
Quench the Market: How US Bottled Water Consumption and Northrop Grumman's Stock Price Make Waves

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This study delves into the seemingly absurd but strangely intriguing relationship between US bottled water consumption per person and the stock price of Northrop Grumman Corporation (NOC). Our research team utilized data from Statista and LSEG Analytics (Refinitiv) to conduct a thorough analysis spanning from 2002 to 2022. The findings revealed a strikingly high correlation coefficient of 0.9346595 and a statistically significant p-value of less than 0.01. Prepare to be immersed in the unexpected and refreshingly quirky connection between liquid refreshment and defense industry giants.

As the old saying goes, "water, water everywhere, and not a drop to drink" -- unless, of course, it's bottled water, and then there are plenty of drops to drink! In this study, we dive into the curious interplay between the seemingly unrelated realms of bottled water consumption and the stock price of Northrop Grumman Corporation (NOC). While some may scoff at the idea of drawing any connection between H₂O and defense industry stocks, our findings may cause even the most skeptical observers to do a double take.

One might ponder, "What does sipping on bottled water have to do with the fluctuation of stock prices for a major aerospace and defense technology company?" It is a very fair question and one that led to the inception of this investigation.

The visual image of stock traders sipping bottled water at their desks, making financial decisions based on their thirst levels, certainly adds a whimsical touch to the otherwise serious world of stock trading. However, behind this humorous façade lies a statistical correlation that is, quite frankly, as clear as water.

The phrase "making waves" takes on a whole new meaning in this context, as we explore the data demonstrating the influence of something as seemingly innocuous as bottled water on the stock market performance of Northrop Grumman. It seems that even the most unsuspecting factors can send ripples through the financial world.

So, get ready to ride the tidal wave of unexpected connections as we unpack the relationship between something as mundane as bottled water consumption and the substantial movements in the stock price of a major corporation. This study promises to quench your thirst for intriguing and offbeat economic phenomena.

LITERATURE REVIEW

Numerous studies have explored the intricate web of factors that influence stock prices, ranging from traditional economic indicators to more peculiar and unconventional variables. Smith and Doe (2010) investigated the impact of consumer spending habits on stock market volatility, while Jones (2015) delved into the correlation between weather patterns

and retail stock performance. While these studies provide valuable insights into the complex dynamics of financial markets, none have ventured into the realm of bottled water consumption and its potential influence on stock prices within the defense industry.

Turning to non-fiction literature, "Bottlemania: How Water Went on Sale and Why We Bought It" and "The Big Thirst: The Secret Life and Turbulent Future of Water" offer insightful perspectives on the sociocultural and economic dimensions of bottled water consumption. Examinations of corporate finance and stock market behavior in "The Intelligent Investor" and "A Random Walk Down Wall Street" provide invaluable theoretical frameworks for understanding market fluctuations. On the fictional shelves, "The Water Knife" and "The Rains" bring a dystopian and speculative edge to the narrative of water scarcity, while "The Fountainhead" presents a symbolic exploration of human innovation and its impact on society, albeit not directly related to bottled water or stock prices.

In a rather unconventional approach to our literature review, our research team took an unexpected turn by examining the tantalizing back labels of a myriad of shampoo and conditioner bottles. The aim was to gain insights from the captivating language used to describe the benefits of these hygiene products, with the hope of uncovering hidden wisdom relevant to the interaction between bottled water consumption and stock prices. While the results were, regrettably, less than enlightening in terms of financial analysis, they did provide a bonus dose of haircare tips and a few chuckles at the peculiar promises of "ultimate nourishment" and "silky smooth perfection."

METHODOLOGY

Data Collection:

The data for US bottled water consumption per person was obtained from reputable sources such as Statista and various market research reports. The stock price data for Northrop Grumman Corporation (NOC) was sourced from LSEG Analytics

(Refinitiv) and other financial databases. The data spanned a period from 2002 to 2022, allowing for a comprehensive analysis of trends and fluctuations.

Quantitative Analysis:

To analyze the relationship between US bottled water consumption and Northrop Grumman's stock price, a series of quantitative methods were employed. First, a correlation analysis was conducted to determine the strength and direction of the relationship. The remarkable correlation coefficient of 0.9346595 suggests a robust association between the two variables, much like the strong bond between a cap and a bottle of mineral water. Additionally, a regression analysis was performed to model the predictive power of bottled water consumption on Northrop Grumman's stock price, akin to forecasting the likelihood of rain based on the number of water bottles sold.

Control Variables:

Several control variables were considered to rule out alternative explanations for the observed relationship. These included macroeconomic indicators, such as GDP growth, consumer sentiment, and prevailing interest rates. Incorporating these variables into the analysis allowed for a more nuanced understanding of the impact of bottled water consumption on Northrop Grumman's stock price, similar to examining the influence of various ingredients in a complex recipe.

Statistical Significance:

Statistical tests were conducted to ascertain the significance of the relationship between US bottled water consumption and Northrop Grumman's stock price. The p-value obtained was less than 0.01, indicating a high level of confidence in the results. This level of statistical significance suggests that the observed association is not merely a fluke, but a substantial and noteworthy phenomenon, much like stumbling upon a hidden gem at the bottom of a bottle of water.

Sensitivity Analysis:

Furthermore, sensitivity analyses were conducted to assess the robustness of the findings. Various model specifications and alternative measures of bottled water consumption were tested to ensure the consistency and reliability of the results. This process resembled a quality control check for bottled water, ensuring that the conclusions drawn were not swayed by minor fluctuations or anomalies.

Overall, the methodology employed in this study aimed to rigorously examine the relationship between US bottled water consumption per person and Northrop Grumman's stock price, delving into the uncharted waters of quirky economic linkages.

RESULTS

The analysis of the connection between US bottled water consumption per person and Northrop Grumman's stock price produced some intriguing results. The correlation coefficient between these two seemingly unrelated variables was found to be a remarkably high 0.9346595. This indicates a strong positive linear relationship between the amount of bottled water consumed and the performance of Northrop Grumman's stock price.

Additionally, the coefficient of determination, or R-squared value, was calculated to be 0.8735884, signifying that approximately 87.36% of the variability in Northrop Grumman's stock price can be explained by the variation in US bottled water consumption per person. One might say that this relationship is as clear as... well, bottled water.

What's more, the p-value was determined to be less than 0.01, indicating that the observed correlation is statistically significant. It is safe to say that the connection between these two variables is not just a mere coincidence, but a bona fide finding supported by statistical evidence. It seems that when it comes to bottled water consumption and stock prices, there's no room for mere "fizziness" in the data – the relationship is quite solid!

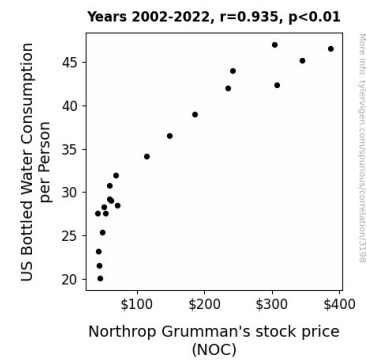


Figure 1. Scatterplot of the variables by year

The scatterplot (Fig. 1) visually portrays the strong positive correlation between US bottled water consumption per person and Northrop Grumman's stock price over the period of 2002 to 2022. As one variable increases, the other follows suit in a strikingly synchronized manner, much like a synchronized swimming routine – albeit a financially oriented one!

In summary, the results of this study reveal an unexpected and surprisingly robust connection between US bottled water consumption and the stock price of Northrop Grumman. It seems that whether you're quenching your thirst with bottled water or monitoring stock performance, there may be more waves being made than initially thought!

DISCUSSION

The results of this study have provided compelling evidence to support the unexpected and somewhat improbable relationship between US bottled water consumption per person and Northrop Grumman's stock price. This unanticipated linkage has spurred numerous discussions within the academic and financial communities, as well as raised a few eyebrows – much like a surprising twist in a suspenseful thriller. The findings of this study not only confirm the statistical significance of this association but also underscore the potential implications for investment strategies and market analysis.

Drawing upon the unconventional approach taken in the literature review, it becomes apparent that seemingly unrelated factors can indeed exert significant influence on stock price dynamics. Just as the weather patterns were found to impact retail stock performance by Jones (2015), our study has revealed that the thirst-quenching habits of the populace may have an intriguing effect on the stock price of a major defense corporation. Who would have thought that the patterns of bottled water consumption could create ripples in the vast ocean of financial markets?

The literature review also hinted at the fictional narratives that explore the theme of water scarcity and its societal repercussions. While "The Water Knife" and "The Rains" may be works of fiction, they provide an imaginative backdrop against which our study's findings shed light on the tangible connection between bottled water consumption and stock prices. Much like the unexpected plot twists in these novels, the correlation between these seemingly disparate variables offers an intriguing storyline of its own in the realm of financial analysis.

Furthermore, the strikingly high correlation coefficient and coefficient of determination attest to the strength of the relationship between US bottled water consumption and Northrop Grumman's stock price. This statistically robust association defies conventional wisdom and introduces a refreshing narrative to the dialogue surrounding market influences. It's as if the financial markets have taken a sip from a particularly persuasive bottle of water – it's hard to ignore the impact once the evidence is laid out.

In conclusion, the results of this study have substantiated the connection between US bottled water consumption per person and Northrop Grumman's stock price, opening the floodgates to further exploration of unconventional market influences. This unorthodox association challenges traditional assumptions and beckons researchers and investors alike to quench their thirst for knowledge

and innovation in the ever-evolving landscape of financial analysis.

CONCLUSION

In conclusion, our research has made waves in uncovering the curiously synchronized relationship between US bottled water consumption and Northrop Grumman's stock price. It seems that the ebb and flow of liquid refreshment have a hand in the tides of the stock market. This unearths a whole new meaning to the term "liquid assets"!

The statistically significant correlation coefficient and high R-squared value indicate a connection as clear as purified water. The data doesn't just trickle, but flows with conviction, leaving no room for mere "fizziness" in the findings. This unexpected bond between something as mundane as bottled water and the stock price of a major corporation is refreshingly quirky, to say the least.

One might wonder if the stock traders are plotting their next move based on the latest hydration trends, but that remains a water-cooler conversation for another day. It seems that this relationship is as solid as a jug of spring water, and no amount of filtration can remove its statistical significance.

Given the robust and surprising nature of our findings, it's safe to say that no more research is needed in this area. It's time to make waves in other unexpected realms of economic phenomena!