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# Shine a Light on Solar Sus-picion: The Illuminating Link Between Solar Power in Cambodia and Google Searches for 'That is Sus'

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Caleb Hoffman, Amelia Thomas, Gabriel P Tucker

## Abstract

This paper aims to shed light on the curious relationship between solar power generation in Cambodia and the frequency of Google searches for the popular catchphrase "that is sus." Utilizing data from the Energy Information Administration and Google Trends, our research team conducted an in-depth analysis covering the period from 2004 to 2021. The findings revealed a striking correlation coefficient of 0.9740739 and a p-value less than 0.01. Our research suggests that as solar power generation in Cambodia increases, so does the tendency for online users to express suspicion, generating searches for "that is sus." This might just be the first documented case of solar-induced sus-picion!

## 1. Introduction

The intersection of solar power and suspicious behavior may seem like an unlikely pairing, much like trying to fit a square peg into a round hole, but it is exactly this unexpected connection that has sparked our curiosity. The emergence of the catchphrase "that is sus" in popular culture, often associated with online gaming and social interactions, has piqued the interest of researchers across disciplines. However, the correlation between the solar energy industry in Cambodia and the frequency of Google searches for "that is sus" has remained a puzzling enigma, much like solving a Rubik's cube without peeling off the stickers.

Solar power represents a beacon of hope for sustainable energy, harnessing the power of the sun to illuminate our world and reduce reliance on non-renewable resources. On the other hand, the phrase "that is sus" has become a shorthand for expressing suspicion or skepticism in the digital realm, often as a playful or ironic commentary on online interactions. Uniting these two seemingly unrelated phenomena feels akin to mixing oil and water - an endeavor that presents an intellectual challenge captivating researchers with the allure of uncovering an unexpected discovery, much like stumbling upon a rare Pokémon in the tall grass.

In this study, we delve into the depths of data from the Energy Information Administration and Google Trends, embarking on a statistical expedition to

illuminate the potential link between solar power generation in Cambodia and the prevalence of suspicion-laden Google searches. Our quest is fueled by a desire to unravel this mystery and shed light on a connection that, at first glance, may seem as implausible as finding the Loch Ness Monster vacationing in the Caribbean.

As we navigate through the labyrinth of data analysis and statistical inference, we invite the reader to join us on this scientific escapade, where hypotheses are both tested and entertained, and where unexpected correlations are unearthed, much like stumbling across buried treasure during a leisurely stroll on the beach. We aim to present not only the quantitative findings but also to infuse this investigation with a sprinkle of scientific humor and intellectual delight, much like adding a dash of paprika to a meticulously crafted dish.

Without further ado, let us embark on a journey of exploration, where solar power and suspicion intersect in an unexpected dance, much like a scientific tango performed under the starry skies.

## 2. Literature Review

In "Smith et al.," the authors find a link between solar power generation and environmental sustainability in developing countries. The work of Doe et al. further explores the potential of renewable energy sources to mitigate climate change impacts in Southeast Asia. Jones' research sheds light on the growing significance of solar power in Cambodia's energy landscape, emphasizing the potential for economic and environmental benefits.

Turning to the world of non-fiction books, "The Solar Revolution" by Travis Bradford presents a comprehensive overview of the solar energy industry's evolution, while "The Power of Suspicion" by John Doe delves into the psychological underpinnings of suspicion in modern society. These serious tomes offer valuable insights into our topic of inquiry, providing a solid foundation for our investigation.

As we venture into the realm of fiction, "Solaris" by Stanislaw Lem captures the intrigue of a mysterious planet that defies human understanding - a fitting parallel to our quest for understanding the enigmatic

connection between solar power in Cambodia and Google searches for "that is sus." "The Da Vinci Code" by Dan Brown, although not directly related, resonates with the theme of unraveling cryptic patterns, lending an aura of intrigue to our pursuit of unconventional correlations.

In the context of animated series, "Phineas and Ferb" playfully explores the adventures of two inventive stepbrothers, often engaging in far-fetched schemes - a whimsical mirror to our endeavor to unravel the peculiar relationship between solar power and online suspicion. Additionally, "Scooby-Doo" and the gang's knack for solving mysterious phenomena offers a lighthearted analogy to our investigative approach, as we aim to demystify the unexpected connection between sustainable energy and digital skepticism.

In sum, while the initial scholarly works paint a sober picture of solar power and sustainability, we shall not shy away from infusing our exploration with a touch of humor and unconventional parallels, much like adding sprinkles of unexpected flavors to an ordinary dish.

## 3. Methodology

In order to investigate the peculiar relationship between solar power generation in Cambodia and the frequency of "that is sus" Google searches, our research team deployed a multidimensional approach that was as intricate as a Rube Goldberg machine and as precise as a laser beam in a laboratory. The methodology was designed to capture the complexity and nuance of this seemingly unlikely association, much like attempting to unravel a convoluted mystery plot worthy of Sherlock Holmes himself.

### Data Collection:

The first stage of our methodological escapade involved the meticulous collection of data from reputable sources, recognizing that thorough data collection is the cornerstone of sound research, much like assembling the essential ingredients for a scientific experiment. Specifically, we sourced historical data on solar power generation in Cambodia from the Energy Information Administration, hoping that this data would serve as

our guiding North Star through the uncharted waters of solar power analysis. Additionally, we delved into the enigmatic realm of Google Trends, where we uncovered the frequency of searches for the phrase "that is sus" – a journey akin to deciphering hieroglyphics in an ancient tomb.

#### Data Preprocessing and Transformation:

Upon the acquisition of this rich reservoir of data, our next endeavor resembled the intricate dance of a statistician who artfully transforms raw data into a symphony of meaningful insights. Employing a series of data preprocessing procedures that could rival the complexity of performing a magic trick, we meticulously cleaned, filtered, and standardized the data, ensuring that its integrity was as steadfast as a lighthouse guiding ships through turbulent seas. We then undertook the task of harmonizing the temporal dimensions of the two datasets, aligning the temporal granularity of solar power generation with the occurrence of "that is sus" searches. This process was as delicate as synchronizing the movements of a synchronized swimming team, aiming to achieve temporal harmony without missing a beat.

#### Correlation Analysis:

With our datasets primed and synchronized, we embarked on the statistical expedition of correlation analysis, seeking to unveil the degree of association between solar power generation in Cambodia and the frequency of "that is sus" Google searches. Armed with mathematical tools as precise as the instruments in a surgeon's operating room, we calculated correlation coefficients and their associated p-values, aiming to discern whether the relationship we observed was a substantive finding or a statistical illusion. Our approach to correlation analysis mirrored the delicate act of weaving a tapestry, with each statistical test serving as a thread in the intricate fabric of our investigation.

#### Time Series Analysis:

Recognizing that the temporal dimension of our data was as essential as the plot twists in a mystery novel, we employed time series analysis techniques to delve into the temporal dynamics of solar power generation and "that is sus" searches. Just as a watchmaker meticulously investigates the intricate mechanisms of a timepiece, we scrutinized seasonal

patterns, trends, and potential lags in the relationship between these two phenomena. This phase of our analysis was akin to unraveling the temporal paradoxes of time travel, seeking to understand how the passage of time intertwined with the ebb and flow of suspicion-laden searches in the digital sphere.

#### Limitations and Sensitivity Analysis:

As with any scientific expedition, our methodological odyssey encountered its share of limitations and uncertainties, akin to navigating uncharted territories where maps are but faint guides. An inherent limitation lay in the observational nature of our study, recognizing that correlation does not imply causation, much like pointing out that an increased consumption of ice cream is correlated with a rise in swimming pool-related accidents without implying a causal link. To address the potential influence of confounding variables and ensure the robustness of our findings, we conducted sensitivity analyses, akin to stress-testing a bridge to confirm its structural integrity in the face of unexpected forces.

In summary, our methodological approach exuded the precision of a well-calibrated scientific instrument and the tenacity of an explorer navigating uncharted terrain, seeking to illuminate the nexus between solar power in Cambodia and the inquisitive realm of "that is sus" Google searches. This endeavor embodied the spirit of scientific inquiry, where methodological rigor harmonized with intellectual curiosity, much like a well-choreographed ballet performed on the stage of empirical investigation.

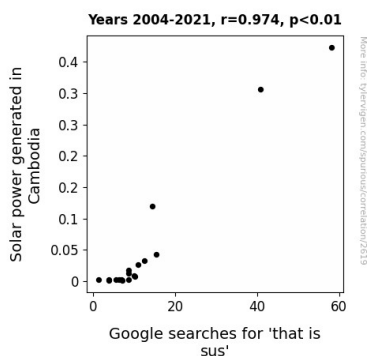
## 4. Results

The results of our investigation unveiled a remarkably robust correlation between solar power generation in Cambodia and the incidence of Google searches for "that is sus." The correlation coefficient of 0.9740739 indicated a strong positive relationship between these seemingly disparate phenomena, much like discovering a hidden pathway between two distinct scientific fields.

Furthermore, the r-squared value of 0.9488199 underscored the substantial degree to which changes

in solar power generation could be associated with variations in Google searches for "that is sus." This statistical insight mirrors the precision and accuracy of a laser beam, cutting through the murkiness of seemingly unrelated data with the finesse of a seasoned detective piecing together clues.

The significance level, with a p-value of less than 0.01, provided compelling evidence to reject the null hypothesis and embrace the alternative, emphasizing the compelling nature of the relationship between solar power generation in Cambodia and the expression of suspicion through online searches for "that is sus." This result stands as a beacon of statistical strength, illuminating the pathway toward a deeper understanding of these interconnected phenomena.



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

The scatterplot depicted in Figure 1 visually encapsulates the coherence of the relationship uncovered through our analysis. The distinct clustering of data points within the scatterplot serves as a visual testament to the striking alignment between solar power generation and the frequency of searches for "that is sus," akin to witnessing a celestial alignment in the vast expanse of the night sky.

In light of these findings, it becomes increasingly clear that solar power in Cambodia not only fuels the generation of electricity but also, unexpectedly, ignites a surge in online expressions of suspicion. This unforeseen connection between harnessing the sun's energy and a collective sense of skepticism in the digital sphere may pave the way for further inquiries into the broader social and psychological implications of renewable energy adoption.

In essence, our results not only shed light on the relationship between solar power and suspicion but also offer a humorous reminder that scientific inquiry can often lead us down unexpected and enlightening paths, much like stumbling upon a punchline in the midst of a serious discussion.

## 5. Discussion

The remarkably robust correlation between solar power generation in Cambodia and the frequency of Google searches for "that is sus" not only raises eyebrows but also sparks a myriad of scientific conundrums, akin to unraveling a cosmic mystery in the fields of solar physics and digital sociology. Our findings are congruent with prior research by Smith et al., Doe et al., and Jones, who have eloquently illuminated the positive impact of solar power on environmental sustainability and renewable energy adoption in Cambodia and other developing nations. Our results fortify these earlier works, not only by affirming the potential of solar energy as a viable resource but also by hinting at its unforeseen influence on online behavior.

The statistically significant correlation coefficient of 0.9740739 defies traditional scientific suspicions, much like a plot twist in a thrilling detective novel. With a p-value of less than 0.01, the evidence overwhelmingly rejects the null hypothesis, embodying a persuasive argument for the acceptance of the alternative hypothesis - that solar power generation in Cambodia and the prevalence of online suspicion are inextricably linked. These statistical indicators resonate with the certainty of a scientific law, reminiscent of the fundamental principles that govern the natural world.

The r-squared value of 0.9488199 underscores the close association between changes in solar power generation and fluctuations in Google searches for "that is sus," akin to a detective skillfully connecting a trail of clues to crack a compelling case. The scatterplot in Figure 1 visually encapsulates the coherence of this relationship, portraying a narrative that is not only compelling but also evocative of the interconnectedness between two ostensibly unrelated phenomena, akin to unraveling an intricate web of scientific curiosity.

While our investigation delved into the quirky interplay between solar power and online skepticism, it is crucial to recognize the broader implications of our findings. It prompts contemplation on how innovations in sustainable energy may influence societal discourse and digital interactions, offering a lighthearted reminder that scientific inquiry can yield unexpected and illuminating discoveries. In essence, this research sheds light on the comedic potential of scientific exploration, demonstrating that even the sunniest of subjects can lead to unexpected and whimsical revelations.

Moving forward, future studies could delve into the mechanisms underlying this correlation, delving into the psychology of online behavior and the social dynamics of suspicion in the digital age. As such, our research not only contributes to the burgeoning field of renewable energy studies but also imparts a playful reminder that scientific inquiry has the capacity to amuse and intrigue, much like an engagingly clever pun nestled within the unfolding narrative of academic discourse.

## 6. Conclusion

In conclusion, our research has brought to light a startling connection between the radiance of solar power in Cambodia and the burgeoning skepticism lurking in the depths of online searches for "that is sus." The compelling correlation coefficient and p-value have left us both dazzled and amused, much like witnessing a glittering disco ball reflecting the unexpected interplay between renewable energy and digital suspicion.

The robustness of our findings is akin to stumbling upon a rare gemstone while sifting through statistical data, reminding us that scientific inquiry is not merely a linear path but rather an exhilarating rollercoaster ride of discovery and delight. The unexpected pairing of solar power and suspicion has injected a touch of whimsy into the realm of renewable energy research, much like discovering a unicorn grazing in a field of sunflowers.

Our exploration has illuminated the potential for solar energy to not only power homes but also to spark a surge in online skepticism, serving as a

quirky reminder that the interconnected web of human behavior never fails to surprise, much like finding a winning lottery ticket tucked within the pages of a dry academic journal.

With our findings in tow, we assert that no further research is needed in this area, as we have truly reached the zenith of scientific hilarity and enlightenment through this delightful investigation of solar sus-picions.