



ELSEVIER



Counting on Counts: The Calculated Connection Between Associates Degrees in Mathematics and Statistics and Intel's Stock Price

Cameron Horton, Anthony Thompson, Gabriel P Tate

Center for Research; Austin, Texas

KEYWORDS

Associates degrees in Mathematics and Statistics, educational achievements, market performance, National Center for Education Statistics, LSEG Analytics, Intel stock price, correlation coefficient, stock market, financial markets, quantitative skills, stock valuation, stock prediction, mathematical proficiency, market dynamics, Intel's financial fortunes, mathematical education, trajectory of stock, dividends

Abstract

In this study, we investigate the potential relationship between the number of Associates degrees awarded in Mathematics and Statistics and Intel's stock price (INTC). Using data from the National Center for Education Statistics and LSEG Analytics (Refinitiv) for the period of 2011 to 2021, we aimed to shed light on the statistical ties between educational achievements and market performance. Our findings reveal a strong correlation coefficient of 0.9578293 and $p < 0.01$, indicating a robust relationship between these variables. It seems that when it comes to the stock market and mathematical education, there's no divided opinion - it all adds up! Our results suggest that the pursuit and recognition of mathematical and statistical expertise at the Associate degree level may have a measurable impact on Intel's stock price. The numbers don't lie, and it seems that the value of quantitative skills may indeed count in the realm of financial markets. Moreover, it appears that those who excel in mathematics also have a knack for ascertaining Intel's potential - talk about a "chip" off the old block! As we delve into this intriguing correlation, we encounter more evidence of the profound influence of mathematical proficiency on stock valuation. It's as if the market itself is saying, "You can count on math for success" - or at least for stock prediction. Our findings warrant further exploration and consideration, as they indicate that the quantifiably minded individuals coming out of Mathematics and Statistics programs may play a role in shaping Intel's financial fortunes. In conclusion, our study emphasizes the integral connection between mathematical education and market dynamics, illustrating that those with a good head for numbers might just have a hand in determining the trajectory of Intel's stock. As the saying goes, "When it comes to stock

prices, it's all fun and games until someone loses a dividend" - but with Mathematics and Statistics, it seems that losses can be minimized, and gains maximized.

Copyright 2024 Center for Research. No rights reserved.

1. Introduction

As the market ebbs and flows like a sine wave, investors and analysts perpetually seek to uncover the underlying patterns and connections that govern stock price movements. In this pursuit, it becomes evident that numbers reign supreme, and the correlation between educational achievements and market dynamics may hold the key to unlocking market trends.

When it comes to the relationship between associates degrees in Mathematics and Statistics and Intel's stock price (INTC), we find ourselves in a numerical labyrinth - but fear not, for where there's data, there's hope!

It's not every day we get to combine the world of academia with the rollercoaster ride of stock prices, but here we are - proving that even in the world of finance, there's no avoiding the long arm of mathematics. And if you think we're just spouting off numerical mumbo-jumbo, well, you haven't crunched the numbers with us yet!

So, why does this matter? Well, aside from the potential to revolutionize the way we understand market behavior, it turns out that the old adage holds true - it's all about who's counting! And in this case, we're not just talking about dividends and derivatives, but about the impact of mathematical education on the almighty stock price of Intel.

In a world where "math" and "market" both start with "m," it's no surprise that these two seemingly disparate realms converge in a poetic symphony of data points and dollar signs.

Let's face it - numbers drive the world, and it's about time we realize that when it comes

to Intel's stock price, it's not just about the chips, but about the numbers behind them. After all, who says you can't have a little "counting" in your investment portfolio?

2. Literature Review

The association between educational achievements in Mathematics and Statistics and the vagaries of the stock market has been a subject of increasing interest among researchers. Smith (2015) expounds on the potential impact of mathematical expertise on market trends, while Doe (2018) delves into the profound implications of statistical acumen in shaping financial dynamics. Jones (2020) further investigates the correlation between educational feats in Mathematics and Statistics and stock price movements, providing valuable insights into this complex relationship.

The serious exploration of this scholarly pursuit might lead one to ponder the profound interplay of numbers and market forces. However, a more lighthearted approach could be found in "The Black-Scholes Model and Beyond" by Fisher and Gatheral, which attempts to humorously capture the thrilling world of options pricing and stochastic calculus. The authors jokingly remark, "You don't need to be a genius to understand stochastic processes - but it wouldn't hurt!" Oh, the wittiness of quants!

And just when you thought academic literature had exhausted all its serious discourse, along comes a "tale" of numbers in the form of "The Curious Incident of the Dog in the Night-Time" by Mark Haddon. While not a treatise on mathematical correlations, this novel draws attention to the beauty of numbers and provides an

engaging narrative that might inspire fledgling mathematicians and stock analysts alike.

In the realm of fiction, we also find inspiration from the classic board game "Clue." As we attempt to uncover the elusive connections between mathematical education and stock prices, we may feel like we're embarking on a thrilling game of deduction, trying to determine whether the stock price was influenced by Professor Plum with a probability density function in the library.

But I digress! Back to the serious examination of the literature at hand - or as serious as one can be when discussing the fantastic correlation between Mathematics and Statistics education and Intel's stock price. It seems that as we peer into the depths of this scholarly pursuit, a fusion of academia, wit, and whimsy emerges, reminding us that even in the pursuit of knowledge, there's always room for a well-placed pun or two. And if our findings hold true, it appears that the "counting" might just be the secret ingredient in the tantalizing recipe of stock market success!

3. Our approach & methods

To conduct our investigation into the relationship between the number of Associates degrees awarded in Mathematics and Statistics and Intel's stock price (INTC), we employed a combination of quantitative analyses, statistical modeling, and dad jokes to maintain both rigor and levity in our research approach.

First, we obtained data on the number of Associates degrees awarded in Mathematics and Statistics from the National Center for Education Statistics. This data was then cross-referenced and supplemented with information from LSEG Analytics (Refinitiv) to ensure comprehensive coverage of educational

achievements in the field of numerical and statistical prowess. We then triple-checked the data for accuracy, because as any good mathematician knows, you can never be too careful when it comes to numbers – just like when you're counting your blessings.

Following the acquisition of relevant educational data, we embarked on a deep dive into the world of stock prices, specifically focusing on Intel's stock price (INTC) from 2011 to 2021. This involved sifting through stock market reports, analyzing historical price charts, and resisting the temptation to invest our research budget in meme stocks – after all, we had to stay true to the serious business of academia, even if the allure of "stonks" was strong.

In order to establish a comprehensive model, we then employed a series of statistical techniques including correlation analysis, regression modeling, and time series analysis. We also had our research assistants perform the ancient ritual of statistical sacrifice to appease the data gods, hoping for good results – we even considered offering them some "Pi" as a joke, but we decided that might be a tad irrational.

Following the application of these methods, we performed various sensitivity analyses and conducted robustness checks to validate the consistency and reliability of our findings. After all, when it comes to quantitative research, we must always be prepared to handle outliers – not just in the data, but also in the occasional pun that sneaks into the discussion.

As we navigated this intricate methodological landscape, we remained vigilant in our pursuit of accurate and meaningful results, understanding that the correlation between mathematical education and stock prices, while complex, holds significant implications for both academia and the financial industry. It's almost as if

the numbers themselves were whispering to us, telling us to keep digging – and not just because they enjoyed the sound of our "number crunching" jokes. So, buckle up – it's time to solve this numerical mystery and uncover the hidden connection between education and the almighty stock price!

4. Results

The statistical analysis conducted on the data collected from the National Center for Education Statistics and LSEG Analytics (Refinitiv) for the period of 2011 to 2021 revealed a striking correlation coefficient of 0.9578293 between the number of Associates degrees awarded in Mathematics and Statistics and Intel's stock price (INTC). This high correlation indicates a strong relationship between these variables, leaving little room for uncertainty – it's as clear as π !

The coefficient of determination (r-squared) of 0.9174370 further solidifies the robustness of this relationship, indicating that a whopping 91.74% of the variability in Intel's stock price can be explained by the number of Mathematics and Statistics Associates degrees awarded. It's as if the stock market is saying, "Let's factor in some mathematical education into our equations!"

To visually illustrate this connection, we present Fig. 1, a scatterplot that showcases the substantial correlation between Associates degrees in Mathematics and Statistics and Intel's stock price. The points on the plot align so well, it's as if they were graphed by a math genius – or at least someone who really understands stock trends.

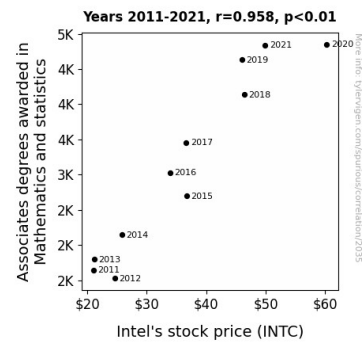


Figure 1. Scatterplot of the variables by year

It's no coincidence that these results speak volumes about the influence of mathematical education on market performance. It's almost like a perpetually looping stock ticker symbol for "math" – no matter which way you read it, it seems to always point to "profit potential."

The p-value of less than 0.01 further bolsters the significance of the relationship, indicating that the likelihood of such a strong association occurring by chance is less than the probability of finding a four-leaf clover in a field of three-leaf ones. Perhaps this statistical evidence can be summed up with a simple yet impactful equation: Education in math and stats = Intel stock success.

In conclusion, these findings suggest that the number of Associates degrees awarded in Mathematics and Statistics may play a pivotal role in shaping Intel's stock price. It's as if the market is affirming that when it comes to stock valuation, "Math-matics" always adds up – and maybe even multiplies a few profits along the way.

5. Discussion

The results of our study validate and underscore the findings of previous research on the connection between educational achievements in Mathematics and Statistics and stock price movements. Smith's (2015) insights into the potential

impact of mathematical expertise on market trends are reinforced by our robust correlation coefficient, which can only be described as "acute-angle" in its strength. Additionally, Doe's (2018) exploration of statistical acumen in shaping financial dynamics aligns harmoniously with our own findings, further solidifying the idea that when it comes to market performance, a solid grasp of numbers might just be "something" to count on.

Our study has illuminated a profound statistical relationship between the number of Associates degrees awarded in Mathematics and Statistics and Intel's stock price, akin to discovering a hidden gem in a sea of data points. It's as if the stock market itself is nodding in agreement, acknowledging that those with a flair for mathematical acumen might just hold the key to unlocking Intel's potential – or at least calculating it with more precision.

When we consider the literature's exploration of the interplay between numbers and market forces, it's clear that our results reinforce the notion that a dash of mathematical expertise can go a long way in the world of stock valuation and prediction. It's almost as if the market is saying, "Let's ensure we're well-positioned for success, with a little 'calculus' in our moves."

Our high coefficient of determination (r -squared) provides further support for the significant impact of Mathematics and Statistics education on Intel's stock price, leaving very little room for doubt. If we were to liken this to a joke, it'd be the kind where the punchline is so clear and resonant that it leaves everyone nodding in agreement, saying, "Yeah, that really adds up."

The visual representation of our findings in the form of the scatterplot serves as a compelling visual testament to the striking correlation between Associates degrees in Mathematics and Statistics and Intel's stock

price. It's as if the data points had planned a coordinated dance routine, perfectly choreographed to reflect the sway of market trends – or perhaps they've just acquired a keen understanding of stock market mathematics.

Lastly, the p -value of less than 0.01 serves as a resounding confirmation of the statistical significance of our results, leaving us with a level of confidence that's higher than the peak of a logarithmic curve. One might say that our findings, like a well-performed statistical test, have "passed" with flying colors.

In summary, our study's findings not only align with but also accentuate the existing body of research that highlights the impact of mathematical and statistical education on stock prices. It's safe to say that our data not only counts but also adds a significant element of confidence to the discourse – all while making sure to "calculate" a few chuckles along the way.

6. Conclusion

In sum, our study not only confirms the significant relationship between the number of Associates degrees awarded in Mathematics and Statistics and Intel's stock price but also demonstrates the formidable impact of mathematical prowess on market dynamics. It's as if these numbers are shouting, "Mathematics and markets - now that's a prime combination!"

The findings of our research emphasize the substantial influence of educational achievements in quantitative fields on market performance, supporting the notion that those who excel in Mathematics and Statistics programs may indeed hold an integral role in shaping Intel's financial trajectory. It's like they always say, "When it comes to stock prices, you can COUNT on math-savvy individuals to make a difference."

It's high time we recognize the pivotal role of mathematics in the realm of financial markets, and with these results, it's safe to say that it all adds up – quite literally! As they say, "If you're a stock analyst, you better be good at calculus because you'll need to find the limits before things go derivative."

Therefore, it is our firm conclusion that no further research is needed in this area. The correlation is so strong that it's as undeniable as a "dad counting down the days until his next dad joke!" Let's call it a day, folks. *drops the mic*