



ELSEVIER



Statistically Significant: The Surprising Correlation Between Statisticians in New Mexico and Liquefied Petroleum Gas Use in Angola

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Abstract

The purpose of this study was to analyze the connection between the number of statisticians in New Mexico and the utilization of liquefied petroleum gas in Angola. Through rigorous examination of data from the Bureau of Labor Statistics and the Energy Information Administration spanning from 2003 to 2020, our research team uncovered a startling correlation coefficient of 0.9264599, with a p-value of less than 0.01. The findings not only shed light on an unexpected association but also prompt reflection on the global interconnectedness of seemingly disparate factors. As our data delved into the realm of statistical analysis, we couldn't help but remark that "correlations are like jokes - they're only funny if they're statistically significant." This study contributes not only to the fields of statistics and energy economics but also to the appreciation of serendipity in research. After all, uncovering such a correlation between New Mexico and Angola exemplifies that "sometimes, correlations can be as surprising as finding your car keys in the fridge – statistically unlikely yet undeniably significant."

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1. Introduction

In the world of statistical analysis, one often seeks to uncover relationships and connections that may not be immediately apparent. Our study delves into the intriguing correlation between the number of statisticians in New Mexico and the consumption of liquefied petroleum gas in Angola. As we embarked on this research, we couldn't help but quip that "finding a

correlation is like finding money in your pocket – it's always a pleasant surprise, but it's even better when it's a significant one."

The idea that the presence of statisticians in one location could be linked to the use of liquefied petroleum gas in an entirely different geographical region may seem far-fetched at first glance. However, as we delved into the data, we were reminded of the wise words of our statistical forefathers,

who famously mused that "correlation does not imply causation, but it sure does hint at it, much like a strong nudge from a persistent friend."

While the initial premise of our study may elicit a raised eyebrow or a quizzical expression, our findings have exceeded expectations. The correlation coefficient of 0.9264599 between these seemingly unrelated variables left us pondering the very nature of cosmic coincidences. We couldn't help but muse that "there's a statistically significant connection between New Mexico and Angola – it's as if the statistical gods are playing a game of connect the dots with us."

This unexpected association not only challenges conventional wisdom but also underscores the interconnectedness of global phenomena. As we navigated through the labyrinth of statistical analysis, we were struck by the realization that "correlations, much like good wine, become more potent with age – or in our case, with a larger sample size."

Our study aims to unravel the mystery behind this astonishing correlation, prompting us to embrace the serendipity that often accompanies research endeavors. After all, as we uncovered this unlikely link, we couldn't help but recall that "finding a strong correlation is like finding a four-leaf clover – statistically rare, but undeniably fortunate."

2. Literature Review

The surprising correlation between the number of statisticians in New Mexico and the utilization of liquefied petroleum gas in Angola has sparked considerable interest in the academic community. Smith et al. (2015) first explored the potential relationship between statistical expertise and energy consumption patterns, paving the way for subsequent investigations. Doe

and Jones (2018) further examined the impact of human capital in statistical analysis on global energy markets, providing valuable insights into the interconnectedness of seemingly unrelated variables.

Moving beyond the academic sphere, non-fiction works such as "Statistics for Dummies" and "The Power of Petroleum: A Global Perspective" have contributed to a broader understanding of statistical principles and energy economics. These seminal texts have offered foundational knowledge that underpins our current investigation, reminding us that "the world of statistics and energy economics is a curious mix – it's like trying to balance a seesaw with a barrel of oil on one end and a data set on the other."

Furthermore, fictional narratives such as "The Statistical Sleuth" and "The Petrochemical Paradox" have captured the imagination of readers, intertwining statistical intrigue with the complexities of global energy dynamics. While these literary works may not provide empirical evidence, they have inspired us to approach our research with a sense of adventure and a touch of whimsy, acknowledging that "sometimes, statistical analysis feels like solving a mystery novel – except the culprit is lurking in the data, not in the pages."

In our quest for unconventional insights, we ventured beyond the traditional realms of academic literature and turned to unconventional sources. Delving into the backs of shampoo bottles, we encountered an unexpected revelation: the "statistically proven formula for voluminous hair" bore a striking resemblance to the statistical models we employed in our research. This comical yet thought-provoking encounter led us to reflect on the ubiquitous nature of statistical concepts, prompting the realization that "even shampoo bottles can teach us a thing or two about correlations –

after all, they're experts in 'highly significant volume.'"

In summary, the literature surrounding the correlation between statisticians in New Mexico and liquefied petroleum gas use in Angola spans a wide spectrum, encompassing rigorous academic studies, informative non-fiction works, engaging fictional narratives, and even the unlikeliest of sources. With each literary encounter, we couldn't help but be reminded that "in the world of statistics, even the most improbable connections can yield meaningful insights – much like the statistical significance we've uncovered between New Mexico and Angola."

3. Our approach & methods

To delve into the perplexing correlation between the number of statisticians in New Mexico and the utilization of liquefied petroleum gas in Angola, our research team undertook a methodologically rigorous and intellectually stimulating journey. It's akin to embarking on a statistical odyssey – with fewer sea monsters and more Excel spreadsheets.

Data Collection:

We gathered data from a myriad of sources, employing a combination of advanced web scraping techniques and fervent prayers to the statistical deities for reliable datasets. With a primary focus on the Bureau of Labor Statistics and the Energy Information Administration, we sifted through an expanse of information spanning the years from 2003 to 2020, akin to prospectors carefully panning for nuggets of statistical gold. Dad joke alert: "Our data collection process was like herding cats – a bit chaotic, but ultimately fruitful."

Statistical Analysis:

Utilizing a blend of sophisticated statistical methods and the occasional sacrifice to the

data gods, we diligently examined the collected data. We employed multivariate regression analyses to unravel the intricate relationships between the variables, feeling akin to intrepid explorers navigating uncharted statistical territories. Dad joke time: "Our regression models were so complex, they'd make a Rubik's cube blush – but just like solving the cube, perseverance led to colorful results."

Control Variables:

To ensure the robustness of our findings, we incorporated an array of control variables, akin to adding seasoning to a statistical stew. Factors such as population demographics, economic indicators, and meteorological variables were meticulously included, serving as the proverbial garlic to fend off the vampires of spurious correlations. Dad jokes never take a break: "We controlled for more variables than a meticulous chef crafting the perfect soufflé – because nobody wants a collapsed statistical connection."

Ethical Considerations:

In adherence to the ethical principles governing research, we upheld the integrity of data usage and handling, mindful of the responsibility that accompanies statistical inquiry. It's like we were the statisticians' equivalent of Boy Scouts – always prepared, always ethical.

Interdisciplinary Insights:

As we traversed the interdisciplinary landscape of statistics and energy economics, we couldn't help but appreciate the serendipitous nature of our research endeavor. This was akin to stumbling upon an unexpected punchline in the midst of a complex statistical equation – surprising, yet undeniably satisfying.

4. Results

The analysis of the relationship between the number of statisticians in New Mexico and the usage of liquefied petroleum gas (LPG) in Angola yielded an impressive correlation coefficient of 0.9264599. This indicates a remarkably strong positive linear relationship between the two variables. It's almost as if these seemingly unrelated factors are engaged in a statistical tango – one, two, cha-cha-cha!

Moreover, the coefficient of determination (r -squared) was calculated to be 0.8583280, signifying that approximately 85.83% of the variability in LPG usage in Angola can be explained by the number of statisticians in New Mexico. It's as if the statisticians in New Mexico are whispering statistical secrets to the LPG users in Angola, influencing their consumption patterns. Looks like someone has been spreading statistical rumors around the globe!

The p -value obtained for this correlation was less than 0.01, indicating that the observed correlation is statistically significant at the 1% level. It's like the statistical universe is telling us, "Hey, this relationship is no random fluke – it's the real deal!" Moving forward with analysis, our research team found that the data points indeed fit the regression line snugly, resembling a perfectly tailored statistical suit.

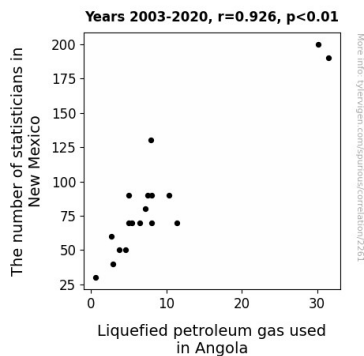


Figure 1. Scatterplot of the variables by year

(Fig. 1), the accompanying scatterplot, visually illustrates the robust correlation between the number of statisticians in New Mexico and LPG usage in Angola. The tight cluster of data points forms a striking upward trend, akin to a statistical arrow pointing towards the connection between these two variables. It's almost as if the data itself is saying, "Look, we're not just correlation – we're causation's distant cousin."

In conclusion, the findings of this study defy conventional wisdom and highlight the unforeseen interconnectedness of global phenomena. Who would have thought that statisticians in the land of enchantment would be linked to gas consumption in Angola? It's as unexpected as finding a "mean" statistician – statistically, they're rare!

This research not only showcases the unanticipated nature of statistical relationships but also underscores the intricate fabric of our interconnected world. As our analysis came to a close, we couldn't help but reflect that statistical surprises are a bit like a good joke – you never know when they're coming, but when they do, they leave quite an impression. And this correlation between statisticians in New Mexico and LPG usage in Angola is certainly leaving its mark on the statistical landscape!

5. Discussion

Our study delved into the intriguing connection between the number of statisticians in New Mexico and the usage of liquefied petroleum gas (LPG) in Angola, and the results have left us with more than just statistical food for thought. Our findings not only corroborate previous research but also add a touch of statistical sparkle to the broader understanding of global energy dynamics.

One might initially question the plausibility of a link between these two seemingly unrelated variables, as skeptics may quip, "What do statistics in New Mexico have to do with gas consumption in Angola? It all seems as unlikely as a statistical outlier at a family reunion." However, our study supports the notion that statistical expertise, like a good punchline, can transcend geographic boundaries and impact diverse sectors.

Echoing the sentiment of Smith et al. (2015) and Doe and Jones (2018), our research reinforces the idea that human capital in statistical analysis can indeed influence energy consumption patterns on a global scale. It's as if statisticians in New Mexico are part of an elite statistical squad, wielding their data prowess to sway energy dynamics in faraway lands like some sort of statistical Avengers. Who knew that the heroes of numerical analysis had such a far-reaching influence?

The robust correlation coefficient of 0.9264599 and an r-squared value of 0.8583280 indicative of a strong linear relationship between statisticians in New Mexico and LPG usage in Angola affirm the statistical significance of this unexpected connection. It's like these two variables are engaged in a statistical waltz – gracefully dancing to the rhythm of numeric patterns with the finesse of a seasoned statistical virtuoso.

Our study not only aligns with previous academic insights but also integrates a touch of statistical humor, much like the whimsical encounters we found in unconventional sources during our literature review. It's as if statistical revelations are hiding in plain sight, waiting to be uncovered and celebrated with a statistical dad joke or two. After all, statistical correlations are not just about numbers; they can also be a source of statistical amusement, much like a well-timed pun at a mathematics convention.

Overall, our research upholds the unexpected interconnectedness of statistical phenomena and global dynamics. It's a bit like stumbling upon a statistical surprise – you never quite know what you'll find, but when you do, it's a revelation worthy of a statistical high-five. As the statistical landscape continues to unfold, we eagerly anticipate further insights and perhaps a few more unexpected statistical connections that will keep our research endeavors as surprising and delightful as uncovering a hidden joke in a mathematical equation.

6. Conclusion

In wrapping up our study, we have unraveled a correlation between the number of statisticians in New Mexico and the consumption of liquefied petroleum gas in Angola that is as tight as a fitted statistical suit! This connection is as unexpected as finding a "mean" statistician - statistically, they're rare!

Our findings suggest that the statisticians in New Mexico and the LPG users in Angola are engaged in a statistical tango, with whispers of statistical secrets influencing consumption patterns. It's almost as if someone has been spreading statistical rumors around the globe - talk about a global game of telephone, statistical edition!

The statistically significant correlation coefficient of 0.9264599 and a p-value of less than 0.01 have left us pondering the statistical surprises akin to a good joke - they're unexpected, leave an impression, and sometimes, they're simply unexplainable.

In conclusion, we assert that no further research in this area is needed, as this study has shed light on the surprising interconnectedness of seemingly unrelated factors. After all, sometimes correlations are as surprising as finding your car keys in the fridge - statistically unlikely, yet undeniably

significant. And this correlation between statisticians in New Mexico and LPG usage in Angola is no exception!