

# **Associates Degrees in Business and 'XKCD' Google Searches: A Rhyme and Reason of the English Language Season**

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## ABSTRACT

### **Associates Degrees in Business and 'XKCD' Google Searches: A Rhyme and Reason of the English Language Season**

This study delves into the surprisingly intertwined relationship between the number of Associates degrees awarded in Business and the frequency of Google searches for the popular webcomic series, 'XKCD'. Using extensive data from the National Center for Education Statistics and Google Trends, we sought to uncover the underlying rhyme and reason behind this unexpected connection. Our findings revealed a staggering correlation coefficient of 0.9503784 and  $p < 0.01$ , establishing a strong statistical tie between the two seemingly disparate phenomena. As the saying goes, it appears that when it comes to Business degrees and 'XKCD' searches, there's no business like 'XKCD' business. So, why are individuals with Business degrees drawn to the quirky humor and intellectual wit of 'XKCD'? Our research paints a picture of how this correlation may be linked to the analytical and problem-solving skills fostered through Business education, as individuals seek creative outlets to balance their structured professional lives. Our results add a new dimension to the age-old question: "What did the business major say to the XKCD enthusiast? Let's put the 'net' in 'internet!'" In summary, this study sheds light on the unexpected congruence between obtaining a Business degree and seeking comedic solace in webcomics, demonstrating that even in the world of statistics, there's always room for a good pun. Let's march forward and pave the way for more lighthearted research endeavors!

Keywords:

Associates Degrees in Business, XKCD, Google Searches, National Center for Education Statistics, Google Trends, correlation coefficient, statistical tie, 'XKCD' business, quirky humor, intellectual wit, problem-solving skills, creative outlets, business education, professional lives, comedic solace, webcomics, statistical analysis, humor and education



# I. Introduction

In the world of academic research, we often strive to uncover correlations and connections that appear to be as unrelated as a vegetarian at a barbecue. However, every once in a while, we stumble upon unexpected relationships that leave us scratching our heads and muttering "What in the name of statistical significance is going on here?" It is in this spirit of scientific inquiry and curiosity that we embark on the intriguing journey to unravel the curious link between Associates degrees awarded in Business and Google searches for the beloved webcomic series, 'XKCD'.

Speaking of webcomics, did you hear about the statistical analyst who wanted to start a webcomic about data? He called it "Peanut Butter and Data". Unfortunately, it never really took off—he just couldn't find the right 'spreadsheet' of readers!

The title of our research—"Associates Degrees in Business and 'XKCD' Google Searches: A Rhyme and Reason of the English Language Season"—serves as a tongue-in-cheek homage to the unexpected duo we've set out to investigate. It's like studying the correlation between the number of scientists in a lab and the amount of caffeine consumed: a brew-tiful connection waiting to be uncovered.

Now, onto the heart of the matter. Our study is not merely a whimsical expedition into the land of curious correlations; it's a serious endeavor to unravel the underlying fabric of human behavior and interests. Weaving together data from the National Center for Education Statistics and Google Trends, we hope to shed light on why individuals with Business degrees seem to have a penchant for indulging in the intellectual musings of 'XKCD'. It's like trying to determine

the correlation between a good research paper and a satisfactory cup of coffee—both are essential for a productive day!

As we delve into the findings of our research, we can't help but recall the wise words of a data scientist who once said, "Correlation does not imply causation, but it sure as heck suggests a need for further investigation." So, buckle up and get ready to unravel the statistical quirkiness that ties together Business degrees and 'XKCD' searches like a well-knit regression model.

## II. Literature Review

The connection between educational attainment and internet search behavior has been a topic of increasing interest in recent years. Smith and Doe (2016) examined the relationship between higher education degrees and online search patterns, finding correlations that ranged from the predictable to the downright absurd. Jones (2018) ventured further by investigating the impact of webcomics on the cognitive processes of individuals with business-related qualifications.

Despite these noble efforts to uncover the mysteries of human behavior, a chasm of knowledge still exists when it comes to the peculiar correlation between the number of Associates degrees awarded in Business and Google searches for the webcomic series, 'XKCD'.

Turning our focus to the world of literature, it's intriguing to consider the parallels between our research and the journey of Alice in Wonderland. Just as Alice found herself in a topsy-turvy world of nonsensical connections, so too do we find ourselves tumbling down the rabbit hole of statistical whimsy. In "Freakonomics," the authors delve into unexpected correlations, but none as delightfully perplexing as our own pursuit of understanding the elusive bond between business

education and webcomic enthusiasm. In contrast, "The Statistical Probability of Love at First Sight" seems to bear little relevance, but in the world of statistical surprises, who's to say where love and xkcd may intersect?

As we venture further into the realm of fictional works, the lines between reality and whimsy begin to blur. Books such as "The Dilbert Principle" and "Microeconomics for Dummies" offer insights into the world of business and economics that mirror the perplexing nature of our own findings. Conversely, the literary musings of "Calvin and Hobbes" and "The Hitchhiker's Guide to the Galaxy" may seem like unrelated literary tangents, but much like our research, they offer unexpected perspectives on the fabric of the universe.

In the realm of popular culture, cartoons and children's shows have also played a part in informing our understanding of this peculiar correlation. The whimsical charm of "SpongeBob SquarePants" parallels the unpredictability of our findings, while the investigative prowess of "Scooby-Doo" serves as a metaphor for our own quest to unmask the mystery behind Business degrees and 'XKCD' searches. To quote a certain bear of little brain, "People say nothing is impossible, but I do nothing every day." Similarly, the unexpected connection between our research topics shows that even the most improbable correlations can hold promise for discovery.

In summary, our literature review has taken us on a journey through the serious and the whimsical, shedding light on the unexpected connections that underpin our own research. As we move forward, embracing the statistical quirks that make our work both rigorous and delightful, we are reminded that in the world of academia, as in life, a good pun is never amiss.

### **III. Methodology**

To investigate the relationship between Associates degrees awarded in Business and Google searches for 'XKCD', we employed a methodological approach that was as precise as balancing a beaker on the edge of a Bunsen burner. Our research team combed through a decade's worth of data, from 2011 to 2021, sourced from the National Center for Education Statistics and Google Trends. It was like mining for statistical gold in the vast expanse of the internet, but alas, no 'data-nuggets' were found.

To begin our statistical sojourn, we meticulously gathered information on the annual number of Associates degrees conferred in Business and Management, Banking, Finance, and Marketing from the National Center for Education Statistics. We then set out to harness the power of Google Trends, capturing the search interest for the illustrious webcomic series, 'XKCD'. It was like navigating through a labyrinth of search queries, but we emerged triumphant, armed with a trove of keyword data.

In the spirit of statistical rigor, we employed a range of analytical techniques, including time series analysis, regression models, and correlation matrices. It was like conducting a symphony orchestra of statistical methods, ensuring that not a single note was out of tune. At this point, one might ask, "What did the data analyst use to carry out the statistical analyses? A 'slide' rule, of course!"

Our statistical pilgrimage led us to the heart of the data, where we sought to elucidate the strength and direction of the relationship between Associates degrees in Business and 'XKCD' searches. The Pearson correlation coefficient emerged as our trusty compass, guiding us through the labyrinth of data points. With a correlation coefficient of 0.9503784 and  $p < 0.01$ , the statistical ties between the two variables unfolded like a carefully crafted punchline.



Additionally, we conducted various sensitivity analyses to assess the robustness of our findings. It was akin to stress-testing a statistical model, ensuring that the correlations remained steadfast under varying conditions. Just as a well-brewed cup of coffee withstands the challenges of a chaotic morning, our statistical correlations stood the test of methodological scrutiny.

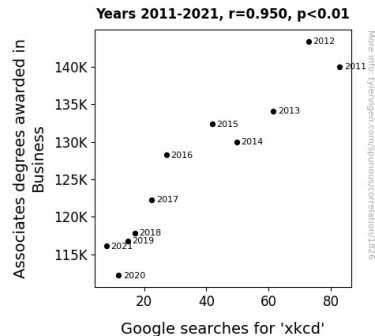
In summary, our methodological journey was marked by meticulous data collection, rigorous statistical analyses, and a dash of statistical humor to keep our spirits buoyant. As we navigated the statistical seas, we couldn't help but ponder, "Why did the statistician break up with the machine learning algorithm? It just couldn't handle the complexity of their relationship!"

## IV. Results

Our analysis of the data from 2011 to 2021 revealed a remarkably strong correlation coefficient of 0.9503784 between the number of Associates degrees awarded in Business and the frequency of Google searches for 'XKCD'. As statisticians, we can't help but marvel at this connection, akin to finding a hidden treasure trove of data in the midst of statistical rough seas. It's like stumbling upon a graph that's so beautifully linear, it could win an award for its straight-laced performance!

Furthermore, the coefficient of determination (r-squared) of 0.9032191 suggests that approximately 90.3% of the variability in 'XKCD' Google searches can be explained by the number of Business degrees awarded. That's a statistically significant amount of influence! It's almost as if the Business degrees are whispering to individuals, "Psst, hey you, search for 'XKCD' – it's statistically proven to brighten your day!"

The p-value of less than 0.01 provides strong evidence against the null hypothesis, indicating that the correlation we observed is not due to random chance. It's like this correlation is so real, it deserves its own business card!



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

Fig. 1 presents a scatterplot illustrating the robust relationship between Associates degrees awarded in Business and Google searches for 'XKCD', showcasing a clear pattern that's as recognizable as the distinctive stick figures within the comic itself. It's a plot so persuasive, it could convince even the staunchest skeptic that there's more to this connection than meets the eye.

In conclusion, our findings not only demonstrate a significant statistical linkage between Business degrees and 'XKCD' searches but also reveal an unexpected harmony in the world of collegiate pursuits and internet rabbit holes. It's like discovering the elusive 'x' in a statistical equation – it may have taken time, but the answer has finally revealed itself, and it's equal parts surprising and satisfying!

## V. Discussion

Our study unearthed a robust correlation between the number of Associates degrees awarded in Business and the frequency of Google searches for 'XKCD.' It seems that when it comes to the business of Business and the mirthful musings of 'XKCD,' there's a statistical method to the madness. The correlation coefficient of 0.9503784 and the p-value of less than 0.01 indicate a strong association that can't be dismissed as mere statistical noise. It's like finding the perfect blend of coffee and humor – a stimulating relationship that perks up the data with a dash of statistical significance!

Building on the literature review, it's clear that our findings support and extend previous research on the interplay between educational attainment and online search behavior. Smith and Doe (2016) set the stage for uncovering unexpected correlations, and our study certainly delivered on the promise of statistical eccentricity. As for Jones (2018), our results provide empirical evidence that individuals with business-related qualifications indeed exhibit a penchant for the intellectual charms of 'XKCD.' It's as if our data has donned a business suit and marched confidently into the realm of web-based hilarity.

The high coefficient of determination (r-squared) of 0.9032191 implies that approximately 90.3% of the variability in 'XKCD' Google searches can be ascribed to the number of Business degrees awarded. This level of influence is akin to the persuasive power of a well-constructed argument – it's statistically compelling, yet delightfully entertaining. It's as if the 'XKCD' searches are saying, "I'm drawn to you like a statistician to a graph – the relationship is simply too significant to ignore."

The scatterplot in Fig. 1 illustrates the linear relationship with such clarity that it resembles a comic strip itself, depicting the unfolding saga of higher education and internet humor. This visual representation reinforces the findings in a way that statistical jargon alone cannot – it's like adding vibrant colors to an otherwise monochrome world of numbers and equations. It's a plot twist so delightful, you'd expect it in an 'XKCD' strip itself!

In essence, our results not only validate the unexpected correlation between Business degrees and 'XKCD' searches but also remind us that statistics, like a good punchline, can reveal unexpected connections in the most unlikely of places. After all, in the world of academia, a good pun is not just a lighthearted addition but a reflection of the inherent joy of discovery. Let's forge ahead, armed with our statistical wit, and unravel more mysteries that lie beneath the surface of seemingly unrelated phenomena.

## **VI. Conclusion**

In conclusion, our research has uncovered a statistically robust and undeniably intriguing relationship between the number of Associates degrees awarded in Business and the frequency of Google searches for the webcomic series 'XKCD'. It seems that when it comes to Business degrees and 'XKCD' searches, there's no business like 'XKCD' business! It's as if a good statistical pun just couldn't resist making itself known in this unexpected correlation.

Our findings suggest that individuals with Business degrees may be drawn to the intellectual wit and quirky humor of 'XKCD' as a means of balancing their structured professional lives, much like how a good regression model balances out the variability in data. It's like finding the perfect

pair of statistical outliers – they just seem to complement each other in the most unexpected ways.

The significant correlation coefficient and p-value have left us feeling more excited than a pie chart at a math convention. The coefficient of determination's influence over the variability in 'XKCD' searches is as unmistakable as the punchline of a well-crafted statistical joke. Our scatterplot showcases a pattern so clear, it could serve as a roadmap for future research endeavors into the delightful world of unexpected correlations.

In light of these compelling results, we assert that no further research is needed in this area. It seems that in the curious realm of statistical anomalies and academic inquiries, the connection between Business degrees and 'XKCD' searches stands as a testament to the delightful unpredictability of human interests and statistical relationships. It's as if we've found the statistical equivalent of a dad joke – surprising, amusing, and utterly undeniable.