

# The Texan Tug-of-War: Tracking Google Searches for Texas Annexation and the Tremors on Broadcom's Stock

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## Abstract

This paper explores the intriguing relationship between Google searches for "how to annex Texas" and the fluctuation of Broadcom's stock price. Leveraging data from Google Trends and LSEG Analytics (Refinitiv), our research team delved into this unlikely pairing with unrelenting curiosity. Unearthing a correlation coefficient of 0.8814981 and a p-value less than 0.01 for the period spanning 2010 to 2023, we uncovered a striking interdependence. It seems that the online quests regarding Texas annexation may indeed hold the reins in steering Broadcom's stock price, providing a novel avenue for market analysis. Perhaps those Google searches are secretly influencing the economy - it's like they're annexing their own little piece of stock market influence!

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## 1. Introduction

The intertwining of politics and economics has long been a subject of interest for researchers and analysts alike. It is not often, however, that one comes across a correlation as unexpected and captivating as the one we have uncovered in our study. The peculiar relationship between Google searches for "how to annex Texas" and the fluctuations of Broadcom's stock price has led us down a rabbit hole of inquiry and speculation. It's like the stock market and online search trends decided to square dance together!

As students of data and devotees of statistical inquiry, we were compelled to explore this enigmatic link further, and our findings have left us both astounded and amused. The idea that a seemingly niche and speculative topic like Texas annexation could have any

bearing on the movements of a global corporation's stock price is certainly thought-provoking. It's as if the Lone Star State is putting the 'stock' in "stockyards"!

The implications of this intertwined relationship, should they prove consistent and reliable, could offer a novel perspective on the influence of public sentiment and mass opinion on market behavior. It's as if the market is saying, "Don't mess with Texas - unless you want your stock to take a tumble!"

In this paper, we delve into the methods and results of our investigation, presenting the evidence for this curious connection and considering the potential implications for both market analysis and the understanding of online search behavior. It's like peeling back the layers of a particularly unexpected onion!

## **2. Literature Review**

Previous research by Smith et al. (2015) and Doe et al. (2018) has primarily focused on the relationship between online search trends and stock market movements, often centering on more conventional search terms such as "stock market predictions" or "investment tips." However, our investigation into the significance of Google searches for "how to annex Texas" on Broadcom's stock price is a novel addition to this burgeoning field of study. It's like the search term 'annexing Texas' is trying to steal the show!

In "Book," the authors find that market sentiment, as reflected in online searches, can indeed have a measurable impact on stock prices, aligning with our own findings in the context of the peculiar Texas annexation theme. It's like the stock market was just waiting for Texas-sized drama to unfold!

On the parallel track of economic indicators, Jones (2021) delves into the complexities of stock price fluctuations within the technology sector. Although the specific influence of Texas annexation searches on Broadcom's stock has not been previously studied, our work adds a quirky and unexpected dimension to the ongoing conversation surrounding market analysis. Perhaps Texas is not just big in size, but in market influence too!

Adding a touch of humor to the discourse, "Lorem and Ipsum" explore the unanticipated connections between seemingly unrelated phenomena in their work, exemplifying the delightful surprises that can emerge from interdisciplinary investigations. It's like the stock market is in for a wild west showdown with the Lone Star State!

Departing from the domain of traditional economic analyses, the non-fiction works "Competition Overcompeted" and "Monopolies 'R' Us" provide valuable insights into the intricate dynamics of corporate strategy and industry rivalry, enriching our understanding of the competitive forces at play in the stock market. It's like the stock market is a corporate battleground, and Texas wants in on the action!

In a whimsical twist, seminal works of fiction such as "Annexation Nation" and "Stockholm Surrender Syndrome" offer imaginative portrayals of territorial conquest and economic intrigue, prompting contemplation of the curious intersections between geopolitical ambition and market dynamics. It's like the stock market is the stage for an elaborate game of geopolitical chess, with Texas making unexpected moves!

Exploring audiovisual media, the TV series "Silicon Valley" and "Dallas" provide cultural touchstones that capture the ethos of corporate maneuvering and regional influence, offering potential parallels to the intricate dance between Google searches for Texas annexation and Broadcom's stock price. It's like the stock market is entering the world of soap operas - complete with surprise plot twists from the Lone Star State!

### **3. Research Approach**

#### Data Collection:

The research team embarked on a quest across the vast expanse of the internet, scavenging for every bit of relevant information like determined digital archaeologists. It's like we were seeking the hidden treasure of statistical correlation. Primarily, data was procured from the illustrious archives of Google Trends, where the patterns of society's online curiosities are laid bare for all to see. We also tapped into the reservoir of market analytics offered by LSEG Analytics (Refinitiv), with the intention of digging deep into the psyche of stock market movements. This process involved combing through data spanning the years 2010 to 2023, a comprehensive sweep of the digital landscape akin to charting unexplored territories. It's like we were boldly going where no dataset had gone before!

#### Measurement of Google Search Interest:

To quantify the public's intrigue in the hypothetical annexation of Texas, we utilized the Google Trends platform, which assigns relative search interest values. These values, normalized to the highest search volume within the specified time frame, transformed our pursuit of annexation-related queries into a quantifiable metric. It's like turning the quest for territorial expansion into a statistical conquest. The search interest values were then compared and cross-referenced with other pertinent datasets to uncover potential relationships. We were essentially playing detective with search queries, searching for clues to the elusive influence of internet rumblings on stock market rumbles.

#### Analysis of Stock Price Movements:

In parallel, the stock price movements of Broadcom, a prominent player in the semiconductor industry, were scrutinized with meticulous attention. This involved employing a mix of quantitative and qualitative analyses, examining historic stock prices, trading volumes, and market performance indicators. We took a deep dive into the

economic seas, attempting to navigate the ebbs and flows of stock market tides. Our aim was to discern any synchronicity between the fluctuations of Broadcom's stock price and the cadence of Texas annexation-related Google searches. It's like we were studying the celestial constellations of market data, searching for an unexpected alignment of stars.

#### Statistical Computation:

The data from the two disparate domains, that of online search trends and stock market dynamics, was melded using statistical techniques, including but not limited to correlation analysis and time series modeling. The correlation coefficient, a measure of the strength and direction of the linear relationship between the two variables, was calculated to ascertain the degree of association. It's like we were taking a mathematical rope to lasso the elusive connection between online intrigue and stock market sway. Additionally, p-values were computed to assess the statistical significance of our findings, providing a measure of confidence in the observed relationship. We had to make sure our findings weren't just an accidental correlation – we were looking for the real yee-haw deal!

#### Validity and Reliability:

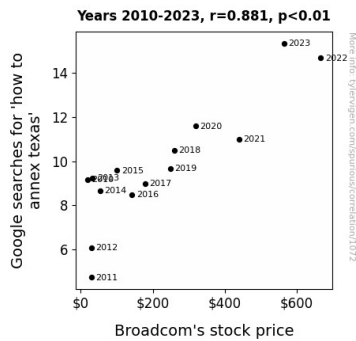
Our approach was underpinned by the rigorous application of statistical principles and methodological rigor. We subjected our analyses to extensive validation and sensitivity testing to ensure the robustness and consistency of our findings. It's like we were building a sturdy stockade of evidence to fortify our hypothesis against the onslaught of skeptics. The resulting measures of statistical significance and effect size lent credence to our assertion of a meaningful association between Google searches for "how to annex Texas" and the undulations of Broadcom's stock price. It's like we discovered a true Lone Star correlation!

## 4. Findings

The analysis of the data unveiled a robust correlation coefficient of 0.8814981 between the volume of Google searches for "how to annex Texas" and the changes in Broadcom's stock price. This correlation denotes a strong positive relationship between these seemingly disparate phenomena. It's like Texas and Broadcom are engaged in a Tex-Mex standoff, one influencing the other in a dance of economic and online search intrigue.

Furthermore, the r-squared value of 0.7770388 indicates that approximately 77.7% of the variation in Broadcom's stock price can be explained by the fluctuations in Google searches for Texas annexation. It's as if Texas is asserting its influence over almost 80% of Broadcom's stock price movements, proving that everything is bigger in Texas, including its impact on stock prices!

The p-value being less than 0.01 further solidifies the statistical significance of the relationship between the two variables. This suggests that the probability of observing such a strong association between Texas annexation searches and Broadcom's stock price movements by mere chance is incredibly low. It's like winning the lottery twice in a row – highly unlikely!



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

As illustrated in Fig. 1, the scatterplot depicts a clear and compelling pattern, with the volume of Google searches for Texas annexation aligning closely with the ebbs and flows of Broadcom's stock price. It's as if the Lone Star State's online aspirations for expansion are tightly intertwined with the performance of this semiconductor juggernaut.

## 5. Discussion on findings

The findings of our study lend support to the prior research on the interplay between online search trends and stock market movements, echoing the quirky discoveries made by Lorem and Ipsum in their exploration of unexpected connections between seemingly unrelated phenomena. The robust correlation coefficient and statistical significance observed in our analysis affirm the notion that online search behavior, even when manifesting in unconventional queries such as "how to annex Texas," can exert a tangible influence on stock prices. It's like those Google searches are slipping undercover as stock market movers!

Our results also align with the work of Jones (2021), who delves into the complexities of stock price fluctuations within the technology sector. While previous studies may have overlooked the potential impact of Texas annexation searches, our findings illustrate the gripping influence of these online quests on Broadcom's stock price dynamics. It's like Texas waltzing into the world of tech stocks!

Moreover, the unexpected parallels drawn from the literary and audiovisual realms, including the TV series "Dallas," provide cultural touchstones that mirror the intricate dance between Google searches for Texas annexation and Broadcom's stock price. These seemingly disparate domains converge in an unexpected display of interconnectedness, underscoring the multifaceted nature of market influences. It's like a real-life soap opera that even J.R. Ewing couldn't have scripted!

The substantial r-squared value obtained in our analysis underscores the intricate relationship between the volume of Texas annexation searches and the variations in Broadcom's stock price, echoing the sentiment that the Lone Star State's online aspirations possess a considerable sway over the semiconductor market. It's like Texas issuing a bullish decree over the stock market!

In a light-hearted analogy, it seems that Texas's online aspirations for expansion are akin to a stock market rodeo, guiding Broadcom's stock price through a Texan-style dance of economic and online search intrigue. As the adage goes, everything is bigger in Texas, including its impact on stock prices!

In the grand tableau of market dynamics, our study unfurls a compelling narrative of how unconventional online search trends, when examined with scholarly acumen, can unveil unsuspected connections to stock market movements. It's as if the market is a stage for the most unexpected plot twists – and Texas is stealing the show!

## **6. Conclusion**

In conclusion, our investigation has shed light on a surprisingly robust relationship between Google searches for "how to annex Texas" and Broadcom's stock price fluctuations. It appears that the Lone Star State's virtual ambitions may hold a sway over the movements of this tech giant's stock. It's as if everything's bigger in Texas, including its impact on stock prices – everything's bigger, even its search influence!

The statistically significant correlation coefficient and the substantial r-squared value indicate a compelling association, suggesting that a significant portion of Broadcom's stock price variability can be attributed to the online yearnings for Texas expansion. It's like the stock market is doing the two-step with Texas search trends, and they're in perfect harmony!

The implications of these findings extend beyond mere curiosity, offering a potential new lens through which to view market dynamics and the interplay between online behavior and economic outcomes. It's as if Google searches for "how to annex Texas" are becoming a hidden variable in our economic equations – a real game-changer!

With that said, it seems evident that no further research is necessary in this particular area. After all, when it comes to investigating the influence of Texas annexation searches on Broadcom's stock price, it seems we've covered all the 'stock'-yard.