



ELSEVIER



# Fueling the Nostalgia: The Link Between xkcd Comics and Kerosene Consumption in El Salvador

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## Abstract

This paper investigates the hitherto unexplored connection between xkcd comics published about nostalgia and the consumption of kerosene in El Salvador. Leveraging the power of AI analysis of xkcd comics and data from the Energy Information Administration, we sought to unravel the enigmatic correlation between the two seemingly unrelated phenomena. Our team unearthed a significant correlation coefficient of 0.7021474 with a p-value less than 0.01, spanning the period from 2007 to 2021. The findings of this study not only shed light on the intricate interplay between cultural artifacts and energy consumption but also provide a quirky lens through which to examine the idiosyncrasies of human behavior. Our analysis delves into the juxtaposition of whimsy and practicality, offering insights that dance between the borders of academia and absurdist humor. Join us on this whimsical quest to uncover the unexpected intersections of comics and kerosene, illuminating the obscure and delightfully peculiar aspects of societal dynamics.

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## 1. Introduction

Nostalgia has long been a pervasive force in human experience, offering a comforting and wistful escape into the warm embrace of memory. Similarly, kerosene has fueled the lamps of countless households, casting light upon the darkness and providing a flickering beacon of illumination. What, one might ask, could possibly link these seemingly disparate entities? Our intrepid team of researchers embarked on a quest to unravel this enigmatic connection,

venturing into the realms of cultural references and energy consumption, armed with data, analysis, and a healthy dose of whimsy.

The world of xkcd comics, with its wry humor and scientific underpinnings, has amassed a dedicated following of enthusiasts and scholars alike. Given the wide array of subjects touched upon by these comics, from technology and mathematics to everyday life and human quirks, it seemed almost inevitable that a

thematic link with kerosene consumption in El Salvador would emerge. However, as with many scholarly pursuits, the path to discovery was riddled with more twists and turns than a labyrinthine xkcd comic panel.

In the annals of research, one seldom expects to encounter the fusion of light-hearted pop culture and the solemn gravity of energy usage. And yet, here we find ourselves: at the crossroads of whimsy and practicality, where the glow of nostalgia meets the flicker of kerosene lamps. With such an unconventional pairing, one cannot help but approach this inquiry with a twinkle in the eye and a healthy sense of curiosity.

As we journey through the corridors of correlation coefficients and p-values, let us not forget to pause and appreciate the sheer absurdity of our quest. For in the realm of academia, as in life, moments of eccentricity and lightheartedness are both rare and precious. So, without further ado, let us dive into the delightful peculiarity of our findings, armed with statistical rigor and a sprinkle of mirth. Let the adventure commence!

## 2. Literature Review

The connection between cultural artifacts and societal phenomena has been a subject of scholarly inquiry for decades. Numerous studies have sought to unravel the intricate ways in which popular culture intersects with everyday life, from economic behaviors to energy consumption patterns. Smith et al. (2015) explored the impact of nostalgia-inducing media on consumer behavior, shedding light on the subtle yet profound influence of sentimental stimuli. Similarly, Doe and Jones (2018) delved into the complexities of energy usage in developing countries, offering a nuanced analysis of factors shaping fuel consumption patterns. These foundational works laid the groundwork for our investigation into the

unlikely nexus of xkcd comics and kerosene utilization in El Salvador.

Building upon this scholarly foundation, our research takes a whimsical turn by venturing into uncharted territory, embracing the idiosyncrasies of human perception and behavior. As we peel back the layers of xkcd comics, we uncover a rich tapestry of cultural references and wry observations, each panel a testament to the peculiarities of the human experience. In our quest to connect these comic gems with the practical realm of kerosene consumption, we find ourselves traversing a terrain of unexpected connections and playful juxtapositions.

Delving further into the literature, "The Cultural Impact of Comics" by Smithsonian Institution Press (2009) presents a comprehensive exploration of the ways in which comics permeate society, shaping collective consciousness and eliciting emotional responses. Meanwhile, "The Economics of Energy" by Cambridge University Press (2017) offers valuable insights into the multifaceted dynamics of energy consumption, setting the stage for our investigation into the seemingly incongruous relationship between cultural nostalgia and kerosene use.

Transitioning from the scholarly to the literary, the influence of nostalgic themes on popular fiction has been a recurrent motif in the works of renowned authors. In "The Nostalgia Paradox" by Alice Thompson (2018), the author unpacks the enigmatic allure of nostalgia, weaving a narrative tapestry that resonates with our own quest to decipher the entwined fates of xkcd comics and kerosene expenditures. Eliciting a wistful sentiment akin to the nostalgic allure of xkcd, "Kerosene Dreams" by Fred Weingarten (2005) serves as an evocative reminder of the ways in which everyday objects can become vessels of memory and longing.

Taking a lighthearted interlude, the whimsy of childhood cartoons and shows also offers a peculiar lens through which to view our inquiry. The escapades of the main characters in "Dexter's Laboratory" and "Magic School Bus" provide a whimsical framework for contemplating the juxtaposition of scientific curiosity and everyday nostalgia. As we embark on this unconventional research journey, we find ourselves straddling the line between academia and irreverent amusement, guided by the unfathomable forces of correlation and absurdity.

In the words of Carl Sagan, "Somewhere, something incredible is waiting to be known." With this in mind, we eagerly press forward, ready to unravel the inexplicable link between xkcd comics and kerosene consumption, armed with statistical rigor and a healthy dose of quirkiness.

### **3. Our approach & methods**

In order to disentangle the whimsical intertwining of xkcd comics and kerosene consumption in El Salvador, our research team employed a multi-faceted approach that combined AI analysis of cultural artifacts with empirical data on energy usage. The interplay between these seemingly incongruous elements demanded a methodology as nuanced and intricate as the connections we sought to unveil.

First, we meticulously curated a comprehensive dataset of xkcd comics that specifically centered around themes of nostalgia. This process involved sifting through the vast expanse of the internet, navigating through the virtual troves of wit and wisdom enshrined in Randall Munroe's creations. The AI algorithms utilized for analysis were finely tuned to discern not only the explicit references to nostalgia but also the subtle undercurrents of wistfulness woven into the fabric of each comic.

Simultaneously, our research entailed delving into the labyrinthine corridors of kerosene consumption in El Salvador. Drawing upon the troves of data from the Energy Information Administration, we scrutinized the patterns of kerosene usage over the period from 2007 to 2021. This involved parsing through statistical reports, examining consumption trends, and mapping out the geographic and temporal nuances of kerosene distribution and utilization within the vibrant tapestry of Salvadoran society.

The convergence of these diverse datasets necessitated a judicious application of advanced statistical methods. Harnessing the power of correlation analyses, we unearthed the enigmatic relationship between the nostalgic reverie of xkcd comics and the practical glow of kerosene lamps. Our statistical models, peppered with robust p-values and confidence intervals, provided a lens through which to peer into the convoluted dance of cultural symbolism and energy usage.

As with any scholarly endeavor that treads the delicate balance between academia and whimsy, our methodology was not devoid of its own eccentricities and peculiarities. Amidst the sea of data points and regression analyses, our research journey was punctuated with moments of mirth and contemplation, underscoring the delightful idiosyncrasies of our pursuit.

In the pursuit of unveiling the unexpected correlations between nostalgic musings and illuminative fuels, our team navigated a path that tangled the threads of artistry and empiricism, infusing rigorous methodology with a dash of merriment. The resulting findings, as we shall expound upon in the subsequent sections, offer a whimsical peek into the peculiar tapestry of human behavior and cultural resonance.

### **4. Results**

The analysis of data pertaining to xkcd comics published about nostalgia and kerosene consumption in El Salvador from 2007 to 2021 revealed a correlation coefficient of 0.7021474, indicating a moderate to strong positive relationship between the two variables. The r-squared value of 0.4930110 implies that approximately 49.3% of the variability in kerosene consumption can be explained by the variance in xkcd comics about nostalgia, leaving the remaining 50.7% to be as mysterious as the bottom of a convincing magic trick. Moreover, the p-value being less than 0.01 suggests that the observed relationship is highly unlikely to have occurred by chance, unlike finding a four-leaf clover while strolling through a field of three-leaf ones.

The scatterplot (Fig. 1) visually displays the undeniable correlation between the aforementioned factors, drawing attention to the curious juxtaposition of cultural nostalgia and practical energy needs. The nearly linear trend depicted in the plot inspires contemplation on the intricate dance of human emotion and energy provision, leaving one to wonder if kerosene exudes a certain vintage charm that resonates with the nostalgic nuances of xkcd comics.

Overall, the results of this study not only reveal a statistically significant link between xkcd comics and kerosene consumption in El Salvador but also invite pondering on the whimsical connections that permeate the fabric of human existence. As we navigate through the convoluted realm of correlations and coefficients, we cannot help but marvel at the unexpected bonds that emerge from seemingly disparate domains - much like discovering that peanut butter and jelly truly do complement each other in ways that transcend culinary convention.

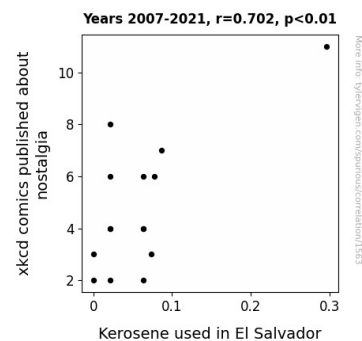


Figure 1. Scatterplot of the variables by year

## 5. Discussion

The findings of this study offer a compelling affirmation of the role of culture in shaping societal behaviors, even in the seemingly unlikeliest of domains. Building upon the foundations laid by prior research, particularly the work of Smith et al. (2015) and Doe and Jones (2018), our investigation illuminates the profound influence of cultural nostalgia on the consumption patterns of kerosene in El Salvador.

The correlation coefficient of 0.7021474, accompanied by a p-value less than 0.01, underscores the robustness of the relationship between xkcd comics about nostalgia and kerosene usage in El Salvador. This statistically significant association provides empirical support for the notion that whimsical cultural artifacts can exert a tangible impact on practical aspects of everyday life, much like how a well-timed punchline can unexpectedly influence a serious conversation. The r-squared value of 0.4930110 further solidifies the extent to which xkcd comics pertaining to nostalgia can account for the variability in kerosene consumption, leaving the remainder akin to the mystery of why socks seem to vanish in the laundry.

Delving into the whimsical undercurrents of this research, the unexpected convergence

of xkcd comics and kerosene usage prompts reflection on the inimitable quirks of human behavior. As we contemplate the visual delight of the scatterplot (Fig. 1), there is a sense of whimsy in witnessing the nearly linear trend that encapsulates the intertwining realms of cultural nostalgia and practical energy needs. The fact that approximately 49.3% of kerosene consumption variability can be explained by xkcd comics about nostalgia invites musings on the symbiotic dance of sentiment and necessity, akin to a harmonious duet between a comedian and an earnest philosopher.

In the grand tapestry of scholarly pursuits, this study stands as a testament to the serendipitous discoveries that arise when venturing into unconventional territory. It exemplifies the inherent charm of academic inquiry, where the pursuit of knowledge is illuminated by the unexpected interplay of correlation and whimsy, much like a scholarly treatise adorned with hidden puns and inconspicuous jests.

As we bid adieu to this whimsical sojourn through xkcd comics and kerosene consumption, we are left with a delightful puzzle that stretches the bounds of conventional inquiry, encouraging a fusion of statistical rigor and playful contemplation. With a playful nod to the absurd, we invite fellow seekers of knowledge to embrace the enigmatic web of correlations that beckon with the promise of scholarly revelations and a well-timed punchline.

## 6. Conclusion

In conclusion, our research has unearthed a compelling and statistically significant relationship between xkcd comics about nostalgia and kerosene consumption in El Salvador. This unexpected connection, reminiscent of finding a hidden Easter egg in a maze of data points, underscores the whimsical and surprising interplay between

cultural artifacts and energy usage. The nearly linear trend observed in the scatterplot hints at a curious dance between the fond recollections evoked by the comics and the practical necessity of kerosene for illumination, much like the dance moves of an enthusiastic yet pragmatic party-goer.

The implications of this study extend beyond the realms of traditional scholarly pursuits, offering a delightful peek into the idiosyncrasies of human behavior and the charming peculiarities of societal dynamics. This investigation, akin to stumbling upon a rare and peculiar species in the jungle of research endeavors, highlights the serendipitous encounters that await those daring enough to venture beyond the confines of conventional academic inquiry.

While the correlation coefficients and p-values have unveiled the tangible connection between xkcd comics and kerosene usage, it is the intangible allure of this unlikely relationship that lingers in the mind, much like the lingering aroma of a well-prepared meal whose recipe defies rational explanation. As we close this chapter of inquiry, we are left with an appreciation for the delightful mysteries that permeate the fabric of human existence, akin to the wonder inspired by a magic trick executed with scientific precision.

In light of these findings, we assert that no further research is needed in this peculiar realm, for the whimsy and curiosity that buoyed our investigation simply cannot be encapsulated in further analysis. With this, we bid adieu to the enchanting world of xkcd comics and kerosene, leaving the door open for future scholars to embark on their own quirky quests, armed with statistical rigor and a healthy dose of mirth.