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# A Breath of Fresh Air: The Iron Clad Connection Between Air Quality in Iron Mountain, Michigan and Libertarian Votes for Senators in Michigan

## **Caroline Hart, Anthony Tucker, Grace P Trudeau**

International College; Cambridge, Massachusetts

#### Abstract

This study sets out to untangle the unexpected relationship between ambient air quality in Iron Mountain, Michigan and the voting behavior of Michigan residents in senatorial elections. Amidst the political air, amidst the literal air, our research team delved deep into reams of data, finally exhaling as we discovered a resounding link between air quality and libertarian votes. The correlation coefficient of 0.8384047 that materialized between these two seemingly disparate variables sent waves of excitement through our team, as we realized that air quality might not just be a breath of fresh air, but also a breath of political change. Our findings, pointedly demonstrating p < 0.05 from 1985 to 2010, leave us gasping for more research and blowing away preconceived notions. Breathe easy, for the air in Iron Mountain, Michigan may just hold the key to unlocking electoral patterns in the state.

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#### **1. Introduction**

Buckle up, dear readers, as we embark on an intriguing journey through the seldomexplored intersection of air quality and political propensities. While it may seem like a breath of fresh air to consider these seemingly unrelated variables, our study dives headfirst into the enigmatic connection between the ambient air in Iron Mountain. Michigan, and the political leanings of Michigan residents in senatorial elections. Hold your breath, as we unfold the quirkiness that lies within the correlation of air quality and libertarian votes, and brace yourselves for a statistical rollercoaster ride filled with unforeseen twists and turns.

Our research team, armed with an arsenal of statistics and an insatiable curiosity, sought to unravel the perplexing relationship existing at the interface of environmental factors and voter behavior. As we delved into the atmospheric and political landscape, we discovered that the correlation coefficient of 0.8384047 emerged as a beacon of light amidst the fog, defying conventional expectations and leaving us gasping for more. With every inhalation of data, the realization dawned upon us that air quality in Iron Mountain, Michigan may hold more than just the sweet scent of petrichor – it may also exhale a gust of political inclinations that drift far across the state.

In a blaze of excitement, our findings revealed a resounding p-value of less than 0.05 from 1985 to 2010, affirming the robustness of the relationship between air quality and libertarian votes. As the pieces of the statistical puzzle fell into place, it became evident that our research was not just a mere statistical blip on the radar but a seismic shift in our understanding of environmental influences on democratic processes. So, dear readers, fasten your seatbelts as we navigate through this unparalleled correlation, breathing new life into the realms of electoral analysis and environmental impact.

### 2. Literature Review

As we embark on this scholarly exploration at the juncture of political proclivities and atmospheric circumstances, it is fitting to first delve into the existing body of work on the subject matter. Smith and Doe (2017) expound on the intricate relationship between air quality and political behavior, underscoring the need for comprehensive investigations into the potential influence of environmental factors on voter mindset. Jones and Brown (2014) similarly contribute to the discourse, shedding light on the environmental interconnectedness of variables and electoral patterns, paving the way for our current study's analysis of the connection between air quality in Iron Mountain, Michigan and libertarian votes for Senators in Michigan.

Turning to non-fiction sources, the seminal work of "Economics of Clean Air" by White (2019) provides valuable insights into the economic underpinnings of air quality regulations, offering a breath of fresh air in understanding the policy implications of our findings. Additionally, "Air Pollution and Political Processes" by Green and Grey (2015) serves as a beacon in elucidating the complex interplay between environmental factors and political dynamics, further fuelling our curiosity to decipher the enigmatic link between air quality and libertarian voting behaviors.

Shifting gears, we meander into the world of fiction, where books such as "The Airborne Senator" by Azure Skies (2008) and "Libertarian Skies: Cloudy with a Chance of Votes" by Gold Dust (2012) inject a breath of whimsy into our scholarly pursuits. While these literary works may not offer empirical evidence, they certainly tickle the imagination and evoke a sense of mirth in contemplating the intersection of air quality and political affiliations.

In addition to literature, cinematic pieces such as "Air Force One" and "The Candidate" present tangential echoes of political narratives, serving as a thoughtbackdrop provoking to our own investigation. While not directly related, these movies lend an air of intrigue and add a touch of theatrical flair to our scholarly foray into the correlation between Iron Mountain's air quality and Libertarian votes for Michigan senators.

### 3. Our approach & methods

Donning our metaphorical lab coats and armed with a formidable amalgamation of data from the Environmental Protection Agency, MIT Election Data and Science Lab, and Harvard Dataverse, our research team set out on an expedition to unravel the mystifying relationship between air quality in Iron Mountain, Michigan, and the votes cast for Libertarian Senators in the state of Michigan.

Firstly, the ambient air quality in Iron Mountain, Michigan was scrutinized with fervent enthusiasm. We collected voluminous data pertaining to particulate matter (PM2.5 and PM10), ozone (O3), carbon monoxide (CO), sulfur dioxide (SO2), and nitrogen dioxide (NO2) levels, forming an intricate mosaic of environmental variables that could potentially influence the political atmosphere - pun intended!

Simultaneously, the electoral landscape was scrutinized meticulously from 1985 to 2010, with a keen eye on Libertarian votes for Senators. We meticulously combed through troves of electoral data, gleefully sipping on our cups of statistical elixirs, to discern any signs of correlation that might emanate from this nonsensical yet intriguing ensemble of variables.

The painstaking process involved cleaning the data, massaging out any irregularities or incongruities that might have crept in, and ensuring that our statistical inferences were as pristine as the metaphorical Alpine air, despite dealing with the decidedly less poetic empirical evidence.

As if performing a high-stakes balancing act, we deftly executed a series of statistical analyses, including, but not limited to, correlation analyses, regression modeling, and time series assessments. to web disentangle the of associations between air quality and Libertarian votes, akin to untangling a Gordian knot of political and environmental intrigue.

Our rigorous methodology embodies the spirit of scientific inquiry, leavened with a pinch of jovial spirit and a dash of statistical whimsy, as we unveil the curious affinity between air quality and political choices in the Great Lakes State.

Our pioneering research has unveiled a striking correlation between ambient air guality in Iron Mountain, Michigan and the libertarian votes for Senators in Michigan. The correlation coefficient of 0.8384047 and an r-squared value of 0.7029225 attest to a statistically robust and significant relationship between these seemingly unrelated variables. This revelation has us all breathing a little easier, as we inhale the fresh perspective that air quality may not just be a matter of inhaling oxygen, but also a matter of influencing political choices.

Moreover, our findings, with a resounding pvalue of less than 0.05 from 1985 to 2010, have left us gasping for more research, blowing away preconceived notions, and pondering the unforeseen influence of air quality on electoral patterns. It seems that the atmospheric musings in Iron Mountain, Michigan carry weight not just in the physical realm, but also in the political arena.

The evidence of this connection is vividly depicted in Fig. 1, which presents a captivating scatterplot showcasing the strong correlation between air quality and libertarian votes. This visual representation leaves little room for doubt and invites a lungful of contemplation on the implications of our findings.



Figure 1. Scatterplot of the variables by year

#### 4. Results

In conclusion, our research unveils the thin air of mystery surrounding the political influence of air quality, leaving us thirsting for further investigation into the unforeseen connections that lurk within the realm of environmental and electoral dynamics. So take a deep breath, readers, as we venture forth into uncharted territory, where the air of discovery is as crisp as a newly published paper.

### 5. Discussion

Our findings have undoubtedly breathed new life into the discourse surrounding the interplay of air quality and political inclinations. The substantial correlation we uncovered between the ambient air quality in Iron Mountain, Michigan and the voting behavior of Michigan residents in senatorial elections has, quite literally, blown us away. It seems that the winds of change are indeed wafting through the air in Iron Mountain, and voters may be exhaling their political views right along with it.

The statistical connection we revealed is not just a fluke; it echoes the melodies of prior research. Smith and Doe's (2017) work, though initially met with skeptical air quotes, is now vindicated as we observe our findings align with their clarion call for comprehensive investigations into the influence of environmental factors on voter mindset. Jones and Brown (2014) may have shed a light-hearted perspective on the interconnectedness of environmental variables and electoral patterns, but our results suggest there's more than just hot air in their findings. Our research breathes life into these prior studies, providing empirical support for the whimsical musings of literary works such as "The Airborne Senator" and "Libertarian Skies: Cloudy with a Chance of Votes" that previously seemed more like fiction than fact.

The broad implications of our findings can't be sniffed at. The statistical significance of our results, coupled with the robust correlation coefficient and r-squared value, leave little room for skepticism. It seems that the air in Iron Mountain, Michigan may carry not just oxygen, but also political inclinations that reach far beyond mere atmospheric musings. Who would've thought that air quality could be as politically charged as a charged ion?

tantalizingly Our results raise more answers, questions than leaving us breathless with curiosity. What specific underpin mechanisms this curious correlation? Is it the fresh scent of pine mingling with political fervor, or the gusts of wind whispering political promises on the breeze? Perhaps it's time for political pundits to take a deep breath and consider the far-reaching implications of air guality on electoral outcomes.

As we fan the flames of curiosity and blow away preconceived notions, it's clear that our research is just the tip of the atmospheric iceberg. Our findings may just be the first gust of wind in an unforeseen storm of research, uncovering the hidden currents of influence that lurk within the realm of environmental and electoral dynamics. So. buckle up, fellow researchers, as we brace for the winds of change and venture further into this uncharted territory, where the air of discovery is as crisp as a newly published paper.

### 6. Conclusion

In the grand scheme of political analysis, the unexpected connection between air quality in Iron Mountain, Michigan, and the voting behavior of Michigan residents in senatorial elections has left us breathless with excitement. Our findings demonstrate a remarkably high correlation coefficient of 0.8384047, proving that there's more than just hot air in the world of statistics. The robust relationship uncovered between the clean, crisp air of Iron Mountain and libertarian votes for Senators defies conventional wisdom, prompting us to take a deep breath and reconsider the unseen influences that permeate the political landscape. After all, who knew that fresh air could also breathe new life into electoral dynamics?

As we exhale after this exhilarating journey through uncharted statistical territories, we are left with a deep sense of satisfaction, like taking a lungful of pure, unpolluted air. Our results, with a p-value of less than 0.05 from 1985 to 2010, beg the question - could the political winds of change be carried on the very breeze we breathe?

The scatterplot vividly depicting this unexpected correlation is a breath of fresh air in itself, inviting us to soar to new heights of contemplation and inspiration.

In this spirit, we assert that no further research is needed in this area. The findings of our study have blown away preconceived notions, and we have unequivocally proven the significant relationship between air quality and libertarian votes for Senators in Michigan.

Breathe easy, dear readers, for our research has not just left us gasping for more - it has also opened up a window into a world where the air we breathe may just hold the key to unlocking the enigmatic patterns of political choice and electoral behavior. With this, we bid adieu, in the hope that our findings will linger in the air like the faint whiff of a scientific breakthrough.