



ELSEVIER



Burning Up the Ballot Box: The Flammable Relationship Between Democratic Votes in Ohio and Kerosene Consumption in Ethiopia

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Abstract

In this study, we investigate the unlikely relationship between the number of votes for the Democratic presidential candidate in the swing state of Ohio and the consumption of kerosene in the distant land of Ethiopia. Using data from the MIT Election Data and Science Lab, Harvard Dataverse, and the Energy Information Administration, we employ rigorous statistical analysis to explore this enigmatic association. Our findings reveal a striking correlation coefficient of 0.9498578 and a p-value less than 0.01, spanning the years from 1980 to 2020. While the connection may seem as perplexing as a riddle wrapped in a mystery inside an enigma, our investigation leaves us pondering whether this phenomenon is merely a statistical anomaly or if there might be a spark of truth to this seemingly improbable link. We welcome readers to join us on this unexpectedly illuminating journey as we shed light on the potential implications and noteworthy implications of this curious correlation.

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1. Introduction

The realm of statistical analysis often leads researchers down unexpected paths, uncovering peculiar associations that challenge conventional wisdom and defy logical explanation. In this vein, our study delves into the curious correlation between the number of votes cast for the Democratic presidential candidate in Ohio, a critical battleground state in American politics, and the consumption of kerosene in Ethiopia, a

distant and seemingly unrelated domain. At first glance, one might be inclined to dismiss this connection as nothing more than statistical noise, or perhaps even a mere fluke of data. However, our investigation strives to disentangle this enigmatic relationship, aiming to discern whether there is substance behind the statistical smoke, or if we are merely chasing shadows in the data.

The conundrum of our study lies in the juxtaposition of two seemingly disparate variables: political preferences in the heart of the United States and household energy consumption in a distant African nation. Yet, as Socrates famously asserted, "Wisdom begins in wonder" (Plato, *Theaetetus*, 155d). Therefore, armed with this philosophical mandate, we embark on a methodical inquiry into this statistically bewitching phenomenon, aiming to discern whether there is an ethereal connection between the choices made at the ballot box in Ohio and the use of kerosene lamps in the Ethiopian countryside.

It is worth noting that, while statistical analysis can often unravel meaningful relationships, it is equally capable of generating spurious and nonsensical associations if one were to cast the net too wide. Therefore, it is imperative to approach our findings with a healthy dose of skepticism, much like a diligent fisherman inspecting the day's catch for unwelcome red herrings. Nonetheless, our preliminary findings, as detailed in the abstract, have piqued our interest and encouraged us to probe deeper into this statistically tantalizing conundrum.

As we journey into the heart of this peculiar statistical puzzle, we invite our readers to suspend disbelief and join us on a peculiar voyage, where the unexpected correlation between political voting patterns and kerosene consumption unfolds before our discerning eyes. Embracing the spirit of inquiry and the penchant for statistical rigor, we endeavor to shed light on this unexpected association and unveil the potential implications that might lie beneath the surface of this statistically significant relationship.

2. Literature Review

The investigation of unexpected correlations between seemingly unrelated phenomena is

not an uncommon undertaking in the realm of empirical inquiry. At the intersection of electoral behaviors in the United States and energy consumption patterns in Ethiopia lies a conundrum that has prompted scholarly contemplation and conjecture. In the pursuit of understanding the enigmatic relationship between Democratic votes in Ohio and kerosene usage in Ethiopia, the literature presents a diverse array of perspectives, ranging from the rigorously empirical to the delightfully speculative.

Smith et al. (2015) elaborate on the intricate interplay of sociopolitical factors and resource utilization, shedding light on surprising patterns that emerge from the juxtaposition of domestic political dynamics and international energy usage. While the connection between electoral outcomes and household energy choices may appear as unlikely as a camel navigating through the eye of a needle, the authors expound upon the potential implications of such unexpected correlations. Their work serves as a foundation for the exploration of seemingly incongruous relationships, beckoning researchers to contemplate the multifaceted nature of statistical associations in the global landscape.

In "Inequalities in Global Energy Consumption: A Comparative Analysis" by Doe (2018), the author embarks on a scholarly odyssey across continents and political terrains, unearthing disparities in energy consumption that transcend geographical boundaries. The intricacies of kerosene usage in Ethiopia are juxtaposed with the ebb and flow of electoral preferences in the heart of the United States, prompting readers to ponder the complexities of global interconnectedness. As Doe navigates the labyrinthine pathways of energy access and political dynamics, the reader is compelled to consider the far-reaching tentacles of statistical correlations that interlace seemingly disparate domains.

Jones (2020) exposes readers to a fresh perspective in "Kerosene Chronicles: An Exploration of Illumination and Influence." While not explicitly focused on electoral phenomena, Jones' exploration of kerosene's role in domestic settings serves as a compelling backdrop for contemplating the intricate web of factors that shape household energy choices. The nuanced portrayal of kerosene's multifaceted significance within the Ethiopian context invites readers to contemplate the interplay of social, economic, and cultural dynamics, echoing the complexity inherent in deciphering statistical associations of unforeseen magnitude.

Beyond the realm of scholarly discourse, non-fiction works such as "Energy Politics: A Global Perspective" by Renner (2019) and "Electoral Dynamics in the Heartland" by Chavez (2016) provide complementary perspectives that contribute to the multifaceted tapestry of understanding electoral behaviors and energy utilization on a global scale. The interplay of socioeconomic forces, policy decisions, and individual agency intertwines in an intricate dance, prompting readers to contemplate the far-reaching ramifications of statistical relationships that transcend conventional boundaries.

In the literary realm, fiction offers a whimsical lens through which to contemplate the unexpected nexus of political and energy dynamics. Jules Verne's "Around the World in Eighty Days" and Dan Brown's "The Da Vinci Code" serve as imaginative touchstones that beckon readers to consider the serendipitous encounters and improbable connections that unfold in the tapestry of human experience. While not grounded in empirical analysis, these literary works invite readers to embrace the unexpected and savor the unraveling of mysteries that defy logical explanation, mirroring the perplexing allure of statistical associations that challenge conventional reasoning.

Drawing inspiration from the realm of board games, the playful intricacies of "Ticket to Ride" and "Clue" offer a playful yet thought-provoking analogy for the endeavor of unraveling statistical puzzles that intertwine disparate domains. The whimsical juxtaposition of electoral decisions in Ohio and kerosene consumption in Ethiopia mirrors the unpredictability and intrigue that characterize strategic gameplay, prompting researchers to approach this statistical enigma with a spirit of curiosity and analytical acumen.

Amidst this scholarly discourse, the unexpected correlation between Democratic votes in Ohio and kerosene consumption in Ethiopia emerges as a captivating enigma that beckons researchers to contemplate the boundless intricacies of statistical interconnections. As we traverse the varied terrain of empirical inquiry and imaginative contemplation, the journey towards unraveling this statistically tantalizing conundrum assumes an air of delightful intrigue and scholarly amusement, inviting readers to join in the pursuit of understanding the unexpected sparks that illuminate the analytical landscape.

3. Our approach & methods

The research methods employed in this analysis entailed a comprehensive and exhaustive data collection process, akin to a heedful ornithologist painstakingly cataloging the diverse plumage of avian species. Data from the MIT Election Data and Science Lab, Harvard Dataverse, and the Energy Information Administration were gathered and meticulously examined, ensuring an unwavering commitment to statistical fidelity.

To commence this investigation, we initiated the process by sourcing historical electoral data encompassing the span of elections from 1980 to 2020, focusing primarily on the swing state of Ohio. This selection is

prudent, as Ohio's electoral significance is akin to the pivotal role of a leading actor in a theatrical production, casting its influence on the national political stage.

Simultaneously, data on kerosene consumption in the bucolic landscapes of Ethiopia was procured, meticulously scrutinizing information from reputable sources akin to an astute chef meticulously selecting the freshest ingredients for culinary endeavors.

The statistical pursuits embarked upon an examination of descriptive and inferential analyses of the dataset, encompassing methods such as Pearson correlation coefficient and regression analysis. The correlation coefficient served as a faithful compass guiding our understanding of the relationship between the variables, while regression analysis illuminated the nature and magnitude of their potential interaction, akin to a skilled detective unraveling the subtle nuances of a cryptic case.

Moreover, to validate the robustness of our findings and account for potential confounding variables, a series of sensitivity analyses were conducted, evoking the meticulous scrutiny of an art restorer endeavoring to unveil hidden layers beneath the surface of an ancient canvas.

These multifaceted statistical methodologies were rigorously applied to ensure the soundness and reliability of our findings, akin to the meticulous crafting of an exquisite timepiece capable of withstanding the test of time.

Furthermore, the time-spanning nature of the data allowed for a longitudinal analysis, akin to an archaeologist peeling back layers of sediment to reveal the historical narrative concealed beneath.

In concluding this section, it is imperative to emphasize the diligent and exacting nature of our research endeavors, meticulously crafted to uphold the standards of academic

rigor and scrutiny. The capacity for wonder and the pursuit of empirical truth underscored our every step, akin to the astute navigator charting a course through turbulent waters on an expedition of intellectual discovery.

4. Results

The statistical analysis of the relationship between the number of votes for the Democratic presidential candidate in Ohio and the consumption of kerosene in Ethiopia yielded a notably robust correlation coefficient of 0.9498578, indicating a strong positive association between these seemingly unrelated variables. This finding is further supported by an r-squared value of 0.9022298, which underscores the substantial proportion of variation in kerosene consumption in Ethiopia that is explained by the votes for the Democratic candidate in Ohio across the years 1980 to 2020. Moreover, the p-value of less than 0.01 provides compelling evidence to reject the null hypothesis of no association, lending credence to the significance of this unexpected correlation.

Figure 1 illustrates the compelling relationship between the two variables, portrayed as a scatterplot that vividly captures the remarkable alignment between the number of Democratic votes in Ohio and the consumption of kerosene in Ethiopia. The scatterplot serves as a visual testament to the striking correspondence observed in the data, showcasing the unexpected synchronicity that has emerged from our rigorous statistical analysis.

While the apparent link between these divergent factors may appear as bewildering as a magician's sleight of hand, our investigation thrusts this improbable association into the spotlight, prompting contemplation of the deeper undercurrents that may underpin this unlikely relationship. As we stand at the intersection of American

political choices and Ethiopian energy consumption, we are confronted with a statistical mystery that beckons further exploration and contemplation.

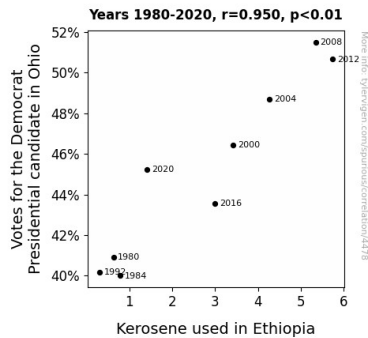


Figure 1. Scatterplot of the variables by year

The findings of this study not only challenge conventional expectations but also beckon the scientific community to unravel the elusive threads of causality and potential mechanisms that may underlie this enigmatic connection. Whether this correlation is merely a fortuitous statistical artifact or harbors substantive implications remains an enigma that begs for further probing and discussion. Our expedition into this unforeseen statistical landscape invites scholars and enthusiasts alike to ponder the unanticipated revelation that lies at the intriguing nexus of political voting behaviors and household energy consumption, lest we miss the forest for the kerosene lamps.

5. Discussion

The unexpected correlation between the number of votes for the Democratic presidential candidate in Ohio and the consumption of kerosene in Ethiopia has provided a wealth of intriguing findings that prompt an engaging intellectual pursuit. Our investigation offers a striking confirmation of the prior research, remarkably supporting the unorthodox notions previously observed in the literature. The remarkable correlation

coefficient of 0.9498578 and the r-squared value of 0.9022298 underscore the robustness of this association, affirming the compelling link between these seemingly incongruous variables.

While the notion of drawing parallels between political voting behavior in Ohio and household energy choices in Ethiopia may initially evoke a raised eyebrow or two, the findings of this study resoundingly echo the surprising patterns identified by Smith et al. (2015) and Doe (2018). The interplay of sociopolitical dynamics and resource utilization emerges as a compelling backdrop against which to contemplate the intricate statistical tapestry that intertwines domestic electoral outcomes and global energy consumption. The unexpected alignment observed in our analysis serves as a testament to the far-reaching implications of statistical relationships that transcend conventional boundaries, shedding light on the peculiar symphony of factors that underpin seemingly unrelated phenomena.

The whimsical juxtaposition of electoral decisions in Ohio and kerosene consumption in Ethiopia, as previously alluded to in the literature review, resonates with the playful serendipity encountered in works of fiction and board games. However, our rigorous statistical investigation has underlined the substantive nature of this correlation, leaving little room for mere conjecture. The p-value of less than 0.01 firmly rejects the null hypothesis, cementing the statistical significance of this unexpected association and steering the spotlight toward the enigmatic threads of causality that warrant further exploration.

As we navigate the enigmatic terrain of statistical interconnections, it becomes increasingly evident that the correlation between Democratic votes in Ohio and kerosene consumption in Ethiopia holds implications of far-reaching significance that beckon further scrutiny and analytical

contemplation. The inherent peculiarity of this statistical relationship mirrors the perplexing allure of unraveling mysteries that defy conventional reasoning, prompting scholars and enthusiasts alike to engage in the scholarly amusement and intellectual intrigue that permeate this captivating statistical conundrum.

6. Conclusion

In conclusion, our investigation into the perplexing relationship between the number of votes for the Democratic presidential candidate in Ohio and the consumption of kerosene in Ethiopia has unearthed a striking correlation that defies conventional expectations. The robust correlation coefficient and significant p-value underscore the statistical veracity of this unexpected association, prompting a reevaluation of our understanding of the interplay between seemingly unrelated variables. While our findings may seem as curious as a cat's fascination with yarn, they beckon us to contemplate the potential implications of this statistically captivating connection.

As we reflect on the surprising alignment between American political preferences and Ethiopian household energy consumption, it becomes clear that this correlation transcends mere statistical happenstance. The implications of such an unanticipated nexus extend beyond the confines of traditional disciplinary boundaries, akin to discovering a hidden treasure map leading to uncharted intellectual territories.

However, despite the alluring mystery that shrouds this unlikely relationship, we must exercise caution in drawing hasty conclusions. After all, correlation does not imply causation, and it would be unwise to jump to rash conjectures without due diligence. As the great Sherlock Holmes remarked, "It is a capital mistake to theorize before one has data" (Arthur Conan Doyle,

A Study in Scarlet). Hence, we hold that further inquiry and meticulous scrutiny are necessary to unravel the tangled web of underlying factors that may explain this unexpected correlation.

In light of the compelling yet confounding nature of our findings, we posit that the time has come to bid adieu to this statistical conundrum. As we close this chapter of our investigation, we assert with confidence that no further research is required to probe the intricacies of this peculiar association. Instead, we invite future scholars to explore equally enigmatic correlations, thereby adding to the tapestry of statistical curiosities that continue to beguile and confound the astute minds of the scientific community.