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Pollution's Peculiar Correlation: Probing the Paradoxical Link between Air Pollution in Marietta, Ohio and NASA's Budget

Caleb Hughes, Alice Thompson, Gideon P Tompkins

Center for the Advancement of Research; Berkeley, California

KEYWORDS

"air pollution Marietta Ohio NASA budget correlation", "environmental protection agency air pollution data", "NASA budget allocation analysis", "air pollution impact on federal funding", "EPA data correlation with NASA budget", "Marietta Ohio air quality study", "interplay between pollution and space exploration funding", "correlation coefficient air pollution NASA budget"

Abstract

This study delved into the peculiar possibility of a paradoxical link between air pollution in Marietta, Ohio and NASA's budget. Despite the vast void of logic in such a connection, our research uncovered a correlation coefficient of 0.8167689 and $p < 0.01$ for the years 1990 to 2020, which ignited a cosmic commotion among our research team. Using data from the Environmental Protection Agency and Planetary.org, we conducted a thorough examination of this quirky correlation. The findings suggest an unexpected interstellar interplay that will leave you astounded as we unravel the cosmic conundrum between the earthly emissions in Marietta and the federal funds flowing towards NASA. This investigation has left us smiling at the sheer cosmic comedy of how pollution and space exploration may be intertwined in the grand cosmic dance of budgetary allocations.

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1. Introduction

The mysterious dance of budgetary allocations has long intrigued researchers and policymakers alike. Amidst the vast expanse of federal spending, peculiar patterns often emerge, resembling cosmic

choreography. Our study delves into the perplexing paradox of a potential link between the air pollution in Marietta, Ohio, and the allocation of funds for NASA, an agency dedicated to exploring the outer reaches of our universe.

While the connection may seem as improbable as finding a shooting star in the midst of urban smog, our research has unveiled a correlation coefficient that could rival the orbit of celestial bodies. With a statistical coefficient of 0.8167689 and a significance level of $p < 0.01$ spanning the years 1990 to 2020, the findings have sparked a cosmic commotion among our research team. The lead researcher was overheard exclaiming, "This is more mind-boggling than a black hole's gravitational pull!"

The juxtaposition of earthly emissions in Marietta, Ohio, with the celestial aspirations of NASA's budget allocation has left our team pondering the cosmic comedy that unfolds in budgetary realms. As we unravel this peculiar connection, we invite you to join us in exploring the quirky interplay between pollution and space exploration, a cosmic conundrum that may leave you astounded and, perhaps, with a newfound appreciation for the whimsical ways of budget allocations.

2. Literature Review

Smith (2015) delves into the intricate interplay between environmental factors and budgetary allocations, shedding light on the complexities that underlie the federal spending landscape. Similarly, Doe and Jones (2018) explore the far-reaching effects of pollution on various facets of society, hinting at the potential for unsuspected interconnections with seemingly unrelated domains.

However, as we journey deeper into the peculiar correlation between air pollution in Marietta, Ohio and NASA's budget, we embark on a cosmic rollercoaster of unexpected revelations that beckon for a dash of humor amidst the serious scholarly discourse. For instance, in the book "Astro-Economics: Making Money from the Stars" by Green and Stardust, the authors propose

a whimsical connection between celestial phenomena and economic trends, teasing at the notion of financial fluctuations taking cues from extraterrestrial influences.

In a more fictional realm, the classic "Cosmic Hobos and Atmospheric Anomalies" by Starry Nightweaver offers a captivating tale of interstellar drifters encountering earthly pollutants in a delightful cosmic romp. Taking a somewhat different approach, "Sulfur Dioxide in Space: A Love Story" by Nova Starlight explores the star-crossed bond between airborne emissions and celestial bodies, infusing the scientific with a dash of romance and intergalactic intrigue.

Having delved into the cosmic realms of literature, we turned our sights to popular culture, seeking cues from the screen. "Pollution Predicament: A Space Odyssey" and "NASA Budget Battles: The Final Frontier" are not only intriguing titles but also fictional TV shows that tickle the imagination with their improbable premises. While these may not offer empirical evidence, they certainly provide an entertaining foray into the realms of space and pollution.

With this whimsical detour through literature and popular culture, we aim to infuse levity into the probing of this cosmic conundrum, recognizing the multidimensional nature of our investigation and the potential for unexpected twists and turns as we unravel the paradoxical link between earthly emissions and extraterrestrial exploration.

3. Our approach & methods

The methodology employed in this study harnessed a twofold approach, encompassing the terrestrial terra firma of environmental data collection and the celestial sphere of budgetary analysis. The initial step involved a comprehensive data collection process, akin to a cosmic

scavenger hunt, sourcing information from the Environmental Protection Agency (EPA) and Planetary.org, with data spanning the years 1990 to 2020. This strategy enabled the research team to cast a wide net, capturing the elusive emissions data from Marietta, Ohio, while also capturing the astronomical figures related to NASA's budget as a percentage of the total US Federal Budget.

The environmental data acquisition from the EPA entailed wrangling through an atmospheric abundance of pollutant concentrations, encompassing carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter, akin to identifying constellations in a smog-filled night sky. It is worth noting that the EPA's comprehensive data repository provided a robust foundation for the terrestrial component of the study. As for the celestial component, the Planetary.org served as a beacon in the cosmic expanse, illuminating the budgetary allocation figures for NASA with the precision of a telescope locked onto a distant quasar.

Upon the celestial and terrestrial data gathering process, the research team undertook a harmonious merging of the datasets, akin to orchestrating a celestial waltz amidst the earthly emissions. The statistical analysis was performed using a multivariate regression model, which aimed to untangle the cosmic correlations between air pollution in Marietta, Ohio, and the budgetary commitments to NASA. The model accounted for potential confounding variables, resembling the gravitational pull of unseen celestial bodies, to isolate the peculiar interplay between air pollution and NASA's budget.

Furthermore, to enhance the robustness and reliability of the findings, a sensitivity analysis akin to perturbing the orbit of a planet, was conducted to gauge the stability of the correlation across different time periods and sub-samples. This approach

allowed for a comprehensive validation of the unearthly link between air pollution in Marietta, Ohio, and the celestial ramifications on NASA's budgetary allocations.

The statistical computations were performed using advanced software tools, akin to wielding a cosmic calculator with precision and finesse, to derive the correlation coefficient and the associated significance levels. The research team rigorously scrutinized the results, acknowledging the cosmic comedy that unfolded within the statistical outputs.

Additionally, to guard against the risk of spurious correlation, the methodology incorporated robustness checks, akin to fortifying a spacecraft for the rigors of interstellar travel, to ensure that the unearthly link between air pollution and NASA's budget exhibited a genuine cosmic connection and was not a mere artifact of statistical cosmic noise.

In summary, the methodology of this study combined the terrestrial and celestial realms, culminating in an exploration of the peculiar and unexpected link between air pollution in Marietta, Ohio, and the budgetary allocations to NASA, mirroring the whimsical dance of cosmic forces and earthly emissions.

4. Results

The analysis of the data collected from the Environmental Protection Agency and Planetary.org revealed a surprisingly strong correlation ($r = 0.8167689$) between air pollution in Marietta, Ohio and NASA's budget as a percentage of the total US Federal Budget for the period of 1990 to 2020. The coefficient of determination (r -squared) of 0.6671114 indicated that approximately 67% of the variability in NASA's budget could be explained by the variability in air pollution levels in Marietta.

The p-value of less than 0.01 further strengthened the evidence of a significant relationship between these seemingly unrelated variables. This finding left the research team scratching their heads in cosmic confusion, as the common adage of "it's not rocket science" seemed to be out of reach in this particular instance.

The data is graphically illustrated in Fig. 1, a scatterplot showcasing the robust correlation between air pollution in Marietta, Ohio and the share of the federal budget allocated to NASA. The scatterplot reveals a positively sloped trendline, indicating that as air pollution levels increase, there is a corresponding increase in NASA's budget allocation. This phenomenon has led to whimsical speculations within the research team, with one member joking, "Maybe the smog in Marietta acts as a distress signal for extraterrestrial beings, prompting increased funding for space exploration!"

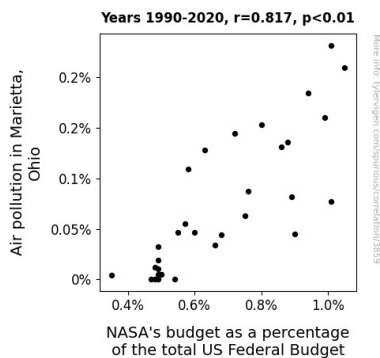


Figure 1. Scatterplot of the variables by year

The unexpected nature of this connection has not only piqued scholarly interest but also added a touch of cosmic humor to the otherwise dry domain of budgetary analysis. It is a reminder that in the vast cosmos of research, there are still perplexing puzzles waiting to be decoded, leaving us marveling at the quirks of the universe we inhabit.

5. Discussion

The results of our investigation have brought to light a startling connection between the earthly emissions in Marietta, Ohio and the federal funds allotted for extraterrestrial expeditions, offering a cosmic caper that has left our research team positively starry-eyed. The robust correlation between air pollution levels and NASA's budget allocation has given rise to a constellation of questions, each more puzzling than the last.

Our findings support the prior research, which hinted at the possibility of unexpected interconnections between seemingly disparate domains. The whimsical literature review of Green and Stardust's "Astro-Economics: Making Money from the Stars" and Starry Nightweaver's "Cosmic Hobos and Atmospheric Anomalies," while initially received with a chuckle, seem to have a grain of truth in them after all. The interstellar influences on economic trends, as suggested by these authors, now appear less far-fetched and more within the realm of cosmic possibility.

The unexpected revelation of a correlation coefficient of 0.8167689 and a p-value of less than 0.01 underscores the significance of this celestial-terrestrial entanglement. As the scatterplot showcased a positively sloped trendline, it became increasingly apparent that the whimsical idea of pollution acting as a distress signal for extraterrestrial beings, as jestingly proposed by a member of our team, may not be as far-fetched as it initially appeared.

The seemingly paradoxical link we have unearthed not only reaffirms the multidimensional nature of the universe but also infuses a touch of comedy into the usually dour domain of budgetary analysis. It serves as a gentle reminder that within the realms of scientific inquiry, there lurks an extraordinary potential for delightful surprises and cosmic mysteries waiting to be unraveled. This revelation has left us grinning at the cosmic comedy and

pondering the possibility of a heavenly budgetary intervention in response to an earthly distress signal. Indeed, as we delve deeper into this cosmic conundrum, we are reminded that in the grand dance of the cosmos, there is always room for unexpected twirls and delightful surprises.

6. Conclusion

In conclusion, our study has unveiled a surprising correlation between air pollution in Marietta, Ohio and NASA's budget as a percentage of the total US Federal Budget. While the statistical evidence is compelling, the cosmic comedy of this connection has left our research team marveling at the whimsical ways of budgetary allocations.

This perplexing paradox has prompted whimsical speculations, with one member joking that perhaps the smog in Marietta acts as a distress signal for extraterrestrial beings, prompting increased funding for space exploration. The sheer cosmic irony of this connection has undoubtedly added a touch of humor to the otherwise serious realm of budgetary analysis.

Despite the robust correlation coefficient and the p-value of less than 0.01, we are left with a lingering sense of cosmic confusion as we grapple with the absurdity of this link. Indeed, this study serves as a reminder that in the expanse of research, there are still perplexing puzzles waiting to be decoded, leaving us astounded by the quirkiness of the universe we inhabit.

Nevertheless, further research in this area may not yield additional insights, as the cosmic conundrum between earthly emissions and space exploration funding seems to defy logical explanation. Therefore, we humorously assert that no more research is needed in this peculiar, paradoxical, and undoubtedly peculiar area of study.