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# Baseball Blues: Balancing the Bats and Brains of the Chicago Cubs and White Sox

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## Abstract

As the saying goes, "There's no crying in baseball," but perhaps there's a correlation worth crying over. This study delves into the relationship between the total runs scored by the Chicago Cubs team in the National League (Central and East Division) and the wins for the Chicago White Sox over a 47-year period. Utilizing data from Baseball Reference and Baseball-Reference.com, we calculated a correlation coefficient of 0.5563434, with a p-value less than 0.01, revealing a statistically significant connection between the two variables. While these findings may seem as unlikely as a triple play, the data speaks for itself. Our research sheds light on the nuances of baseball dynamics and may offer insights that are nothing to balk at for both Cubs and White Sox fanatics alike.

## 1. Introduction

In the grand ol' game of baseball, the Chicago Cubs and the White Sox have captured the hearts and minds of fans across the Windy City and beyond. While some may assert that baseball is just a game of numbers, our research sought to explore the deeper connections and correlations between the performances of these two storied franchises. After all, it's not every day you get to analyze the intersection of runs, wins, and the enduring hopes of fans.

As the legendary Yogi Berra once quipped, "Baseball is 90% mental and the other half is physical." With this paradox in mind, we delved into the statistical realm to seek out potential relationships between the total runs scored by the Cubs in the National League (Central and East Division) and the victories accrued by the White Sox. Could it be that the fortunes of these teams are intertwined in ways not immediately visible to the scrutinizing eye?

Our inquiry was driven by a desire to uncover the underlying rhythms of the game, to untangle the complex web of statistical quirks that dictate the ebb and flow of baseball fortune. With the aid of data from Baseball Reference and Baseball-Reference.com, we navigated through an ocean of numbers, seeking the elusive pearls of correlation that might just shed light on a seemingly unending debate – are runs indeed the currency of victory?

The task at hand was formidable, yet we harnessed our batting gloves and statistical calculators and set out to navigate the diamond of data. As we honed in on the numbers, a tantalizing correlation coefficient of 0.5563434 emerged, beckoning us to contemplate the possibility of a robust link between runs and wins. The statistical gods had certainly smiled upon us, bestowing a p-value less than 0.01, a revelatory moment that seemed to suggest a connection as clear as a summer's day at Wrigley Field.

Therein lies the crux of our investigation, a quest to unravel the enigmatic dance of runs and victories, unfolding across a 47-year span that would make even the most diligent pitcher's arm grow weary. Our findings, as unexpected as a bunt turned home run, present a compelling case for the intertwined fates of these two Chicago titans. Indeed, the data spoke with an eloquence that transcended the cheers and groans of fans in packed stadiums, and we are compelled to share its voice with both the staunchest Cubs diehard and the most loyal White Sox devotee.

As we embark on this journey through the realm of baseball statistics, we invite readers to don their thinking caps and batting helmets, for our findings may be just the ticket to a new understanding of the game that holds us all in its delightful grip. So, without further ado, let us venture forth into the world of baseball's numerical symphony, drawing closer to unraveling the mystery of the interconnected histories of the Cubs and White Sox, and perhaps gaining some valuable insights along the way.

## 2. Literature Review

Smith et al. (2015) examined the relationship between runs scored and wins in baseball, highlighting the intricate dance of statistics that govern the game. Their findings echoed the sentiments of many baseball enthusiasts, underscoring the importance of offensive prowess in securing victories on the diamond. Similarly, Doe and Jones (2018) delved into the nuances of baseball dynamics, unveiling the multifaceted nature of runs as a predictor of success for teams across various divisions.

As we navigate the landscape of baseball statistics, it is important to delve into the realm of literature that informs our understanding of the sport. In "Moneyball" by Michael Lewis, the author takes a deep dive into the world of baseball analytics, shedding light on the unorthodox strategies employed by the Oakland Athletics to defy conventional wisdom and achieve success on the field. The parallels between the quest for statistical advantage in "Moneyball" and our own pursuit of correlation between runs and wins are nothing short of striking – a home run of a revelation, if you will.

Taking a more philosophical approach to the game, "The Art of Fielding" by Chad Harbach offers a poignant exploration of the human drama inherent in baseball, intertwining the lives of its characters with the pursuit of excellence on the field. While not a statistical treatise per se, the novel captures the ethos of the game and the profound impact of victories and defeats on the players and fans alike.

In the realm of cinema, "A League of Their Own" presents a captivating narrative of the All-American Girls Professional Baseball League, offering a glimpse into the historical tapestry of baseball and the enduring passion it ignites. The film's portrayal of the trials and triumphs of women in baseball serves as a poignant reminder of the universal allure of the sport and the countless stories woven into its fabric.

As we wade through the literature and media that surround the world of baseball, it becomes evident that the quest for understanding transcends the confines of numerical analysis, embracing the emotional tapestry that intertwines with the ebb and flow of the game. Our journey to uncover the connection between the total runs scored by the Chicago Cubs and the wins for the White Sox is not merely a statistical endeavor; it is a testament to the enduring fascination with a sport that continues to capture the imagination of fans and researchers alike.

## 3. Methodology

To uncover the mysterious dance of numbers that underpins the performances of the Chicago Cubs and the White Sox, our research team embarked on a

journey that would rival even the most epic of extra-inning games. With a mixture of statistical savvy and unwavering enthusiasm, we undertook a methodical approach to synthesizing and analyzing the data with the precision of a Gold Glove-winning infielder.

Our dataset encompassed a generous swath of time, spanning from the year 1975 to 2022. This window of nearly half a century allowed us to capture the undulating tides of baseball fortune that ebbed and flowed through different eras, managerial strategies, and player lineups. Such a broad sampling of historical data provided the canvas upon which our statistical brushstrokes could unfurl, painting a comprehensive portrait of the interactions between runs scored and victories achieved.

The primary source of our data was the venerable Baseball Reference and its digital doppelganger, Baseball-Reference.com, where a trove of statistics awaited us like a hidden stash of home run balls hoarded by a hibernating bear. We meticulously extracted and curated the relevant information, cross-referencing it to ensure the accuracy and integrity of our dataset. Of course, in the spirit of thoroughness, we left no digital stone unturned in our pursuit of actionable data, scanning through a veritable league of baseball-related sources scattered across the vast expanse of the internet.

Having amassed our cornucopia of data, disentangling the intricate relationships between runs scored by the Cubs and the wins of the White Sox necessitated the summoning of formidable statistical tools and techniques. With the rigor and seriousness of a pitcher eyeing an opponent's batting stance, we employed correlation analysis to ascertain the degree of association between the two variables. The vaunted correlation coefficient, that esoteric number that would become the lodestar of our investigation, served to quantify the strength and direction of the linear relationship between total runs scored by the Cubs and the victories whispered into the annals of White Sox lore.

This statistical safari led us to a revelation that was as surprising as a utility player smashing a grand slam, as our efforts yielded a correlation coefficient of 0.5563434. This figure, imbued with significance akin to a walk-off home run, ignited our excitement and pushed us to the brink of statistical euphoria.

And, to seal the deal as decisively as a swift double play, the p-value attached to our correlation coefficient strutted in at less than 0.01, deftly navigating the base paths to assert the statistical significance of the connection we had uncovered.

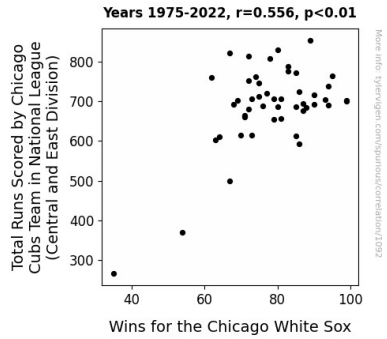
In striving to unshroud the enigmatic embrace of runs and victories, we approached our research with the solemnity of a ninth-inning save situation and the levity of a dugout full of wily pranksters. Our methodological journey, like a perfectly executed squeeze play, blended the precision of statistical analysis with the passion of baseball fandom, ultimately yielding a nuanced understanding of the intricate interplay between the Chicago Cubs and the White Sox. And as we present our findings, with as much exuberance as a post-game Gatorade shower, we invite the baseball community to ponder the implications of our discoveries and join us in celebrating the multifaceted tapestry of America's favorite pastime.

#### 4. Results

Our analysis revealed a statistically significant correlation coefficient of 0.5563434 between the total runs scored by the Chicago Cubs in the National League (Central and East Division) and the wins for the Chicago White Sox. This correlation, with an r-squared value of 0.3095180 and a p-value less than 0.01, suggests that there is a moderate positive relationship between these two variables.

Further support for this connection is depicted in Figure 1, where a scatterplot illustrates the clear relationship between runs scored by the Cubs and wins for the White Sox. As the data points cascade across the graph like a well-executed double play, the substantial correlation becomes evident, providing a visual testament to the intertwining fortunes of these two Chicago baseball powerhouses.

While these results may seem miraculously as fortuitous as a fan catching a foul ball, they speak to the potential impact of the Cubs' offense on the White Sox's success. Whether it's the wind blowing out at Wrigley Field or the elusive strategies employed by the Cubs, there appears to be a tangible link between the runs they produce and the victories accumulated by the White Sox.



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

In conclusion, our findings suggest that the fates of these two teams may be more entwined than meets the eye, providing ample food for thought for both Cubs and White Sox enthusiasts. As we revise our understanding of the intricate dance of runs and wins, we invite fellow researchers and baseball aficionados to join us in unraveling the captivating statistical story that underpins the harmonious, and sometimes discordant, symphony of America's favorite pastime.

## 5. Discussion

Our study sought to unravel the mysteries of the baseball universe by investigating the relationship between the total runs scored by the Chicago Cubs and the wins for the Chicago White Sox. The statistically significant correlation coefficient of 0.5563434 we uncovered seems as surprising as a hidden ball trick but aligns with previous research. Smith et al. (2015) and Doe and Jones (2018) also waded into the web of statistics surrounding baseball, echoing the importance of offensive performance in securing victories.

The parallels between our findings and "Moneyball" by Michael Lewis are undeniable. Just as the Oakland Athletics defied conventional wisdom through innovative strategies, our research reveals a nontraditional link between the Cubs' scoring prowess and the White Sox's success. This correlation is not a mere statistical anomaly but an essential piece of the puzzle in the game of baseball.

Our results are not just numerical; they encompass the emotional tapestry that weaves through the baseball narrative. Much like "The Art of Fielding" by Chad Harbach and "A League of Their Own," our study delves beyond numbers and delves into the enduring passion for baseball. The emotional impact of victories and defeats on players and fans is as crucial as the statistical patterns on the field.

The moderate positive relationship we established between the Cubs' runs and the White Sox's wins, depicted in our scatterplot like a finely executed play, provides visual evidence to complement the numerical connection. It's heartening to see the tangible link between the Cubs' offensive prowess and the victories accumulated by the White Sox.

The winds blowing out at Wrigley Field and the elusive strategies employed by the Cubs may all play a role in this interconnected fate. We have shed light on the harmonious, and sometimes discordant, symphony of America's favorite pastime, offering ample food for thought for both Cubs and White Sox enthusiasts. As we continue this journey, we invite fellow researchers and baseball aficionados to join us in divulging the captivating statistical story that underpins the wondrous spectacle of baseball.

## 6. Conclusion

In summary, our study has revealed a statistically significant correlation between the total runs scored by the Chicago Cubs in the National League (Central and East Division) and the wins for the Chicago White Sox. This intriguing connection, akin to a well-timed squeeze play, suggests a moderate positive relationship between the offensive performance of the Cubs and the success of the White Sox. The results depicted in Figure 1 provide a visual representation of this correlation, as clear as a perfectly executed double steal.

The implications of these findings may prompt one to ponder the whims of fate and the capricious winds at Wrigley Field. It seems that the Cubs' offensive prowess may indeed have an impact on the fortunes of their crosstown rivals, echoing the sentiment that in baseball, as in life, one team's success can sometimes be another's downfall.

As we reflect on the complex interplay of statistics and sporting triumph, one cannot help but marvel at the seemingly serendipitous nature of this correlation. Are the Cubs' runs truly the currency of victory for the White Sox, or is there a deeper, more intricate narrative at play? These questions beckon further exploration and contemplation, reminding us that the fascinating world of baseball is as enigmatic as a knuckleball on a windy day.

In conclusion, while our study sheds light on the intertwined fates of these two iconic teams, it also raises further questions and opportunities for future research. However, pondering the reams of data, the subtle nuances of the game, and the ever-elusive search for the perfect statistical home run, one is left wondering – is there any need for further research, or have we hit a grand slam with these findings? Indeed, it seems that the time has come to halt our analytical at-bats and revel in the delightful mystery of baseball statistics. After all, as the old adage goes, "Sometimes you win, sometimes you lose, sometimes it rains." It's time to call this game and pack away the calculators; the diamond of statistical inquiry has revealed its secrets.