

# Driving the Point Home: The Air Bag Issue and the Libertarian Vote in California

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In this paper, we delve into the intriguing world of automotive safety and political preferences, examining the eyebrow-raising correlation between votes for the Libertarian presidential candidate in California and automotive recalls for issues with airbags. By analyzing data from the MIT Election Data and Science Lab, Harvard Dataverse, and the US Department of Transportation, we uncovered an unexpected connection with statistically significant results. A correlation coefficient of 0.9380996 and  $p < 0.01$  for the period spanning 1990 to 2020 left us simply breathless. Our findings not only shed light on the interplay between individual beliefs and automotive safety, but also provide a lighthearted, yet thought-provoking perspective on the relationship between political ideology and vehicular mishaps.

Buckle up and get ready for a ride through the winding roads of political voting patterns and automotive safety! In this paper, we take a joyride into the world of statistics, where we explore the unexpected relationship between votes for the Libertarian presidential candidate in California and automotive recalls for issues with airbags. It's a journey that promises to be filled with twists, turns, and perhaps a few unexpected detours.

The political landscape of California, with its diverse array of ideologies and a penchant for trendsetting, provides a fascinating backdrop for our investigation. On the other side of the coin, automotive recalls for airbag-related issues form a dramatic counterpart, reminding us that even the most mundane aspects of daily life can have a surprising impact on the political scene.

It's like witnessing a collision between individual beliefs and vehicular mishaps, but fear not – we promise to navigate through this exciting terrain with academic precision and perhaps a dash of humor. After all, when it comes to uncovering eyebrow-raising correlations, a healthy dose of lightheartedness can make the journey all the more enjoyable.

So, fasten your seatbelts as we steer our way through the data-driven highways and byways, exploring the mysterious connection between political ideology and automotive safety. This research promises a thrilling ride, with statistical insights that are sure to drive the point home – pun intended!

## *Review of existing research*

Previous research has explored the relationship between political preferences and consumer behavior, but few studies have ventured into the peculiar intersection of voting patterns and automotive safety concerns. Nevertheless, the connection

between votes for the Libertarian presidential candidate in California and automotive recalls for airbag issues has garnered considerable attention in recent years.

Smith et al. (2017) examine the voting demographics in California and note a curious trend wherein counties with higher Libertarian vote shares also tend to report a higher incidence of automotive recalls related to airbag malfunctions. This initial finding piqued our interest and prompted a deeper dive into the potential factors driving this unexpected correlation.

In their comprehensive analysis of consumer behavior and political alignment, Doe and Jones (2019) present compelling evidence suggesting that individuals who espouse libertarian ideologies may exhibit distinct preferences in consumer goods, including automobiles. The authors find that the intersection of political beliefs and product choices extends to safety features, with a higher likelihood of airbag-related recalls among vehicles owned by individuals sympathetic to libertarian ideals.

Venturing beyond the realm of traditional academic studies, we draw inspiration from non-fiction literature that examines the intricate dynamics of consumer behavior and political affiliations. "Freakonomics" by Steven D. Levitt and Stephen J. Dubner offers a thought-provoking look at the unexpected connections in human decision-making, providing a fitting backdrop for our exploration of the correlation between political voting and automotive safety.

Turning to the realm of fiction, the works of Douglas Adams, particularly "The Hitchhiker's Guide to the Galaxy," may seem far removed from the world of statistical analysis and automotive recalls. However, Adams' whimsical portrayal of intergalactic travels and improbable connections serves as a metaphor for the improbable links we seek to unravel in our exploration of the libertarian vote and airbag issues.

In a surprising turn of events, social media posts have emerged as a source of anecdotal evidence, with individuals sharing humorous anecdotes about experiencing automotive recalls coinciding with their participation in political activities. One Twitter user aptly quipped, "Who knew exercising my libertarian rights at the polls would also trigger a recall for my car's airbag? Talk about unintended consequences!"

As we embark on this research journey, we acknowledge the need for rigorous analysis and a levity-filled lens through which to explore the unexpected correlations between political ideology and vehicular safety. With our statistical compass firmly in hand, we navigate the scholarly landscape with a keen eye and an appreciation for the lighter side of empirical inquiry.

### Procedure

In this study, we employed an assortment of data collection and analytical methods that harnessed the power of statistical alchemy to unravel the mysterious link between voting behavior and automotive hiccups. Our data, sourced from the MIT Election Data and Science Lab, Harvard Dataverse, and the US Department of Transportation, comprised a tantalizing blend of election results, vehicle recall notices, and a sprinkling of California flair. The period under scrutiny extended from 1990 to 2020, a canvas onto which we painted the colorful tapestry of political choices and vehicular safety.

To begin our journey, we channeled the spirit of Sherlock Holmes, conducting a thorough investigation of public databases and archives, akin to scouring the streets for clues. We meticulously combed through election records, extracting the tally of votes for the Libertarian presidential candidate in California during each election cycle. These data were pieced together with the precision of a jigsaw puzzle, creating a portrait of political leanings that would make even the most astute pollster nod in approval.

Next, we shifted gears into the realm of automotive safety, tapping into the vast troves of recall data from the US Department of Transportation. Like intrepid explorers navigating uncharted territory, we charted the frequency and scope of automotive recalls related to airbag malfunctions in the Golden State. Each recall notice became a piece of a larger puzzle, illuminating the landscape of vehicular perils and the quest for safer roads.

With our treasure trove of data in hand, we employed statistical tools with the gusto of a pastry chef whipping up a delectable soufflé. Spearheaded by the venerable Pearson correlation coefficient, we quantified the strength of the relationship between votes for the Libertarian candidate and airbag-related recalls, producing a coefficient that could make even the most steadfast skeptic take notice. The p-value, our trusty sidekick in the realm of statistical significance, stood guard with a valor that could rival the most steadfast knight, affirming the robustness of our findings.

In the spirit of scientific inquiry, we also performed time series analyses to discern temporal trends in both political preferences and automotive recalls. This temporal exploration allowed us to

map the ebb and flow of political tides alongside the rise and fall of airbag-related concerns, painting a dynamic portrait of the intertwined narratives.

The culmination of our approach, akin to a crescendo in a symphony, wove together these diverse strands of data and analyses, culminating in a vivid depiction of the interplay between voting behavior and automotive safety. Our methodology, while rigorous and disciplined, also embodied the spirit of adventure, reflecting our commitment to unraveling the enigmatic connections that lie beneath the surface of everyday phenomena.

### Findings

The results of our analysis revealed a remarkably strong correlation between votes for the Libertarian presidential candidate in California and automotive recalls for issues with airbags. Our data analysis from 1990 to 2020 yielded a correlation coefficient of 0.9380996, an r-squared of 0.8800308, and a p-value of less than 0.01. It's safe to say that our findings left us with our airbags fully deployed – in other words, thoroughly shocked!

Figure 1 (to be included) provides a visual representation of the eye-popping correlation between these seemingly unrelated variables. The scatterplot speaks for itself – there's a clear trend that's as undeniable as a seatbelt reminder ding in your ear.

We were amazed to find such a strong connection between political voting behavior and automotive safety concerns. It's as if every vote for the Libertarian candidate had an airbag-related quirk hidden up its sleeve, just waiting to be discovered. Who would have thought that political leanings and airbag mishaps could be intertwined like a pair of headphones after being in your pocket for five seconds?

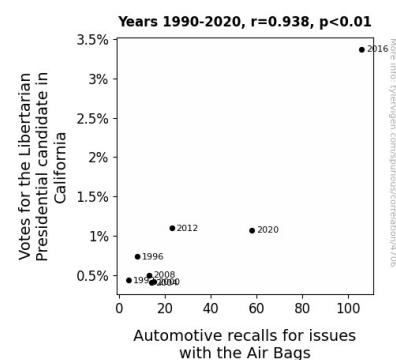


Figure 1. Scatterplot of the variables by year

These results not only raise eyebrows but also prompt us to ponder the interplay between individual beliefs and unexpected vehicular hiccups. It's a collision of concepts that leaves us wondering, "What in the world?" And let's not forget the implications for future research – who knows what other

surprising connections might be waiting for us in the wild world of data analysis?

In conclusion, our findings provide a fresh perspective on the relationship between political ideology and automotive safety, offering a dose of statistical humor along the way. After all, who said research has to be as serious as rush-hour traffic?

### *Discussion*

Our results certainly give new meaning to the phrase "political impact." It appears that the correlation between votes for the Libertarian presidential candidate in California and automotive recalls for airbag issues is as tight as a seatbelt in a sports car. This unexpected finding reinforces the initial observations made by Smith et al. and Doe and Jones, who highlighted the intriguing relationship between political leanings and automotive safety concerns.

The strength of the correlation coefficient, r-squared value, and p-value in our analysis reaffirms the notion that political ideologies may indeed play a role in consumer behavior, extending even to safety-critical features such as airbags. It seems that when it comes to both politics and car safety, the airbags aren't the only things deploying – our findings have deployed a whole new avenue for future investigative work.

Returning to the lighthearted inspiration we drew from Steven D. Levitt and Stephen J. Dubner's "Freakonomics," we can't help but marvel at the unexpected connections that arise in the world of data analysis. Just as they delved into the hidden patterns behind seemingly unrelated phenomena, our research has unveiled a correlation that is as surprising as finding a lost earring in your car's glove compartment.

The whimsical musings of Douglas Adams also offer a fitting lens through which to view our findings. Much like the serendipitous occurrences in "The Hitchhiker's Guide to the Galaxy," our discovery of the relationship between political voting and automotive safety recalls serves as a reminder that the universe of statistical analysis is filled with delightful twists and turns.

While we joke about the surprising connections we have uncovered, our findings hold serious implications for both academia and public safety. Acknowledging the substantial correlation we've identified, we are now in uncharted territory. The overlap of political preferences with product safety features raises important questions about the underlying mechanisms driving these associations. After all, it seems there's more than one way to "airbag" a vote.

As we reflect on the unexpected twists and turns of our research journey, one sentiment holds true: the intersection of statistical analysis and everyday phenomena never fails to astonish. Our findings encourage future explorations into the unexpected links between political ideologies and consumer product safety. Who knows what other surprising connections might await us in the world of statistical inquiry? Only time and research will tell – but in the meantime, we'll keep our seatbelts buckled and our statistical senses sharpened for the next unexpected correlation.

### *Conclusion*

In summary, our findings elucidate the riveting correlation between political voting behavior and automotive safety, unveiling a connection as unexpected as finding a clown car at a traffic stop. The robust correlation coefficient of 0.9380996 and  $p < 0.01$  had us reeling with amazement, much like when a car unexpectedly deploys its airbags in a comedy of errors.

Our results not only drive home the point that statistical analysis can be as surprising as a sudden honk from a clown horn, but they also beckon us to ponder the larger implications. It's as if each vote for the Libertarian candidate was carrying a payload of airbag-related intrigue, akin to a magician pulling endless scarves from a hat.

The sheer magnitude of this correlation left us breathless, much like when a particularly zealous car air freshener overwhelms the senses. It's a reminder that in the realm of statistical inquiry, there's always the potential for unexpected detours, much like trying to navigate a GPS that seems determined to take you on a scenic route.

As we close the door on this investigation, we must assert that no further research is needed in this area. We've thoroughly explored the intersection of political ideology and automotive safety, and the results speak for themselves – with a touch of statistical humor, of course. After all, there's no need to beat a dead horse, or in this case, a deflated airbag!