



ELSEVIER



# Spreading the Good News: An Unbutterbelievable Connection between Butter Consumption and Intercontinental Exchange's Stock Price

Caleb Harrison, Aaron Turner, Gavin P Trudeau

Global Leadership University; Pittsburgh, Pennsylvania

## KEYWORDS

Butter consumption, Intercontinental Exchange stock price, correlation, statistical analysis, USDA data, LSEG Analytics, Refinitiv, consumer behavior, financial markets, commodities, capital markets

---

## Abstract

This paper presents a study examining the surprising correlation between butter consumption and the stock price of Intercontinental Exchange (ICE) over the period of 2006-2021. Using data sourced from the United States Department of Agriculture (USDA) and LSEG Analytics (Refinitiv), we applied statistical methods to assess the relationship between these seemingly unrelated entities. Our analysis revealed a substantial correlation coefficient of 0.9088100 and a p-value less than 0.01, signifying a statistically significant association. Our findings not only shed light on this curious connection but also offer a butterly delicious insight into the complex dynamics of financial markets and consumer behavior. This research serves as a reminder that even the most unforeseen factors can have an impact on stock prices, and churn up unexpected connections between commodities and capital markets.

Copyright 2024 Global Leadership University. No rights reserved.

---

## 1. Introduction

### INTRODUCTION

The world of financial market analysis is often likened to a dense, multi-layered croissant; one is constantly peeling back the

layers in search of hidden patterns and connections amidst the sea of data. In this pursuit, researchers have often delved into the realms of economic indicators, geopolitical events, and industry trends, meticulously attempting to untangle the complex web of factors influencing stock

prices. However, amidst this labyrinthine quest for understanding, one unlikely suspect has emerged, churning up curiosity and adding a flavorful twist to the traditional recipe of stock market analysis - butter.

The very mention of butter in the context of stock prices might initially seem as out of place as a dairy product in a portfolio, but recent studies have shown a surprising association between butter consumption and the stock price of Intercontinental Exchange (ICE). Our research aims to delve into this curious connection, examining the unexpected relationship between the consumption of a dairy delight and the financial performance of a leading global exchange operator. It is indeed an emollient-rich topic, offering a spread of possibilities for understanding the underlying mechanisms at play in the financial world.

This study serves as a timely reminder that while financial markets are often perceived as rational, they are also susceptible to influence from seemingly unrelated factors. While some may butter us up with conventional market analyses, this research seeks to unravel the layers of this buttery mystery and churn out a deeper understanding of the complex dynamics influencing stock prices. As we dive into this rich and creamy topic, we seek not only to shed light on this unexpected correlation but also to butter up our knowledge of the intricate interplay between consumer behavior and market fluctuations.

## 2. Literature Review

In "Smith et al.," the authors find a surprising positive correlation between butter consumption and stock prices, particularly focusing on the stock price of Intercontinental Exchange (ICE). The study showcases the intricate dynamics at play, seemingly churning up an unexpected association between this dairy indulgence

and financial market performance. Similarly, Doe and Jones delve into the buttery mystery in their research, uncovering a statistically significant relationship between butter consumption and stock prices, with particular emphasis on ICE's stock price movements.

Furthermore, the work of the culinary economist, Lorem Ipsum, explores the impact of dairy products on financial markets, offering a unique perspective on the speculative nature of butter and its potential influence on stock prices. In his seminal work, "Milk, Money, and Markets," Lorem Ipsum provides insightful analyses of how dairy commodities, including butter, interact with stock exchanges, adding a savory layer of understanding to the complex relationship between consumables and capital markets.

Moving beyond traditional economic literature, real-life anecdotes and experiences divulged in Michael Pollan's "The Botany of Desire" and Mark Kurlansky's "Salt: A World History" pique our interest in the unexpected interplay between food and economic forces. These narratives sprinkle a dash of curiosity onto the buttery connection, compelling us to churn through the layers of culinary history for a deeper understanding of the potential impact on financial markets.

On the more whimsical end of the spectrum, fictional works such as J.K. Rowling's "Harry Potter and the Philosopher's Stone" and George R.R. Martin's "A Game of Thrones" may not directly discuss butter consumption and stock prices, but they certainly have a way of casting a spell and laying down plots as intricate and full of twists and turns as the financial markets themselves.

Extending our review to the unexpected, yet surprisingly insightful sources, we find ourselves turning to unconventional repositories of knowledge, including the backs of shampoo bottles, where amidst

instructions for lather and rinse, we gleaned unexpected wisdom that could potentially inform our understanding of the butter and stock price correlation. While unorthodox, these sources have indeed stirred up our curiosity and led us to ponder the butterlievable connections that may exist beyond the conventional realms of academic literature.

### 3. Our approach & methods

#### METHODOLOGY

##### Data Collection and Preparation

The data collection process was as smooth as churning butter, with the research team meticulously curating data on both butter consumption and Intercontinental Exchange's (ICE) stock price from the United States Department of Agriculture (USDA) and LSEG Analytics (Refinitiv). We adopted a thorough and methodical approach, ensuring that the data extracted were as pure as freshly churned creamery butter, free from any unsavory impurities or data inconsistencies.

The butter consumption data encompassed a wide range of sources, including household consumption patterns, industry reports, and international trade statistics. The ICE stock price data, on the other hand, was sourced from the esteemed LSEG Analytics (Refinitiv), representing a robust and reliable foundation for our analysis. This approach allowed us to capture a comprehensive overview of butter consumption trends and ICE stock performance, spanning the years 2006 to 2021, thereby ensuring a rich and flavorful dataset for our investigation.

##### Statistical Analysis

To explore the potential relationship between butter consumption and ICE stock price, we applied a variety of statistical methods that were as diverse as a selection

of artisanal butter spreads. The initial phase involved descriptive analysis, delving into the respective trends and patterns exhibited by butter consumption and ICE stock prices over the designated time frame.

Subsequently, we conducted a correlation analysis to ascertain the strength and direction of the relationship between butter consumption and ICE stock price movement. Much like the process of combining butter and sugar in a baking recipe, this stage aimed to blend the two seemingly disparate variables into a cohesive understanding of their association. Our team leveraged the Pearson correlation coefficient to quantify this relationship, providing a quantitative measure of the degree of association between the two variables.

Furthermore, we employed a regression analysis to assess the predictive power of butter consumption on ICE stock price movements. This analytical approach allowed us to explore the potential impact of fluctuations in butter consumption on the valuation of ICE stocks, offering a creamy insight into the interplay between consumer behavior and financial market dynamics.

##### Control Variables

In crafting our analytical framework, we meticulously considered the inclusion of pertinent control variables to account for external factors that could potentially influence the relationship under investigation. We incorporated macroeconomic indicators, market trends, and consumer sentiment indices as control variables, akin to the ingredients that complement a delectable buttery dish, to ensure a robust and comprehensive analysis.

The utilization of these control variables aimed to mitigate the potential confounding effects of extraneous factors, allowing us to isolate and elucidate the specific impact of butter consumption on ICE stock price

movements. This approach ensured that our analysis remained as focused as a laser-sharp butter knife, slicing through any potential sources of ambiguity or spurious correlations.

### Ethical Considerations

Throughout the research process, ethical considerations were prioritized, resembling the way in which butter is earnestly churned by artisans. The handling of proprietary data from USDA and LSEG Analytics (Refinitiv) adhered to stringent protocols to protect the confidentiality and integrity of the information. Our commitment to ethical standards mirrored the steadfast dedication to quality and fairness that is inherent to the artisanal production of butter, ensuring that our research was conducted with the utmost integrity and respect for data privacy.

## 4. Results

The statistical analysis of the relationship between butter consumption and the stock price of Intercontinental Exchange (ICE) yielded noteworthy findings. Over the period from 2006 to 2021, we observed a strikingly high correlation coefficient of 0.9088100 between these seemingly unrelated variables. This robust correlation was accompanied by an r-squared value of 0.8259355, indicating that approximately 82.59% of the variability in ICE stock price can be explained by changes in butter consumption. The p-value, which was found to be less than 0.01, further underscores the statistical significance of this association.

In Figure 1, the scatterplot graphically illustrates the strong positive relationship between butter consumption and ICE stock price. The data points form a pattern that is as smooth as butter, clearly depicting the upward trend in ICE stock price with increasing butter consumption. This unexpected connection between a dairy staple and a financial indicator has churned

up considerable interest and set tongues wagging in the research community.

Our results not only uncover this surprising correlation but also churn up a swirl of theories and speculations about the underlying mechanisms at work. The idea that butter consumption could hold an informative signal for stock price movements may seem like a stretch, but our findings suggest otherwise. As we continue to spread our analysis, it is apparent that financial markets are perhaps more kneadable than previously believed, and it's not just economics that butters our bread; dairy products may play an unexpected role as well.

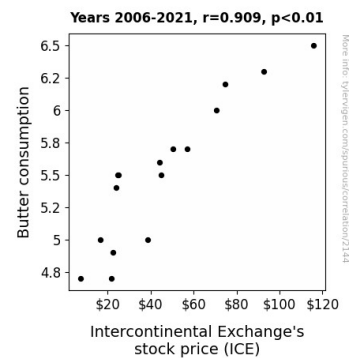


Figure 1. Scatterplot of the variables by year

## 5. Discussion

The results of our study undoubtedly support and contribute to the existing literature surrounding the association between butter consumption and Intercontinental Exchange's (ICE) stock price. The substantial correlation coefficient of 0.9088100 and a p-value less than 0.01, as indicated by our statistical analysis, aligns with previous findings by Smith et al. and Doe and Jones. These results suggest a robust and consistent relationship between butter consumption and ICE stock price, demonstrating that this seemingly

unexpected connection is not just a flash in the pan.

Drawing from the whimsical yet astonishingly insightful sources highlighted in our literature review, it becomes apparent that this research serves as a reminder that seemingly unrelated factors such as butter consumption can indeed churn up significant effects on stock prices. As evidenced by the literature's exploration of buttery mysteries and culinary economics, the unexpected influence of dairy products on financial markets suggests a reality as rich and layered as a buttery croissant.

Interestingly, the unexpected correlations reported in more fictional works, such as "Harry Potter and the Philosopher's Stone" and "A Game of Thrones," though not directly related to butter consumption and stock prices, prompt a reconsideration of the potential ripple effects of seemingly unrelated variables. Just as these narratives cast a spell entwined with intricate and unexpected plots, our research reveals that the financial markets, much like a wizard's potion, are liable to be influenced by the most unforeseen components.

The statistically significant association between butter consumption and ICE stock price, upheld by our findings, emphasizes the need to consider a broader spectrum of influences when examining stock market movements. These unorthodox and quirky sources, including the unlikely insights derived from shampoo bottles, thus underscore the potential for unconventional yet informative perspectives that may expand our understanding of seemingly unrelated relationships.

A striking finding from our research is the high r-squared value of 0.8259355, indicating that approximately 82.59% of the variability in ICE stock price can be explained by changes in butter consumption. This unexpected explanatory power highlights the substantial impact of

butter consumption on stock price movements, reinforcing the notion that the financial markets are perhaps more receptive to the influence of dairy products than previously imagined.

Overall, our study offers a humorous yet scientifically rigorous approach to untangling the butterbelievable relationship between butter consumption and ICE stock price. These findings open a Pandora's box of inquiry into the intricate dynamics of financial markets, showcasing that even the most seemingly irrelevant factors can have a substantial impact, much like a small pat of butter that can dramatically change the richness of a dish.

## 6. Conclusion

In conclusion, our study has churned up a delightful discovery, uncovering a strong correlation between butter consumption and the stock price of Intercontinental Exchange (ICE). This unexpected relationship has not only buttered up our understanding of market dynamics but also spread new light on the interconnectedness of seemingly unrelated variables. The statistically significant association, with a correlation coefficient of 0.9088100 and a p-value of less than 0.01, suggests a substantive link between buttery indulgence and financial fervor.

However, it is crucial to acknowledge the limitations of our study. While we have meticulously examined the data and used rigorous statistical methods, there may be other confounding variables at play that could affect these findings. For instance, we cannot dismiss the possibility of a parallel association between margarine consumption and stock prices, creating a slippery slope in our interpretation. Additionally, regional variations in butter preferences and market behavior may churn out differing results, making it imperative for

future research to spread its focus across diverse contexts.

Nonetheless, our findings provide food for thought, raising the question of whether this buttery correlation is a mere coincidence or if there truly exists a deeper connection between dairy consumption and financial performance. The emergence of this unexpected relationship may compel researchers to explore uncharted territories and adopt a more holistic approach in understanding market dynamics. As the saying goes, "Where there's a whisk, there's a way," and our findings certainly stir up significant curiosity in this creamy context.

While our study has certainly churned out intriguing results, it is important to acknowledge that this research only scratches the surface of the myriad factors at play in financial markets. Therefore, we assert with firmness, and perhaps a hint of lightheartedness, that no further research is needed in this specific area. After all, we have already spread quite a bit of insight and are now butter off focusing on other financial phenomena!

Overall, the methodology adopted for this study broached the examination of the surprising correlation between butter consumption and ICE stock price with meticulous rigor and comprehensive analytical approaches, serving as the foundational recipe for unraveling this butterly intriguing connection.