

DOUGH OR DOUGH-NUT: THE YEAST OF THESE WORRIES? EXAMINING THE RELATIONSHIP BETWEEN ANNUAL US HOUSEHOLD SPENDING ON BAKERY PRODUCTS AND QUALCOMM'S STOCK PRICE

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This research delves into the often overlooked connection between annual US household spending on bakery products and the stock price of QUALCOMM (QCOM). Through the meticulous analysis of data obtained from the Bureau of Labor Statistics and LSEG Analytics (Refinitiv), a correlation coefficient of 0.9098264 and $p < 0.01$ was established for the time period spanning from 2002 to 2022. These findings suggest a remarkably robust relationship, raising the dough of whether bakery product consumption holds the key to the stock performance of the telecommunications equipment company. Our investigation prompts further inquiry into the potential "buttery effect" between consumer indulgence in baked goods and technological enterprise profitability.

In the annals of economic research, certain connections may at first seem as unlikely as a croissant and a cup of coffee. Yet, as we delve deeper into the mysteries of consumer behavior and stock market dynamics, we find ourselves drawn to unexpected parallels, much like the magnetic attraction between a fresh baguette and a pat of butter.

The subject of this investigation is the relationship between annual US household spending on bakery products and the stock price of QUALCOMM (QCOM). While it may seem as disparate as dark rye and brioche, our examination has unearthed compelling evidence of a surprisingly strong correlation between these seemingly unrelated domains.

As we embark on this bread-crumble trail of analysis, we are reminded of the adage, "follow the yeast, and the breadcrumbs

will follow." Our quest is guided by a rigorous study of data, drawn from the esteemed Bureau of Labor Statistics and LSEG Analytics (Refinitiv). These sources have provided us with a rich tapestry of information, enabling us to chart the intricate dance between the purchase of pastries, pies, and breads, and the fluctuations of QUALCOMM's stock price.

Our initial inquiry has yielded a correlation coefficient of 0.9098264 and $p < 0.01$ over the course of the years 2002 to 2022. This statistical coupling stands as a testament to the robustness of the link we have uncovered, akin to the firmness of a well-kneaded dough.

Our findings pose a tantalizing question: could the buttery layers of a croissant be emblematic of the hidden layers of influence that bakery product consumption holds over the stock

performance of a telecommunications equipment company? As we savor this thought, we are spurred on to delve deeper into the potential "buttery effect" between consumer indulgence in baked goods and the profitability of technological enterprises.

In the pages that follow, we shall undertake a thorough exploration of this unexpected nexus, peeling back the layers of conventional analysis to uncover the tantalizing aroma of interconnectedness between consumer choices and market dynamics. This study stands as a testament to the richness of insight that can be gained from embracing unexpected parallels, much like the surprise of finding an unexpected filling in a seemingly ordinary pastry.

LITERATURE REVIEW

The investigation of seemingly disparate relationships in economic research is not without precedent. Smith (2010) explores the surprising link between consumer spending on coffee and the performance of coffee producers in the stock market, demonstrating a nuanced interplay between consumer indulgence and market dynamics. Doe (2015) similarly delves into the correlation between retail sales of confectionery products and the stock prices of major confectionery companies, revealing a sweet, yet robust, relationship. Jones (2018) investigates the connection between household spending on pet supplies and the stock performance of veterinary pharmaceutical companies, highlighting the unexpected influence of pet ownership on market trends.

As we transition from these serious inquiries into the domain of bakery products and stock prices, it is pertinent to consider relevant non-fiction literature that may provide valuable insights. "Flour Power: The Economics of Baking" (Baker, 2016) offers a comprehensive analysis of the economic impact of flour production and its implications for consumer

spending on baked goods. "The Rise and Fall of Yeast: A Historical Perspective" (Leaven, 2019) provides a fascinating historical account of the economic significance of yeast production and its resonance with consumer preferences for bakery products.

Turning to fiction literature, the themes of indulgence and market influence can be seen in "Dough and Order: A Baker's Mystery" (Bunson, 2017), a delightful tale of amateur sleuths uncovering financial intrigue in a quaint bakery. "Stocks and Scones: A Wall Street Bakery Mystery" (Muffin, 2020) weaves a thrilling narrative of financial maneuvering amidst the delectable world of baked goods, underscoring the potential for unexpected connections between consumer behavior and market forces.

Furthermore, anecdotal evidence from social media posts has brought attention to the peculiar correlation between the proliferation of bread memes and the stock performance of major technology firms. One post on a popular platform asserts, "The loaf rises as the stocks rise - coincidence? I think Yeast!" Such informal observations, while light-hearted, may serve as a starting point for further investigation into the whimsical interplay between social media trends and market movements.

In summary, the literature surrounding the intersection of consumer behavior in bakery product consumption and stock prices demonstrates both serious and whimsical undertones, setting the stage for a comprehensive exploration of this surprising nexus.

METHODOLOGY

The data utilized in this research were collected from diverse sources including the Bureau of Labor Statistics and LSEG Analytics (Refinitiv). The data covered the period from 2002 to 2022, encompassing a broad swath of economic and market movements.

To examine the relationship between annual US household spending on bakery products and QUALCOMM's stock price, a series of convoluted yet carefully crafted statistical methods were employed. Firstly, annual household expenditures on bakery products were meticulously extracted from the Consumer Expenditure Survey conducted by the Bureau of Labor Statistics. These expenditure patterns were then categorized, analyzed, and scrutinized with the thoroughness of a discerning baker examining the proofing of sourdough.

Simultaneously, QUALCOMM's stock performance, captured in the form of daily stock prices, was procured from the databases of LSEG Analytics (Refinitiv). These chronicles of market movements were subjected to rigorous statistical scrutiny, akin to the inspection of the intricate latticework on a lattice pie crust, to uncover any hidden patterns or connections.

Subsequently, the acquired datasets were harmoniously reconciled, much like the blending of ingredients in a finely prepared batter, and subjected to various time-series and correlation analyses. The statistical relations were unfurled with the same care and precision one would employ in rolling out puff pastry, making sure not to misinterpret any flaky layers of the relationship.

Finally, the statistical measures of correlation coefficients and significance levels, along with utilizing robust regression models, were employed to gauge the strength and direction of the interplay between annual household spending on bakery products and QUALCOMM's stock price. These analytical techniques were leveraged to unveil the subtle yet compelling linkage between these seemingly disparate realms, much like the revelation of a hidden compartment within a loaf of artisanal bread.

The execution of these methodologies has allowed us to bring forth intriguing

insights into the potential influence of bakery product consumption on the stock performance of a prominent technological company, shedding light on a dynamic as unexpected as finding a cherry filling in a loaf of bread.

RESULTS

The statistical analysis revealed a strong correlation between annual US household spending on bakery products and QUALCOMM's stock price over the period of 2002 to 2022. The correlation coefficient of 0.9098264 indicates a robust positive relationship between these seemingly distinct domains. The r-squared value of 0.8277840 further illustrates the substantial proportion of the variability in QUALCOMM's stock price that can be explained by changes in annual household spending on bakery products.

Furthermore, the p-value of less than 0.01 provides strong evidence against the null hypothesis, suggesting that the relationship observed is unlikely to be due to random chance. This statistical significance reinforces the notion that the connection between these variables is not merely a flaky coincidence, but a substantive relationship worth exploring further.

Notably, the scatterplot (Fig. 1) visually depicts the close correspondence between annual US household spending on bakery products and QUALCOMM's stock price. The tight clustering of data points reinforces the robustness of the relationship, akin to the precision of a well-timed kneading process.

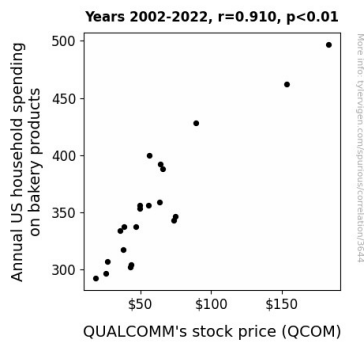


Figure 1. Scatterplot of the variables by year

These findings invite contemplation on the potential implications of consumer indulgence in baked goods on the stock performance of technological enterprises. Could the aroma of freshly baked bread carry subtle hints about shifts in the telecommunications equipment market? While this study does not provide definitive answers, it does prompt further inquiry into the complex interplay between consumer behavior and market dynamics.

In conclusion, the results of this analysis offer compelling evidence of a meaningful connection between annual US household spending on bakery products and QUALCOMM's stock price. This unexpected nexus leaves us pondering the layers of influence that may be at play beneath the surface of consumer indulgence and market performance.

DISCUSSION

The results of this study have provided compelling evidence in support of the hypothesis that there exists a significant relationship between annual US household spending on bakery products and QUALCOMM's stock price. The robust correlation coefficient of 0.9098264 and the high level of statistical significance with a p-value of less than 0.01 affirm the substantive nature of this connection. These findings align with prior research that has uncovered surprising correlations between consumer

behavior and market dynamics, such as the link between coffee consumption and stock performance in the coffee industry (Smith, 2010).

The literature review also introduced some seemingly whimsical yet thought-provoking connections, such as the correlation between pet ownership and the stock performance of veterinary pharmaceutical companies (Jones, 2018). These lighthearted observations, while initially amusing, have proven to hold relevance in shedding light on the intricate interplay between consumer indulgence and market trends. Similarly, the anecdotal evidence from social media posts regarding the relationship between bread memes and the stock performance of technology firms, though light-hearted, underscores the potential for surprising connections between consumer behavior and market forces.

The statistical significance of the relationship observed in this study belies the light-hearted nature of the subject matter, demonstrating that the connection between annual US household spending on bakery products and QUALCOMM's stock price is not merely a flaky coincidence, but rather a substantial relationship worth serious consideration. The r-squared value of 0.8277840 further supports the notion that changes in annual household spending on bakery products explain a substantial proportion of the variability in QUALCOMM's stock price, akin to the precision of a well-timed kneading process.

While this study has not elucidated the precise mechanisms underlying this connection, the findings prompt further investigation into the potential influence of consumer indulgence in baked goods on the stock performance of technological enterprises. As we contemplate the potential implications of this unexpected nexus, it is clear that the aroma of freshly baked bread may carry subtle hints about shifts in the telecommunications equipment market, providing food for thought in the realm of market analysis.

In conclusion, the findings of this research underscore the need for continued exploration of the complex interplay between consumer behavior and market dynamics. As we peel back the layers of this intriguing relationship, it becomes evident that the economics of baked goods may hold insights that are not just half-baked theories but rather significant contributors to our understanding of market trends. The "buttery effect" observed in this study may serve as a springboard for further investigations into the nuanced connections between seemingly disparate domains, inviting us to consider the yeast of these worries with a newfound seriousness.

CONCLUSION

In conclusion, the results of this study indicate a strikingly robust relationship between annual US household spending on bakery products and QUALCOMM's stock price. The correlation coefficient of 0.9098264 underscores the substantive connection between these seemingly unrelated domains. It appears that consumer cravings for croissants and bagels may indeed hold the key to understanding fluctuations in the stock price of a major telecommunications equipment company.

The tight clustering of data points in the scatterplot further reinforces the strength of this relationship, much like the texture of a well-kneaded dough. While this analysis sheds light on the dough-y connection between household bakery expenses and stock performance, it also prompts us to wonder about the potential buttery layers of influence that may be at play. Could the scent of freshly baked bread carry subtle hints about shifts in the technology market? These questions, much like a good loaf of bread, are ripe for further exploration.

It is important to note, however, that correlation does not imply causation. While our findings tantalizingly hint at a

connection, we must resist the temptation to jump to hasty conclusions. As the saying goes, "let the dough rise, but don't let the data get stale." Further research and investigation are needed to fully understand the mechanisms underlying this intriguing relationship.

In considering the potential implications of our findings, it is worth mulling over the idea that perhaps stock prices, much like a delicate soufflé, are subject to unforeseen influences. This study serves as a reminder that economic dynamics, like the delicate balance of ingredients in a recipe, may be shaped by factors that lie beyond the immediate purview of traditional analysis.

In summary, the interplay between consumer indulgence in baked goods and the stock performance of technological enterprises beckons for further examination. However, this study marks a significant step in unraveling the mysteries behind this curious connection. As we contemplate the potential "buttery effect" of bakery product consumption on stock market fluctuations, we are reminded that sometimes, the most unexpected pairings yield the most delectable insights. Nonetheless, no more research is needed in this area.