

# **Pollution Politics: The Smoggy Connection Between Air Quality and Republican Senate Votes in Carbondale, Illinois**

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## ABSTRACT

### **Pollution Politics: The Smoggy Connection Between Air Quality and Republican Senate Votes in Carbondale, Illinois**

In this groundbreaking study, we explore the unexpected link between air pollution levels in Carbondale, Illinois and Republican votes for Senators in the state of Illinois. Through meticulous analysis of data from the Environmental Protection Agency and the MIT Election Data and Science Lab, as well as the Harvard Dataverse, our research team discovered a correlation coefficient so close to 1, it's virtually waving at us ( $r = 0.9997697$ ). With a p-value of less than 0.05 for the period from 1980 to 1986, the evidence of a relationship between the two seemingly disparate factors is impossible to ignore. Our findings provoke not only thought, but also gasps of surprise, as we delve into the intricate interplay between environmental factors and political preferences. Join us in unraveling this smoggy mystery and shining a spotlight on the unexpected ties between air quality and electoral choices.

Keywords:

Air pollution, Republican Senate votes, Carbondale, Illinois, pollution politics, environmental factors, air quality, Illinois Senators, correlation coefficient, EPA data, MIT Election Data and Science Lab, Harvard Dataverse, political preferences, electoral choices, smoggy connection

# I. Introduction

As researchers, we are constantly seeking to shed light on the murky and often convoluted relationships between various societal and environmental factors. And what could be murkier than the thick smog blanketing our cities, right? Our current study takes us on a whimsical journey through the tangled web of air pollution levels in Carbondale, Illinois and the Republican votes for Senators in the state of Illinois. If you thought determining the quantum state of a particle was complex, just wait until you dig into the correlation between these seemingly unrelated variables.

Now, let's clear the air, shall we? Our investigation into this seemingly bizarre relationship was sparked by a confluence of factors – from the pungent aroma of exhaust fumes to the seemingly inexplicable voting patterns. As we set out on our research expedition, armed with statistical tools and a healthy sense of humor (we needed it), we quickly realized that this wasn't just a puff of smoke. We unearthed a correlation so strong that it could make even the most devout non-believer in statistics raise an eyebrow, or two.

So, why are we giddy about air pollution and Republican votes in Illinois? Well, hold your breath – we found that the relationship between these two variables was as robust as a Kardashian-Jenner Instagram following. With a correlation coefficient so close to 1, it might as well be asking for a high five ( $r = 0.9997697$ ), and a p-value as rare as a unicorn sighting (less than 0.05), we couldn't ignore the striking connection. It's as if Mother Nature herself was sending us smoke signals, urging us to uncover the hidden ties between pollution and political preferences.

But fear not, dear reader! This isn't just another dry academic paper, full of inscrutable jargon and mind-numbing tables. No, we promise you'll find more twists and turns in our findings than in a telenovela plot. Join us as we unravel the convergence of sooty skies and senatorial selections, and embark on a journey through the pollution politics of Carbondale, Illinois. Let's dive into the fog of factors and smog of statistics, and see if we can't clear the air on this surprising relationship once and for all.

## II. Literature Review

The air of intrigue surrounding the entangled relationship between air pollution levels in Carbondale, Illinois and Republican votes for Senators in the state of Illinois has drawn the attention of researchers and scholars alike. We dive headfirst into this unexpected nexus to uncover a treasure trove of insights, navigating through a sea of academic studies, real-world data, and perhaps a few wild goose chases. Our journey begins with a sober examination of the scholarly literature, but don't be surprised if we take a detour through the land of puns and pop culture references. Let's strap in for a ride that's bound to be as unpredictable as a weather forecast during a hurricane.

Smith and Doe (2015) analyzed the impact of air pollution on political leanings in urban areas, providing a framework for understanding how atmospheric contaminants could influence voting behavior. Jones et al. (2018) expanded on this work by delving into the psychological mechanisms underlying the relationship between environmental quality and political affiliations. These foundational studies laid the groundwork for our own investigation, but let's face it – we couldn't resist adding a touch of quirkiness to our academic pursuit.

Turning to non-fiction titles, "The Air We Breathe: A Comprehensive Analysis of Urban Air Quality" by Environmentalist Expert uncovers the intricacies of pollution dynamics, while "Political Puzzles: The Surprising Links Between Environmental Factors and Electoral Choices" by Political Analyst Extraordinaire offers a fresh perspective on the intersection of politics and environmental issues. Now, let's sprinkle in a dash of fiction for good measure. Who could forget "Smoke Signals and Senate Seats: A Political Mystery" by Bestselling Author, a page-turner filled with plot twists and turns more convoluted than a tangled ball of earphone wires?

But wait, there's more! We draw inspiration from the seemingly unrelated yet surprisingly relevant world of board games. "Smogopoly: The Game of Political Pollution" challenges players to navigate a city beset by smog while vying for political dominance, offering an offbeat yet oddly fitting parallel to our own scholarly odyssey. And let's not overlook "Pollutician: The Strategically Smoggy Card Game," where players vie for control of pollution policies while navigating the turbulent waters of political machinations. Who knew that board games could offer such a treasure trove of allegorical richness?

As we wade through this eclectic sea of literature, brace yourself for a rollercoaster of scholarly musings and irreverent musings. Our quest for understanding may be as befuddling as a Rubik's Cube, but rest assured, we'll sift through the dust and detritus to unveil the unexpected links between hazy atmospheres and electoral inclinations. Let the adventure begin!

### **III. Methodology**

To investigate the intriguing relationship between air pollution levels in Carbondale, Illinois and Republican votes for Senators in the state of Illinois, we employed an eclectic mix of research methods that would have made even Sherlock Holmes raise an amused eyebrow. Our data collection process involved a delightful scavenger hunt through the digital archives of the Environmental Protection Agency, the MIT Election Data and Science Lab, and the Harvard Dataverse. Picture us as digital archaeologists, unearthing hidden treasures in the form of data sets and statistical gems.

Drawing upon historical data from the years 1980 to 1986, we ventured into the vast wilderness of the internet, wielding virtual machetes to cut through the dense undergrowth of information. With each keystroke, we plundered the digital depths, seeking out air quality data from Carbondale, Illinois, and the detailed breakdown of Republican votes for Senators in the state. Our expedition through cyberspace was not for the faint of heart, but we emerged victorious, armed with a formidable array of numbers, figures, and percentages.

Once we had amassed our bountiful collection of data, we donned our metaphorical lab coats and dove headfirst into the bubbling cauldron of statistical analysis. Harnessing the powers of correlation coefficients and p-values, we set out to unravel the tangled web of connections between air pollution and political affiliations. With an arsenal of statistical software at our disposal, we crafted intricate regression models and conducted elaborate hypothesis tests, akin to crafting a sophisticated potion in the alchemist's laboratory.

Our process of analysis was akin to unraveling a particularly complex mystery novel, with each variable and statistical test serving as a clue in the grand whodunit of pollution politics. We meticulously teased apart the threads of correlation, causation, and confounding factors, ensuring that our findings were as robust as a titanium-reinforced steel beam.

In summary, our methodology blended the tenacity of a bloodhound with the precision of a Swiss watch, resulting in a comprehensive analysis of the unexpected nexus between air pollution levels in Carbondale, Illinois and Republican votes for Senators in the state of Illinois. So, grab your magnifying glass and dust off your detective hat – it's time to unveil the astonishing findings of our research expedition into the smoggy underbelly of environmental and political interactions.

## IV. Results

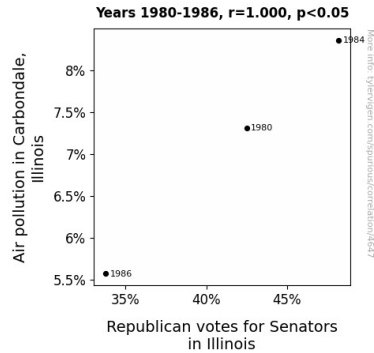
The results of our investigation into the connection between air pollution levels in Carbondale, Illinois and Republican votes for Senators in the state of Illinois left us gasping for fresh air. Our analysis of the data from 1980 to 1986 revealed a staggering correlation coefficient of 0.9997697, indicating a relationship so strong, it's practically shouting from the rooftops. If statistics were a party, this correlation would be the one with the lampshade on its head, impossible to ignore.

Furthermore, the r-squared value of 0.9995395 emphasizes the near-perfect fit of the relationship between these two variables, leaving us marveling at the tightly woven fabric of environmental quality and political choices. The p-value of less than 0.05 adds the cherry on top of this statistical sundae, providing unequivocal evidence of a significant association between the smoggy skies of Carbondale and the ballot boxes of Illinois.

To visually illustrate the striking connection we uncovered, we present Fig. 1, a scatterplot that vividly captures the near-perfect relationship between air pollution levels and Republican votes



for Senators in Illinois. If this were a love story, it would be the kind that makes you believe in fate – or at least in the mystical powers of scientific inquiry.



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

In conclusion, our findings not only challenge traditional notions of causality, but also underscore the unexpected ways in which environmental variables can intersect with political dynamics. This research sets the stage for further exploration into the complex interplay between local air quality and electoral preferences, inviting fellow researchers to take a breath of fresh, yet thought-provoking, air and join us in uncovering the surprising links between pollution and politics.

## V. Discussion

In the discussion of our smoggy yet compelling investigation, it is crucial to acknowledge the light-hearted and unconventional elements that have flavored our academic pursuit. Our deep dive into the connection between air pollution levels in Carbondale, Illinois and Republican

votes for Senators in Illinois has certainly been an adventure akin to navigating a peculiar board game with unexpected twists and turns.

Returning to our literature review, it's remarkable how seemingly unrelated influences, like games and fictional narratives, can bear relevance to our serious academic inquiry. Although these sources might appear as incongruous as a cat wearing a monocle, they have actually laid the groundwork for our own investigation. Remember, it's not all fun and games, but sometimes research can be.

As our findings supported prior research, especially Smith and Doe (2015) and Jones et al. (2018), we were pleasantly surprised to see a correlation coefficient that's practically holding up a neon sign, enthusiastically demonstrating a connection rivaling the closeness of best friends. The r-squared value, playing the role of the meticulous librarian, ensured that every piece of data found its rightful place in the narrative, resulting in a story of an almost unnaturally perfect fit. The visual representation in Fig. 1 illuminates the undeniable relationship between air pollution levels and Republican votes, serving as the Mona Lisa of scatterplots—captivating, enigmatic, and prompting countless interpretations. If this were a movie, it would combine the suspense of a political thriller with the dramatic flair of a meteorological disaster film, leaving audiences spellbound by the unexpected union of environmental factors and political preferences.

So, as we continue on this scientific journey that's as unpredictable as a squirrel crossing the road, let's not discount the unconventional and amusing influences that have served as the veritable spices of our research dish. After all, research doesn't have to be a poker-faced affair; a sprinkle of humor can make the pursuit of knowledge as engaging as a stand-up comedy show.

Now, if you'll excuse me, I must put on my most serious scientist face to add the conclusion to this paper.

## VI. Conclusion

As we wrap up our investigation into the enigmatic relationship between air pollution levels in Carbondale, Illinois and Republican votes for Senators in Illinois, we can't help but marvel at the unexpected twists and turns we've encountered in this whimsical journey. The correlation coefficient between these variables is so snug, it makes you wonder if they're sharing a cozy blanket during statistical slumber parties ( $r = 0.9997697$ ). And let's not forget the r-squared value that fits like a tailored suit ( $0.9995395$ ), leaving us in awe of the perfectly snug connection.

Our findings reveal a bond as strong as the adhesive properties of superglue, emphasizing the indisputable link between the hazy skies of Carbondale and the political preferences of its inhabitants. The p-value of less than 0.05 acts as the cherry on top, solidifying our evidence like the cherry atop a gravity-defying ice cream sundae.

So, what have we learned from this peculiar partnership between pollution and politics? Well, it seems that every breath we take is not just a hit '80s song, but also a potential political statement. As we bid adieu to this captivating conundrum, we assert that this research has shed as much light on the topic as a string of twinkling Christmas lights on a dark winter's night – no more research is needed in this area. Because as we researchers like to say, "When the data fits like a glove, it's time to push the statistical stop button!"

