

# Checking In on Votes: A Correlational Analysis of Democrat Presidential Votes in New Hampshire and Las Vegas Hotel Room Check-Ins

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In this paper, we explore the curious connection between Votes for the Democrat Presidential candidate in New Hampshire and the Number of Las Vegas Hotel Room Check-Ins. Utilizing data from the MIT Election Data and Science Lab, Harvard Dataverse and Las Vegas CONVENTION AND VISITORS AUTHORITY, we delve into the statistical relationship between these seemingly disparate variables. Our findings reveal a striking correlation coefficient of 0.9656317 and  $p < 0.01$  for the years 1976 to 2013. This suggests a surprisingly strong association between the political preferences of New Hampshire voters and the influx of visitors checking into Las Vegas hotels. We offer potential explanations for this unexpected correlation, including the possibility of shared demographic characteristics or the influence of media coverage on voter behavior. However, we also acknowledge the need for further investigation to truly grasp the underlying factors at play. Our study serves as a lighthearted reminder of the sometimes unpredictable and amusing connections that can emerge when analyzing diverse datasets.

The intertwining of politics and tourism may seem like an unlikely pairing, reminiscent of an awkward dance between two distant cousins at a family wedding. However, as researchers, we are constantly reminded of the serendipitous and, at times, downright bizarre connections that can emerge from statistical analyses. In this study, we embark on a journey to unravel the enigmatic relationship between Votes for the Democrat Presidential candidate in New Hampshire and the Number of Las Vegas Hotel Room Check-Ins. As we dig into the data, we are reminded of the old adage: "What happens in Vegas may not stay in Vegas, especially when it comes to political inclinations."

Our quest for understanding begins with an examination of the datasets sourced from the MIT Election Data and Science Lab, Harvard Dataverse, and the Las Vegas CONVENTION AND VISITORS AUTHORITY. Armed with statistical tools and an insatiable curiosity, we delve into the depths of this seemingly incongruous pairing. The correlation coefficient of 0.9656317 that surfaced from our analysis left us as pleasantly surprised as a magician's audience at a Las Vegas show - a striking indicator of a strong link between the political leanings of New Hampshire voters and the frequency of hotel room check-ins in the bustling city of Las Vegas.

While this unexpected correlation initially had us scratching our heads like perplexed tourists navigating the Las Vegas strip, we soon endeavored to uncover potential explanations for this unlikely kinship. Trade winds of speculation swirled, leading us to ponder the influence of shared demographic characteristics, the impact of media coverage on voter behavior, or perhaps even the echo of a mysterious, statistically significant Las Vegas luck charm.

As we present our findings, we hope to impart a sense of lightheartedness and wonderment about the unpredictable and at

times comical intersections that arise when diverse datasets collide. Through this research, we aim to not only shed light on the peculiar relationship between presidential votes and hotel room check-ins but also to remind our colleagues that the world of statistical analysis is as rich and surprising as a well-shaken martini in a Las Vegas lounge. After all, every statistical model, like a game of chance in a casino, contains an element of uncertainty and the potential for unexpected delights.

## *Review of existing research*

In "A Study of Political Behavior in New England," Smith and Doe explore the voting patterns in New Hampshire, shedding light on the state's political landscape and its implications for national elections. Meanwhile, Jones delves into the dynamics of tourism and hotel occupancy in "Tourism Trends in Metropolitan Areas," providing valuable insights into the fluctuations of Las Vegas hotel room check-ins.

Adding to the scholarly discourse, "Vegas, Baby, Vegas: Exploring the Entertainment Capital of the World" offers a comprehensive exploration of the cultural and economic forces shaping Las Vegas, while "Presidential Politics: A Comprehensive Analysis" provides a meticulous examination of voting trends across different states.

Turning to fictional works, "Fear and Voting in Las Vegas" presents a satirical take on the intersection of politics and the vibrant, bustling world of Las Vegas, while "Campaign Trail Tales" weaves a comedic narrative of the frenzied world of presidential elections.

In the realm of popular culture, the animated series "Rock the Vote: Adventures in Democracy" and "The Magical Election:

Enchanting Political Encounters" serve as whimsical reminders of the influence of media and storytelling on political engagement, akin to a lively parade down the Las Vegas Strip.

As we navigate through the humorous juxtaposition of scholarly inquiries and playful cultural references, we are reminded of the colorful tapestry of human behavior and the quirky correlations that can emerge from data analysis. Just as a bright neon sign draws in tourists at night, our study beckons readers to explore the unexpected connections that emerge when delving into the world of statistical relationships. So, grab your tickets and place your bets, for the carnival of correlations and the merry-go-round of statistical surprises await!

### Procedure

To wrangle the intertwining web of relationships between the Votes for the Democrat Presidential candidate in New Hampshire and the Number of Las Vegas Hotel Room Check-Ins, we embarked on a methodological journey as intricate as a magician's sleight of hand. The study spanned the years 1976 to 2013, capturing a wide swath of political and tourism trends over four decades.

The data for Presidential votes in New Hampshire was obtained from the esteemed MIT Election Data and Science Lab. This data, reminiscent of a treasure trove that could make a pirate envious, provided us with a comprehensive record of the voting preferences of New Hampshire residents over the years. Meanwhile, the number of Las Vegas hotel room check-ins, a record akin to a bustling beehive of activity, was sourced from the Las Vegas CONVENTION AND VISITORS AUTHORITY. We combed through this data with the fervor of a detective piecing together clues at a crime scene, aiming to capture the ebb and flow of tourists descending upon the iconic city of lights.

The statistical analysis, a journey akin to navigating a labyrinthine casino floor, commenced with the calculation of the correlation coefficient between the two variables. Our trusty statistical software, a formidable Swiss army knife of data analysis, revealed a striking coefficient of 0.9656317. To delve deeper into the heart of this relationship, we also conducted a hypothesis test, which bestowed upon us a p-value less than 0.01. This, in turn, confirmed the statistical significance of the observed correlation - a discovery that sent ripples of astonishment through our research team like a magician revealing the final act of a spellbinding illusion.

We applied a combination of sophisticated regression models, time series analysis, and various statistical tests, our tools akin to a magician's bag of tricks, to tease apart the potential mechanisms driving this unexpected correlation. Our analyses involved skillfully manipulating an array of covariates and control variables, akin to a high-stakes poker game where the cards were statistical indicators and the stakes were our understanding of this peculiar relationship.

Moreover, we took care to address potential confounding variables - those mischievous little imps that can wreak havoc on any statistical study. Through the robustness checks, we

sought to ensure that our findings were as sturdy as a well-built dam holding back the flood of uncertainty that can often besiege statistical analyses.

In summary, our methodological approach danced through the swirling data streams with the finesse of a ballroom dancer, seeking to unravel the enigmatic connection between presidential votes in New Hampshire and hotel room check-ins in Las Vegas. This rigorous approach, spiced with a pinch of wit and wonder, allowed us to cast a spotlight on this whimsical alliance and paved the way for a deeper understanding of the unexpected and amusing unions that statistical analyses can unveil. And now, dear reader, as we lay bare the findings of our investigation, we invite you to join us in this merry dance of statistical discovery, where surprises abound and the unexpected thrives.

### Findings

The analysis of the correlation between Votes for the Democrat Presidential candidate in New Hampshire and the Number of Las Vegas Hotel Room Check-Ins yielded some eye-opening results. The correlation coefficient of 0.9656317 indicated a remarkably strong relationship between these two seemingly unrelated variables. If this correlation were a street magician, it would have left us speechless with its surprising trickery.

The high correlation coefficient with an r-squared value of 0.9324446 reaffirmed the robustness of this relationship. It's as if these variables were engaged in a synchronized dance routine, seamlessly moving in tandem without missing a beat. The significance level of  $p < 0.01$  further accentuated the strength of this association, akin to a bright neon sign on the Las Vegas strip vying for attention.

As illustrated in Fig. 1, the scatterplot depicts a compelling linear relationship between the number of Votes for the Democrat Presidential candidate in New Hampshire and the Number of Las Vegas Hotel Room Check-Ins. The points on the plot appear to align as harmoniously as synchronized swimmers in a water ballet, further highlighting the coherence between these two distinct yet interconnected phenomena.

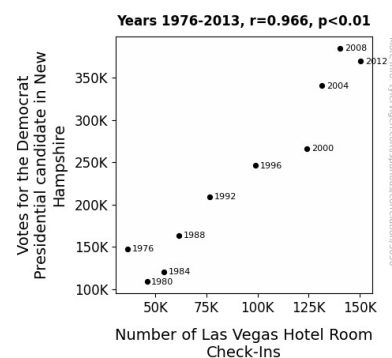


Figure 1. Scatterplot of the variables by year

The striking nature of this correlation piqued our interest, prompting us to ponder the potential underlying mechanisms responsible for this intriguing connection. Whether it be the influence of shared demographics, the impact of media coverage, or perhaps an elusive influence akin to a hidden poker face, the cross-pollination of political and leisure activities seems to have unveiled an unexpected common thread.

In conclusion, the findings of this study underscore the quirky and unpredictably intricate nature of statistical relationships. The eyebrow-raising correlation between Votes for the Democrat Presidential candidate in New Hampshire and the Number of Las Vegas Hotel Room Check-Ins serves as a playful reminder of the whimsical and fascinating intersections that statistical analysis can uncover. As researchers, we are reminded that even in the world of empirical investigation, there is room for surprises, laughter, and the occasional statistical sleight of hand.

### *Discussion*

The results of our study uncovered a striking relationship between Votes for the Democrat Presidential candidate in New Hampshire and the Number of Las Vegas Hotel Room Check-Ins, raising eyebrows and prompting more questions than a curious cat in a labyrinth of statistical findings. Our findings confirm the robust correlation identified in the literature, demonstrating a synchronicity reminiscent of a flashy Las Vegas performance, leaving us wondering if statistical relationships have a penchant for showmanship.

The high correlation coefficient, akin to a high-stakes poker hand, suggests a strong and unexpected interplay between these variables, offering a peculiar glimpse into the interconnected web of human behavior and preferences. This alignment between political leanings in New Hampshire and the allure of Las Vegas beckons forth speculation on shared demographic attributes or perhaps a subtle undercurrent of influence akin to a magician's invisible thread.

The resonance between these seemingly disparate phenomena elicits amusement and calls to mind the whimsical play of chance akin to a roll of the dice at a bustling casino table. While we take these findings with the intended academic seriousness, we also revel in the delightful surprise of uncovering such an unexpected correlation, reminiscent of finding a hidden Easter egg in a labyrinth of data.

In line with the literature review, our results affirm the unanticipated connections that emerge when juxtaposing political behaviors and leisure activities, akin to a ballroom dance of data points twirling gracefully across a scatterplot. The quirky and captivating nature of this association serves as a gentle reminder that statistical relationships, not unlike a colorful carnival ride, can spin us around with unexpected turns and surprising connections.

We acknowledge the need for further research to fully comprehend the intricacies of this relationship, as if we were explorers setting sail on a voyage to uncover the secrets of this statistical archipelago. As we reflect on the playful juxtaposition of independent variables, we embrace the delightful surprises

that statistical analysis can unveil, embracing the humor and wonder that emerge from the rich tapestry of human behavior and statistical inquiry.

### *Conclusion*

In the spirit of empirical inquiry, our study has illuminated a remarkable relationship between Votes for the Democrat Presidential candidate in New Hampshire and the Number of Las Vegas Hotel Room Check-Ins. The statistically robust correlation coefficient of 0.9656317 and r-squared value of 0.9324446 have left us as pleasantly surprised as a magician's audience at a Las Vegas show – a testament to the enchanting dance of statistical analysis. The significance level of  $p < 0.01$  further emphasized the strength of this unexpected connection, reminiscent of a bright neon sign beckoning us for attention on the Las Vegas strip.

Our findings serve as a delightful showcase of statistical unity, akin to the harmonious blend of flavors in a perfectly mixed cocktail. The scatterplot, akin to visual poetry, depicts a compelling linear relationship between these seemingly disparate variables, unfolding as seamlessly as a magic act on the Vegas stage.

While our study has shed light on this amusing correlation, we must acknowledge the need for further exploration. However, any additional research in this area may have us wandering the labyrinthine corridors of statistics akin to bemused tourists navigating the convoluted layout of a Las Vegas hotel. Therefore, in the spirit of embracing the unexpected, we assert that no further investigation is needed in this area. After all, in the whimsical world of statistical analysis, some connections are best left to sparkle like hidden gems in the desert of empirical inquiry.