

Price Variations in Health Insurance Marketplaces



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Background & Purpose

The Affordable Care Act established state-level marketplaces in which individuals could obtain health insurance coverage. This project offers an evaluation of the performance of these state marketplaces (also termed “health insurance exchanges”) after ten years of operation. This project compares differences across states in various characteristics, such as enrollment and health plan competition, as we develop a repository for research literature that addresses various outcomes of these mechanisms.

Our main objective is to identify features associated with the success of the marketplaces in providing health insurance and, consequently, necessary health care services, to the population. Each researcher investigated a specialized topic to contribute to this ongoing research project.

Abstract

Pricing for health insurance plans vary based on numerous factors including age of the beneficiary, location, unique insurers/total number of plans offered in the area, and plan type. In this project, we investigated price variations and potential correlations between insurance plans offered in state marketplaces for twenty-seven year olds. This specific age was chosen for analyses as at twenty-seven, most dependents have been released from their parents’ insurance plans.

References

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Dafny, L., Gruber, J., & Ody, C. (2015). More Insurers Lower Premiums: Evidence from Initial Pricing in the Health Insurance Marketplaces. *American Journal of Health Economics*, 1(1), 53–81. https://doi.org/10.1162/ajhe_a_00003

Health Insurance Exchange Public Use Files (exchange PUFs). CMS. (2023). Retrieved February 23, 2023, from <https://www.cms.gov/ccio/resources/data-resources/marketplace-puf>

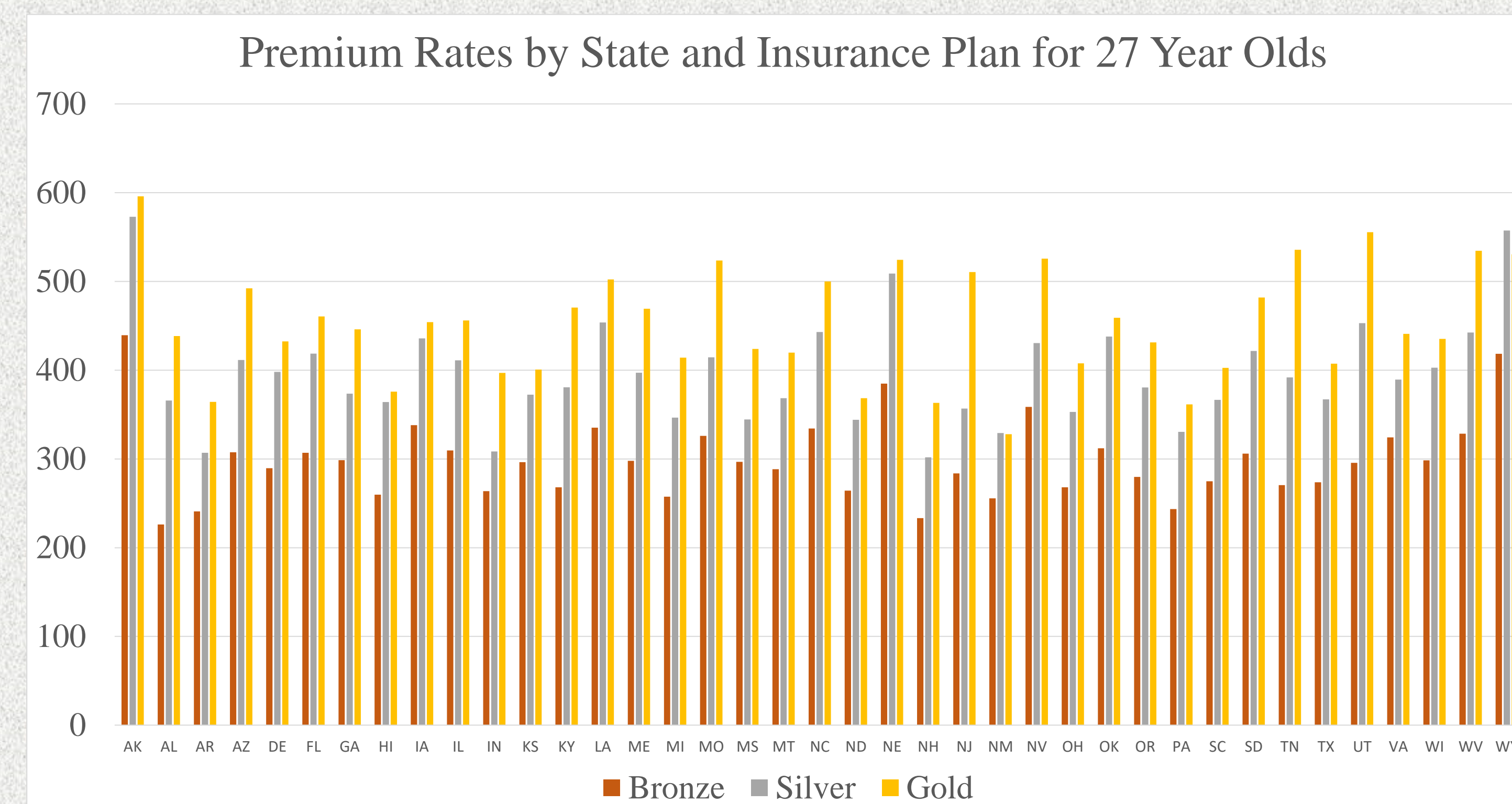
Methodology

To conduct our research, our team conducted literature reviews, data collection, preparation of data visualizations (graphs), and analysis of the data. Utilizing insurance marketplace data gathered from the *US Centers for Medicaid and Medicare Services*, published from 2014-2023, our main method of research was a cross-sectional study where each research member was assigned a specific couple years of data. We then combined our files to create one large spreadsheet in *Microsoft Excel*.

We took advantage of the *FSU Virtual Lab* applications *StataSE 17* and *Tableau Desktop* in order to sort and present our data by various categories, including State, County, Year, Bronze, Expanded Bronze, Silver, Gold, Platinum, Catastrophic, Unique Insurers, Total Plans, and Rural Classification.

Within *Microsoft Excel*, we established new variables that represented the percentage increase from one insurance plan to another, and graphed these variables based on state and age of beneficiary. To study correlations between premium increases and other variables, linear regression analyses was conducted through the *Data Analysis ToolPak* offered by *Microsoft*.

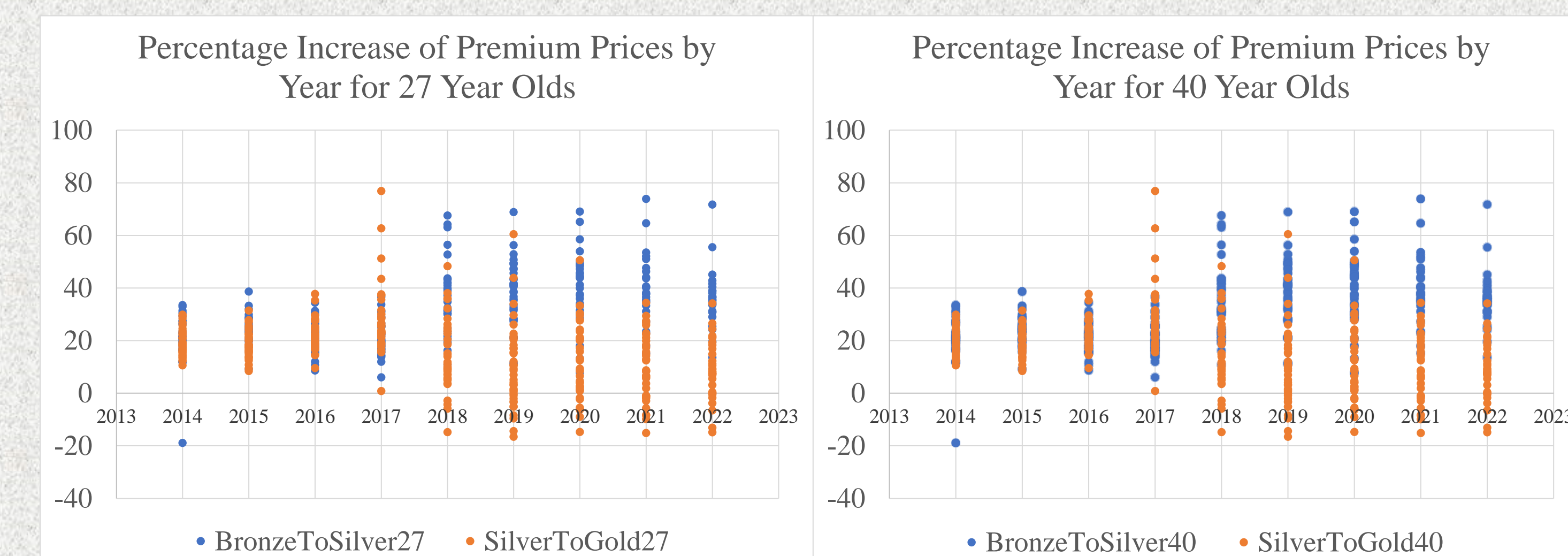
Limitation of data: Not all states’ data was provided.



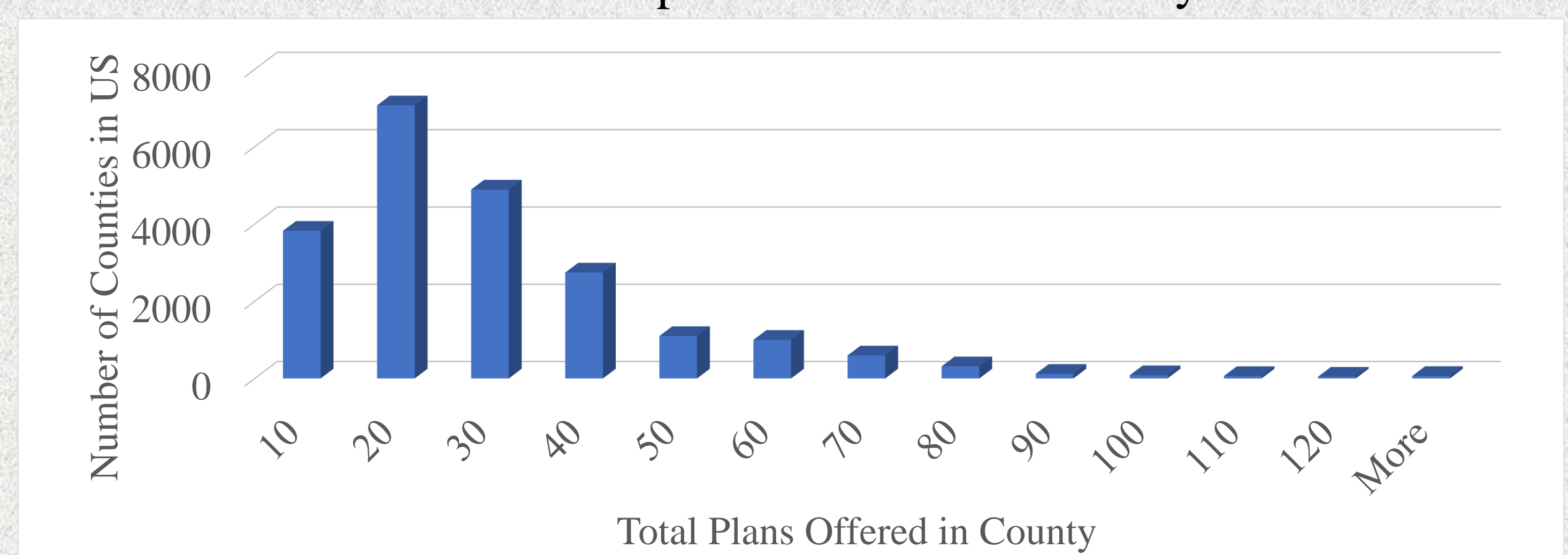
Bronze To Silver 27 Regression				
Multiple R	0.104895323			
R Square	0.011003029			
Adjusted R Square	0.010912751			
Standard Error	12.88893994			
Observations	21913			
	Coefficients	Standard Error	t Stat	P-value
Intercept	30.75974387	0.175879	174.8915096	0
uniqueinsurers	0.028759654	0.093270603	0.308346397	0.757821697
Total Plans	-0.073189979	0.006956975	-10.52037383	8.02007E-26

Results & Discussion

As a result of this study, the percentage increase of the premiums from bronze to silver insurance plans, as well as silver to gold insurance plans was discovered to be nearly identical for 27 year old individuals and 40 year old individuals for every year, by state/county. The specific premium percentage increase varied by state, however, for bronze to silver plans, the average increase was by 32.9%, and for silver to gold plans, the average increase was by 14.7%.



From the linear regression analysis, the probability value of the premium price increase was statistically significant from bronze to silver plans ($p = 8.02E-26$) and silver to gold plans ($p = 1.8E-57$) based on total insurance plans offered in the area, but not based on the amount of unique insurers ($p > 0.05$). This indicates that there is a correlation between premium price increases and total insurance plans offered in a county. On average, this premium price increase from plan to plan was lowered by about 1% for each additional plan offered in that county.



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