Abstract

Literature Review

To start, I gathered data from teams in both the NFL and MLB. This data included average home game attendance (for multiple years, which was then averaged as a white), stadium capacity, rank based on revenue, rank based on fan base, win percentage (over multiple years, which was then averaged), and for the NFL, rank based on append sales (MLB sales were not available).

A more loyal fan is more likely to attend a game even if the team does not have a winning record. In order to test this relationship, I first calculated the average percentage of the stadium that was filled (average attendance/stadium capacity x 100) for each team. Then I made a ratio combining the average % of stadium filled and the teams win percentage (average % of stadium filled/win % attendance). This number gives more credit to teams with high attendance than winning teams with high attendance or losing teams with low attendance. The last step was to plot the adjusted attendance number on a 100 point scale.

I then converted the numbers into a usable format. To make everything uniform, all the data was converted to be on a 100 point scale. The ranking numbers were inverted.

After getting all of my data into the same 100 point scale format, I created a formula to represent fan loyalty for the MLB and for the NFL. For the MLB the formula used was: (4 x adjusted attendance number) + (2 x rank based on fan base) + (1 x rank based on revenue).

For the NFL the formula used was: (5 x adjusted attendance number) + (2 x rank based on fan base) + (1 x rank based on revenue).

These formulas were created in order to give different weights to the data. The fan number is the overall attendance number + (5 x rank based on fan base) + (5 x rank based on revenue).

Results and Discussion

Overall, the teams with the lowest fan loyalty for the MLB seem to be located in the southeast, with the Miami Marlins having the lowest fan number. The MLB teams that have the highest fan number and therefore the most loyal fans are all located in the North, with the St. Louis Cardinals leading the MLB. As for the NFL, the teams with low fan numbers were spread throughout the United states, with the Jacksonville Jaguars having the lowest fan number. Football teams in the Northeast have the most loyal fans, with the Philadelphia Eagles having the highest fan number.

Each individual factors maps differently than the overall fan number. The fan number does not directly correlate with any of the data used to calculate it. If only win percentage was taken into account, the Miami Marlins would still be last in place, but the New York Yankees would have the most loyal fans in the MLB. In the NFL, the Detroit Lions would fall to last place and the Cleveland Browns would take over the top spot.

Based on those observations, there are many factors that effect the amount of loyalty that fans have. Winning alone does not mean that a team will have supportive fans. Along the same lines, a team can still have loyal fans even if they do not have a winning record.

Although the correlation between teams being in the same area and having a higher fan number is not strong, there is somewhat of a relationship. There is also somewhat of a correlation between an NFL team and an MLB team in the same area both having a similar amount of fan support.