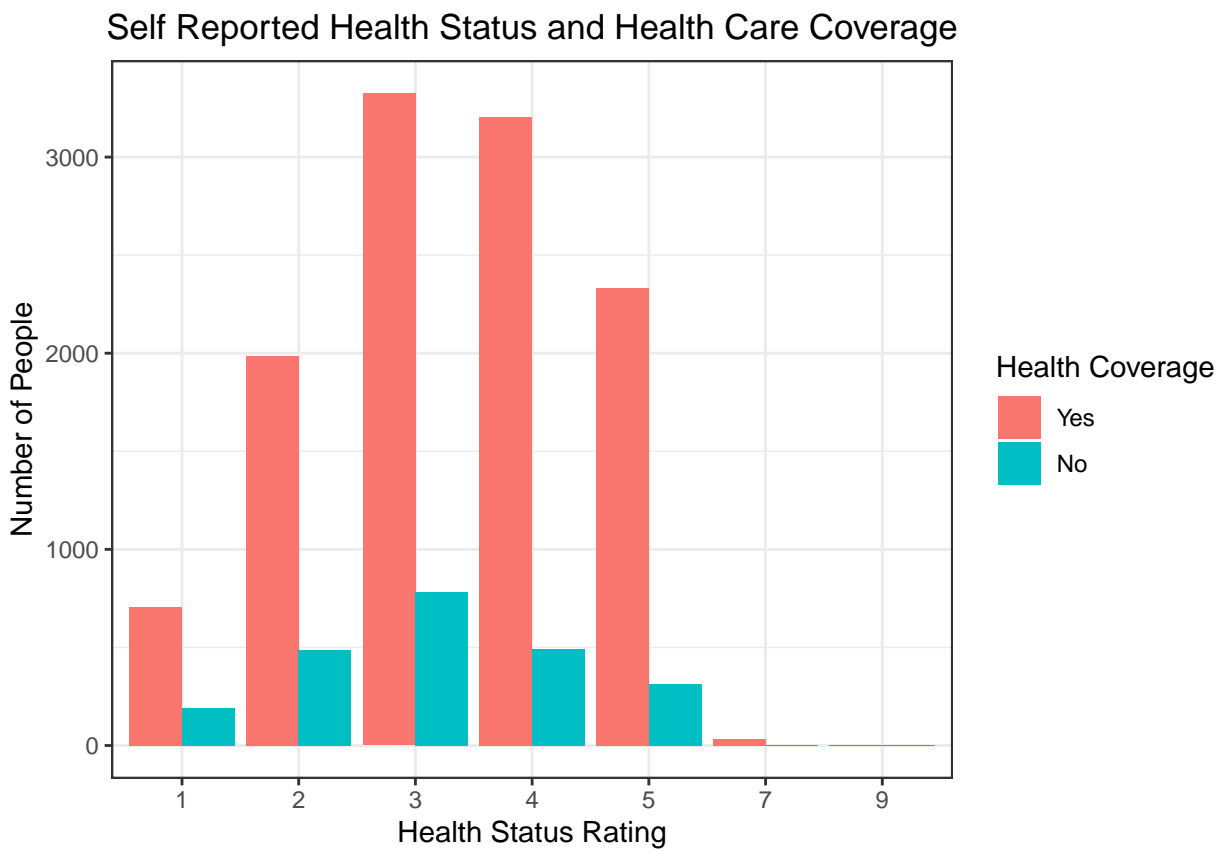
Figure 3: Self Reported Health Status and Medicaid Expansion

Figure 4: Self Reported Health Status and Health Care Coverage