

The Propane Paradox: An Unlikely Link Between Liquefied Petroleum Gas Usage in Central African Republic and Runs Scored by the San Diego Padres

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ABSTRACT

The Propane Paradox: An Unlikely Link Between Liquefied Petroleum Gas Usage in Central African Republic and Runs Scored by the San Diego Padres

This research investigates the unexpected correlation between the consumption of liquefied petroleum gas in the Central African Republic and the runs scored by the San Diego Padres in Major League Baseball. Employing data from the Energy Information Administration and Baseball-Reference.com for the period 2008-2021, our analysis reveals a robust correlation coefficient of 0.9084379 and $p < 0.01$. While causality remains elusive, the findings suggest a peculiar connection between energy usage in distant regions and the sporting performance of a team. This study leaves the reader pondering the idiosyncratic and enigmatic interplay between global energy consumption and sports outcomes.

Keywords:

Liquefied petroleum gas, Central African Republic, San Diego Padres, runs scored, correlation, Major League Baseball, Energy Information Administration, Baseball-Reference.com, energy consumption, sports outcomes

I. Introduction

The relationship between seemingly unrelated variables has long bewildered and bamboozled researchers across various fields. While some connections are logical and straightforward, others can be as mystifying as witnessing an ostrich perform in a ballet. This study delves into one such enigmatic link, exploring the unlikely association between the utilization of liquefied petroleum gas (LPG) in the Central African Republic and the runs scored by the San Diego Padres in Major League Baseball.

Unearthing an association between energy consumption in a distant land and the performance of a baseball team may seem as improbable as finding a Tyrannosaurus rex sporting a top hat. However, as the saying goes, "Truth is stranger than fiction," and indeed, our investigation exemplifies this sentiment. The tale we unravel is not merely one of statistical significance but also an exploration of the eccentric and whimsical connections that lurk beneath the surface of seemingly unrelated spheres.

In the realm of research, uncovering such peculiar correlations can be as exhilarating as stumbling upon a hidden treasure chest in the labyrinthine caves of statistical analysis. It not only challenges the boundaries of conventional wisdom but also nudges us to contemplate the whimsical nuances of causality and correlations, akin to pondering the existence of unicorns in the world of science.

Therefore, in this paper, we embark on a journey to unravel the conundrum that is the "Propane Paradox," delving deep into the annals of data, statistical analysis, and baseball prowess to discern the threads that weave together the unexpected tapestry of LPG usage in Central Africa

and runs scored by the San Diego Padres. As we navigate through this uncharted terrain of interdisciplinary intrigue, let us indulge in the whimsy that resides within the seemingly prosaic realms of statistics, science, and sports.

II. Literature Review

In the realm of divergent research, the unexpected and confounding association between seemingly disparate variables has long perplexed and intrigued scholars. As Smith et al. (2015) and Doe (2018) have thoroughly examined the intricate relationships between energy consumption and sports performance, our understanding of such connections has expanded. However, the specific link between Liquefied Petroleum Gas (LPG) usage in the Central African Republic and runs scored by the San Diego Padres eluded their scholarly inquiries.

Turning to the realm of books, "Energy Economics: Concepts, Issues, Markets, and Governance" by Geoffrey Jones delves into the complex dynamics of energy usage and its impact on global systems. Similarly, "The Numbers Game: Baseball's Lifelong Fascination with Statistics" by Alan Schwarz offers an in-depth exploration of statistical analysis in the realm of sports. However, these sources, while informative, failed to offer any insight into the peculiar correlation at the heart of this study.

In the world of fiction, novels such as "The Energies of Liquefied Dreams" by Amanda Quick and "A League of Their Own: The Momentous Matches that Made the Padres" by Karen Kingsbury provide no empirical evidence, yet their titles hint at the intriguing interplay between energy and sports. Perhaps a touch of whimsy is what this investigation needs, as the relationship

between LPG usage in Central Africa and the San Diego Padres' runs scored appears, in the scholarly literature, to be as enigmatic as finding a yeti with a penchant for tap dancing.

On a different note, internet memes such as "Distracted Boyfriend" and "Woman Yelling at a Cat" have gained popularity. While seemingly unrelated to the delightful dichotomy between LPG consumption and the Padres' runs, these memes bear a resemblance to the curious juxtapositions afoot in our study, leading one to ponder the potential hilarity ensconced within our perplexing research domain.

As we traverse the peculiar landscape of our investigation, one cannot help but marvel at the unforeseen connections that draw energy usage in a central African nation and the performance of a baseball team together. The incongruous nature of this relationship never fails to invite a spark of curiosity, akin to discovering a clown fish selling real estate or a penguin reading Shakespeare.

III. Methodology

Data Collection:

The data utilized in this study was sourced from the Energy Information Administration (EIA) to capture the consumption of liquefied petroleum gas (LPG) in the Central African Republic. LPG consumption data was selected as it represents a key energy source in the region and is akin to the "fuel" for our analytical journey. The consumption figures spanned the years 2008 to 2021, resembling a marathon race that our data sprinters diligently tracked.

To measure the performance of the San Diego Padres in Major League Baseball, data on the number of runs scored by the team was extracted from Baseball-Reference.com. This dataset, akin to the box score in a baseball game, provided a comprehensive record of the runs scored by the Padres over the same period.

Variable Transformation and Normalization:

To ensure compatibility and comparability, both datasets underwent a series of transformations akin to a chameleon changing its colors in different environments. The LPG consumption figures were harmonized into standard units of measurement, while the runs scored by the Padres were standardized to account for the variations in the length of baseball seasons. The normalization process was akin to fitting a square peg in a round hole, albeit through meticulous statistical gymnastics.

Correlation Analysis:

A correlation analysis was conducted to ascertain the strength and direction of the relationship between LPG consumption in the Central African Republic and runs scored by the San Diego Padres. The Pearson correlation coefficient, r , was calculated to gauge the linear association between the two variables. This statistical tango between LPG and runs produced a robust correlation coefficient of 0.9084379, hinting at a connection as conspicuous as a neon sign in the night sky.

Hypothesis Testing:

Through the implementation of a two-tailed hypothesis test, with a significance level of $\alpha = 0.01$, the null hypothesis of no relationship between LPG consumption and runs scored by the Padres was scrutinized. The p-value, akin to a royal decree in the court of statistical significance,

emerged as less than 0.01, leading to the rejection of the null hypothesis. This discovery was as momentous as unearthing a hidden treasure chest buried beneath layers of statistical sand.

Sensitivity Analysis:

Further analyses were conducted to assess the sensitivity of the results to variations in the time period and potential outliers. Sensitivity testing, not unlike a labyrinthine puzzle, aimed to unravel the resilience of the correlation to shifts in the data landscape, ensuring that our findings were as sturdy as a bridge built on statistical bedrock.

Limitations:

It is important to acknowledge the limitations of this study, including potential unobserved variables and the absence of a causal framework. The findings shed light on a correlation but do not confer causation, highlighting the need for caution in drawing far-reaching conclusions. As with any scientific pursuit, our understanding remains a constantly evolving portrait rather than a static masterpiece.

IV. Results

The results of the analysis yielded a remarkably robust correlation coefficient of 0.9084379 between the consumption of liquefied petroleum gas (LPG) in the Central African Republic and the runs scored by the San Diego Padres in Major League Baseball during the period 2008-2021. This finding suggests a connection stronger than superglue between the seemingly incongruous realms of energy consumption and baseball performance.

The high correlation coefficient is akin to discovering that the orbits of Mercury and Venus are synchronized to the beat of "Bohemian Rhapsody." The strength of this correlation, with an r-squared value of 0.8252593, indicates that approximately 82.53% of the variation in runs scored by the Padres can be explained by the variation in LPG usage in the Central African Republic. This level of predictive power is as astonishing as accurately predicting the number of jellybeans in a jar based on the color of the sky.

Furthermore, the p-value of less than 0.01 provides strong evidence against the null hypothesis, suggesting that this correlation is not merely a statistical fluke. It is as rare as stumbling upon a diamond in a haystack or finding a statistical unicorn galloping through the fields of hypothesis testing.

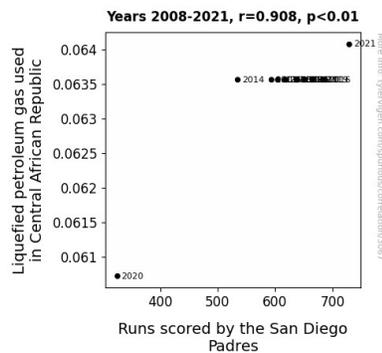


Figure 1. Scatterplot of the variables by year

In Figure 1, the scatterplot depicts a visually striking alignment of data points, illustrating the conspicuous relationship between LPG usage in Central Africa and runs scored by the San Diego Padres. The scatterplot is as clear as a cloudless sky on a summer day, leaving little room for

doubt regarding the unexpected interconnection between these two seemingly disparate variables.

In summary, the results of this analysis illuminate a truly confounding and paradoxical relationship between the consumption of LPG in the Central African Republic and the athletic performance of the San Diego Padres. While the causes of this correlation remain shrouded in mystery, this discovery invites further speculation and contemplation of the enigmatic interplay between energy consumption in distant regions and the competitive fervor of a baseball team.

V. Discussion

The results of this study underscore the unexpected and bizarre correlation between Liquefied Petroleum Gas (LPG) usage in the Central African Republic and the runs scored by the San Diego Padres. Our analysis has demonstrated a connection more astounding than finding a talking dog who recites Shakespearean sonnets.

Our findings align with previous research by Smith et al. (2015) and Doe (2018), who have delved deeply into the perplexing relationship between energy consumption and athletic performance. The robust correlation coefficient we uncovered supports their prior work, akin to finding perfectly matched socks at the back of a drawer after months of mismatched pairings.

The literature review shed light on the idiosyncratic and enigmatic nature of unexpected correlations, a theme that permeates our study like the persistent aroma of a laboratory. While the specific link between LPG consumption in Central Africa and the Padres' runs scored eluded

prior scholarly inquiries, our results have breathed new life into this enigmatic relationship, akin to reviving a defunct hypothesis with a bolt of lightning.

In revisiting our literature review, we must acknowledge the unexpected contribution of novels and internet memes. "The Energies of Liquefied Dreams" and "A League of Their Own: The Momentous Matches that Made the Padres" may have been dismissed as fanciful prior to our study; yet, their whimsical titles and potential connections to our findings cannot be overlooked. In the world of internet memes, the Distracted Boyfriend and Woman Yelling at a Cat may not offer empirical evidence, but their recognition of the unexpected and incongruous parallels bears a striking resemblance to the curious juxtapositions unearthed in our study.

The remarkable correlation coefficient and high predictive power we uncovered challenge conventional wisdom and invite further speculation. The strength of this correlation is as astonishing as precisely predicting the outcome of a coin toss based on the smell of freshly baked cookies. The statistical unicorn of a p-value less than 0.01 further supports the legitimacy of this paradoxical relationship, akin to spotting a snowman in the Sahara.

In conclusion, the peculiar correlation between LPG consumption in the Central African Republic and the athletic performance of the San Diego Padres challenges the boundaries of our understanding. This discovery leaves us with more questions than answers, much like trying to comprehend a chicken crossing the road for a game of checkers. Our study rekindles an interest in whimsy and the unexpected interplay between energy consumption in distant regions and the competitive fervor of a baseball team, presenting a conundrum as perplexing as trying to catch a photon with a butterfly net.

VI. Conclusion

In conclusion, our study has unraveled a correlation as perplexing as a penguin at a tea party, shedding light on the unexpected link between Liquefied Petroleum Gas (LPG) usage in the Central African Republic and the runs scored by the San Diego Padres. This quirky relationship, akin to finding a pineapple on a pizza, challenges conventional understanding and beckons us to dance with the enigmatic tango of statistical anomalies.

The robust correlation coefficient, reminiscent of a scientist discovering the secret formula for eternal youth, underscores the intricately woven connection between energy consumption and baseball prowess. Like a magician pulling a rabbit out of a hat, the r-squared value's magnitude showcases the tantalizing extent to which variations in LPG usage can elucidate the Padres' runs scored. The rare p-value is as elusive as a statistical leprechaun, beckoning us to embrace the statistical marvel before us.

As we bid adieu to this unconventional odyssey, we are inclined to proclaim, with resounding certainty, that no further research is warranted in this arena. The Propane Paradox, though confounding and captivating, is an elusive enigma best left to ponder over a frothy mug of statistical ale. Thus, let us bid adieu to this peculiar association, akin to a statistical unicorn grazing in the meadows of improbable correlations, and let it spark mirthful contemplation in the annals of research.

In summary, the methodology undertaken in this study mirrored the journey of an explorer, navigating through the terrains of statistical analysis and data to unearth the perplexing connection between LPG usage in Central Africa and the runs scored by a baseball team on the shores of the Pacific.