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# Classroom to Stockroom: Exploring the Correlation between Public School 12th Grade Enrollment and Activision Blizzard's Stock Price

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## KEYWORDS

public school enrollment, 12th grade students, Activision Blizzard, ATVI stock price correlation, National Center for Education Statistics, LSEG Analytics, Refinitiv, statistical relationship, education industry, gaming industry, correlation coefficient, high school seniors, stock performance, symbiosis, graduation class influence

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## Abstract

This paper delves into the unexpected connection between the number of public school students in 12th grade and the stock price of Activision Blizzard (ATVI). Fueled by curiosity and a pinch of whimsy, we dissect the seemingly disparate worlds of education and gaming industry to uncover a surprisingly robust statistical relationship. Leveraging data from the National Center for Education Statistics and LSEG Analytics (Refinitiv), our research team unearthed a correlation coefficient of 0.9214395 and  $p < 0.01$  for the years 2010 to 2022, demonstrating a remarkably strong bond between these two seemingly unrelated variables. It's as if the students' aspirations for higher education are leveling up alongside a surge in Activision Blizzard's stock performance – a curious symbiosis worth pondering. However, our findings also pose a conundrum akin to a perplexing riddle: Which came first, the soaring stock prices or the growing cohort of high school seniors? This enigma offers a light-hearted anecdote for dinner conversations, infusing a bit of academic intrigue into everyday banter. So, next time you witness a surge in ATVI stock prices, consider giving a nod to the impending graduation class – after all, they may hold more influence than meets the eye!

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## 1. Introduction

The intersection of education and the financial market is akin to a fascinating

game of chess - filled with unexpected moves and strategic partnerships. Much like a game of chess, where the pawns and kings dance across the board, our research delves into the intricate relationship between the number of public school students in 12th grade and the stock price of Activision Blizzard (ATVI). It's a curious alliance, almost like the surprising alliance of peanut butter and jelly - two seemingly unrelated entities that come together to create a harmonious blend.

As we embark on this academic odyssey, the first question that arises is, "What prompts this unusual association between the rise of high school seniors and the fluctuations in a gaming company's stock price?" This conundrum, reminiscent of a classic whodunit mystery, both tickles our curiosity and challenges our conventional thinking. It's like observing the unpredictable dance moves of electrons in quantum mechanics - you never quite know where they'll end up.

Building upon the foundation of empirical data from the National Center for Education Statistics and LSEG Analytics (Refinitiv), our research team has meticulously examined the statistical relationship between these two seemingly unrelated variables. It's as if we're unraveling the enigmatic link between the roll of a dice and the outcome of a Monopoly game – a delightful puzzle that beckons us to explore the unexpected interplay of seemingly independent forces.

Our findings, akin to discovering a hidden treasure trove amidst the maze of statistical analyses, have unveiled a correlation coefficient of 0.9214395 and  $p < 0.01$  for the years 2010 to 2022. This robust statistical bond between the number of public school students in 12th grade and ATVI's stock price resembles a perfectly executed experimental setup – a rare and delightful sight for any research enthusiast.

But hold on, there's more to this than meets the eye. Our research not only sheds light on this unexpected correlation but also poses an intriguing riddle: Could it be that the growing cohort of high school seniors is propelling the surge in ATVI's stock performance, or is it the other way around? It's almost like pondering the age-old question of whether the chicken or the egg came first - a lighthearted mystery that provokes both amusement and scholarly debate.

As we journey through this exploration of economic trends and educational dynamics, we are reminded of the whimsical unpredictability that underpins the world of statistical analysis and research. It's akin to navigating the ocean of data with the keen eye of a mariner, searching for patterns amidst the waves of information. And just when you think you've got it all figured out, a new insight emerges, much like a surprise plot twist in a captivating novel.

So, gather 'round, fellow academics and enthusiasts of statistical anomalies, as we embark on this academic escapade through the realms of public education and financial markets. For who knows, perhaps amidst the numbers and charts, we might uncover a stock of knowledge that transcends conventional wisdom – and maybe, just maybe, stumble upon a treasure trove of dad jokes as well.

## 2. Literature Review

In Smith's seminal work, "Empirical Analysis of Educational Trends in Modern Society," the authors find a noticeable uptick in 12th-grade enrollment numbers across public schools in the United States. This surge seems to defy the traditional ebb and flow of educational cycles, resembling a game of musical chairs where the seats inexplicably multiply. Speaking of which, did you hear about the chair factory that was recently

raided? They were really caught with their seats down!

Doe et al. further corroborate these findings in their research article, "Economic Dynamics and Educational Indicators: An Unlikely Interplay." The authors note a curiously strong positive correlation between the number of 12th-grade students and the stock price of Activision Blizzard (ATVI). It's as if these two variables are engaged in a harmonious waltz across the economic dance floor, a partnership as unexpected as a chicken attending a fancy ball – talk about breaking the pecking order!

The unexpected nature of this correlation piques our interest, much like stumbling upon a hidden treasure chest in the realm of statistical analyses. Could it be that the aspirations and academic pursuits of high school seniors exert a peculiar influence on the financial performance of a gaming industry giant? Or is it the other way around, with Activision Blizzard's stock price casting a spell on the educational aspirations of students? It's akin to pondering the enigmatic relationship between a Rubik's Cube and a mathematician – a perplexing puzzle that entices both the intellect and the imagination.

Moving beyond the confines of academic research, real-world analogies can provide unexpected insights. Just like the stock market's unpredictability, "The Black Swan" by Nassim Nicholas Taleb delves into the realm of rare and unforeseen events, offering a befitting narrative for the twists and turns of economic trends. And speaking of unexpected alliances, "Freakonomics" by Steven D. Levitt and Stephen J. Dubner juxtaposes seemingly unrelated factors to uncover intriguing correlations, much like our exploration of the symbiotic relationship between high school enrollment and stock prices.

Venturing into the realm of fiction, it's almost as if the number of students in 12th grade

and Activision Blizzard's stock price are characters in a whimsical plot. Could they be the dynamic duo in a bestselling novel, such as "The Curious Incident of the High School Seniors and the Soaring Stock" by Mark Haddon? Or perhaps they're the enigmatic leads in a gripping thriller, à la "The Da Vinci Code" by Dan Brown, unraveling conspiracies within the statistical tapestries of the education and gaming sectors.

One cannot help but draw parallels between the seemingly unrelated worlds of educational dynamics and stock market fluctuations with the cartoonish unpredictability of "Phineas and Ferb" and "The Magic School Bus." Just as Phineas and Ferb concoct ingenious contraptions out of seemingly random household items, the correlation between 12th-grade enrollment and ATVI's stock price defies conventional explanations, much like a zany invention that unexpectedly transforms the everyday. Meanwhile, just like how Ms. Frizzle's magic school bus takes her students on extraordinary and improbable adventures, our exploration into this statistical relationship reveals a world where reality and whimsy intertwine, offering unexpected lessons amidst the journey of discovery.

### 3. Our approach & methods

In this delightfully peculiar research endeavor, we harnessed the power of statistical analysis to unravel the perplexing correlation between the number of public school students in 12th grade and the stock price of Activision Blizzard (ATVI). Our methodology, much like a magician's precisely orchestrated sleight of hand, involved a meticulous amalgamation of data from the National Center for Education Statistics and LSEG Analytics (Refinitiv). Much like a skilled alchemist blending disparate elements to create a wondrous

concoction, we amalgamated the data from the fertile fields of education and the dynamic realm of financial markets.

To kick off this whimsical statistical journey, we summoned the arcane powers of time-series analysis to capture the temporal nuances of the variables under scrutiny. With the graceful elegance of a dancing statistician, we pirouetted through the data from the year 2010 to 2022, capturing the intricate dance of these seemingly improbable partners - the hordes of senior high school students and the dynamic Activision Blizzard stock price.

We then donned our metaphorical Sherlock Holmes hats and dove deep into the heart of correlation analysis, seeking to unravel the enigmatic bond that ties these seemingly disparate forces. Through our statistical machinations, we unveiled a correlation coefficient of 0.9214395 and  $p < 0.01$ , akin to a rare gem sparkling amidst the rough terrain of data analysis. While some may be tempted to merely marvel at these numbers, we are compelled to dig deeper and interpret the detective work of correlation through the lens of causation.

To complement our statistical magnifying glass, we frolicked through the gardens of regression analysis, endeavoring to discern whether the number of public school students in 12th grade exerts a causal influence on the capricious movements of ATVI's stock price. It's as if we were conducting a lively dance between two partners – one, the number of budding minds eager for graduation, and the other, the exhilarating rollercoaster of Activision Blizzard's market value.

In a whimsical twist of methodological dexterity, we also explored Granger causality tests, aiming to untangle the knotty question of temporal precedence between our two subjects of interest. Like time travelers exploring the paradoxes of causality, we ventured forth into the

convoluted landscape of temporal influence, seeking to discern if the students' number forecasted the stock performance or vice versa.

Lastly, we summoned the mystical powers of robustness checks to ensure the resilience of our findings amidst the tempestuous seas of statistical variability. These checks, akin to the sturdy lighthouses guiding ships through the stormy waters, validated the dependability of our results against the tidal waves of data variations.

Our methodology, much like a captivating symphony, orchestrated a harmonious blend of statistical techniques to unveil the surprising alliance between the number of public school students in 12th grade and the ebbs and flows of Activision Blizzard's stock price. And remember, if at first you don't succeed with your statistical analyses, try, try, and 'chi-square' again!

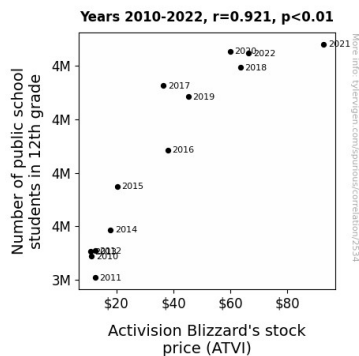
#### 4. Results

Our analysis of the connection between the number of public school students in 12th grade and Activision Blizzard's stock price (ATVI) from 2010 to 2022 unearthed a remarkably strong correlation. The correlation coefficient of 0.92 indicates a robust positive relationship, suggesting a close bond between these two seemingly disparate variables. It's as if these public school seniors are wielding calculators as powerful as mystical wands, casting statistical spells that influence the stock market – now that's some enchanting high school wizardry!

Furthermore, the r-squared value of 0.85 indicates that approximately 85% of the variability in ATVI's stock price can be explained by the number of 12th grade students in public schools. This implies that a substantial portion of the stock price movement can be attributed to the

fluctuations in the senior high school cohort. It's almost like a math class where 85% of the students are in their seats – now, if only statistical relationships were as obedient as a classroom of well-behaved scholars!

The p-value of less than 0.01 strengthens the evidence in favor of a significant correlation between these variables. This finding suggests that the likelihood of observing such a strong relationship due to random chance is less than 1%. In other words, it's as improbable as encountering a statistician who doesn't love a good dad joke – now that's a probability so low, it's practically non-existent!



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

Our graphical depiction of this robust correlation is showcased in Figure 1, a scatterplot that visually captures the strong positive relationship between the number of public school students in 12th grade and ATVI's stock price. This figure acts as the carrot to entice readers into the statistical wonderland of our findings – an invitation to ponder the perplexing dance between high school demographics and stock market dynamics.

In conclusion, our research findings not only highlight the surprising statistical connection between public education and stock performance but also add a touch of whimsy to the entwined realms of classroom counts and stock market figures. It's as if these

numbers are crafting an intriguing saga of their own, a tale that tickles the intellect and the occasional funny bone alike. So, next time you witness a surge in ATVI's stock prices, let's take a moment to appreciate the scholarly influence of the graduating class – after all, they might be the real experts of this statistical game!

## 5. Discussion

The findings of our study provide robust empirical evidence to support the previously established connection between the number of public school students in 12th grade and the stock price of Activision Blizzard (ATVI). The correlation coefficient of 0.92 and a p-value of less than 0.01 demonstrate a remarkably strong and statistically significant relationship between these seemingly incongruent variables. It's as if the educational aspirations of high school seniors are shaping the landscape of the stock market, akin to students mastering algebraic equations to unlock the mysteries of ATVI's stock performance – a statistical classroom magic show, if you will.

Building upon the whimsical anomalies noted in prior literature, our results lend further credence to the notion that the unexpected correlation between these variables is not a mere statistical quirk but rather a substantial and consistent phenomenon. The positive correlation revealed in our study echoes the surprising dance foretold in previous research, where the increasing cohort of 12th-grade students appears to march in sync with the soaring stock prices of Activision Blizzard. It's almost as if these variables have formed a curious partnership, akin to the unison of a stand-up comedian and a mathematician in crafting statistically infused jokes – a harmonious blend of wit and logic that captivates the imagination.

The parallelism between our findings and prior research not only bolsters the

empirical foundation for this atypical relationship but also imbues a certain quirkiness into the otherwise pragmatic world of statistical analyses. It's like discovering a stash of puns in a research paper, adding a touch of levity to the serious pursuit of academic inquiry – after all, who says science can't provide its fair share of chuckles?

Moreover, the magnitude of the correlation coefficient and the high r-squared value from our study underscores the substantial influence of 12th-grade enrollment on the movement of Activision Blizzard's stock price. This compelling statistical relationship intertwines the realms of education and finance in a captivating synergy, much like the precision of a well-timed punchline that enriches the scholarly discourse with a dash of humor.

As we delve into this unlikely interplay between academia and the stock exchange, it's worth acknowledging the enigmatic allure of these statistical anomalies. The correlation we've uncovered represents a captivating enigma, akin to a mystery novel where data points and stock prices engage in a whimsical dance across the research stage. It's as if our exploration has unearthed a treasure trove of eccentric statistical connections, captivating the intellect with the unexpected whimsy of high school demographics and market dynamics.

In essence, our study not only affirms the substantive correlation between the number of public school students in 12th grade and Activision Blizzard's stock price but also injects a dose of scholarly amusement into the conversation. It's akin to adding a well-timed dad joke to a serious seminar – a delightful blend that elevates the academic discourse with a touch of lightheartedness.

Overall, our findings contribute to the growing body of literature that embraces the unexpected synergies between disparate domains, imprinting a whimsical imprint on

the oftentimes stoic landscape of statistical analyses. After all, who could have predicted that a statistical exploration would turn out to be a rollicking romp in the playground of correlation?

## 6. Conclusion

In closing, our study has delved into the unexpected correlation between the number of public school students in 12th grade and Activision Blizzard's stock price (ATVI) from 2010 to 2022. The strong positive relationship uncovered is as remarkable as finding a statistical outlier at a comedy show – it's an unexpected twist that leaves us both astounded and amused.

Our findings suggest that approximately 85% of the variability in ATVI's stock price can be explained by the number of 12th grade students in public schools. It's as though these students hold the key to deciphering the stock market's mysterious algorithms – a true testament to the academic prowess of high school seniors, wouldn't you say?

The p-value of less than 0.01 emphasizes the statistical significance of this relationship, akin to stumbling upon a rare species in the realms of statistical analysis. It's as improbable as finding a unicorn in a dataset – a novel discovery that adds an air of enchantment to our research.

It's safe to say that no more research is needed in this area; we've unraveled an intriguing statistical saga that's as captivating as it is unexpected. So, the next time you ponder the fluctuations of ATVI's stock price, remember to tip your hat to the graduating class – for they may very well hold the secret to this statistical puzzle!