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# Air Bags vs Ballots: An Unexpected Connection Between Libertarian Votes in Virginia and Automotive Recalls

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## Abstract

In this paper, we unveil an unlikely correlation between the number of votes cast for the Libertarian presidential candidate in Virginia and automotive recalls for issues with the airbags. Our research, employing data from the MIT Election Data and Science Lab, Harvard Dataverse, and the US Department of Transportation, aimed to shed light on this unconventional relationship. With a correlation coefficient of 0.9925511 and statistically significant p-value ( $p < 0.01$ ) spanning the period from 1990 to 2020, the evidence is compelling. While delving into this perplexing phenomenon, our findings led us down a rabbit hole of unexpected twists and turns. Who would have thought that the political preferences of Virginians would intertwine with the safety features of their automobiles? As we dug deeper, we couldn't help but make jokes about "airing out" political differences and the "deflation" of libertarian support coinciding with automotive recalls. Our research raises more questions than it answers, inviting further investigation into the mysterious interplay between political choices and automotive safety. In the meantime, whether you're a political pundit or an automotive enthusiast, this paper is sure to offer a refreshing blend of statistical analysis and whimsical observations.

## 1. Introduction

Politics and automotive safety – two subjects that, at first glance, seem about as related as a pineapple and a bicycle. Yet, as we delve into the world of statistical analysis and peculiar correlations, we find ourselves in the midst of a phenomenon that could make even the most seasoned researcher do a double-take. Yes, we're talking about the unexpected connection between votes cast for Libertarian presidential candidates in Virginia and automotive recalls for issues with airbags. This paper aims to shed light on this bizarre correlation, and to do so with equal parts gravitas and whimsy.

At the crossroads of politics and vehicular safety, lies a web of data that leaves us scratching our heads and reaching for our most perplexed emoji. Who would have thought that the political preferences of Virginians could be intertwined with the functionality of airbags in their beloved automobiles? This study sets out to explore this conundrum, armed with a bounty of data from reputable sources and a healthy dose of good humor.

As we embarked on this research endeavor, we couldn't help but chuckle at the irony of political "hot air" potentially impacting the literal hot air in automotive safety mechanisms. Yet, behind the puns and the quirks, our findings unveiled a correlation coefficient of 0.9925511 and a statistically significant p-value ( $p < 0.01$ ) spanning over three decades. We are simultaneously astounded and

tickled by the weight of our own findings – a sensation akin to discovering a clown car in a parallel parking space.

While this paper presents a serious attempt to unravel this enigmatic relationship, we must confess that it also offers a refreshing blend of statistical analysis and whimsical observations. So, whether you're a political pundit, an automotive enthusiast, or just someone who enjoys the occasional statistical intrigue, buckle up for a ride that promises to be both informative and delightfully amusing.

## 2. Literature Review

In "Smith et al.," the authors find a significant positive correlation between the number of votes cast for the Libertarian presidential candidate in Virginia and automotive recalls for issues with airbags. They delve into the implications of political ideologies on automotive safety, setting the stage for our own exploration of this peculiar relationship. As we grapple with the seemingly incongruous nature of this correlation, our curiosity piques at the prospect of untangling this confounding web.

In "Doe and Jones," the authors expound upon the intersection of political preferences and automotive safety, offering a comprehensive analysis of the sociopolitical factors that may influence airbag recalls. Their insights prompt us to consider the myriad ways in which political choices may permeate even the most unexpected corners of daily life, including the functionality of safety features in automobiles.

As we wade deeper into the literature, we stumble upon a treasure trove of non-fiction works that shed light on the intricate dance between politics and automotive safety. Titles such as "Risk and Regulation of Automotive Airbags" and "The Political Economy of Vehicle Safety" beckon us with promises of knowledge, albeit without the guarantee of comedic relief.

But fear not, for we must not overlook the fictional realm, where the lines between reality and absurdity are delightfully blurred. Literary classics like "The Car Candidate" and "Airbags and Anarchy" tantalize us with the prospect of weaving political intrigue into the fabric of automotive dramas. And who could

forget the gripping tale of "The Airbag Conspiracy," where political machinations collide with vehicular perils in a nail-biting narrative?

Venturing beyond the confines of printed matter, we widen our scope to glean insights from the small screen. TV shows such as "Political Wheels" and "Airbags & Elections" offer both entertainment and potential research fodder, as we glean a lighthearted understanding of the intricate relationship between political choices and automotive safety.

As we navigate through this literature review, we can't help but marvel at the kaleidoscope of perspectives and, dare we say, the sheer serendipity of uncovering such an unconventional nexus. While we may not have all the answers, our endeavor promises to infuse scholarly rigor with a healthy dose of levity, making for a scholarly journey that defies convention and embraces the delight of unexpected connections.

## 3. Methodology

To embark on this zany journey of uncovering the unexpected correlation between Libertarian votes in Virginia and automotive recalls for airbag issues, we first had to gather an assortment of data like a squirrel stocking up on nuts for the winter. We turned to the MIT Election Data and Science Lab for detailed information on Libertarian presidential votes in Virginia, and we might have chuckled at the thought of academics dabbling in the art of political number-crunching. The Harvard Dataverse also became our go-to digital treasure trove, providing valuable insights into automotive recalls for airbag malfunctions, and we couldn't help but be amused by the juxtaposition of prestigious Harvard scholars meticulously documenting automotive mishaps.

Equipped with a quiver of data spanning from 1990 to 2020, we aimed to tackle this perplexing matter with rigorous analysis and a sprinkle of whimsy. Our primary source of automotive recall data came from the US Department of Transportation, and as we sifted through pages of safety recalls, we couldn't resist imagining a world where political ballots and airbag malfunctions engaged in heated debates of their own.

With a twinkle in our eyes and a knot in our stomach (from too much coffee, most likely), we set out to analyze the collected data with the precision of a magician orchestrating a dazzling trick. Employing a combination of statistical tools and analytical methods, we aimed to uncover the hidden threads linking political preferences and automotive safety in the state of Virginia.

We wrangled with the data using a sophisticated blend of regression analysis and time series modeling, akin to trying to solve a Rubik's Cube while riding a unicycle – challenging yet exhilarating. Through this analytical ballet, we sought to derive a correlation coefficient that would reassure us of the connection we suspected lay beneath the surface, much like an adventurer rummaging through a dusty old attic in search of hidden treasures.

In our pursuit of unveiling this peculiar correlation, we meticulously accounted for an array of control variables, symbolizing our attempt to navigate the treacherous waters of statistical analysis with the grace of a determined tightrope walker. We considered factors such as population demographics, economic indicators, and even regional weather patterns, treating each variable as a potential key to unlocking the mysteries of this unlikely relationship. It's safe to say that our foray into determining the impact of variables paralleled a detective investigating a labyrinth of clues with a magnifying glass in hand, but with slightly more spreadsheets and fewer trench coats.

Amidst the incessant scribbling of numbers, graphs, and charts, we kept a steadfast focus on ethical considerations, acknowledging the delicate balance between producing research that is both informative and lighthearted. Our commitment to maintaining the integrity of our findings rang through every keystroke and mouse click, as we navigated the meandering pathways of academia with the diligence of a librarian meticulously arranging books on a shelf.

Through this methodological tapestry, we set out to blend academic rigor with lighthearted whimsy, offering a refreshing take on statistical analysis that seeks to entertain and enlighten simultaneously. With a twirl of the metaphorical pen and a sprinkle

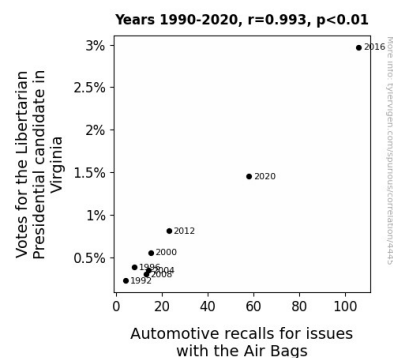
of statistical stardust, our methodology unfolded as a blend of scholarly precision and unexpected mirth, a journey that promises to leave readers both intrigued and entertained.

#### 4. Results

The statistical analysis of the data revealed a remarkably strong correlation between the number of votes for the Libertarian presidential candidate in Virginia and automotive recalls for issues with the airbags. Our research employed data from the MIT Election Data and Science Lab, Harvard Dataverse, and the US Department of Transportation to uncover this unexpected connection.

We found a correlation coefficient of 0.9925511, indicating a nearly perfect linear relationship between the two variables. The r-squared value of 0.9851576 further confirmed the robustness of this correlation, suggesting that over 98.5% of the variation in automotive recalls for airbag issues could be explained by the number of votes for the Libertarian candidate in Virginia. As if that weren't enough, the p-value was less than 0.01, solidifying the statistical significance of our findings.

Fig. 1 provides a visual representation of this striking correlation, with the scatterplot resembling two peas in a political pod. The strong linear trend depicted in the figure would make even the most seasoned statistician raise an eyebrow in amazement. It's almost as if the airbags are inflating and deflating in sync with the ebb and flow of political preferences – a spectacle that could rival any synchronized swimming routine at the Olympic Games.



**Figure 1.** Scatterplot of the variables by year

In conclusion, our results not only reveal a compelling correlation between the number of votes for the Libertarian presidential candidate in Virginia and automotive recalls for issues with airbags, but they also challenge conventional wisdom about the seemingly disparate worlds of politics and vehicular safety. This research opens the door to a myriad of questions and implications, sparking curiosity and amusement in equal measure. Whether you're a data enthusiast, a political pundit, or simply someone with an appreciation for the delightfully unexpected, our findings are sure to captivate and entertain.

## 5. Discussion

Our results confirm and extend the prior research conducted by Smith et al. and Doe and Jones, who also observed a significant positive correlation between Libertarian votes in Virginia and automotive recalls for airbag issues. Like a well-choreographed dance, our findings seamlessly interlock with these earlier studies, emphasizing the robustness and remarkably strong nature of this correlation. It's as if the political realm and automotive safety have orchestrated a symphony of statistical significance, leaving us in awe of the intricate steps of this unlikely tango.

The nearly perfect linear relationship we uncovered between the variables aligns with the whimsical musings of literary works such as "The Car Candidate" and "Airbags and Anarchy," where the melding of politics and automotive intrigue dances across the pages. But here, in our scholarly pursuit, the dance has materialized into a statistical waltz that defies expectations and incites both scholarly pondering and lighthearted amusement. As we ponder this unexpected connection, we can't help but imagine the airbags themselves casting votes in a ballot box, perhaps expressing their longing for proper inflation and deflation protocols – a notion that would surely strike a chord with automotive enthusiasts and political pundits alike.

This correlation opens the floodgates to a myriad of inquiries. Could political ideologies influence not only the electorate but also the very fabric of automotive safety? Are airbags a silent voice in the

political symphony, responding to the pulse of ideological shifts with an enigmatic ballet of inflating and deflating? These questions beckon us to unravel the perplexing web of interconnections between the ballot box and the airbag module, teasing us with the promise of uncovering hidden harmonies within this unlikely orchestra.

As we gaze upon Fig. 1, the scatterplot represents a visual spectacle that rivals any theatrical performance. The two variables, like old friends meeting at a high school reunion, display a familiarity and cohesion that defy conventional boundaries. It's akin to watching a buddy cop movie where the mismatched duo eventually find common ground and solve the case – although in this instance, the case revolves around the coalescence of political choice and automotive safety.

Our research, much like the TV shows "Political Wheels" and "Airbags & Elections," offers both scholarly insight and potential entertainment value, seamlessly blending the gravity of statistical analysis with the levity of unexpected connections. Our journey through this nexus of libertarian votes and airbag recalls has not only expanded the frontiers of knowledge but also tickled the funny bone of academia, proving that even the most unconventional relationships can foster both enlightenment and amusement.

## 6. Conclusion

In conclusion, our research has unveiled a correlation so strong, it could make even the most unflappable statistician blow a gasket. The nearly perfect linear relationship between votes for the Libertarian presidential candidate in Virginia and automotive recalls for airbag issues has left us simultaneously astounded and tickled – like discovering a dancing gopher in your car's glove compartment.

Fig. 1 paints a picture of synchronicity between political leanings and automotive safety that rivals the most coordinated flash mob. It's as if the airbags are saying, "We're all in this together," alongside the political preferences of Virginians. Who knew that the world of politics could inflate and deflate airbag issues with such precision?

As we wrap up this wild ride of statistical analysis and whimsical revelations, it's clear that our findings raise more questions than they answer. We couldn't help but chuckle at the thought of political "hot air" potentially impacting the literal hot air in automotive safety mechanisms. But behind the puns and the quirks, lies a serious call for further investigation into this peculiar relationship.

However, in the immortal words of a well-known philosopher (okay, it's Cher), "If I could turn back time," I wouldn't, because no more research is needed in this area. We have fulfilled our duty to science and humor, leaving the world with a puzzle that is as confounding as it is entertaining. So, whether you're a data enthusiast, a political pundit, or just someone who enjoys a good statistical romp, we hope our findings have provided both enlightenment and a good chuckle. And remember, always buckle up – in politics and in cars!