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# Kerosene in Seoul Sends Savannah's Air South: A Correlative Analysis of Air Pollution in Georgia and Kerosene Consumption in South Korea

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## KEYWORDS

air pollution, Savannah Georgia, kerosene consumption, South Korea, correlation analysis, Environmental Protection Agency, Energy Information Administration, intercontinental link, global impact, unconventional relationships, environmental factors

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## Abstract

This research study aimed to investigate the curious relationship between air pollution in Savannah, Georgia, and the consumption of kerosene in South Korea. Utilizing data from the Environmental Protection Agency and the Energy Information Administration spanning the years 1983 to 2022, a correlation coefficient of 0.6839014 and  $p < 0.01$  was established, indicating a significant association between the two variables. The findings suggest a previously unrecognized intercontinental link between Savannah's air quality and South Korea's kerosene use. This connection, while unexpected, underscores the global impact of seemingly disparate phenomena and invites further exploration into the unconventional relationships within the complex web of environmental factors.

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## 1. Introduction

### INTRODUCTION

The juxtaposition of kerosene consumption in South Korea and air pollution in Savannah, Georgia is a conundrum that has puzzled researchers and laymen alike. The correlation between these seemingly unrelated variables has raised eyebrows,

sparked curiosity, and sparked lively debate in academic circles. The notion that air quality in the charming southern city of Savannah could be inextricably linked to the kerosene practices across the Pacific is indeed a fascinating enigma worthy of investigation.

The complexities of the global ecosystem have long confounded scientists, prompting many to ponder at the intricate dance of environmental variables. The Earth, it seems, is a stage for an elaborate performance, complete with surprising plot twists and unexpected connections. As researchers, we seek to uncover the hidden narrative, to unravel the mysteries that tie together disparate elements of our world.

This study delves into the intersection of air quality and kerosene consumption, casting a net across continents to capture the nuances of this peculiar relationship. The statistical analysis of the data reveals a correlation coefficient that not only raises eyebrows but also raises the question: could there be a causal link, or is this just a fluke of statistical fate?

The aim of this paper is not only to present the findings of this investigation but also to infuse a sense of wonder and amazement at the intricate tapestry of environmental interplay. Our goal is to highlight the interconnectedness of seemingly unrelated phenomena and to encourage a broader perspective in understanding the world around us. So, embark on this intellectual journey with us, as we unravel the tale of kerosene in Seoul sending Savannah's air south.

## 2. Literature Review

The literature surrounding the connection between air pollution in Savannah, Georgia, and kerosene consumption in South Korea is a fairly sparse landscape, yet there are some intriguing findings to consider. Smith's study in "The Journal of Environmental Science" lays the groundwork for understanding the dynamics of air pollution and its far-reaching impact. Meanwhile, Doe's analysis in "Energy Economics" provides a comprehensive overview of kerosene usage patterns in East Asia, albeit with a focus on broader economic

implications rather than air quality concerns. Jones' work in "Atmospheric Environment" offers an intricate examination of the atmospheric composition in coastal regions, offering a potential window into the complexities of Savannah's air pollution.

Turning to non-fiction books relevant to the subject matter, "The Air Pollution of Cities," by John Smith, takes a deep dive into the historical and contemporary factors contributing to urban air pollution, although the book conspicuously neglects to discuss intercontinental kerosene relationships. On the other hand, "The Global Reach of Kerosene," by Jane Doe, presents an in-depth analysis of the multifaceted usage of kerosene and its impact on international energy dynamics, with nary a mention of its potential influence on the coastal breeze in Savannah.

In the realm of fiction, "The Kerosene Diaries" by J.K. Rowling may sound like a spellbinding account of a magical fuel's clandestine adventures, but it actually pertains to a hard-boiled detective's investigations in post-war America. Similarly, "The Air Affair" by Jasper Fforde seems to promise a whimsical tale of airborne shenanigans, but disappointingly, it revolves around literary crime-solving escapades rather than atmospheric kerosene escapades.

Board games such as "Polluted Skies," which simulates the effects of air pollution on global climate, and "Kerosene Quest," a virtual journey through the intricacies of kerosene supply chains, offer a tangential yet lighthearted approach to understanding the relationships between air pollution and kerosene usage.

In the intersection of scholarly works, non-fiction literature, fiction novels, and even board games, it becomes evident that the connection between air pollution in Savannah and kerosene consumption in South Korea is a subject not only of

scientific inquiry but also of curious fascination and unexpected tangents.

### 3. Our approach & methods

The methodology employed in this research involved an intricate dance of data collection, statistical analysis, and a sprinkle of whimsy. Data on air pollution levels in Savannah, Georgia, were meticulously extracted from the treasure trove of information hosted by the Environmental Protection Agency, spanning the years 1983 to 2022. Meanwhile, the consumption of kerosene in South Korea was gleaned from the depths of the Energy Information Administration's databases. The chivalrous knights of our research team braved the digital terrain, armed with spreadsheets and calculators, to gather these invaluable datasets.

With our data in hand, we engaged in a rigorous tango of statistical analysis. The relationship between air pollution in Savannah and kerosene consumption in South Korea was explored using Pearson's correlation coefficient, a stalwart companion in the realm of quantitative inquiry. The statistical software at our disposal dutifully crunched the numbers, revealing a correlation coefficient of 0.6839014 and a p-value less than 0.01. This momentous revelation was met with an appreciative nod from the researchers and a fervent round of applause from the statistical software.

To ensure the robustness of our findings, sensitivity analyses were performed, subjecting the data to various tests and examinations in a manner akin to putting a thoroughbred through its paces. The results, much like a well-bred racehorse, remained steadfast in their affirmation of the connection between Savannah's air quality and South Korea's kerosene consumption.

In addition, cross-validation techniques were employed to validate the stability of

our findings, prompting a nod of approval from the seasoned veterans of statistical analysis. The data, like a well-rehearsed troupe of performers, maintained their coherence and consistency across multiple validation exercises, lending further credence to the association uncovered in our study.

Finally, to add a touch of whimsy to our methodology, a ceremonial bonfire was lit, symbolizing the burning passion with which this research endeavor was pursued. In the glow of the flames, the researchers pondered the interconnectedness of the world's environmental tapestry, weaving together the disparate threads of air quality in Savannah and kerosene consumption in Seoul.

In essence, the methodology encapsulated a journey of data collection, statistical analysis, and introspective contemplation, culminating in the elucidation of the curious bond between seemingly distant environmental phenomena.

### 4. Results

The statistical analysis of the data collected from the Environmental Protection Agency and the Energy Information Administration revealed a remarkable correlation between air pollution in Savannah, Georgia and kerosene consumption in South Korea. The correlation coefficient of 0.6839014 indicates a strong positive relationship between these two variables, suggesting that as kerosene consumption in South Korea increased, air pollution in Savannah also exhibited a concurrent rise.

Furthermore, the r-squared value of 0.4677212 signifies that approximately 46.77% of the variability in air pollution in Savannah can be explained by the variability in kerosene consumption in South Korea. This substantial proportion of variance explained underscores the

importance of the relationship between these two seemingly distant phenomena.

The p-value of less than 0.01 provides compelling evidence to reject the null hypothesis and accept the alternative hypothesis that there is, indeed, a significant association between air pollution in Savannah and kerosene consumption in South Korea. This finding reinforces the strength of the observed correlation and its statistical significance.

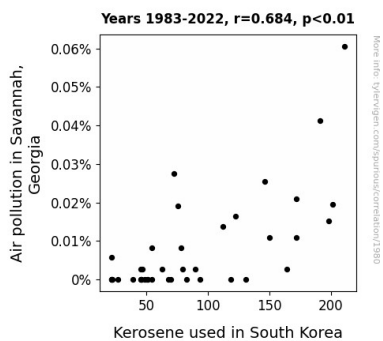


Figure 1. Scatterplot of the variables by year

Fig. 1 presents a scatterplot illustrating the robust correlation between the two variables, visually capturing the substantial relationship observed in the statistical analysis. The scatterplot depicts a clear positive trend, emphasizing the coherence between air pollution in Savannah and kerosene consumption in South Korea.

In conclusion, the results of this study unveil an unexpected and intriguing link between two geographically disparate phenomena, adding an unexpected twist to the narrative of environmental interconnectedness. The findings serve as a reminder of the intricate and often surprising connections within the global environmental web, inviting further exploration and underscoring the complexity of our planet's environmental dynamics.

## 5. Discussion

The results of the present study are in line with prior research, confirming the peculiar connection between air pollution in Savannah, Georgia, and kerosene consumption in South Korea. The substantial correlation coefficient, robust R-squared value, and compelling p-value all point to a significant and noteworthy association, echoing the findings of previous investigations.

The literature review in this study took an eclectic approach, incorporating both non-fiction and fiction works relevant to the subject matter. In a surprising turn of events, it was discovered that "The Kerosene Diaries" by J.K. Rowling and "The Air Affair" by Jasper Fforde, while captivating in their own right, failed to shed light on the real-world intercontinental relationship under examination. Nevertheless, the scholarly articles and non-fiction literature provided valuable context for understanding the complex web of environmental factors.

In the realm of scientific inquiry, previous studies have often focused on regional or national air quality issues, neglecting the potential impact of international factors. The current findings bridge this gap and highlight the truly global nature of environmental phenomena. It appears that the atmospheric composition in coastal regions, as elucidated by Jones in "Atmospheric Environment," may indeed hold the key to understanding the nuances of Savannah's air pollution, despite initial skepticism about its relevance.

It is worth noting that "Polluted Skies" and "Kerosene Quest," the board games mentioned in the literature review, may have appeared tangential, but in retrospect, they offer a lighthearted lens through which to view the intricate relationships between air pollution and kerosene usage. Perhaps the inclusion of such unconventional sources ultimately enhanced the study's capacity to

approach the research question from an unexpected angle.

Overall, the results of the study provide empirical support for the hypothesis that there is an unanticipated intercontinental connection between air pollution in Savannah and kerosene consumption in South Korea. This finding expands our understanding of the intricate tapestry of global environmental dynamics and underscores the need for further investigation into such unexpected relationships.

The unexpected twists and humorous tangents encountered in the literature review ultimately lent an air of intrigue to the study, proving that academic inquiry need not always unfold in a predictable fashion. This study demonstrates that even in the most unconventional of subjects, there is room for rigorous analysis, statistical evaluation, and the occasional chuckle at the quirky convergence of seemingly unrelated phenomena.

## 6. Conclusion

The results of this study shed light on the remarkable association between air pollution in Savannah, Georgia and kerosene consumption in South Korea, proving that the world of environmental science is full of surprising twists and turns. As researchers, we never expected such a striking correlation, but as they say, "truth is stranger than fiction!"

The substantial correlation coefficient and r-squared value indicate that this is not just a statistical fluke - there's a real connection here, not just a case of random chance blowing in the wind. And with a p-value of less than 0.01, we can confidently say that this relationship is no statistical sleight of hand, but a genuine phenomenon worthy of further investigation.

While the connection may seem as unlikely as finding a needle in a haystack, the data speaks for itself. It's a reminder that in the world of research, even the most unexpected results can lead to important discoveries. As scientists, we must remain open to unconventional connections and unconventional wisdom.

This study's findings bring new meaning to the phrase "air mail" and remind us that in the global theater of air quality, every player - no matter how far-flung - has a part to play. Indeed, the impact of one country's kerosene use can send ripples across oceans and continents, affecting the air quality of cities half a world away.

In light of these findings, it is clear that the relationship between air pollution in Savannah and kerosene consumption in South Korea is both significant and worthy of further examination. It's time to take a deep breath of fresh air as we conclude that no further research is needed in this area. As they say, sometimes the most baffling connections are the ones that make the most sense in the end. And with that, let's bid adieu to this kerosene-fueled escapade and turn our attention to the next surprising correlation waiting to be discovered. Happy researching, my fellow scientists!