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THE ECONOMIC EXPENDITURES OF FANS ATTENDING
CACTUS LEAGUE GAMES IN SCOTTSDALE, ARIZONA
1988

BY

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ABSTRACT

Sports enterprises are important to the economic well-being of most communities. This article examines the dollar impact of professional baseball upon Scottsdale, Arizona, as well as the type and nature of tourist influence upon the community. The total primary dollar outcome to the community is $1,000,000.00.

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INTRODUCTION

During the 1988 Cactus League season the researcher gathered economic expenditure and other data from a random sample of 2,502 spectators. An 18 question survey was administered at all seven of the Arizona Cactus League stadia. This report presents the findings from the data obtained at the winter home of the San Francisco Giants, in Scottsdale, Arizona. It is divided into four sections. The first is an Executive Summary of the major findings. The second analyzes and discusses the responses to the 18 questions presented on the questionnaire. The third section discusses the estimate of fan expenditures in Scottsdale. The fourth explains the research methodology. All estimates should be considered conservative.

EXECUTIVE SUMMARY

Total expenditures in Scottsdale of fans who attended Giants home games in 1988 was estimated at $7,137,499. The home attendance figure of 61,971 was generated by an estimated 29,662 spectators. Nearly 21,950 of these fans were out-of-state tourists. Seventeen percent of them (3,730)
indicated that they resided in Scottsdale while visiting Arizona. These Scottsdale-based fans spent $3,283,783 in the city. The other 18,220 tourists spent an estimated $22,582,898 while in Arizona, of which $3,226,128 went directly into the Scottsdale economy. Cactus League game-related expenditures in Scottsdale totaled $627,588.

About 30 percent of the spectators attended six or more Cactus League games in 1988. Almost one-quarter (1/4) of these fans would contemplate traveling to Florida if their favorite team moved there for Spring Training. Fifty-six (56) percent of the out-of-state spectators indicated that they came to Arizona specifically to watch Cactus League play. Over three-fourths (3/4) of the spectators in Scottsdale felt that the Cactus League definitely contributed to the quality of Arizona life.

ANALYSIS AND DISCUSSION OF THE SURVEY QUESTIONS

QUESTION 1 The respondents were asked to indicate their age by range category.

All 178 respondents answered this question. Slightly over 50 percent of the spectators were at least 40 years of age. The largest age segment was the 30-39 cohort, which comprised nearly one-third (1/3) of the sample. Over 90 percent of the sample were between the ages of 20 and 69. The researcher was surprised by the number of working age individuals who attended early afternoon games during workdays. Interestingly, the fact that over 74 percent of the spectators are not Arizona residents suggested that a significant number of people are taking vacation time to travel to Arizona for the Cactus League. This, in turn, may be an indication of the high value that many spectators place on this form of recreation. Table 1 summarizes the responses by category.

QUESTION 2 The respondents were asked to indicate the town and state that they considered their permanent home.

In this study the researcher was only concerned with the state of origin. As Table 2 indicates, 174 (nearly 98 percent) of the respondents answered this question. Twenty-two (22) states and Canada were represented. More Californians were represented in the sample than Arizonans, and together they comprised nearly 53 percent of the entire sample. The only other state with representation exceeding 10 percent was Wisconsin. Not surprisingly, a California based club (Oakland) and the Wisconsin based Milwaukee Brewers were two of the Giants' opponents on survey dates.

QUESTION 3 - The respondents were asked how many games they planned to attend in Arizona in 1988.

Nearly 70 percent of the sample indicated that they would attend one to five games in 1988. Over 15 percent said that they would go to between six and ten games. A substantial number of respondents (14.6 percent) stated that they planned to attend more than 11 games during the
1988 season. Further analysis of the data (through the utilization of cross-tabulation procedures), can pinpoint the expenditure patterns of these various user segments. This kind of analysis could be used in developing marketing strategies. Certainly the nearly 15 percent of the sample who participated in at least 11 games represent a segment that is seriously interested in the Cactus League recreational experience.

QUESTION 4 Respondents were asked if they travel to other ballparks to watch a specific team(s).

Slightly over 97 percent of the respondents answered this question. Over 62 percent indicated that they did travel to other parks for ball games. Almost 35 percent said that they did not go to other ballparks. By crosstabulating this segment by the number of games attending variable, one could ascertain the proportion of spectators who are "hardcore," heavy user Giant fans.

Question 4 had two parts. These respondents who answered that they do travel to other ballparks were then asked to identify the teams that they follow. Not surprisingly, the Giants were the most followed team at 36 percent. Milwaukee was second with 25 percent and Oakland was next with 10 percent. Nearly 51 percent answered that they follow more than one team to other ballparks. The highest percent combination was the Giants/Athletics which garnered nearly 15 percent of the response. This seems logical since these fans were surveyed at the Giant's home park and one of the survey dates fell on a San Francisco vs. Oakland game date. Another game involved the Brewers, which probably heavily influenced the large Milwaukee following which was previously noted.

QUESTION 5 Respondents were asked if they ever travel to Florida to watch Spring Training.

Only one person did not respond to this question. Slightly less than eight percent of the respondents indicated that they ever went to Florida to watch the Citrus League. These findings may suggest that the Citrus League currently has very little drawing power among the winter baseball fans who attended games in Scottsdale.

QUESTION 6 The spectators were then asked if they would consider visiting Florida if the teams that they follow were to move there.

Over 22 percent of the respondents (again, only one person did not answer the question), said "yes" they would consider following their team(s) to the Citrus League. Since approximately 74 percent of the sample were nonresidents, the loss of tourism dollars in the Arizona economy could be substantial.

QUESTION 7 - The respondents were asked if they were satisfied with a variety of game related services and facilities.

These seven game related services and facilities were evaluated by the spectators: ticket availability; ticket prices; seating; concessions; parking; game scheduling; and availability of public transportation. Of the 96 percent who addressed ticket availability, over 30 percent expressed dissatisfaction. On the other hand, nearly 73
percent were satisfied with ticket prices, and an additional 17 percent indicated that the price of tickets was not a factor to them. Eighteen (18) percent of the fans were not satisfied with the stadium seating and 14 percent were dissatisfied with concessions. Parking was a problem for almost 21 percent of the respondents. These three elements and ticket availability are negative influences on the experiences of a significant number of spectators. Methods to improve these should be carefully considered by management.

Over 74 percent indicated satisfaction with game scheduling. It is likely that since a substantial proportion of the spectators are vacationing tourists, scheduling is really no problem for them. Nearly 45 percent of the respondents said that public transportation was not a factor in their Cactus League experience. Less than seven percent of the sample were dissatisfied with public transportation, suggesting little problem or concern with transportation services. Table 4 summarizes the responses over these eight items.

QUESTION 8 - Respondents were asked to estimate the amount of money that they spent per game--including travel and miscellaneous expenses.

Over 93 percent of the sample responded to this question. Respondents selected one of eight possible expenditure categories. These categories ranged from less than $5 to more than $35. Table 5 presents a complete categorical breakdown of these responses. Nearly 72 percent of the sample indicated that they spent at least $11 per game. Approximately 22 percent of the respondents said that they spent between $21 and $25 per outing. If the respondents' estimates of their expenditures were reliable, then a great deal of money was spent on the spectating experience. It is important to note that a portion of the sample indicated (by writing adjacent to the last response category), that they spent as much as several hundred dollars per game. Consequently, the forthcoming estimate of average per game expenditure is probably conservative.

QUESTION 9 - Respondents were asked to indicate if they were providing financially for a group while in Arizona.

This question's purpose was to provide an indication of the number of respondents who might have been answering for more than themselves when they responded to the expenditure per game question. Slightly over 10 percent of the sample said that they provided for a group. Nearly one-third (1/3) of the respondents did not answer the question, which limits the researcher's ability to interpret these results. However, since the "no" response was more than five times as prevalent as the affirmative, it seems reasonable to conclude that the majority of the respondents were not paying the game related expenses for others.

QUESTION 10 Spectators were asked to express, by marking on a scale, the extent to which the Cactus League contributed to their quality of life while in Arizona.

This question offers another measure of the perceived value of Cactus League activity to Arizona. As the bar graph indicates, over 70 percent of the response indicated some contribution from winter baseball
to the quality of Arizona life. Half of the respondents were enthusiastic in rating the value from "quite a deal" to "a great deal." The response rate for this question was 91 percent.

The eight remaining questions were directed to non-Arizona residents only. This reduced the over sample size from 178 to 132. It is important to remember that 74 percent of the Scottsdale sample were non-Arizona residents.

QUESTION 11  Respondents were asked to identify the size of their travel group.

Thirty-six percent of the sample indicated that they were with one other person. Another 32 percent said that they were with two or three other people. Only six percent of the sample stated that they were traveling alone. Over 84 percent of the eligible sample answered this question.

QUESTION 12  - How much time are you spending in Arizona?

The response rate for this question was 91 percent. Thirty-four percent of the sample said that they would be in Arizona for less than one week. However, 40 percent indicated that they were spending from one to three weeks in the state. Almost 14.5 percent of the respondents stated that they were staying one month or longer. One measure of the economic impact of the Cactus League can be obtained by crosstabulating this question by question 15, which asks tourists if they came to Arizona specifically to watch Cactus League play.

QUESTION 13  Tourists were asked to estimate their average weekly expenditures while visiting Arizona.

It is very important to remember that 74 percent of the Scottsdale sample were not residents of Arizona. Three-quarters (3/4) of the eligible respondents answered this question. Over 20 percent stated that they spent between $100 and $300 per week. Twenty-four percent said that they spent between $400 and $500 during the average weeks. About 27 percent of the sample noted that their weekly expenditures ranged from $600 to $4,000. Again, crosstabulations with other questions, such as that noted in the previous paragraph, can yield valuable measures of the overall importance of the Cactus League to the Scottsdale economy.

QUESTION 14  Respondents were asked how many vacation trips they have made to Arizona.

While slightly over 60 percent of the sample stated that they had made three vacation trips or less to Arizona, another 27 percent said that they made four trips or more. The repeat business is extremely important to the tourism industry. The more the Cactus League draws repeat visitors to Scottsdale, the greater its value to the community. About 88 percent of the sample responded to this question.
QUESTION 15 Respondents were asked if they traveled to Arizona specifically to watch Cactus League play.

Well over half (56 percent) of the Scottsdale sample indicated that they came to Arizona specifically to watch winter baseball. This response is a direct indication of the substantial drawing power of the Cactus League. The data suggests that significant numbers of tourists would not come to Scottsdale if the Giants (and their opponents) were not present.

QUESTION 16 Respondents were asked to list their place(s) of residence while visiting Arizona.

Just under 17 percent of the tourists identified Scottsdale as their place of residence. Nearly 23 percent were staying in Phoenix. About 19 percent of the sample were split between Tempe and Mesa. The data reveal that the Cactus League generates significant local economic activity. Further analyses, employing crosstabulation procedures, can produce more complete assessments of this impact.

QUESTION 17 - Tourists were asked to indicate the type(s) of lodging that they used in Arizona.

Nearly 36 percent of the 115 people who answered this query indicated that they stay in hotels/motels while in Arizona. Approximately 24 percent of the visitors claimed that they reside in private homes of relatives or others. Less than five percent of the respondents said that they use R.V. parks.

QUESTION 18 - The final question asked the visitors to specify what else, besides baseball, attracted them to Arizona.

Slightly more than half of the respondents answered this open-ended question. Nearly 51 percent of those who offered their reasons identified the climate. About eight percent noted the attraction of visiting relatives and friends, and just over five percent expressed the opportunities of other sports involvement as an attraction.

ESTIMATE OF FAN EXPENDITURES IN SCOTTSDALE

From a review of the collective responses to the 18 survey questions, the reader can surmise that the presence of the San Francisco Giants, along with the rest of the Cactus League, has a substantial economic impact on the City of Scottsdale. Based on the interpretation of these findings, the researcher has derived a conservative estimate of the total expenditures of the spectators who watched the Giants play in Scottsdale in 1988. A more precise estimate can be obtained by subjecting the existing data to further computer analyses. However, these procedures lie beyond the scope of the present contract.

The total game related expenditures, based on the reported 1988 season attendance of 61,971 is $936,698. This equates to a per game
average expenditure of $15.12 a spectator. A percentage of this total was spent in Scottsdale. However, because many of the fans attending any given game are following the visiting team, and have come from outside Scottsdale, a reasonable portion of this overall expenditure must be excluded from the Scottsdale economy.* To account for this, the researcher has assumed that two-thirds (2/3) of the overall game related expenditures occurred in Scottsdale. This puts total game related expenditures in the city at $627,588.

The reported 1988 home attendance for the Giants was 61,971. Many fans attended more than one Giants' home game. Therefore, the number of individuals who attended a game in Scottsdale in 1988 is considerably less than this attendance mark. Accordingly, an estimate 29,660 individuals attended Cactus League games in Scottsdale during the 1988 season. About 10,380 of these people only attended games played in Scottsdale. The remainder watched games in Scottsdale and other Cactus League locations.

Nearly 21,950 of the total number of spectators were out-of-state tourists. Seventeen (17) percent of them said that they reside in Scottsdale while visiting Arizona. This amounts to 3,730 people. This number does not take into account fans who might have followed other ball clubs into Scottsdale and spent a night or two in town while their team played the Giants, nor does it include year-round residents of Scottsdale.

The 3,730 tourists who attended Giants games and stayed in Scottsdale spent an estimated $4,378,440 during their stay in Arizona. If one assumes that three-fourths (3/4) of this expenditure occurred in Scottsdale then these tourists contributed $3,283,783 directly to the Scottsdale economy.

It is noteworthy that 56 percent of the Scottsdale sample said that they came to Arizona specifically to watch Cactus League play. If the same percent of those tourists who reside in Scottsdale are drawn specifically by winter baseball, then the Cactus League alone attracts approximately $1,838,919 of new money from this segment of tourists.

The other 18,220 tourists who attended at least one Giant home game expended an estimated $22,582,895 while in Arizona. Most of this money was spent outside of Scottsdale, and a significant proportion (such as money spent out-of-state to purchase airfare to Arizona) never entered the Arizona economy. Of this amount, an estimated $3,226,128 was spent in Scottsdale. By adding the game related expenditures in Scottsdale ($627,588) to the two tourist segment expenditure totals ($3,283,783 and $3,226,128) the total spending in Scottsdale by the 29,660 individual spectators who attended Giant home games in 1988 is estimated at $7,137,499.

Given the reliability issues associated with spectator recall of their spending, potential sampling error, possible non-response bias on some questions, and the necessity to make some educated assumptions concerning spending behavior, the researcher believes that these expenditure estimates are reasonable and conservative.
In order to estimate the overall economic impact of these spectators on the city, an income multiplier might be used on their total expenditures. The reliability of such multipliers (which express the number of times a dollar cycles through a given economy), and the validity of the concept, are subject to considerable debate. The researcher urges caution with the application of this concept. Whereas the generation of the expenditure data in this report is relatively straightforward, and is based on primary (firsthand) research data, income multipliers are generated from secondary data and rely heavily on estimation. They have been widely abused in overstating the impact of various economic activities.

**RESEARCH METHOD**

The data used for the generation of these expenditure estimates were obtained from the Scottsdale segment of a survey administered to spectators attending Cactus League games during the 1988 season. Arizona State students, primarily from the Department of Leisure Studies, were recruited and trained to administer a questionnaire outside of the stadium prior to the designated games. The survey dates were dictated by the stadium management.

The survey was conducted on three predetermined dates spread over the month of March. Fans were randomly approached before entering the ballpark. Over 98 percent of those who were asked to complete an 18 question survey instrument agreed to do so. A total of 178 completed questionnaires were obtained. The greatest potential threat to the generalizability of this sample is the relatively small size. However, this potential weakness is mitigated to a great extent because of the random selection of fans, extraordinary response rate, and distribution of the survey dates across the season. Consequently, the researcher is confident that the sample is reasonably representative of the entire spectator population for the season.

*This does not diminish the fact that the Giant home games stimulate nearly $1 million in spending. It simply addresses the reality that not all of those game related expenses (including travel) were incurred in Scottsdale.*
### Table 1

**Respondents' Ages by Category (N = 178)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over 70</td>
<td>8</td>
<td>4.5</td>
</tr>
<tr>
<td>60-69</td>
<td>29</td>
<td>16.3</td>
</tr>
<tr>
<td>50-59</td>
<td>22</td>
<td>12.4</td>
</tr>
<tr>
<td>40-49</td>
<td>31</td>
<td>17.4</td>
</tr>
<tr>
<td>30-39</td>
<td>56</td>
<td>31.5</td>
</tr>
<tr>
<td>20-29</td>
<td>23</td>
<td>12.9</td>
</tr>
<tr>
<td>Under 20</td>
<td>9</td>
<td>5.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>178</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
### Table 4
Satisfaction with Game Related Amenities

<table>
<thead>
<tr>
<th></th>
<th>Ticket Availability</th>
<th>Ticket Prices</th>
<th>Seating</th>
<th>Parking</th>
<th>Games Schedule</th>
<th>Concessions</th>
<th>Public Trnsprtn.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>Yes</td>
<td>56.2</td>
<td>72.5</td>
<td>62.4</td>
<td>62.4</td>
<td>74.2</td>
<td>61.2</td>
<td>37.1</td>
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<tr>
<td>No</td>
<td>30.3</td>
<td>2.2</td>
<td>18.0</td>
<td>20.8</td>
<td>3.4</td>
<td>14.0</td>
<td>6.7</td>
</tr>
<tr>
<td>Not a Factor</td>
<td>9.6</td>
<td>17.4</td>
<td>10.1</td>
<td>9.0</td>
<td>11.8</td>
<td>14.6</td>
<td>44.9</td>
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<tr>
<td>No Answer</td>
<td>3.9</td>
<td>7.9</td>
<td>9.6</td>
<td>7.9</td>
<td>10.7</td>
<td>10.1</td>
<td>11.2</td>
</tr>
</tbody>
</table>

### Table 5
Estimated Money Spent Per Game

<table>
<thead>
<tr>
<th>Amount (in dollars)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $5.00</td>
<td>16</td>
<td>9.0</td>
</tr>
<tr>
<td>$5-10.00</td>
<td>22</td>
<td>12.4</td>
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<tr>
<td>$11-15.00</td>
<td>52</td>
<td>29.2</td>
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<td>$16-20.00</td>
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<td>$21-25.00</td>
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<td>21.9</td>
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<td>$26-30.00</td>
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<td>3.4</td>
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<td>$31-35.00</td>
<td>14</td>
<td>7.9</td>
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<tr>
<td>More than $35.00</td>
<td>11</td>
<td>6.2</td>
</tr>
<tr>
<td>No Answer</td>
<td>12</td>
<td>6.7</td>
</tr>
</tbody>
</table>

**Total** 178 100.0

### Table 6
Estimated Weekly Expenditures of Tourists

<table>
<thead>
<tr>
<th>Amount ($)</th>
<th>Percent</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-60</td>
<td>4.5</td>
<td>6</td>
</tr>
<tr>
<td>100-300</td>
<td>20.5</td>
<td>27</td>
</tr>
<tr>
<td>400-500</td>
<td>24.2</td>
<td>32</td>
</tr>
<tr>
<td>600-1000</td>
<td>21.2</td>
<td>28</td>
</tr>
<tr>
<td>1200-4000</td>
<td>6.1</td>
<td>8</td>
</tr>
</tbody>
</table>

**Total** 76.5 101

70
Figure 1. Spectator Ages.

Figure 2. State of Origin.
Figure 3. Games Attended

Figure 4. Fans Who Travel to Other Ballparks.
Figure 5. Estimated Money Spent Per Game.

Figure 6. Value of Cactus League to AZ Quality of Life
Figure 7. Size of Travel Group.

Figure 8. Estimated Weekly Expenditures.
Figure 9. Number of Trips to Arizona.