Buying Wins: the Role of Salary in on Field Success in the MLB and NFL

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Buying Wins: The role of salary in on field success in the MLB and NFL

Many sports purists maintain that in order to win, teams must have the right components, chemistry, leadership, and timing. Simply paying the best players the most money should not guarantee a championship, right? While having the right payroll with good chemistry certainly is important, what is the actual impact a team’s salary has on its success? This research attempts to answer that question and what effects different salary regulations have on competitive balance in Major League Baseball (MLB) and the National Football League (NFL).

Hypothesis 1: There will be a significant positive relationship between salary and regular season wins but not championship.

Hypothesis 2: There will be a higher relationship between salary and wins in the MLB, which has no salary cap, than in the NFL, which has a hard salary cap.

Hypothesis 3: Having a hard salary cap does increase parity among teams versus no salary cap.

In order to test Hypothesis 1 salary data was collected from USA Today and standardized by converting to z-score. Next playoff results were collected from baseball-reference.com and professional-reference.com. From the results we can determine that salary has a positive impact on making the playoffs, which is determined by regular season success, in both leagues. We calculate z-score of both league’s playoff teams were consistently positive. The league champions had a higher average z-score than the playoff average which suggests that a higher correlation, however they St. Dev. were much higher suggesting a higher degree of variation.

In order to test Hypothesis 2, salary data was collected from USA Today and standardized by converting to z-score. Next playoff results were collected from baseball-reference.com and professional-reference.com. From the results we can determine that salary has a positive impact on making the playoffs, which is determined by regular season success, in both leagues. We calculate z-score of both league’s playoff teams were consistently positive. The league champions had a higher average z-score than the playoff average which suggests that a higher correlation, however they St. Dev. were much higher suggesting a higher degree of variation.

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In order to test Hypothesis 3, we can look at the St. Dev. of average wins, playoff appearances, and championships. Again we should remember to account for games played (MLB-162, NFL-16) so wins should be multiplied by 10. While that is done St. Dev. of average wins is about 10 MLB games & games higher than MLB. However St. Devs. for playoff appearances and championships are much higher in the MLB than the NFL. That results suggest that in the MLB, without salary cap, regular season wins are more evenly distributed than in the NFL, with a hard salary cap. However playoff success is higher concentrated in a few teams in the MLB rather than the NFL where the playoff appearances and Super Bowl wins are more evenly distributed.