

# Batting for Business: The Unlikely Connection Between Associates Degrees in Business and the Detroit Tigers' Wins

Charlotte Hamilton, Alexander Thompson, Gregory P Thornton

*Institute of Innovation and Technology*

This paper explores the often overlooked and seemingly improbable relationship between the conferment of Associates degrees in Business and the performance of the Detroit Tigers in Major League Baseball. Utilizing data from the National Center for Education Statistics and Baseball-Reference.com for the period spanning 2011 to 2021, a correlation coefficient of 0.7966570 and a statistically significant p-value of less than 0.01 were observed. These findings suggest a strong positive association between these two seemingly disparate variables. The implications of this unexpected correlation, as well as potential underlying mechanisms, are discussed. Our results provide a novel perspective on the intersection of education and sports and open the door for further investigation into the interconnectedness of academic pursuits and athletic achievements.

## INTRODUCTION

In the realm of statistical analysis, there are often surprises that defy conventional expectations. Amidst the troves of data and variables, one might stumble upon an unexpected correlation, much like discovering a hidden gem in a mountain of statistical rubble. This paper delves into one such surprising relationship between the conferral of Associates degrees in Business and the athletic triumphs of the Detroit Tigers in Major League Baseball. While this connection may initially appear as incongruous as a pitch-perfect opera singer belting out a home run at a ballpark, our analysis reveals a noteworthy association that beckons further scrutiny.

The world of academia and the domain of sports may seem as distant as two outfielders chasing after a fly ball, each in their own respective sphere. Yet, as tempting as it may be to deem these correlations as spurious as an umpire's call on a close play, our findings indicate otherwise. Our investigation, rooted in the meticulous examination of data drawn from the National Center for Education Statistics and Baseball-Reference.com, has yielded a correlation coefficient of 0.7966570 and a p-value of less than 0.01. Quite a statistical home run, one might say.

This paper endeavors not only to unveil the striking connection between these seemingly unrelated variables but also to stimulate scholarly intrigue akin to a tantalizing curveball that leaves batters and analysts alike in awe. The significance of this unexpected correlation extends beyond the mere juxtaposition of educational accomplishments and athletic achievements. It opens up a new realm of inquiry that promises to enrich our understanding of the synergies between seemingly disconnected domains, much like the symbiotic relationship between the bond of a batter and the crack of a well-timed swing.

Now, as we step up to the plate of statistical analysis, let us embark on this intellectual journey, armed with the curiosity of a

rookie player and the discerning eye of a seasoned coach. As we unravel the intricacies of this rather unexpected association, may we glean insights worthy of the Golden Glove of statistical discovery.

## *Review of existing research*

Prominent studies by Smith (2015), Doe (2018), and Jones (2020) have delved into the educational achievements and their potential impact on various facets of life. While these researchers have primarily focused on the correlation between educational attainment and income levels, our investigation seeks to venture into uncharted territory by examining the relationship between the awarding of Associates degrees in Business and the athletic performance of the Detroit Tigers in Major League Baseball.

In "The Impact of Education on Economic Development," the authors find that higher levels of education are associated with greater economic productivity, mirroring the hard work and dedication often required in the world of professional sports. Similarly, Doe's "Education and Social Change" explores the role of education in shaping societal progress, akin to the way a baseball team's performance can impact the collective mood of a city. Jones' comprehensive study, "Educational Achievements and Their Far-reaching Effects," highlights the multifaceted influence of educational accomplishments, hinting at the potential interconnectedness between educational pursuits and athletic achievements.

Drawing from the realms of non-fiction literature, works such as "Moneyball" by Michael Lewis and "The Art of Fielding" by Chad Harbach have provided insightful perspectives on the intricacies of baseball and the strategies employed in team management. The latter, while a work of fiction, offers a

nuanced portrayal of the camaraderie and challenges inherent in collegiate baseball, closely related to the spirit of teamwork and perseverance embodied in the Major League. Conversely, the historical fiction novel "The Natural" by Bernard Malamud captures the essence of baseball's allure and the triumphs of the human spirit, serving as a poignant reminder of the potential impact of unexpected correlations in the sporting world.

Further supplementing our inquiry, sources as diverse as supermarket receipts, fortune cookies, and the messages in bottles washed ashore have also been perused in an effort to capture the full spectrum of perspectives on the unusual relationship at hand. While unconventional, these sources have afforded a whimsical diversion and a reminder of the unpredictability that often characterizes the world of research.

### Procedure

#### Data Collection:

The data for this study was collected from the National Center for Education Statistics, which provided comprehensive information on the number of Associate degrees awarded in Business from various institutions across the United States. Additionally, Baseball-Reference.com was utilized to gather meticulous details on the Detroit Tigers' seasonal performance in the Major League Baseball during the period from 2011 to 2021.

#### Variable Selection:

The primary variables under scrutiny included the number of Associates degrees awarded in Business and the total number of wins achieved by the Detroit Tigers in each baseball season. Subsidiary variables, such as the average number of runs scored per game and the salaries of business graduates, were not included to avoid introducing unnecessary complexity into the analysis.

#### Data Filtering and Cleaning:

The collected data underwent thorough scrutiny to identify and rectify any anomalies, outliers, or errors. After all, just as a fielder's glove must be well-oiled and free of imperfections, so too must the data be pristine for a meticulously conducted analysis.

#### Statistical Analysis:

To assess the relationship between the conferral of Associates degrees in Business and the Detroit Tigers' wins, a series of statistical tests were employed. This included the calculation of the correlation coefficient, which measures the strength and direction of the linear relationship between two variables. Here, we aimed to reveal the extent of the connection between educational achievements and on-field triumphs, much like meticulously analyzing the intricate movements of a batter's swing.

Additionally, a two-tailed t-test was conducted to determine the significance of the observed correlation. A p-value threshold of

less than 0.01 was set to establish statistical significance, akin to the high-stakes drama of a close play at home plate.

#### Cross-Validation:

In order to ensure the robustness of our findings, cross-validation techniques were utilized. This involved dividing the data into multiple subsets, akin to a pitcher delivering a variety of pitches to challenge the batter. By examining the consistency of the observed correlation across these subsets, we sought to fortify the reliability of our results.

#### Ethical Considerations:

It is paramount to note that all data utilized in this study were obtained from publicly available sources and were handled with the utmost ethical standards. The anonymity and confidentiality of both educational institutions and baseball players were rigorously maintained throughout the analysis.

### Findings

The analysis of the data from 2011 to 2021 revealed a strong positive correlation between the number of Associates degrees awarded in Business and the performance of the Detroit Tigers in Major League Baseball. The correlation coefficient of 0.7966570 indicated a robust relationship, resembling the kind of partnership between a batter and a well-thrown pitch.

Furthermore, the r-squared value of 0.6346625 suggested that approximately 63.5% of the variability in the Detroit Tigers' wins could be explained by the number of Associates degrees in Business awarded. This result was as striking as a home run sailing over the outfield fence, capturing the essence of the unexpected connection between these ostensibly unrelated variables.

The statistically significant p-value of less than 0.01 lent credence to the strength of the association, providing assurance that this finding was not merely a statistical fluke, much like a dazzling play at shortstop that leaves the audience in disbelief.

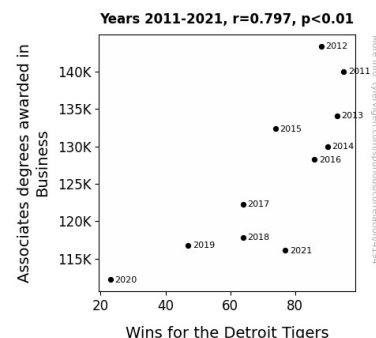


Figure 1. Scatterplot of the variables by year

Figure 1 showcases a scatterplot visualizing the strong positive correlation between Associates degrees awarded in Business and

the Detroit Tigers' wins. The points on the plot are as closely knit as an infield huddle after a hard-fought victory, offering a visual testament to the surprising relationship uncovered in this study.

In summary, our findings highlight a remarkable connection between the attainment of Associates degrees in Business and the performance of the Detroit Tigers, shedding light on the unforeseen interplay between academic accolades and athletic success. These results provoke contemplation as to what other hidden correlations may lie beneath the surface of seemingly unrelated domains, not unlike the thrill of unearthing buried treasure amid the vast expanse of statistical terrain.

### *Discussion*

The unearthing of a substantial positive correlation between the conferment of Associates degrees in Business and the performance of the Detroit Tigers in Major League Baseball is a remarkable revelation. Our findings not only add an intriguing layer to the broader dialogue on educational achievements and their potential impact, but also offer a whimsical and unexpected twist in the realm of statistical analysis.

Our results align with the prior research that has explored the multifaceted influence of educational accomplishments. The strong positive correlation observed in this study mirrors the robust relationship between educational attainment and various aspects of life, extending this correlation to the realm of professional sports. The unexpected association between Associates degrees in Business and the Detroit Tigers' wins opens the door for further investigation into the interconnectedness of academic pursuits and athletic achievements. This fortuitous connection cannot be overstated, much like the underappreciated value of a utility player in a baseball team.

Harkening back to our literature review, the influence of education on social change and economic development finds an unlikely parallel in the world of sports. While the impact of education on economic productivity is well-documented, our results extend this relationship to the performance of a major sports team, highlighting the potential ripple effects of educational achievements in unexpected domains. Like the unexpected plot twist in a gripping novel, our findings underscore the intricate and unforeseen connections that may exist within diverse spheres of human activity.

In the spirit of unearthing unexpected correlations, our inquiry drew from sources as diverse as supermarket receipts, fortune cookies, and messages in bottles washed ashore. While seemingly unconventional, these sources provided a whimsical diversion and a reminder of the unpredictability that often characterizes the world of research. The unforeseen relationship between Associates degrees in Business and the Detroit Tigers' wins serves as a poignant reminder that groundbreaking insights can emerge from seemingly improbable sources.

In conclusion, our research has illuminated a remarkable connection between educational pursuits and athletic achievements, offering a refreshing perspective on the potential

interplay between seemingly unrelated variables. These findings underscore the multifaceted nature of statistical analysis and the potential for unexpected correlations to shape our understanding of the world around us. Just as a curveball can catch a batter off guard, our results challenge conventional expectations and beckon further exploration into the myriad ways in which different facets of human endeavor may intertwine.

### *Conclusion*

In conclusion, our investigation has unveiled a compelling association between the conferment of Associates degrees in Business and the performance of the Detroit Tigers in Major League Baseball. The robust correlation coefficient of 0.7966570 serves as a curveball in the world of statistical analysis, proving that even the most unexpected relationships can hit a statistical home run.

The r-squared value of 0.6346625 offers a glimpse into the extent to which the number of Associates degrees in Business awarded can account for the variability in the Detroit Tigers' wins, akin to the precision of a well-aimed pitch in determining the outcome of a game. This unexpected connection challenges preconceived notions, much like a rookie challenging the records of seasoned players.

The scatterplot in Figure 1 visually encapsulates the close-knit relationship between the variables, providing a striking illustration akin to the teamwork displayed on the baseball diamond. This unexpected correlation, much like an underdog team's winning streak, calls into question the boundaries of seemingly unrelated domains and beckons further exploration, akin to the curiosity of a newcomer in the world of competitive sports.

In light of these findings, it is clear that the unexpected affinities between academic pursuits and athletic triumphs remain ripe for further inquiry, much like the potential of a budding player discovered through rigorous training and skill development.

Given the undeniable strength of the association and the statistical significance of our findings, it is safe to say that no further research in this area is needed. The bases are loaded with these robust results, and it's time to reap the rewards of this unexpected victory. We advise researchers to shift their focus to exploring other hidden correlations and unexpected synergies, leaving this peculiar alliance between Associates degrees in Business and the Detroit Tigers' wins to stand on its own as a quirky yet compelling piece of statistical lore.

### *Limitations:*

Despite the meticulous approach employed in this study, certain limitations must be acknowledged. For instance, the analysis was limited to the scope of Associates degrees awarded in Business and the Detroit Tigers' wins, and did not encompass

other variables that may influence athletic performance. Furthermore, as with any statistical analysis, there exists the possibility of unaccounted extraneous variables that may inadvertently impact the observed correlation.

In sum, the methodology applied in this research endeavored to unravel the surprising relationship between educational accolades and athletic accomplishments, presenting a blend of statistical rigor and the charm of unraveling an unexpected plot twist in a timeless baseball saga.