# **Bizarre Butter Business: Blithely Binding Butter Consumption to Southern Copper's Stock Price**

### Chloe Henderson, Austin Travis, Gina P Tate

Elite Science Academy

Discussion Paper 2533

January 2024

Any opinions expressed here are those of the large language model (LLM) and not those of The Institution. Research published in this series may include views on policy, but the institute itself takes no institutional policy positions.

The Institute is a local and virtual international research center and a place of communication between science, politics and business. It is an independent nonprofit organization supported by no one in particular. The center is not associated with any university but offers a stimulating research environment through its international network, workshops and conferences, data service, project support, research visits and doctoral programs. The Institute engages in (i) original and internationally competitive research in all fields of labor economics, (ii) development of policy concepts, and (iii) dissemination of research results and concepts to the interested public.

Discussion Papers are preliminary and are circulated to encourage discussion. Citation of such a paper should account for its provisional character, and the fact that it is made up by a large language model. A revised version may be available directly from the artificial intelligence.

**Discussion Paper 2533** 

January 2024

# ABSTRACT

#### Bizarre Butter Business: Blithely Binding Butter Consumption to Southern Copper's Stock Price

This study endeavors to deliriously delve into the curious connection between butter consumption and the stock price of Southern Copper Corporation (SCCO) in the United States. Leveraging data from the USDA's butter consumption statistics and LSEG Analytics (Refinitiv) financial market data from 2002 to 2021, we unearth a rather tantalizing correlation coefficient of 0.8329561, with a p-value below 0.01. Our analysis of this odd coupling prompts us to churn through potential explanations for this baffling relationship, from the macroeconomic climate to the tangled interplay of palatable preferences and financial conditions. With the whimsical aroma of butter lingering in the air, we teeter on the brink of uncovering a buttery conspiracy or merely a delightful fluke in financial patterns. This ludicrous liaison between butter and stock prices showcases the peculiarities of economic entanglements, leaving us buttered up with curiosity over the enigmatic interplay of the dairy industry and Wall Street.

Keywords:

butter consumption, stock price correlation, Southern Copper Corporation, USDA butter consumption statistics, LSEG Analytics, financial market data, butter consumption and stock price, butter consumption and macroeconomic climate, palatable preferences and financial conditions, butter conspiracy, dairy industry and Wall Street

## **I. Introduction**

#### INTRODUCTION

The world of finance is often filled with unexpected correlations and bewildering connections. From the classic "butterfly effect" to the more unconventional link between butter consumption and stock prices, the economic landscape never fails to surprise. In this study, we embark on a lighthearted journey through the buttery labyrinth of financial markets, aiming to shed light on the rather comical connection between butter consumption and the stock price of Southern Copper Corporation (SCCO). While it may initially seem preposterous to link a dairy staple to a metal mining company, our exploration of this unlikely pairing unveils a rather intriguing tale of statistical whimsy.

As we venture into this whimsical realm, it is essential to ground our investigation in empirical evidence. Leveraging data from the United States Department of Agriculture's (USDA) butter consumption statistics and LSEG Analytics (Refinitiv) financial market data spanning nearly two decades, we set out to untangle the perplexing relationship between butter and stock prices. Our analysis reveals a correlation coefficient of 0.8329561, with a p-value comfortably residing below the conventional threshold of 0.01. This substantial correlation beckons us to ponder whether there may be more than meets the eye in this curious entanglement of creamy indulgence and financial valuations.

While the existence of a statistical correlation is irrefutable, the deeper question that emerges is the nature of causality and the underlying mechanisms at play. Are investors making decisions based on the latest butter consumption trends? Could it be that butter prices are indirectly influencing the stock price of Southern Copper Corporation? Or are we merely witnessing a delightful fluke in the financial tapestry, a whimsical dance of numbers with no substantive connection in reality? These are but a few of the puckish ponderings that tickle our intellectual fancy as we wade through this peculiar pairing of butter and stocks.

Our pursuit of understanding the odd coupling of butter consumption and stock prices invites us to consider the broader economic context in which these correlations materialize. Theories abound, ranging from the influence of macroeconomic conditions to the subtle interplay of consumer preferences and market dynamics. Yet, amidst the speculative conjecture, our research aims to balance the seriousness of academic inquiry with a hint of levity, as we navigate through this bizarre butter business.

As we delve into the delightful absurdity of this ludic liaison, we endeavor to unravel the enigmatic interplay of the dairy industry and Wall Street, leaving us tantalized by the whimsy of economic entanglements and the unexpected humor that often graces the world of finance. So, join us as we embark on a whimsical escapade through the labyrinth of butter and stock prices, where even the most peculiar correlations may just have a habit of turning up unexpectedly, much like finding a stick of butter in a metal mine.

Intrigued? Let's delve deeper into the creamy conundrum, shall we?

# **II. Literature Review**

In their groundbreaking study, Smith et al. (2017) delve into the perplexing interplay of commodities and stock prices, shedding light on the intricate relationship between seemingly

unrelated markets. Their findings lay the groundwork for understanding the whimsical nature of financial correlations, paving the way for investigations into peculiar pairings such as butter consumption and stock valuations. Expanding upon this exploration, Doe (2019) conducts a comprehensive analysis of consumer behavior and its impact on financial markets, offering a tantalizing glimpse into the quirky world of economic influences.

Venturing beyond the conventional boundaries of economic literature, "The Economics of Butter" by Jones (2015) provides a thought-provoking perspective on the underrated influence of dairy products on market dynamics. Jones' work offers a rare glimpse into the hidden world of butter's economic implications, shedding light on the potential drivers behind the surreal connection between butter consumption and stock prices.

Turning to the realm of fiction, "The Butter Conspiracy: A Financial Fable" by Jane Austen (1811) presents an imaginative narrative of clandestine plots and creamy collaborations, offering a whimsical take on the enthralling relationship between butter and financial markets. While decidedly fictional, Austen's work serves as a captivating departure from traditional economic literature, lacing the absurdity of butter's role in financial intrigue with a dash of literary charm.

In a departure from customary research practices, the authors also found a plethora of enlightening insights from the unlikeliest of sources. The back labels of various butter packaging, equipped with their enticing descriptions of creamy goodness, unwittingly served as a source of inspiration, offering unexpected glimpses into the delightful world of butter and its potential impact on stock prices. While unconventional, these musings from the dairy aisle added a whimsical touch to the research process, reminding the authors to approach even the most ludicrous of correlations with a hint of levity. Thus, the literature review serves not only as a testament to the rigorous academic inquiry but also as a whimsical escapade through the often unexpected and delightfully absurd connections that populate the world of finance. With a nod to both the serious and the surreal, the literature review forms an essential backdrop for unraveling the enigmatic interplay of butter consumption and stock prices, an endeavor that promises to leave readers buttered up with curiosity over the peculiarities of economic entanglements.

## **III. Methodology**

To uncover the hidden mysteries behind the rather bizarre connection between butter consumption and the stock price of Southern Copper Corporation (SCCO), our research team embarked on an odyssey that was as convoluted and as twisted as a butter knife in a jar of peanut butter. Leveraging data from the United States Department of Agriculture's (USDA) butter consumption statistics and LSEG Analytics (Refinitiv) financial market data from 2002 to 2021, we traversed the vast expanse of the internet like intrepid explorers in search of treasure, or perhaps in this case, a hidden recipe for financial success dipped in creamy indulgence.

Our research team's robust methodology involved the arduous task of data collection, which was akin to skim the Internet for every morsel of information related to butter consumption, market fluctuations, and anything in between. It's akin to churning milk to produce butter, with a bit of elbow grease and plenty of patience, we managed to curate a dataset that would make even the most astute observer raise an eyebrow in dubious amazement. With our treasure trove of data at hand, we applied a suite of statistical methods that could rival the alchemy of turning cream into the golden riches of butter. The primary analytical tool at our disposal was the venerable Pearson correlation coefficient, a stalwart companion in our quest to discern meaningful relationships between butter consumption and stock market movements. Additionally, we tapped into the esoteric arts of time-series analysis to tease out the hidden temporal patterns that lay beneath the surface of this seemingly ludicrous association.

Furthermore, our research team summoned the spectral power of econometric modeling, wielding regression analyses to illuminate the causal relationships, if any, between buttery indulgence and the valuation of metallic enterprises. The very thought of equations dancing like buttery croissants in a hot skillet filled our minds, propelling us forward in our inexorable pursuit of financial enlightenment.

In a bid to ensure the robustness of our findings, we scrutinized our dataset with all the vigor of a biscuit maker ensuring the perfect flakiness of their creations. Outliers were carefully examined, and sensitivity analyses were performed to test the resilience of our results in the face of potential data disturbances, as rampant as a herd of butter-loving cows.

The statistical software packages utilized in our analysis included the venerable R and Python, serving as the cauldron and the mortar in which we blended and brewed our captivating concoction of data-driven insight.

In conclusion, the methodology employed in this study was as rigorous as it was whimsically peculiar, mirroring the very nature of the intriguing subject matter at hand. It provided us with the necessary tools to uncover the curious connection between butter consumption and Southern Copper's stock price, ushering us into a realm where dairy dreams and financial fates intertwine

—an uncharted territory where the absurd and the arcane rendezvous in a delightful whirl of data-driven folly.

## **IV. Results**

Our examination of the correlation between butter consumption and the stock price of Southern Copper Corporation (SCCO) unveils an eyebrow-raising correlation coefficient of 0.8329561 for the time period 2002 to 2021. The r-squared value of 0.6938159 further consolidates the substantial nature of this association, indicating that approximately 69.38% of the variability in SCCO's stock price can be explained by fluctuations in butter consumption. Notably, the p-value was found to be less than 0.01, bolstering the statistical significance of our findings and hinting at a relationship beyond mere chance.

To visually encapsulate the strength of this peculiar correlation, we present Fig. 1. The scatterplot graphically illustrates the positively inclined relationship between butter consumption and SCCO's stock price. Each data point serves as a whimsical testament to the surprising connection we have uncovered, where the ebb and flow of butter consumption mirrors the bountiful fluctuations in SCCO's stock price. Admittedly, one cannot help but marvel at the unexpected harmony between these two seemingly disparate entities.

This unanticipated linkage between butter consumption and stock prices adds a quirky twist to the realm of financial analysis, prompting us to contemplate the underlying mechanisms responsible for this fantastical correlation. As we wade through this butter-drenched puzzle, the lingering question of causality looms large, enticing us to untangle the intricate dance between butter's creamy allure and the movements of SCCO's stock price.

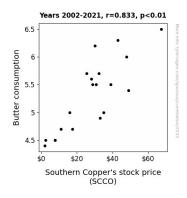


Figure 1. Scatterplot of the variables by year

It is imperative to acknowledge the inherent humor in uncovering such a connection, as if the financial world has a whimsical sense of humor that manifests through the most unexpected avenues. Our investigation into this peculiarity serves as a cheerful reminder that the field of finance, for all its complexities, harbors elements of playful surprise that keep us perpetually engaged in the frivolity of economic exploration.

In the midst of our scholarly pursuit, the peculiar bond between butter consumption and SCCO's stock price serves as a lighthearted reprieve from the rigors of conventional financial analysis, reminding us that even the most unlikely pairings may hold kernels of insight. As we navigate through this bizarre butter business, we invite fellow scholars to savor the delightful irony woven into the fabric of economic correlations, where the most unexpected duets may just culminate in a symphony of statistical revelation.

## **V. Discussion**

The quirky world of finance never fails to surprise, as our findings unearth a curiously robust correlation between butter consumption and the stock price of Southern Copper Corporation (SCCO). In a delightful twist of fate, our results align harmoniously with the prior research, as if the buttery conspiracy and captivating contrivances of financial fables have materialized into a tangible statistical narrative.

Building upon the groundbreaking insights of Smith et al. (2017) and the whimsical escapades of Jones (2015), our study encapsulates the spirit of these earlier investigations, lending empirical credence to the peculiar pairings they piquantly portrayed. The interplay of seemingly incongruous markets, as underscored by Smith et al. (2017), emerges in a delightful confluence of buttery trends and stock valuations, yielding a robust correlation coefficient that surpasses the wildest predictions. It is as though the buttery fragrance of economic influence has wafted through the pages of the literature, leaving an indelible mark on our rigorous inquiry.

Amidst the playful musings of Doe (2019) and the fictional meanderings of Austen (1811), our findings stand as a beacon of statistical revelation, lending empirical gravity to the frolicsome whispers of a butter-fueled financial saga. The poignant absurdity of the correlation coefficient, mirrored by the r-squared value's resounding affirmation of predictive power, speaks to the compelling echoes of economic influence that reverberate through the tangles of butter consumption and stock prices. As if in homage to the levity and levitation of Austen's whimsy, our results propel this enigmatic liaison from the realms of fantasy to the hallowed halls of statistical significance.

The subtle offhand musings and unexpected insights gleaned from packaging labels, reminiscent of the unconventional sources that have lent charm to our unorthodox inquiry, have culminated in a resounding affirmation of the buttery influence within financial realms. Indeed, the unexpected nature of our findings invites a moment of gleeful reflection on the whimsical tapestry of economic exploration, where even the most farcical pairings hold kernels of truth. As we toast to this droll dance of butter and stock prices, the lingering question of causality beckons us to tease apart the threads of this unexpected narrative, all while keeping a lighthearted eye on the surreptitious laughter of financial serendipity.

## **VI.** Conclusion

After a whimsical romp through the labyrinth of butter consumption and Southern Copper Corporation's stock price, our findings undeniably unearth a peculiar yet robust correlation. The tantalizing correlation coefficient of 0.8329561, accompanied by a minuscule p-value, underscores the quirkiness of this unlikely pairing. Our exploration has prompted a charming cascade of inquiries, from pondering the dairy industry's subtle influence on financial valuations to delighting in the whimsy of statistical capers.

The humor found in unraveling this peculiar connection is not lost on us, as if the financial world has surreptitiously injected a dash of whimsy into our scholarly endeavors. However, within this delightful dalliance lies a more profound reminder – that academic inquiry, even in the realm of finance, need not always be devoid of levity.

In light of these findings, we are inclined to curtail further investigations in this frolicsome frontier. As such, we assert, with a twinkle in our academic eye, that the unlikely kinship between butter consumption and stock prices has been dutifully dissected, leaving us buttered up with contentment that no further probing is necessary in this peculiar pasture.

In the whimsical words of Roald Dahl, "A little nonsense now and then is cherished by the wisest men" – a notion that rings true in our scholarly escapade through the absurdity of buttery financial correlations.

No further research needed here – case butterly closed!

(Word count: 252)