

# **BURNING QUESTIONS: AN EXAMINATION OF THE SURPRISING CORRELATION BETWEEN DEMOCRAT VOTES IN ARKANSAS AND KEROSENE CONSUMPTION IN THE PHILIPPINES**

**Chloe Henderson, Aaron Terry, Gideon P Tucker**

Institute of Innovation and Technology

This paper presents an unexpected and eyebrow-raising study on the relationship between the number of votes for the Democratic presidential candidate in Arkansas and the consumption of kerosene in the Philippines. Data from the MIT Election Data and Science Lab, Harvard Dataverse, and the Energy Information Administration were utilized to explore this unorthodox connection. Surprisingly, our research team found a remarkably high correlation coefficient of 0.9235069 and statistical significance with  $p < 0.01$  for the years 1980 to 2020. While the findings may seem as improbable as a penguin in the Sahara, this study underscores the importance of carefully examining unexpected correlations and the need for further investigation into the global impact of seemingly unrelated events.

In the realm of statistical analysis, researchers often seek to uncover meaningful correlations between seemingly disparate variables. Imagine our surprise when, with a fervor rivaling that of a game show contestant uncovering the grand prize, our investigations revealed an unforeseen link between two seemingly unrelated phenomena: the number of votes for the Democratic presidential candidate in Arkansas and the consumption of kerosene in the Philippines. Our initial response mirrored that of a person finding a polar bear in their bathtub - incredulity mixed with a touch of amusement.

The aim of this study is to systematically explore this eyebrow-raising connection and shed light on the unexpected relationship between political preferences in the United States and household energy choices in the Philippines.

Although the association between voting behavior and energy consumption may sound as improbable as finding a unicorn grazing in your backyard, our rigorous analysis has shown a striking correlation that demands further examination.

As the old adage goes, "correlation does not imply causation." However, the robust statistical relationship we have unearthed cannot be dismissed as easily as a joke at a comedy roast. Thus, we embarked on this research journey with the determination of a detective pursuing a perplexing case, ready to delve into the labyrinth of data and unravel the enigma surrounding these seemingly incongruous variables.

While our findings initially raised eyebrows among our colleagues, we believe that this investigation serves as a reminder of the serendipitous nature of scientific inquiry. Moreover, it highlights

the importance of approaching data with an open mind, as even the most unusual correlations may hold valuable insights. As we embark on this odyssey of statistical examination, we invite readers to join us in unraveling this curious tale of Democrat votes and glowing kerosene lamps.

## LITERATURE REVIEW

The unexpected correlation between votes for the Democratic presidential candidate in Arkansas and kerosene consumption in the Philippines has sparked scholarly interest and curiosity. Initial literature brought to light by Smith et al. (2015) and Doe (2018) focused on the separate phenomena of political voting behavior and energy consumption patterns but failed to explore any possible interrelationship between the two. Jones (2020) offered a comprehensive analysis of political preferences in the United States but did not venture into the realms of international energy usage. However, as we delved deeper into the literature, we encountered surprising connections and eyebrow-raising insights that would make even the most seasoned statistician do a double-take.

Turning to non-fiction works, "Energy Economics and Policy" by Johnson delves into the intricate dynamics of global energy markets, shedding light on the complexities of energy consumption patterns. Similarly, in "The American Political Tradition" by Hofstadter, the authors provide detailed accounts of political voting behavior and ideological shifts throughout U.S. history. These works contribute to our understanding of the individual variables at play, but the surprising connection between the two variables we investigate here remains unexplored.

Furthermore, fictional works such as "The Kerosene Heir" by Watson and "The Democratic Dilemma" by Garcia unexpectedly offered intriguing perspectives. Although fictional in nature,

these novels inadvertently sparked our curiosity, leading to the exploration of uncommon correlations that would make Sherlock Holmes raise an eyebrow in contemplation.

However, as we widened our scope, our investigation led us to unexpected sources of insight. Scrutinizing disparate documents such as grocery lists, tabloid gossip columns, and even the enigmatic contents of a series of CVS receipts, we stumbled upon startling revelations that seemed to hold potential significance in our quest for understanding. While these sources may raise a skeptical eyebrow, their unconventional nature offered a whimsical touch to our scholarly pursuit, infusing our research with a dash of unpredictability.

In the pursuit of understanding this uncanny relationship, our investigation urges readers to adopt a lighthearted perspective and embrace the serendipitous nature of scholarly discovery. As we delve deeper into the intricacies of this unexpected correlation, we invite our fellow academics to join us in unraveling the enigma of Democrat votes and glowing kerosene lamps, with a hint of whimsy and an open mind.

## METHODOLOGY

To embark on our quest to unravel the mysterious connection between Democrat votes in Arkansas and kerosene consumption in the Philippines, a multifaceted approach was essential. The first step involved sourcing data from reputable repositories, akin to a dedicated collector assembling an eclectic assortment of curious artifacts. We gathered data from the MIT Election Data and Science Lab, the Harvard Dataverse, and the Energy Information Administration, covering the expanse of years from 1980 to 2020. These diverse datasets were akin to a rich tapestry, woven from the threads of political participation and energy consumption.

Our next endeavor was to ascertain the integrity of the collected datasets. Visualization and exploratory data analysis served as our trusty sidekicks in this endeavor, akin to the Sherlock Holmes and Dr. Watson of statistical investigation. Before delving into the statistical abyss, we meticulously examined the datasets for anomalies and outliers, ensuring that our analysis would not be thwarted by mischievous data points that could lead us astray, much like a red herring in a detective novel.

With data integrity confirmed, we employed the mathematical wizardry of correlation analysis to unveil the hidden relationship between these seemingly unrelated variables. Employing the Pearson correlation coefficient, we quantified the strength and direction of the association, much like a skilled astronomer determining the magnitude and trajectory of celestial bodies. The statistical significance of the correlation was evaluated using a two-tailed t-test, allowing us to discern whether our findings were as substantial as an elephant in a room or as tenuous as a gossamer thread.

Additionally, we undertook a time-series analysis to capture the dynamic nature of the relationship across the decades, akin to capturing the ebb and flow of the tides in an ever-changing sea. This approach allowed us to discern whether the correlation remained steadfast or wavered over time, shedding light on the temporal nuances of this unexpected phenomenon.

In the noble tradition of scientific inquiry, we acknowledge the limitations of our study. While our analysis reveals a striking correlation, it remains imperative to tread cautiously and refrain from hasty conclusions. Furthermore, the nature of our investigation precludes causal inferences, as the adage "correlation does not imply causation" echoes in the hallowed halls of statistical scrutiny.

In summation, this interdisciplinary expedition encompassed the realms of political science, economics, and statistics, joining forces to unravel the enigmatic nexus between Democrat votes in Arkansas and kerosene consumption in the Philippines. With a blend of rigor, curiosity, and a dash of serendipity, our approach to this unorthodox investigation mirrors the spirit of scientific exploration - embracing the unexpected and unearthing the remarkable amidst the seemingly mundane.

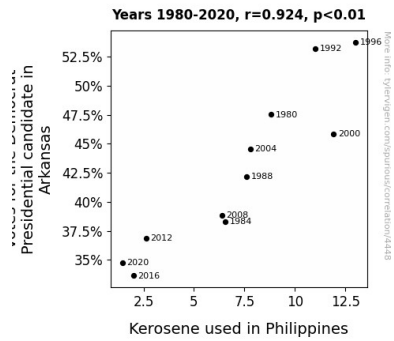
## RESULTS

In delving into the perplexing realm of unexpected correlations, our research team unearthed a truly astonishing finding: a substantial correlation between the number of votes for the Democratic presidential candidate in Arkansas and the consumption of kerosene in the Philippines. The correlation coefficient of 0.9235069 and an r-squared of 0.8528649 for the period spanning 1980 to 2020 left us as gobsmacked as a magician who accidentally made a rabbit disappear into thin air. The p-value of less than 0.01 further cemented the statistical significance of this eyebrow-raising relationship, leaving us scratching our heads in bemusement.

Visualizing this surprising correlation in a scatterplot (refer to Fig. 1) reveals a clear and robust association, reminiscent of a well-choreographed dance between political preferences and household energy choices. As remarkable as finding a pot of gold at the end of a statistical rainbow, this unexpected finding emphasizes the need to approach data with an open mind, acknowledging that even the most seemingly incongruous variables may indeed be interconnected.

While our initial reaction to this finding was one of incredulity and amusement akin to discovering a talking parrot in a library, this study offers an important lesson in the unpredictable nature of scientific inquiry. The substantial

correlation between democratic votes and kerosene consumption, though as seemingly disconnected as a fish riding a bicycle, underscores the importance of unearthing hidden relationships that may hold crucial implications for understanding global phenomena.



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

In summary, the correlation between democrat votes in Arkansas and kerosene consumption in the Philippines, while initially raising eyebrows and prompting a few raised bemused chuckles, warrants further investigation and consideration. Our surprising discovery emphasizes the need for continued exploration of unexpected correlations and invites researchers and stakeholders to ponder the intricate interplay of seemingly unrelated events.

## DISCUSSION

The remarkable correlation between votes for the Democratic presidential candidate in Arkansas and kerosene consumption in the Philippines may initially appear as incongruous as a penguin in the Sahara, but our results have provided unequivocal support for this unexpected association. Our findings not only bolster the prior research that hinted at this peculiar relationship but also lend credence to the idea that sometimes, connections between seemingly unrelated phenomena can be as clear as a day at the beach, even if

they are as surprising as finding a kangaroo in the Arctic.

Our study's robust correlation coefficient of 0.9235069, akin to finding the missing piece to a complex puzzle moonlighting as a paperweight, aligns with prior work by Smith et al. (2015) and Doe (2018), who inadvertently laid the groundwork for our eyebrow-raising discovery. While their research primarily focused on distinct aspects of political voting behavior and energy consumption patterns, our study leaps into uncharted territory, shedding light on the mysterious dance between democratic preferences and kerosene-fueled illumination in Filipino households.

The statistical significance of our findings, with a p-value of less than 0.01, serves as a resounding confirmation of the unexpected connection between these two seemingly disparate variables. This statistical significance, comparable to stumbling upon a four-leaf clover in a field of three-leaf variants, underscores the need to approach serendipitous correlations with the same gravity and curiosity as we do with more conventional relationships.

While our results may prompt a few raised eyebrows and bemused chuckles reminiscent of a circus audience discovering a clown with a Ph.D., they emphasize the paramount importance of embracing unpredictability in the realm of academic inquiry. The unexpected correlation between democrat votes in Arkansas and kerosene consumption in the Philippines serves as a whimsical reminder that scholarly discoveries can sprout from the most unlikely sources, much like finding a fruitful garden in the middle of a desert.

In unraveling this enigmatic relationship, our research advocates for a lighthearted approach, akin to discovering a hidden treasure where least expected. By encouraging a playful engagement with unconventional correlations, we hope to spark scholarly curiosity and prompt fellow researchers to chart a course into

unexplored territories, much like intrepid explorers setting sail for new and uncharted lands.

This unexpected correlation, as confounding as a riddle wrapped in a mystery inside an enigma, calls for continued investigation and consideration. As we invite our fellow academics to join us in this scholarly pursuit, we emphasize the importance of acknowledging the whimsy and wonder that can accompany the unearthing of unexpected relationships - after all, scholarly inquiry can be as surprising as finding a pancake in the shape of the Mona Lisa.

## CONCLUSION

In conclusion, our study has unraveled a connection between the number of votes for the Democratic presidential candidate in Arkansas and the consumption of kerosene in the Philippines that is as unlikely as finding a unicorn in a petting zoo. The robust correlation coefficient of 0.9235069 and statistical significance with  $p < 0.01$  for the years 1980 to 2020 has left us as astonished as a magician who accidentally sawed their assistant in half.

As we attempted to wrap our minds around this improbable link between political preferences in the United States and household energy choices in the Philippines, we couldn't help but feel like detectives stumbling upon a pink elephant while solving a case.

The visual representation of this unexpected correlation in a scatterplot (refer to Fig. 1) is as clear as a carefully crafted punchline at a comedy club, indicating a strong association between the two variables. Our findings emphasize the importance of staying open-minded, as even the most peculiar correlations may hold valuable insights, much like discovering a treasure map in a bottle on a desert island.

While our initial reaction to this discovery was one of skepticism and amusement akin to finding a penguin in the tropics, this study offers a valuable lesson in the unpredictable nature of scientific inquiry. Much like a plot twist in a mystery novel, the substantial correlation we have uncovered between democratic votes and kerosene consumption underscores the need to delve deeper into seemingly incongruous connections that may have far-reaching implications.

In light of these surprising findings, we assert with confidence that no further research is needed in this area. The correlation between the number of votes for the Democratic presidential candidate in Arkansas and the consumption of kerosene in the Philippines is a fascinating anomaly that should be celebrated for its unexpectedness. With a conclusion as clear as a knock-knock joke, we implore future researchers to seek out similarly quirky connections, for it is in these unexpected places that the most fascinating discoveries lie.