Changes in Average Premiums Based on Insurance Regulator Characteristics

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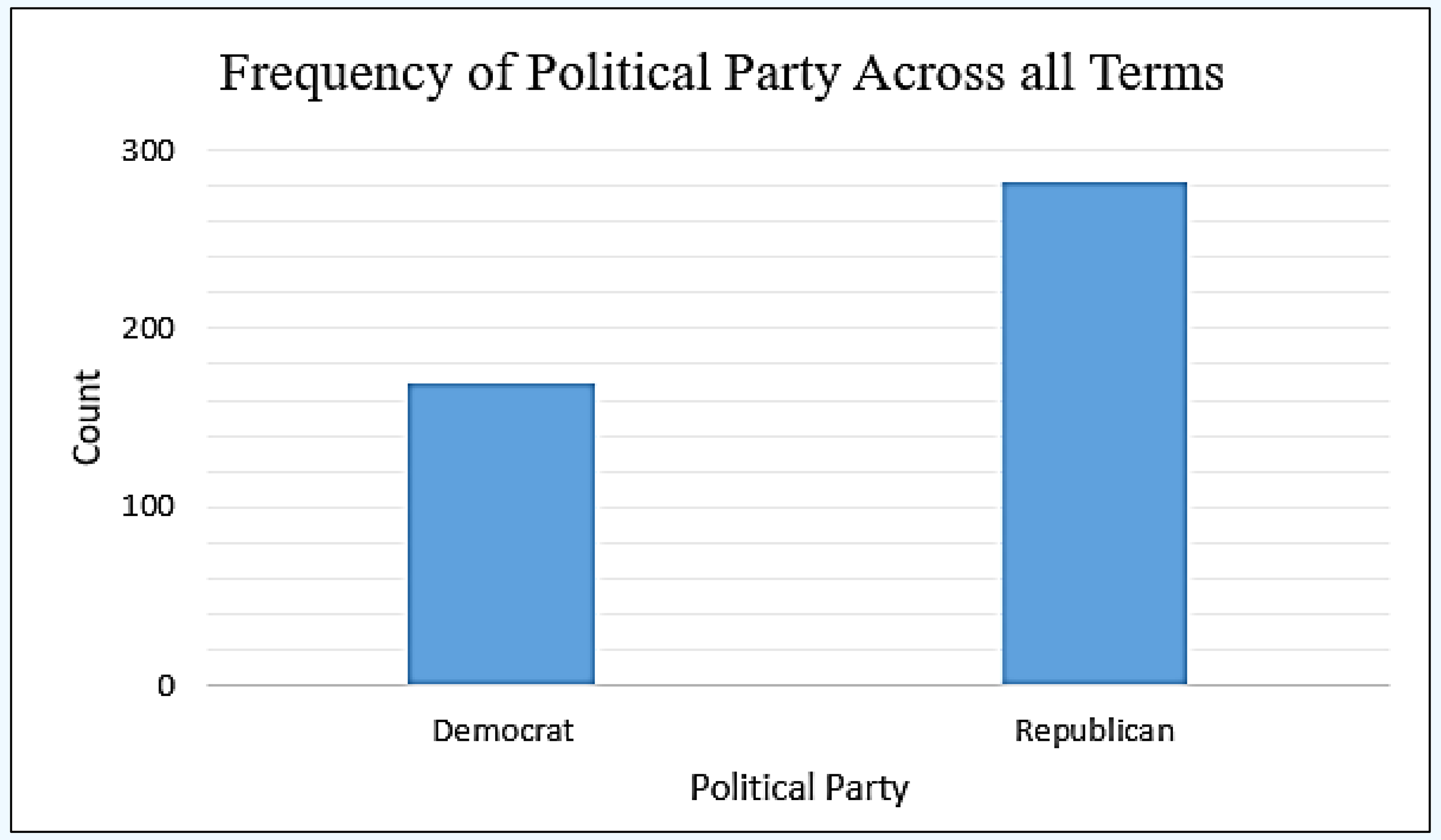
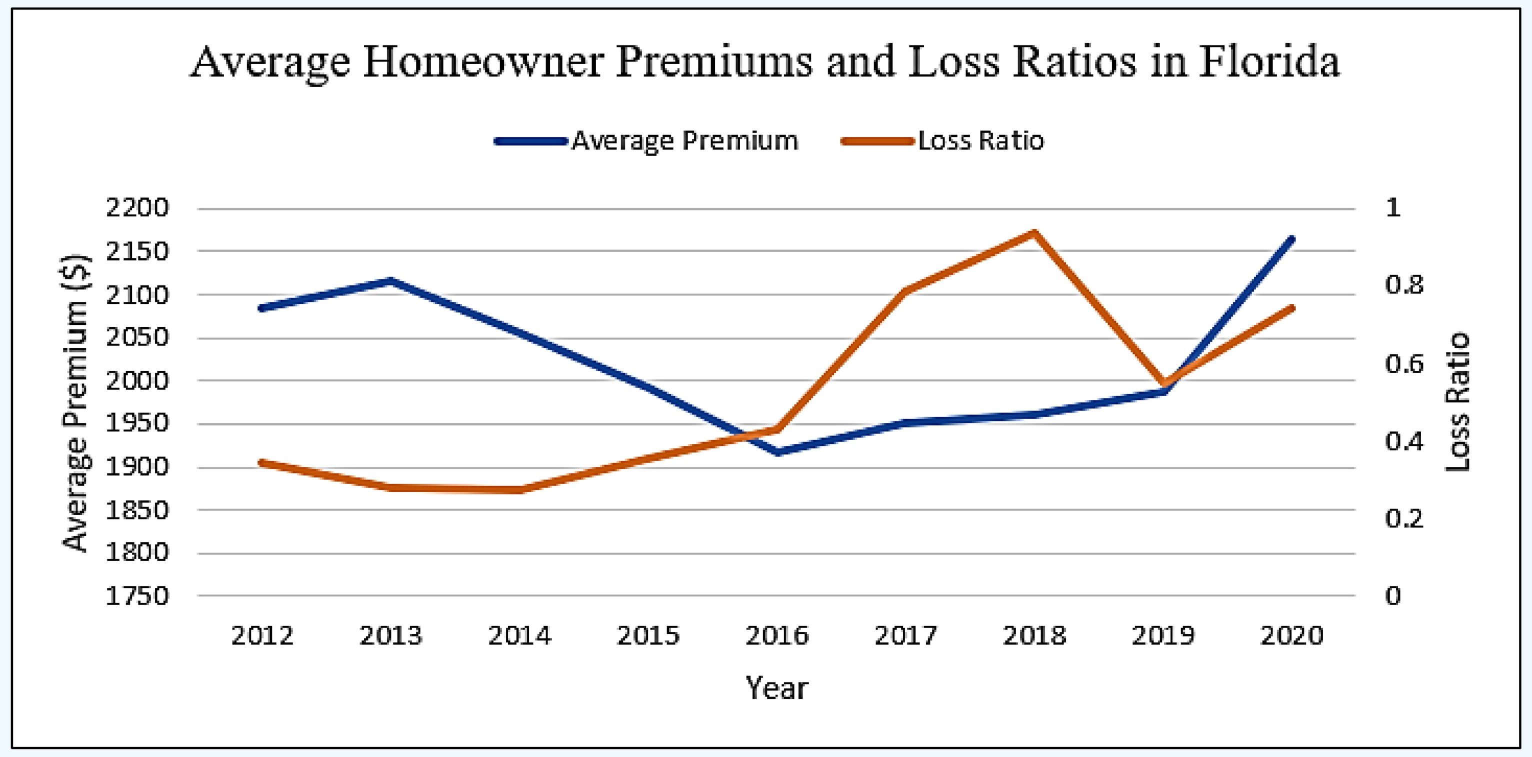
Background

- Every state in the U.S. has its own DOI (Department of Insurance) whose purpose is to maintain "solvency and equity" (Mayerson, 1965, p. 51).
  - This department regulates insurance rates, approves policy language, and enforces insurance laws.
  - The state insurance regulator is the primary individual that oversees this department.
- Before and following their tenure, insurance regulators hold different jobs and positions in society that may or may not be related to insurance or government work.
  - Ex. Politician, working in the private sector, career in the State Department, etc.
- The various backgrounds that insurance regulators may have can alter the decisions of the corresponding state's DOI.
  - For example, it is said that insurance regulators can fill the role of "political actors" to achieve their desired policy goals (Meier, 1991, p. 701).
- Insurance rates can vary greatly from state to state, due to factors like population density, weather conditions, risk assessment, etc.; furthermore, insurance premiums vary from person to person based on the amount of risk that an individual poses to the insurance company.
  - An insurance premium is the amount of money that an individual pays for an insurance policy to cover risks, accidents, injuries, or losses; homeowner premiums are adjusted constantly.
- In a time of ever-changing insurance rates and leadership within a given state's Department of Insurance, it is crucial to evaluate the correlation of these factors to make assumptions about the future.

Methods

- The individuals of focus within this study were insurance regulators across all 50 states, from 2012-2020.
- Panel data was collected using LinkedIn and individual state news resources on the pre- and post-employment of insurance commissioners who worked in the DOI.
- Data was organized within Excel, then cleaned using binary code to denote the pre- and post-employment status and political party affiliation of each regulator.
- Hypotheses were developed questioning the differences in average premiums and loss ratios based on noted political leaning.
- Hypotheses were tested using panel data regression analysis and the "xtreg" function within Stata software to determine if insurance regulator characteristics correlated to the change in homeowner premiums across states, with all other variables held constant.
- A bar graph on the frequency of political affiliation was produced to demonstrate the prevalence of political beliefs within the DOI.
- For simplicity of working with panel data, the line graphs focused on exclusively Florida's average premiums and loss ratios over time; a typical inverse correlation between these variables is shown, though there are some discrepancies in the trends.





	Average Prem
Republican	33.43**
	[14.98]
Loss Ratio	16.84
	[20.94]
Controls	Yes
R-squared	0.94
Observations	400

	Average Prem
Elected	-200.92**
	[93.74]
Loss Ratio	19.28
	[20.94]
Controls	Yes
R-squared	0.94
Observations	400

	Average Prem
Elected	-325.46***
	[103.15]
Republican	18.86
	[15.71]
Elected*Republican	124.77***
	[45.96]
Loss Ratio	16.74
	[20.66]
Controls	Yes
R-squared	0.94
Observations	400

Hypotheses/Models

Republican vs. Democrat

$$H_0 : \mu_{Republican} = \mu_{Democrat}$$

$$H_a : \mu_{Republican} \neq \mu_{Democrat}$$

$$Avgprem_{st} = \beta PoliticalParty_{st} + Controls_{st} + \varepsilon$$

Elected vs. Appointed

$$H_a : \mu_{Elected} = \mu_{Appointed}$$

$$H_a : \mu_{Elected} \neq \mu_{Appointed}$$

$$Avgprem_{st} = \beta Elected * Republican_{st} + Controls_{st} + \varepsilon$$

Results/Conclusions

- Republican commissioners have higher average state homeowner premiums than Democrat commissioners.
- Elected commissioners have significantly lower premiums compared to appointed commissioners.
  - Broken down by political party, on average, Republican elected commissioners have higher premiums than appointed; no significant difference in Democrats between elected vs appointed.
- Results are not driven by loss ratios in a state.
- R-squared value of 0.9439 signifies a strong coefficient of determination; Average premiums can be explained by the characteristics of a commissioner being an Elected Republican by this amount.
- Alternative hypotheses can be accepted due to significant results.
- Future exploration includes qualitative and quantitative research on why Elected Republicans have statistically higher average premiums than other regulators, how this impacts states/citizens, and the predictions that can be made about future premium rates.

References

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