Spring 5-2018

# Location, Location, Location: It Applies to Sports Marketing Too

Olivia Swimm
*University of Maine*

LOCATION, LOCATION, LOCATION: IT APPLIES TO SPORTS MARKETING

TOO

by

Olivia Swimm

A Thesis Submitted in Partial Fulfillment
of the Requirements for a Degree with Honors
(Marketing)

The Honors College

University of Maine

May 2018

Advisory Committee:
    Harold Daniel, Associate Professor of Marketing
    Susan Myrden, Assistant Professor of Marketing
    Todd Gabe, Professor of Economics
    Stefano Tijerina, Lecturer in Management
    Dmitri Markovitch, Assistant Professor of Marketing

ABSTRACT

Minor-league baseball is the farm system of the major-leagues. They grow and teach players who eventually move up to the majors, while at the same time providing entertainment at a cheaper price for consumers. Minor-league baseball teams are located all around the country. The main focus of this paper is to look into the effects of location to the minor-league team with respect to their major-league affiliate. Using data from the eastern league AA teams, Statistical Package for the Social Sciences (SPSS) analyses have been run to find out the influences on attendance. Distance from the minor-league team to its major-league affiliate did have an influence on attendance. The further away the minor-league team was from its major-league affiliate, or any major-league team, had a positive effect on attendance.

*For my parents, who inspire me to go further.*

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER I


INTRODUCTION


This research paper is addressing the question, does proximity from a minor-league team to its major-league affiliate affect attendance? In this research, the minor-league teams are in the Double-A (AA) class, and this is the only class being studied. The question is important because management for a baseball team needs all possible information in order to determine the location for their minor-league team. The purpose of this study is to shed light on how the factor of proximity affects attendance. Many studies have investigated win percentage and environmental factors, which this study does as well, but there are few studies that solely dedicate their research to proximity to the major-league affiliate. In many cases, management is looking to grow their franchises and have high attendance ratings for both the major and minor-league teams. Locating minor-league teams is an important task because there needs to be an interest in baseball in and around the team stadium, and people must be willing to go to the games. This could be the same issue that retail stores face when trying to locate their business. The question how does location affect where people go to buy their goods can be closely related to where does a minor-league team need to be located to have the reap higher attendance?

Going into this research, the thought was that the closer a minor-league baseball team was to its major-league affiliate, the better the attendance. For instance, the Portland Sea Dogs, whose major-league affiliate is the Boston Red Sox, would have higher

attendance than the Richmond Flying Squirrels because their major-league affiliate is the San Francisco Giants. The prediction is that there is more of a fan base if the major-league and minor-league affiliate teams are geographically close. In order to study this question, an analysis was completed using SPSS. The study suggests that there is an inverse relation between distance (proximity of the minor-league team to its major-league affiliate) and attendance.

CHAPTER II

LITERATURE REVIEW

The articles to follow are all concerned with the driving factors behind attendance at minor-league baseball games. The consensus from the literature is that there are a few different determinants behind minor-league baseball attendance. Distance from major-league teams was mentioned as being one of the factors, and thus the location of the team may have an effect on the attendance.

Gitter and Rhoads (2010) reported, using an econometric model, that major-league baseball teams within 100 miles seem to act as substitutes for the minor-league baseball games and having an association with a winning major-league baseball team has a slight positive effect on attendance. Gitter and Rhoads go on to say though, that the increased prices of major-league tickets positively affects the minor-league team's attendance. In this case, the two groups still act as substitutes, but in favor of the minor-league team. If prices are too high at a major-league game for families to afford, then the minor-league games see an increase in attendance. Major-league and minor-league teams acting as substitutes is also consistent with the research of Gifis and Sommers (2006) because, according to them, minor-league fans take an interest in the roots of baseball.

Relating to the previous findings, the location of the minor-league team can be compared to finding a location for a retail store. According to Runciman (1998), retailers compete with multiple factors, one of them being the geographic location of the store. The other three are pricing, product differentiation, and customer service. Runciman

argues that no store can compete on just one of these factors, there has to be a combination of all three. According to Jain and Mahajan (1979), Levy and Weitz (2004), and Lits and Rajaguru (2008), they argue that geographic location is more important than the other factors because it can't be reproduced by the competition.

Adding an extra element on top of the distance factor, a city's population and consumers' personal income has an effect on the location of a minor-league team (Daivs, 2006). This article took a look at where to locate minor-league teams in the future. Using a generalized ordered logit model, Davis wanted to understand if minor-league baseball teams were located in the right city for its quality and quantity of the sport. Surprisingly, Davis found that having different sport options did not have a significant effect on attendance. Although, later in the article he states that the further away a minor-league team is from a major-league team increases the class (Double-A, Triple-A, etc.) of the minor-league team because there is less competition for attendance. This is because if fans of a nearby major-league team support the minor-league team whole-heartedly, then they do not need another baseball team in the area. Davis' research determined that locating an upper level minor-league team near a major-league team would not make sense for management because they would be competing for viewership and the fan base.

Being associated with a major-league team though has its benefits. The minor-league team gets brand recognition from being associated with a major-league team (Conley, 2015, Smith, 2013). This brings in fans and instills an interest in them. Interestingly, all classes of minor-league teams benefit from brand recognition, but the different classes have different factors affecting attendance (Paul, Kristin, & Holihan, 2008; Paul, Andrew, & Toma, 2008). The class of baseball is a factor because the higher

the class rank, the more closely it resembles the intensity of play of the big leagues. Having better play would result in more prospective players fans can see. Higher classes of minor-league baseball can more closely relate to the intensity of play in the major-league. The article ended confirming that all classes of baseball, except Single-A (A) and lower, can be seen as substitutes for major-league baseball because of the type of play fans can see.

Major-league baseball has started to geographically concentrate their affiliate teams (Belson, 2009). In the region, there would be a greater demand for baseball, but it could also negatively affect demand because there could be an aspect of cannibalization with the higher class minor-league affiliate teams (Agha & Cobbs, 2017, Rhoads T. A., 2015). Substitutability remains a constant factor in attendance with the higher class minor-league teams. A study conducted on the Cleveland Indians' affiliate, the Lake County Captains, shows that the fans are going to the game because of their affiliation with the Indians (Shobian, 2016). The affiliation is creating a greater demand for this minor-league team, but they are not a higher class of minor-league baseball, even though the team is located close to Cleveland. This team, the Lake County Captions, are classified as A and this may be why there is not a factor of substitutability.

Other research into the effects on attendance at minor-league baseball games comes from Gitter and Rhoads (2010) where their research also looked into the effect of winning. They found that winning does increase attendance at the A and AA level of minor-league teams. Also, they found that at the AA level, home runs are associated positively with attendance. If a team hits a lot of home runs, fans want to go see that

team. This is contrary to what Siegfried and Eisenberg (1980) found in their research. They found that winning has no effect on attendance in minor-league baseball.

Finally, another variable that could affect attendance is temperature and weather before the game. A model by Anthony, Kahn, Madison, Paul, and Weinbach (2011) when they studied minor-league baseball attendance in the South Atlantic region. According to their results, sunny days were the days that had the most game attendance. Drizzle had the worst effect on attendance. The reason for such an effect is because days with drizzle were perceived as more of a steady gloomy, rainy day. Warmer days had the most game attendance compared to days with lower temperatures. Wind also played a role in attendance. A light breeze had a positive impact on attendance.

Overall, the research on minor-league attendance was supporting the idea that higher class minor-league teams, when geographically close to a major-league team, act as substitutes. Also, there are mixed reactions to how the winning affects attendance. Temperature and weather seem to have an effect on attendance. This thesis study bases its research from the literature by looking more closely at the relationship between proximity from the minor-league team to its major-league affiliate and attendance, as well as the effect temperature, weather, and win/loss percentage has on attendance. As suggested by Gitter & Rhoads (2010), future research should look into how proximity affects attendance. This is what this thesis research will do.

CHAPTER III


THEORETICAL HYPOTHESES


Using the literature as a guide, the three hypotheses begin to emerge. The hypotheses to be studied are as follows:


H1: Increasing proximity to the minor-league team's major-league affiliate will increase attendance at the minor-league team's games.


H2: Increasing the win percentage will increase attendance at the minor-league team's games.


H3: Increasing weather forecasting time will increase attendance at the minor-league team's games.


The first hypothesis concerns distance and was influenced by Gitter and Rhoads (2010) because it was in that piece of literature that they suggested to further research the impact proximity has on attendance. The other two hypotheses were developed through the literature as well. It was also suggested by Gitter and Rhoads (2010) that a winning major-league team can influence the attendance of the minor-league affiliate. Looking at the win percentage of the minor-league team may prove to have its own effect on the team.

Figure 1 is a visual representation of the hypothesized effects on attendance.
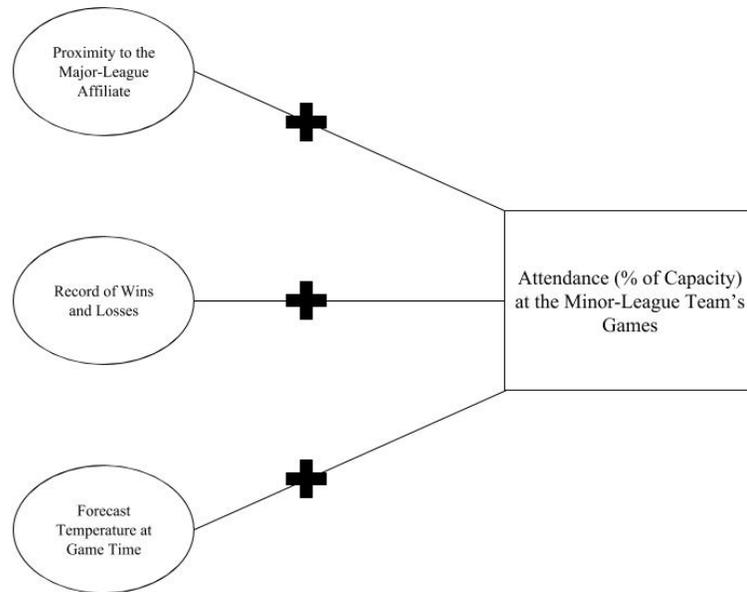


(Figure 1: Proposed model)

CHAPTER IV

CONCEPTUAL FRAMEWORK & DATA

Research Method

The data was collected through milb.com. Data was collected on all the games in the eastern league of AA baseball for the 2017 season. The sample size is twelve teams, as that is how many teams there are in the eastern league. Figure 2 shows all the minor-league teams that data was collected on and their major-league affiliate.

| Minor-League Team | Major-League Affiliate |
| --- | --- |
| Portland Sea Dogs | Boston Red Sox |
| Reading Fightin Phils | Philadelphia Phillies |
| Akron RubberDucks | Cleveland Indians |
| Altoona Curve | Pittsburgh Pirates |
| Harrisburg Senators | Washington Nationals |
| Hartford Yard Goats | Colorado Rockies |
| Richmond Flying Squirrels | San Francisco Giants |
| Erie SeaWolves | Detroit Tigers |
| Bowie Baysox | Baltimore Orioles |
| Binghamton Rumble Ponies | New York Mets |
| Trenton Thunder | New York Yankees |
| New Hampshire Fisher Cats | Toronto Blue Jays |

(Figure 2: Minor-league teams and their major-league affiliates)

The data from the box scores of every game was logged into an excel spreadsheet and then was converted to an SPSS file, in order to run the regression analyses. All the variables were examined to see if the distribution of each variable was skewed. Skewness

is defined as plus or minus 2. All but one variable was acceptable to use in the regression. Home team distance was skewed and thus it had to be transformed.

## Variables

The dependent variable is attendance percentage. This variable means that it is comprised of dividing the game attendance by the stadium capacity. In doing this, it allows the comparison of small and large stadiums. The independent variables are stadium capacity, win/loss percentage, temperature, time, home team distance, weekday vs. weekend 2, summer vs. not summer, precipitation vs. no precipitation 2, home team population, and distance from any major-league team. The following paragraphs will describe each variable.

Stadium capacity is the capacity of each minor-league team's stadium. This variable was added in this model because it can capture the fact that the stadiums do not have the same capacity. It may affect the attendance in some way. If stadiums do not have the same space then it might be harder for those with larger stadiums to fill up.

Win/loss percentage is the winning percentage for each minor-league team on a given game day. When a consumer goes to buy a ticket for a game, they are able to see how the team is performing. This may play a role in their decision to go to the game. That is why this variable is included in the study.

Temperature was added in this model to control for environmental factors. People may be hesitant to go to a game if the temperature is below a certain point and they may be more likely to go to a game if the temperature is higher. This variable is the subject of hypothesis 3 (H3), which is why the variable is part of the regression.

Time was added in this model to again, control for environmental factors. Games either start in the afternoon or evening, and this may play a role in how people decide to go to a game. This is why it is included in the regression, to see time has an effect on attendance.

Home team distance is in this model because it is the main variable for hypothesis 1 (H1) is concerned with. This variable is controlling for how far away each minor-league team is from its major-league affiliate. The variable first had to be transformed because it was heavily skewed. If the variable is skewed, then the regression analysis can not run efficiently because the calculations in the regression are based on the mean of the variable. Therefore, home team distance was transformed to normalize its distribution restring the value of the mean as an indicator of central tendency for the variable. If this variable is significant and the beta is positive, then increasing distance will be associated with increasing attendance, conflicting with H1.

Weekday versus weekend 2 was included in this model so that there would be a control for when the games occur. This variable considers Fridays and Saturdays as the weekend and everything else as a weekday. On the weekday, people are normally at work or kids are in school. During the weekend, most people are not working and have more free time. The variable is looking to see if there is a time of week that has an effect on attendance. This was treated as a dummy variable. A dummy variable is a variable that is used to represent subgroups of a sample. The variable gives values of 0 or 1 to indicate whether there is a categorical effect. In this case, the variable was testing Fridays and Saturdays as one variable and all other weekdays as another variable. There are two other variations of this variable. Weekday vs. weekend 1 considers Saturdays and Sundays as

the weekend and everything else as a weekday. Weekday vs. weekend 3 considers Fridays, Saturdays, and Sundays as the weekend and everything else as a weekday. Weekday vs. weekend 2 is the variable that was chosen for this model but there will be a discussion of the other two variables later in the findings.

Summer vs. not summer is a variable that consists of the months June through September as summer months and April and May as non-summer months. During the summer months, kids are out of school and people take vacation time, while during the non-summer months, kids are in school and people are less likely to take vacation. This dummy variable was included in the model to control for the date of the game relative to the season.

Precipitation vs. no precipitation 2 is another variable controlling for environmental factors. It considers partly cloudy, sunny, and clear as being good weather and everything else as not good. This is a dummy variable, and there's one other variation. Precipitation vs. no precipitation 1 considers partly cloudy, sunny, clear, and overcast as being good weather and everything else as not good. Precipitation vs. no precipitation 1 will be discussed further on in the findings, but for now, precipitation vs. no precipitation 2 was used in the model.

Home team population was included in the model to control for the minor-league team's city population. It was suggested by Davis (2006) and Paul, Weinbach, and Toma (2008) that population of the city has an effect on attendance. Including this in the model will help paint a picture of the many variables that affect attendance. This variable also serves as a control for the differences in market characteristics.

The variable distance from any major-league team was added in because there may be an effect on attendance if there are any major-league teams around the minor-league team, not just their major-league affiliate. If there was an affect from any major-league team, not just their affiliate, then that would mean that minor-league baseball and major-league baseball would be competing for attendance.

Analysis

SPSS was used to analyze the variables and data. Using a confidence level of 95% in the analysis meant that if a significance was smaller than .05, then it was found to be statistically significant, and if the significance was larger than .05, then it was found to be statistically insignificant. This means that there is a 1 in 20 chance that the findings are the result of random sampling error. The analyses that were run were regression analyses. A regression analysis is based on correlation and examines associations between variables. The analyses looked at how the variables together affected the dependent variable, attendance percentage, and to see how much of the variance was being explained by all of the variables.

CHAPTER V


FINDINGS


The variables that were tested in Model 1 were stadium capacity, win/loss percentage, temperature, time, home team distance, summer versus not summer, home team population, distance from any major-league team, weekday versus weekend 2, and precipitation versus no precipitation 2. The ANOVA shows that there is a statistically significant relationship between the set of independent variables and the dependent variable. Figure 3 details the ANOVA.

**ANOVA$^a$**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 180835.270 | 10 | 18083.527 | 39.533 | .000$^b$ |
| | Residual | 352218.550 | 770 | 457.427 | | |
| | Total | 533053.820 | 780 | | | |

a. Dependent Variable: Attendance %

b. Predictors: (Constant), Precip vs. No Precip 2, HT Population, Weekday vs. Weekend 2, Win/Loss %, Distance from any Marjor League Team, Time, Summer vs. Not Summer 1, Stadium Capacity, Temp, HTDistance_Log

(Figure 3: ANOVA showing a statistically significant relationship)


In the regression, the data is representing about 33% of the variance. This means that all the variables being tested explain about 33% of the variation in attendance.

## Model Summary[b]

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .582[a] | .339 | .331 | 21.3875% |

a. Predictors: (Constant), Precip vs. No Precip 2, HT Population, Weekday vs. Weekend 2, Win/Loss %, Distance from any Marjor League Team, Time, Summer vs. Not Summer 1, Stadium Capacity, Temp, HTDistance_Log

b. Dependent Variable: Attendance %

(Figure 4: Total variance in the regression model)

Figure 5 takes a closer look at the data.

## Coefficients[a]

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. | Correlations Zero-order | Correlations Partial | Correlations Part | Collinearity Statistics Tolerance | Collinearity Statistics VIF |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | (Constant) | 80.978 | 10.438 | | 7.758 | .000 | | | | | |
| | Stadium Capacity | −.007 | .001 | −.352 | −10.416 | .000 | −.281 | −.351 | −.305 | .752 | 1.329 |
| | Win/Loss % | .141 | .081 | .053 | 1.751 | .080 | .126 | .063 | .051 | .940 | 1.064 |
| | Temp | .301 | .098 | .119 | 3.061 | .002 | .217 | .110 | .090 | .563 | 1.775 |
| | Time | .000 | .000 | −.150 | −4.788 | .000 | −.008 | −.170 | −.140 | .871 | 1.148 |
| | HTDistance_Log | 8.923 | 1.871 | .207 | 4.768 | .000 | .244 | .169 | .140 | .454 | 2.201 |
| | Summer vs. Not Summer 1 | 13.887 | 2.034 | .255 | 6.827 | .000 | .297 | .239 | .200 | .614 | 1.627 |
| | HT Population | $5.640E{-}5$ | .000 | .119 | 3.026 | .003 | .137 | .108 | .089 | .557 | 1.796 |
| | Distance from any Marjor League Team | −.121 | .025 | −.189 | −4.917 | .000 | .034 | −.174 | −.144 | .582 | 1.719 |
| | Weekday vs. Weekend 2 | 16.867 | 1.745 | .297 | 9.668 | .000 | .248 | .329 | .283 | .908 | 1.101 |
| | Precip vs. No Precip 2 | 4.642 | 3.119 | .050 | 1.488 | .137 | −.071 | .054 | .044 | .768 | 1.303 |

a. Dependent Variable: Attendance %

(Figure 5: Significance level of each variable)

Stadium capacity is significant at .000, with a beta of -.352. This means that the smaller the stadium, the higher the attendance. Temperature is significant at .002, with a beta of .119. This means that the higher the temperature, the higher the attendance. This variable can coincide with the summer versus not summer variable. Summer versus not summer is significant at .000, with a beta of .255. Games in the summer time have higher attendance than games in the non-summer months. Time is also significant at .000, with a

beta of -.150. This means that games played later in the day draw a smaller attendance than games played earlier in the day. Home team distance is significant at .000. The variable has a positive beta (.207), meaning that the farther away a team is from its major-league affiliate, the higher the attendance. Home team population is significant at .003, with a beta of .119. This means that the markets with larger populations will enjoy higher attendance at their games, which corroborates Davis' research (2010). Distance from any major-league team is significant at .000, with a beta of -.189. This means that having any major-league team near a minor-league team tends to reduce attendance at the minor-league team's games. Finally, weekday versus weekend 2 is significant at .000, with a beta of .297. Games played on the weekend enjoy higher attendance than games played during the week.

When compared to the hypotheses, the data can be explained by the following figure.
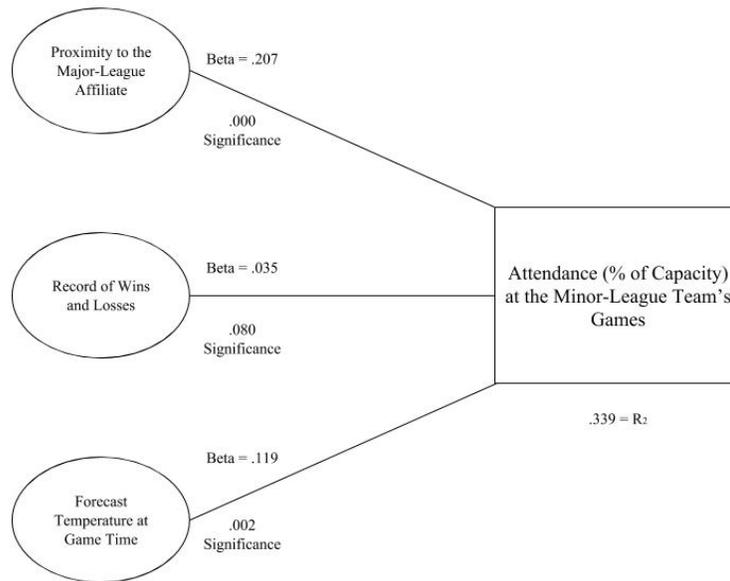
(Figure 6: Hypotheses with data model)

There were two variables that did not play a role in affecting the attendance of minor-league baseball games. Win/loss percentage was not significant using a 95% confidence level. This means that the winning record of the minor-league baseball team does not influence attendance at a significant level. Also, precipitation versus no precipitation 2 was not significant using a 95% confidence level. This means that the weather forecast did not have a significant effect on attendance.

To clarify what was mentioned in the previous section about two dummy variables, the variables weekday versus weekend 2 and precipitation versus no precipitation 2 were chosen over their dummy variable counterparts because they provided the most leverage in explaining attendance. Weekday versus weekend 1 was a significant variable, but when run through the regression analysis, the R-square was

lower than .331. Precipitation versus no precipitation 1 was not significant, using a 95%

confidence level, and it was never in a regression analysis that had a higher adjusted R-

square than .331.

The data was also tested for multi-collinearity. According to an academic

reference (Braunstein, 2007), to test for multi-collinearity the tolerance value can be

examined. If the tolerance is less than .1, then there is reason to do further research. The

results found in this regression did not have a tolerance value of less than .1. Therefore,

there is no reason to do further research into multi-collinearity.

CHAPTER VI

CONCLUSIONS & DISCUSSION

Conclusions

For the first hypothesis (H1), the closer proximity to the major-league affiliate, the greater attendance, the data suggests that this hypothesis is not supported by the data. The variable (home team distance) is significant, but the beta is positive. This suggests that increasing distance between the minor-league team and it major-league affiliate is associated with increasing attendance. When the major-league affiliate and the minor-league team are further apart, then there is a higher attendance. This may be because of substitution, as suggested by Agha and Cobbs (2017) and Rhoads (2015). The type of play fans see at higher level minor-league games is comparable to that of the major-league games. This may be why fans would decide to go to a major-league game over the minor-league game.

For the second hypothesis (H2), the record of wins and losses (win/loss percentage) did not have a significant effect on attendance. In the regression, using a 95% confidence level, the variable was not statistically significant. This means that the fans of minor-league baseball in the AA league are not encouraged or discouraged to go to a game by the win/ loss record. If the win/loss record is not important, this may imply that the minor-league games serve more as entertainment for fans.

For the third hypothesis (H3), the forecasted temperature at the time of the game was significant in the studied regression. This means that fans are more likely to go to a

game when the weather is nicer. The variable temperature can coincide with the variable summer versus not summer, since during the summer months people are more likely to go to the games than the non-summer months. This finding was insightful, but teams already know that when the weather is cooler, people are less likely to want to sit outside and watch a game. What the finding does do is solidify the fact that attendance is affected by the temperature and environmental factors.

## Implications for Locating Minor-League Teams

It can be implied from this research that locating higher level minor-league teams close to major-league teams will not help drive attendance. It can also be implied that locating a minor-league team is just as important as locating a retail store. As a store location helps drive sales, a location for a minor-league team affects attendance. The teams will act as substitutes and the major-league team will cannibalize attendance at the minor-league games because people can see the famous players and better performances. If major-league baseball teams are taking away attendance from minor-league baseball teams, then it could also be implied that other major-league sports teams could be competing for attendance with minor-league teams. Locating a minor-league team outside of the vicinity of the major-league teams, but still within a reasonable distance so that the minor-league team's attendance is less affected may be ideal. Determining exactly what the distance is will require further investigation.

## Implications for Researchers

The implications for researchers are that there is more to investigate when looking into what drives baseball attendance. The data showed that the major-league teams act as

substitutes for the minor-league teams. The cannibalization of attendance at minor-league games associated with close proximity to a major-league team may be true in other sports where minor-league farm clubs groom players for major-league play, for example basketball or hockey. This would require more research.

## Limitations of the Current Research

The first limitation of this research is that the data on which this research is based is limited to the twelve eastern league teams in AA baseball. No data was taken from other minor-league level teams, such as Triple-A or Single-A. Also, the data was taken from the previous baseball season. If there was interest in looking for a trend over multiple years, then adding more seasons would give a lot more data. In the future, the limitations might be that teams have moved or that the dynamic of the minor-league system may change. Not all sports have this type of sophisticated minor-league system.

## Future Research

For future research, the parent team and relocation could be an area to be investigated further. Relocating could have a major effect on demand because that team no longer has its fan base and has to rebuild its image with a new team. Teams also might have to be sure that a minor-league team doesn't switch affiliations to a rival team of its former major-league affiliate. Rivalries are big in sports, and they may have an effect on attendance and demand for a certain team.

Another idea for further research could be to look into how all major sporting teams in an area affect attendance on each other. Not just how major-league and minor-league baseball teams affect each other's attendance, but how all the teams affect the

attendance on one another. This would give more insight on how to locate teams. Also, it would give management an idea of how many customers they lose per game to other sporting events. This may help in their marketing strategy to help bring in new fans for their team.

Finally, the last idea for future research stems from the research done in this thesis. The conclusion drawn from the research was that minor-league teams located too close to major-league teams were negatively influencing attendance. Another research project could look to determine if there is a potential for a threshold, beyond which further distancing the major-league affiliate from the minor-league team no longer increases attendance at the minor-league games. That is, there may be a point beyond which the teams no longer compete for attendance at their games. This could be an area of focus because once again, this information would be important to know when management is trying to locate a team.

# BIBLIOGRAPHY

Agha, N., & Cobbs, J. (2017). Is the Grass Greener? Switching Costs and Geographic Proximity in the High Status Affiliations of Professional Baseball. *Managerial & Decision Economics, 38*(2), 95-108.

Anthony, T., Kahn, T., Madison, B., Paul, R., & Weinbach, P. (2011, December). *Similarities in fan preferences for minor-league baseball across the American southeast.* Retrieved from College Research Center: https://surface.syr.edu/researchcenter/1

Belson, K. (2009, August 22). *Down on the Farm, Wherever That May Be This Season.* Retrieved from The New York Times: https://www.nytimes.com/2009/08/22/sports/baseball/22minors.html

Braunstein, J. W. (2007). *Identifying Multicollinearity in Multpile Regression Statistics Help for Dissertation Students & Researchers.* Retrieved from ResearchConsultation.com: http://www.researchconsultation.com/multicollinearity-regression-spss-collinearity-diagnostics-vif.asp

Conley, W. C. (2015). Top of the Order: Modeling the Optimal Locations of Minor League Baseball Teams. *Undergraduate Economic Review, 11*(1), Article 9.

Daivs, M. C. (2006, November). Called up to the Big Leagues: An Examination of the Factors Affecting the Location of Minor League Baseball Teams. *Internation Journal of Sport Finance, 1*(4), 253-264.

Gifis, S. L., & Sommers, P. M. (2006, December). Promotions and Attendance in Minor League Baseball. *Atlantic Economic Journal, 34*(4), 513-514.

Jain, A. K., & Mahajan, V. (1979). Evaluating the Competitive Environment in Retailing Using Multiplicative Competitive Interactive Model. *Research in Marketing, 2*.

Levy, M., & Weitz, B. A. (2004). *Retailing Management.* New York: McGraw-Hill.

Lits, R., & Rajaguru, G. (2008). Does Small Store Location Matter? A Test of Three Classic Theories of Retail Location. *Journal of Small Business and Entrepreneurship*.

Minor League Baseball. (2017, November). *League Scoreboard.* Retrieved from Minor League Baseball: http://www.milb.com/scoreboard/index.jsp?cid=&lid=113&org=&sc=&sid=milb&t=league&ymd=20170406

Paul, R. J., Andrew, P. W., & Toma, M. (2008). The Minor League Experience: What Drives Attendance at South Atlantic League Baseball Games? *Coastal Business Journal, 8*(1), 70-84.

Paul, R. J., Kristin, K. P., & Holihan, E. (2008). Attendance in the Northwest Baseball League: Effects of Promotions, Winning, and Scoring. *Business Research Yearbook: Global Business Perspectives, 15*(1), 807-812.

Rhoads, T. A. (2015). *The Call up to the Majors.* New York: Springer.

Rhoads, T. A., & Gitter, S. R. (2010, December 1). Determinants of Minor League Baseball Attendance. *Journal of Sports Economics, 11*(6), 614-628.

Runciman, G. (1998, October 22). Retail Competition. *Supply Management*.

Shobian, M. S. (2016). *Factors Affecting Spectators' Decisions in in Attending Minor League Baseball Home Games.* Thesis, Cleveland State University, Cleveland. Retrieved from ETD Archive: https://engagedscholarship.csuohio.edu/etdarchive/949/?utm_source=engagedscholarship.csuohio.edu%2Fetdarchive%2F949&utm_medium=PDF&utm_campaign=PDFCoverPages

Siegfried, J. J., & Eisenberg, J. D. (1980, July). The demand for minor league baseball. *Atlantic Economic Journal, 8*(2), 59-69.

Smith, C. (2013, July 17). *Minor League Baseball's Most Valuable Teams*. Retrieved from Forbes: https://www.forbes.com/sites/chrissmith/2013/07/17/minor-league-baseballs-most-valuable-teams/#7e075d122327

AUTHOR'S BIOGRAPHY

Olivia Swimm was born in Farmington, Maine on September 23, 1996. She was raised in Fayette, Maine and graduated from Maranacook Community High School in 2014. Olivia is majoring in marketing while also minoring in French. She is a member of Beta Gamma Sigma. Upon graduation, Olivia plans on finding a job in the New England area.