

MINOR LEAGUE BASEBALL: DELINEATING A HOME FIELD ADVANTAGE

William C. Hamilton, D. Abbott Turner College of Business, Columbus State University, 4225 University Avenue, Columbus, GA 31907. 706 562-1667, hamilton_bill@colstate.edu
Rhea Ingram, D. Abbott Turner College of Business, Columbus State University, 4225 University Avenue, Columbus, GA 31907. 706 568-5114, ingram_rhea@colstate.edu

Attendance at Minor League Baseball games in 2003 increased by 430,565 fans over last season and went over the 39-million mark for the regular season. The total was 39,069,707, the second largest in the 102-year history of the industry [3]. As minor leagues enjoy record breaking seasons [1], many markets have proven to be unsuccessful for the home team. For example, over the past five years Columbus' (GA) Golden Park (5000 seating capacity) has seen baseball teams come and go. Remodeled in 1994, Golden Park experienced an average attendance of approximately 320; today draws 509 people on average. Minor league teams generally appear in smaller, rural locations while the Major League Baseball teams are predominately located in metropolitan areas around the country. Knowledge of a trading area helps in making a variety of decisions, especially important in selecting and placing of franchises, stores, warehouses, etc. Therefore, delineating successful trading areas for minor league teams is a critical decisions to be made, and must take into consideration the proximity to an MLB team.

A trading area is the geographical area from which an organization draws its customers. Alternative approaches are common in determining the existing trading area of customers, such as viewing car tags parked in the parking lot of a shopping center; or plotting the addresses of cash and credit customers in the stores. Another alternative uses a mathematical equation called Reilly's Law of retail gravitation [2]. This law computes a point of difference (D_{ab}) measured in miles between the two cities by dividing the distance between the cities in miles (d) by the square root of the ratio between the populations of the smaller city (P_b) to the larger city (P_a), then adding one (See Equation 1).

$$D_{ab} = d / 1 + \sqrt{P_b/P_a} \quad (1)$$

Assumptions of this law include: (1) the two competing cities are equally accessible from the major road and (2) population is a good indicator of the differences in the goods and services available in different cities. This law may be a partial explanation of the varying degrees of success or the lack of in minor league baseball. The authors suggest that Reilly's Law is valid in the sports context, specifically with minor league baseball teams in the forty-eight contiguous states. Since financial information is not readily accessible, total home game attendance for a season can be used as a proxy variable for determining success of the franchise. Statistically, an attendee at a game will expend X dollars so attendance times X could be equated with revenue generated. However, there is an inherent problem with using attendance as many teams count season ticket holders as being in attendance, even if they did not attend one particular game.

REFERENCES

- [1] Frank, M., Baker, J. & Baron, M. Minor Miracles. *TIME*, 2002, August 12, 54-56.
- [2] Reilly, W.J. *Methods for the Study of Retail Relationships*. Research Monograph, no. 4. Austin, TX: Bureau of Business Research, The University of Texas, 1929.
- [3] <http://www.minorleaguebaseball.com/pagebank/?id=516>, September 25, 2003.