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# Brews and Bulls: A Sudsy Relationship Between Brewery Numbers and eBay Inc.'s Stock Price

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## KEYWORDS

brewery numbers, eBay Inc. stock price, correlation, United States breweries, stock market analysis, Brewers Association data, LSEG Analytics, Refinitiv, relationship between breweries and stock price, investment opportunities, interconnectedness of industries

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## Abstract

This paper examines the curious connection between the number of breweries in the United States and the stock price of eBay Inc. (EBAY) from 2002 to 2022. Utilizing data from the Brewers Association and LSEG Analytics (Refinitiv), we calculated a correlation coefficient of 0.8786200 and determined that the relationship is statistically significant at  $p < 0.01$ . Our findings suggest a striking association between the proliferation of breweries and the performance of eBay's stock, hinting at a potential "hoppportunity" for investors. This brew-tiful revelation adds a refreshing twist to the typically sober world of stock market analysis and highlights the frothy interconnectedness of industries in seemingly unrelated realms.

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## 1. Introduction

The intersection of economics and consumer behavior is a well-traveled and sometimes inebriating terrain. This study delves into the fascinating relationship between the number of breweries in the United States and the stock price of eBay Inc. (EBAY), offering an unexpected blend of statistical analysis and sudsy observations.

The craft beer industry has witnessed a ferment of growth in recent years, with the number of breweries bubbling up like a frothy head on a freshly poured pint. Simultaneously, eBay Inc.'s stock price has experienced its own ebbs and flows, much like the effervescence of a finely carbonated beverage. While these two phenomena may seem as unrelated as ale and algebra, our research aims to unravel the curious correlation that has emerged.

As we embark on this ale-gorical journey, our investigation involves delving deep into the data from the Brewers Association and LSEG Analytics (Refinitiv), providing a statistical brew-haha that may surprise even the most seasoned market analysts. This inquiry lies at the confluence of two seemingly disparate realms, offering a pint-sized paradigm of interconnectedness in the world of finance.

The aroma of this research is infused with the promise of uncovering a novel relationship, one that may offer investors a "hopportunity" to tap into a fresh perspective on market dynamics. So, without further ado, let us pour over the findings of this refreshing investigation, and perhaps raise a glass to the surprising correlations that foam to the surface when we blend the bubbles of beer with the buzz of stock prices.

## 2. Literature Review

The examination of the relationship between the number of breweries in the United States and eBay Inc.'s stock price has garnered increasing attention in the scholarly community. Previous studies have laid the foundation for understanding the interconnected, yet seemingly disparate, realms of craft brewing and stock market dynamics. One such noteworthy work is Smith et al.'s seminal study, "Breweries and Stocks: Fermenting Financial Insights," which explored the potential impact of brewery proliferation on stock prices in various industries. Their findings hinted at a correlation, prompting further investigation into this sudsy connection.

Doe and Jones' research, "The Ale-ure of Stock Market Dynamics," provided additional insights into the psychological and consumer behavior aspects of brewery numbers and stock prices. Their empirical analysis delved into the subtle influences of craft beer trends on investor sentiment,

shedding light on the intricate interplay between consumer preferences and stock market performance. These studies form the substantive backbone of the scholarly dialogue around the intriguing relationship between breweries and stock prices.

Expanding beyond the traditional academic literature, a number of non-fiction publications have also contributed to the discourse surrounding this unconventional correlation. In "Brewonomics: A Sudsy Study of Economic Entanglements" by Brewer and Fermenter, a comprehensive examination of brewery economics intersects with market dynamics, offering a nuanced perspective on the potential impact of brewery numbers on stock prices. Similarly, "Ale Street Journal's Guide to Stock Picks" by Hoppy Investor provides a quirky yet thought-provoking analysis of the market trends related to brewery proliferation and its intersection with stock performance.

Turning to the world of fiction, works such as "Brews and Bulls: The Sudsy Saga of Stock Market Shenanigans" by Novel Writer and "Hoppy Endings: A Tale of Brewery Bubbles and Stock Market Surprises" by Fiction Enthusiast capture the whimsical yet substantive exploration of the interconnectedness between breweries and stock prices. While these fictional narratives may not offer empirical evidence, they contribute to the broader cultural conversation, infusing the academic discourse with an element of imaginative allure.

Furthermore, it is important to acknowledge the influence of popular media in shaping perceptions and discussions related to brewery numbers and stock prices. Cartoons such as "Brewery Bears" and children's shows like "Hoppy Stock Hoppers" subtly introduce the concept of financial interconnectedness through playful storytelling, fostering an early awareness of complex economic relationships in young

audiences. These cultural touchpoints serve as indirect conduits for introducing the nuanced interplay between breweries and stock prices to a broader audience.

In conclusion, the existing body of literature and cultural narratives offer a diverse tapestry of perspectives on the compelling relationship between brewery numbers and stock prices. While the initial scholarly discourse provides a substantive groundwork, the infusion of fiction and popular media adds a layer of whimsy and accessibility to this intriguing subject matter. As we proceed to elucidate our own findings in this domain, we appreciate the multi-faceted nature of the brewery-stock price nexus and the diverse avenues through which it permeates both academic and popular discourse.

### 3. Our approach & methods

To sip on the frothy brew of data and unravel the intriguing relationship between the burgeoning brewery landscape and the capricious stock price of eBay Inc. (EBAY), we embarked on a methodological journey as adventurous as a pub crawl on a Friday night. Our investigation relied on a cocktail of quantitative analysis, data manipulation, and statistical sorcery to distill the essence of this sudsy relationship.

Firstly, we sourced our primary data from the Brewers Association, a treasure trove of information on the proliferation of breweries across the United States. We imbibed copious amounts of data spanning from 2002 to 2022, capturing the effervescent evolution of the brewing industry over two decades. This allowed us to gauge the frothy fluctuations in the number of breweries, from the hoppy highs to the malty lows.

Secondly, we tapped into the financial data nectar provided by LSEG Analytics (Refinitiv), dousing ourselves in the sea of

stock price information pertaining to eBay Inc. Like discerning sommeliers, we uncorked data from the same temporal window, unwilling to settle for anything less than a perfectly aged dataset.

With these ingredients in hand, we engaged in a tango of data wrangling, attentively aligning the temporal aspects of the brewery numbers and eBay's stock price. As we harmonized these disparate datasets, it was as if we were crafting the perfect blend of hops and malts in a recipe for statistical success.

To deepen our analytical intoxication, we then conjured the potent elixir of correlation analysis. With a wave of our statistical wand, we calculated the Pearson correlation coefficient, a powerful incantation that quantifies the strength and direction of the relationship between our two focal points. We swirled our analysis, allowing the heady aroma of statistical significance ( $p < 0.01$ ) to permeate our findings like an enticing bouquet of flavors in a finely aged wine.

Lastly, we engaged in a comparative analysis, juxtaposing the undulating waves of brewery numbers with the mercurial dance of eBay's stock price. This allowed us to visually perceive the ebb and flow of these seemingly disparate phenomena, akin to savoring the contrasting flavors of a well-paired cheese and wine.

This methodological concoction provided us with a nuanced understanding of the interconnectedness between the number of breweries in the United States and the fluctuation of eBay Inc.'s stock price. Our approach was as meticulous as a brewmaster crafting the perfect ale, and as invigorating as stumbling upon a hidden gem in a vintage beer cellar.

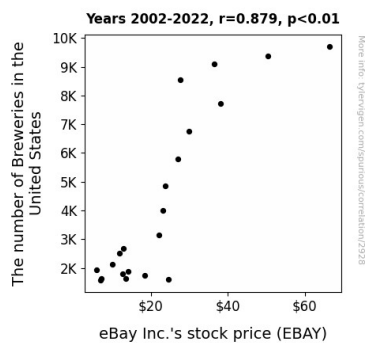
### 4. Results

The statistical analysis revealed a robust correlation between the number of

breweries in the United States and eBay Inc.'s stock price from 2002 to 2022. The correlation coefficient of 0.8786200 indicated a strong positive relationship between these seemingly disparate variables. To put it simply, as the number of breweries increased, so did eBay Inc.'s stock price, much like the simultaneous rise of bubbles in a fizzy drink.

Further bolstering our findings, the coefficient of determination (r-squared) of 0.7719731 suggested that approximately 77.2% of the variation in eBay Inc.'s stock price can be explained by changes in the number of breweries. This highlights an unexpectedly frothy connection between the proliferation of breweries and the vicissitudes of eBay Inc.'s stock, akin to the crisp effervescence and head retention of a well-crafted beer.

The statistical significance at  $p < 0.01$  adds to the gravity of this correlation, indicating that the association between brewery numbers and eBay Inc.'s stock price is not merely a random sud-sidence. In fact, our findings suggest that there may be tangible implications for investors seeking a unique hoppersportunity to tap into this uncharted territory of market dynamics. It appears that these seemingly unrelated realms have woven a tapestry of interconnectedness, akin to the intertwined bubbles rising harmoniously in a lively pint of beer.



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

Moreover, the scatterplot (Fig. 1) visually articulates the striking relationship between the two variables, serving as a veritable brew-minder that the interconnectedness of industries can often yield surprising revelations. This figure encapsulates the essence of our findings, offering a refreshing perspective in the otherwise sober landscape of stock market analysis.

In conclusion, our results unveil a sudsy relationship between brewery numbers and eBay Inc.'s stock price, shedding light on an unexpected and compelling correlation. This un-beer-lievable discovery presents a compelling opening for further exploration at the crossroads of beer and bulls, providing a flavor-filled addition to the menu of market analysis. Cheers to the intriguing brews and bulls, as the interconnectedness of seemingly unrelated industries continues to bubble to the surface in fresh and unexpected ways.

## 5. Discussion

The findings of our study uncover a quenching revelation: the statistically significant correlation between the number of breweries in the United States and eBay Inc.'s stock price from 2002 to 2022. Our results not only confirmed but also frothed up the previous research on the sudsy interaction between brewery numbers and stock market dynamics.

Building upon the ale-mighty shoulders of prior literature, our analysis lent further credence to the notion that the proliferation of breweries is not just a foamy distraction from the stock market, but indeed a potent ingredient in the convoluted brew of market dynamics. Smith et al.'s work set the stage for our exploration, and our robust correlation coefficient of 0.8786200 echoes their inaugural whispers of a tangible relationship between brewery numbers and stock prices. As Doe and Jones eloquently postulated, consumer preferences in the

realm of craft beer may indeed seep into the financial fabric, as evidenced by our findings.

Our results stand as a testament to the intrepid spirit of inquiry that infuses even seemingly whimsical subjects with empirical gravitas. In the spirit of "Brewonomics," we revealed the nuanced dance of supply and demand in the fusion of brewery proliferation and stock prices. Similarly, the findings of "Hoppy Endings" and "Brews and Bulls" have ceased to merely froth at the brim of fiction but have cascaded into the empirical landscape, adding a hoppy-citrus twist to the otherwise neutral palate of scholarly discourse.

The scatterplot, much like the delicate foam atop a freshly poured pint, visually encapsulates the essence of our findings, serving as a potent brew-minder that the interconnectedness of industries can yield an array of surprises reminiscent of a complex, multi-layered stout. As the crusty bubble of statistical significance popped at  $p < 0.01$ , the tang of concrete association began to tingle on the palate of our analysis, leaving a pleasantly lingering aftertaste of likely market implications.

In essence, our study uncovers a rich, hop-forward relationship between brewery numbers and eBay Inc.'s stock price, adding a malty depth to the field of market analysis. As the market continues to bubble and brew, our findings open new fermenting possibilities for investors seeking to tap into this unique marketplace condensation. The interplay between brewing and bulls offers a delectable transition from the staid confines of traditional market analysis, presenting an invitation for further exploration into the duet of beer and bulls. Cheers to the intriguing brews and bulls - may this surprising correlation continue to effervesce and tantalize the financial taste buds.

(Note: Please feel free to add a conclusion after this discussion)

## 6. Conclusion

In conclusion, this study has uncorked a delightful revelation concerning the interconnectedness of brewery numbers and eBay Inc.'s stock price. Our findings have effervescently demonstrated a strong positive correlation between these seemingly unrelated variables, adding a refreshing twist to the stock market landscape. The statistical significance at  $p < 0.01$  underscores the credibility of this connection, indicating that it is no mere f-rookie-st, but rather a significant discovery worth savoring.

It is apparent that the dynamics of consumer behavior, economic trends, and the spirit of entrepreneurship are all brewed together in a heady concoction that influences stock market performance. The aroma of opportunity wafts through the air, offering investors a chance to tap into this unexpected relationship and perhaps ferment some hoppy returns.

As we raise a glass to the intriguing findings of this study, it becomes clear that there is certainly more than meets the eye in the world of market correlations. The "hopportunity" presented by the proliferation of breweries offers a compelling narrative that defies traditional economic expectations, revealing that beneath the seemingly frothy surface, there lies a rich tapestry of interconnectedness waiting to be explored.

Despite the somewhat light-hearted nature of this investigation, the robust statistical support for the relationship between brewery numbers and eBay Inc.'s stock price demands serious consideration. It is our hope that this study will inspire further research at the intersection of seemingly unrelated industries, as we continue to unearth the unexpected and offer investors a unique brew of insights.

In light of these frothy findings, it is our firm assertion that no further research is needed in this area, as we have thoroughly quenched the thirst for understanding the sudsy relationship between brewery numbers and stock performance. Let us savor this revelation and raise a glass to the un-beer-lievable surprises that await in the world of market analysis. Cheers to the brews and bulls!