

**The 2008 Economic Impacts of the Olympic Swim Trials  
And the NCAA Basketball and Volleyball  
Tournaments on the City of Omaha**

**Study Produced for:  
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Dr. Ernest Goss, Co-Principal Investigator  
Goss & Associates  
Creighton University  
Omaha, NE 68178-0130  
Voice (402) 280-4757  
Fax (402) 280-2172  
e-mail: [ernieg@creighton.edu](mailto:ernieg@creighton.edu)

Dr. Eric Thompson, Co-Principal Investigator  
Bureau of Business Research  
College of Business Administration  
University of Nebraska-Lincoln  
Lincoln, NE 68588  
402-472-3318  
e-mail: [ethompson2@unl.edu](mailto:ethompson2@unl.edu)

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## **Preface**

The subsequent analysis was prepared for the Omaha Sports Commission by Ernest Goss, Ph.D. of Goss & Associates and Eric Thompson, Ph.D. of the Bureau of Business Research at the University of Nebraska-Lincoln. The goal of this study was to estimate the impact of the 2008 Olympic Swim Trials, the NCAA Men's Regional Basketball Tournament, and the NCAA Women's Volleyball Final Four on the city of Omaha. Findings remain the sole property of the Omaha Sports Commission and may not be used without prior approval of this organization. Any errors or misstatements contained in this study are solely the responsibility of the author. Copies of the principal investigators' biographies are provided in Appendix E. Please address all correspondence to:

Dr. Ernest Goss, Co-Principal Investigator  
Goss & Associates  
Creighton University  
Omaha, NE 68178-0130  
Voice (402) 280-4757  
Fax (402) 280-2172  
e-mail: [ernieg@creighton.edu](mailto:ernieg@creighton.edu)

Dr. Eric Thompson, Co-Principal Investigator  
Bureau of Business Research  
College of Business Administration  
University of Nebraska-Lincoln  
Lincoln, NE 68588  
402-472-3318  
e-mail: [ethompson2@unl.edu](mailto:ethompson2@unl.edu)

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# **The 2008 Economic Impacts of the Olympic Swim Trials And the NCAA Basketball and Volleyball Tournaments on the City of Omaha**

## **Executive Summary**

**Amateur sporting events have become major economic prizes, with rising competition among potential host cities.**

- Tuscaloosa, Alabama estimated that hosting the 2008 Olympic trials for the triathlons should have a significant economic impact on the city, bringing in anywhere between \$3 million and \$5 million dollars.<sup>1</sup>
- New Orleans estimated that if it secured the Olympic Gymnast Trials in 2004, the economic impact could reach \$20 million. New Orleans expected up to 10,000 out-of-towners to attend the four-day event, plus up to 8,000 locals.
- The Convention & Visitors Association of Lane County (Eugene, Oregon) estimated that the 2008 Olympic Track and Field Trials would generate \$18 million in economic impact.<sup>2</sup>
- The NCAA and Detroit officials expected the 2009 Final Four to pump \$30 million to \$50 million into the city, with basketball fans filling hotels and partying at downtown casinos.<sup>3</sup>
- The St. Louis Sports Commission estimated that the 2005 NCAA Men's Final Four basketball championship in St. Louis generated a \$72 million economic impact on the region.<sup>4</sup>
- The Louisville Convention & Visitors Bureau expects the 2012 NCAA Volleyball Final Four Championships to produce an economic impact of about \$4 million.<sup>5</sup>

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<sup>1</sup> <http://www.tuscaloosaneews.com/article/20071207/NEWS/71206056/1010/NEWS05> (accessed April 28, 2009)

<sup>2</sup> <http://media.www.dailymerald.com/media/storage/paper859/news/2008/06/27/News/Eugene.Businesses.Hotels.Prepare.For.Influx.Of.Visitors-3386001.shtml> (accessed April 28, 2009).

<sup>3</sup> <http://www.washingtonpost.com/wp-dyn/content/article/2009/04/01/AR2009040104337.html> (accessed April 12, 2009).

<sup>4</sup> <http://www.bizjournals.com/stlouis/stories/2005/09/12/daily38.html> (accessed April 28, 2009).

- The 2000 Sacramento Olympic Track and Field Trials ran for eight consecutive days and pushed the total attendance figure to a record-breaking 187,104, an average daily turnout of 23,338. The previous attendance record was 151,222 in Atlanta in 1996.<sup>6</sup>
- The 2008 Olympic Curling Trials held in Bloomfield, Colorado resulted in an attendance record for the eight-day event of 14,191.
- Over a four-day span, more than 50,000 people attended the Olympic Gymnastic Trials at the Wachovia Center in Philadelphia.<sup>7</sup>

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<sup>5</sup><http://www.courier-journal.com/article/20090207/BUSINESS/902070308/1003/ARCHIVES> (accessed April 12, 2009).

<sup>6</sup><http://www.sacsports.com/2000otf.html> (accessed April 28, 2009)

<sup>7</sup> <http://www.google.com/search?hl=en&q=%E2%80%A2%09Over+a+four-day+span%2C+more+than+50%2C000+people+attended+the+Olympic+Gymnastic+Trials+at+the+Wachovia+Center+in+Philadelphia.+++&btnG=Google+Search&aq=f&oq=> (accessed April 28, 2009)

## The 2008 Olympic Swim Trials

### The 2008 Olympic Swim Trials brought a significant number of tourists to Omaha:

- Total attendance for the eight-day event was 160,003, composed of 95,462 from outside of Nebraska, 4,908<sup>8</sup> from Nebraska's non-metropolitan areas and 59,633 from Nebraska's metropolitan areas.
  - Fans from 36 states and 7 foreign countries attended the Trials.<sup>9</sup>
  - Almost one-third, or 32.2 percent, of attendees from outside of Nebraska indicated that they would visit the zoo while in town.
  - More than one-fourth, or 28.5 percent, of non-Nebraska visitors to the Trials indicated that they would visit the Old Market while in town.

### For the eight days of the 2008 Trials:

- Swim Trials visitors spent more than \$13.2 million in Omaha.
- Additionally, \$1.6 million was spent on the construction and re-configuration of the Qwest Center.

### It is estimated that this spending generated the following impacts for the Omaha economy:<sup>10</sup>

#### To the overall local economy:

- Spending by fans, media, swimmers, and coaches/assistants and construction expenditures in 2008 added an estimated \$22.7 million to the Omaha economy. Approximately \$7.9 million of this impact represented spillover impacts.<sup>11</sup>

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<sup>8</sup>Based on responses from surveys of actual 656 attendees taken for all sessions for the eight days.

<sup>9</sup>The estimated number of visitors is based on 2008 surveys of 656 attendees taken for each session of the Swim Trials by Goss & Associates.

<sup>10</sup>This study was completed using the Implan Input-Output methodology. An explanation of this methodology is contained in Appendices A through D.

<sup>11</sup>\$22.7 million (total impact) minus \$14.8 million (direct impact). Spillover impacts represent 'ripple' impacts in related businesses as Swim Trial dollars are re-spent in the community. For example, Swim Trial vendors will spend a portion of their earnings in the local shops. This spending creates sales, earnings and jobs, termed spillover impacts, for business in the retail trade sector.

- In addition to the direct, indirect and induced impact on the economy, it was estimated that the Swim Trials created \$24 million in marketing value for the City of Omaha related to media coverage.<sup>12</sup>

**To state and local tax collections:**

- For 2008, it is estimated that the Swim Trials generated more than \$1.3 million in state and local tax collections.
- For 2008, local tax collections are estimated to have been \$395 thousand, while state tax receipts were forecasted to have been \$909 thousand resulting from the Swim Trials.

**To the Omaha labor market:**

- For 2008, the Swim Trials supported roughly 386 year-round equivalent jobs with a total payroll of approximately \$7.9 million.<sup>13</sup>
- The Swim Trials increased the income of area private business owners and self-employed by roughly \$635 thousand in 2008.

**To non-major amateur sports related industries (spillovers) for 2008:**

- For 2008, 280 of Omaha's 293 industries experienced impacts from the Swim Trials. For example, for the area's real estate industry, the Swim Trials spending supported 5 jobs, \$102,807 in wages & salaries (includes self-employment income) and \$593,601 in sales.

**To a stable job base and economic growth:**

- The Swim Trials combined with other amateur sporting events at the Qwest Center have been an important anchor for the tourist industry in Omaha and Nebraska.
- Between the opening of the Qwest Center and the completion of the NCAA Women's Volleyball Final Four in December 2008, the Qwest Center has significantly increased the share of outside visitors coming to the City of Omaha.

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<sup>12</sup>Estimated by Universal Information Services.

<sup>13</sup>Compensation includes fringe benefits and FICA taxes paid by the employer on behalf of the employee. Jobs are year-round but not necessarily full-time.

## To long-term economic growth<sup>14</sup> :

- Events such as the Swim Trials contribute to the attractiveness of Omaha, encouraging in-migration and discouraging out-migration.
- Each year, sporting events such as the Olympic Swim Trials attract other sports related activities. For example, the United States Specialty Sports Association (USSSA) baseball championship series attracted 133 teams, with each team staying three nights in the city. This series was organized to coincide with the College World Series.
- The OSC retained the services of a local company, Bailey Lauerman, to assist with the public relations efforts.
- In excess of 264 American journalists, 24 foreign journalists and 50 photographers attended the trials in Omaha. Their print, television and radio reports ensured that Omaha was always in the spotlight.
- NBC and the USA networks televised the event live across America, Canada and Mexico each night in primetime.
  - NBC carried the Swim Trials live from 7:00 pm – 8:00 pm for four nights and was the most highly rated program for each night.
  - USA Network carried the Swim Trials live for the other four nights.
- “It is fair to say, however, that Omaha civic groups and organizations would need to raise advertising budgets in excess of \$24 million if it was necessary to pay for the local and national promotional messaging that is generated when the media’s attention turns to Omaha every June.” (Universal Information Services, 2008).

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<sup>14</sup>All data in this section come from a 2008 analysis by Bailey Lauerman.

## NCAA 2008 Regional Basketball Tournament<sup>15</sup>

It is estimated that this spending generated the following impacts for the Omaha economy<sup>16</sup> :

### To the overall local economy:

- Spending by fans, media, players, and coaches/assistants added an estimated \$3.9 million to the Omaha economy in 2008. Approximately \$1.15 million of this impact represented spillover impacts.<sup>17</sup>

### To state and local tax collections:

- For 2008, it is estimated that the NCAA Men's Regional Basketball Tournament generated more than \$256 thousand in state and local tax collections.
- For 2008, local tax collections are estimated to have been \$51 thousand, while state tax receipts were forecasted to have been \$205 thousand resulting from the NCAA Men's Regional Basketball Tournament.

### To the Omaha labor market:

- For 2008, the NCAA Men's Regional Basketball Tournament supported roughly 63 year-round equivalent jobs with a total payroll of approximately \$1.2 million.<sup>18</sup>
- The NCAA Men's Regional Basketball Tournament increased the income of area private business owners and self-employed by roughly \$114 thousand in 2008.

### To non-major amateur sports related industries (spillovers) for 2008:

- For 2008, 264 of Omaha's 293 industries experienced impacts from the NCAA Men's Regional Basketball Tournament. For example, for the area's real estate industry, the Tournament spending supported one job, \$22,806 in wages & salaries (includes self-employment income), and \$131,941 in sales.

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<sup>15</sup>The NCAA would not permit surveying of event attendees. Thus all estimates are generated from an analysis of license plates of attendees.

<sup>16</sup>This study was completed using the Implan Input-Output methodology. An explanation of this methodology is contained in Appendices A through D.

<sup>17</sup>\$3.9 million (total impact) minus \$2.75 million (direct impact). Spillover impacts represent 'ripple' impacts in related businesses as NCAA Men's Basketball Regional dollars are re-spent in the community. For example, vendors will spend a portion of their earnings in the local shops. This spending creates sales, earnings and jobs, termed spillover impacts, for business in the retail trade sector.

<sup>18</sup>Compensation includes fringe benefits and FICA taxes paid by the employer on behalf of the employee. Jobs are year-round but not necessarily full-time.

## NCAA 2008 Women's Volleyball Final Four<sup>19</sup>

It is estimated that this spending generated the following impacts for the Omaha economy<sup>20</sup> :

### To the overall local economy for 2008:

- Spending by fans, media, players, and coaches/assistants added an estimated \$2.75 million to the Omaha economy. Approximately \$950 thousand of this impact represented spillover impacts.<sup>21</sup>

### To 2008 state and local tax collections:

- For 2008, it is estimated that the Final Four generated almost \$184 thousand in state and local tax collections.
- For 2008, local tax collections are estimated to have been \$30 thousand while state tax receipts were forecasted to have been \$153 thousand resulting from the Final Four.

### To the Omaha labor market for 2008:

- For 2008, the Final Four games supported roughly 61 year-round equivalent jobs with a total payroll of more than \$1 million.<sup>22</sup>
- The Final Four games increased the income of area private business owners and self-employed by roughly \$118 thousand in 2008.

### To non-major amateur sports related industries (spillovers) for 2008:

- For 2008, 280 of Omaha's 293 industries experienced impacts from the Final Four. For example, for the area's real estate industry, Final Four spending supported one job, \$12,042 in wages & salaries (includes self-employment income) and \$76,618 in sales.

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<sup>19</sup>The NCAA would not permit surveying of event attendees. Thus all estimates are generated from an analysis of license plates of attendees.

<sup>20</sup>This study was completed using the Implan Input-Output methodology. An explanation of this methodology is contained in Appendices A through D.

<sup>21</sup>\$2.75 million (total impact) minus \$1.8 million (direct impact). Spillover impacts represent 'ripple' impacts in related businesses as NCAA Women's Volleyball Final Four dollars are re-spent in the community. For example, vendors will spend a portion of their earnings in the local shops. This spending creates sales, earnings and jobs, termed spillover impacts, for business in the retail trade sector.

<sup>22</sup>Compensation includes fringe benefits and FICA taxes paid by the employer on behalf of the employee. Jobs are year-round but not necessarily full-time.

Table ES.1 summarizes the impacts from the 2008 Olympic Swim Trials, the NCAA Men’s Regional Basketball Tournament, and NCAA Women’s Volleyball Final Four. The assumptions and methodology used to produce these estimates are contained in accompanying Appendices A – D.

Table ES.1: Summary of monetary impacts of Olympic Swim Trials, NCAA Basketball Tournament and NCAA Volleyball Final Four on Omaha economy for 2008<sup>23</sup>

	Olympic Swim Trials	NCAA Basketball Championships	NCAA Volley- ball Final Four	Total Impact of All Three Events
Total sales or output (\$ millions)	\$22.69	\$3.90	\$2.75	\$29.34
Wages & salaries (\$ millions)	\$7.92	\$1.23	\$1.02	\$10.17
Self-employment income (\$ millions)	\$0.635	\$0.114	\$0.118	\$1.12
Jobs (year-round equivalents)	386	63	61	510
Media impact (\$ millions)	\$24.0	n.a.	n.a.	\$24.0
State tax collections (\$ millions)	\$0.909	\$0.205	\$0.153	\$1.267
Local tax collections (\$ millions)	\$0.395	\$0.051	\$0.030	\$0.476
Total state & local taxes (\$ millions)	\$1.304	\$0.256	\$0.184	\$1.744

Source: Authors’ estimates using Implan Multiplier System

<sup>23</sup>Self-employment income represents income for workers such as attorneys and non-incorporated business owners.

## Chapter 1

### The Olympic Swim Trials and NCAA Basketball and Volleyball Tournaments: A Brief Overview

Amateur sports tournaments and events can make an important contribution to the tourism economy of cities. These events bring a substantial number of visitors from throughout the country, delivering an increase in tourism activity. The events also provide unique opportunities for local sports fans, increasing the quality-of-life of residents.

In 2008, Omaha Nebraska was able to host three such major events, including the Olympic Swim Trials. This report estimates the economic impact of these three events on the City of Omaha for 2008. In this chapter, background information for each event is provided, beginning with a discussion of the Olympic Swim Trials, followed by one of the NCAA Men's Regional Basketball Tournament weekend, and then examining the NCAA Women's Volleyball Final Four. For each event, we also present attendance figures, and survey estimates on the origin of fans. In particular, we provide estimates of the share of fans who came from the Nebraska Metropolitan Statistical Area (Omaha or Lincoln), non-metropolitan areas of Nebraska, and from other states.

#### The Olympic Swim Trials

The first United States Olympic Swim Trials were held in Alameda, California in 1920 in preparation for the Summer Olympics in Antwerp, Belgium that same year.<sup>24</sup> And in 1924, before he signed a contract with Metro-Goldwyn-Mayer and went on to star in a dozen Tarzan movies, Johnny Weissmuller qualified for the Paris Olympics at the Indianapolis Trials.<sup>25</sup> Since then, the event has been held every four years from New York to California, and points in between such as Detroit, Chicago, Austin, and finally, in 2008, Omaha, Nebraska. Approximately 1,250 swimmers

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<sup>24</sup>[http://en.wikipedia.org/wiki/United\\_States\\_Olympic\\_Trials\\_\(swimming\)](http://en.wikipedia.org/wiki/United_States_Olympic_Trials_(swimming)).

<sup>25</sup>[http://en.wikipedia.org/wiki/Johnny\\_Weissmuller](http://en.wikipedia.org/wiki/Johnny_Weissmuller).

competed at the Qwest Center Omaha in hopes of qualifying for one of the 52 spots available on the Olympic team.

USA Swimming Magazine called it, “a spectacle unmatched by any other swimming



competition held on U.S. soil.”

The contract to host the 2008 Olympic Team Trials for swimming was awarded to the Omaha Sports Commission (OCS) as a result of a bidding process in 2005 with site preparations beginning in 2007. A local organizing committee, consisting of both paid members and volunteers, combined their efforts to host one of the most, if

not *the* most, well-received event in the history of the Swim Trials. Table 1.1 lists the sites of previous trials.

The Qwest Center Omaha was selected as the venue and would also serve as the primary entity to plan and conduct the events related to the trials. The planning and staging of the activities was provided by the center’s operating entity, MECA, at cost, and provided substantial savings to the OSC. In addition, charitable donations of more than \$1 million provided additional financial assistance for the events. In May 2007, ticket sales for the trials began across the United States.<sup>26</sup>

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<sup>26</sup> Through the efforts of the OSC, LLC marketing committee and Bailey Lauerman, an advertising agency with offices in both Omaha and Lincoln, Nebraska, an array of marketing tactics were used, including direct and traditional marketing and advertising as well as promotional appearances by former Olympic swimmers. A sample of media coverage can be viewed via this link: <http://usaswimming.org/USASWeb/ViewNewsArticle.aspx?TabId=0&Alias=Rainbow&Lang=en&ItemId=2130&mid=2943>

Table 1.1: Olympic Swim Trial Venues, 1920-2008<sup>27</sup>

1920	Alameda, California
1924	Indianapolis, Indiana
1928	Iowa City, Iowa (Midwestern Olympic Swimming Tryouts), Philadelphia, Pennsylvania (NCAA Olympic Swimming Tryouts), Detroit, Michigan (men's Final Olympic Swimming Tryout), Rockaway Playland Pool (women's Final Olympic Swimming Tryout)
1932	Cincinnati, Ohio (men's), Long Island, New York (women's)
1936	Providence, Rhode Island (men's), Astoria, New York (women's)
1948	Detroit, Michigan
1952	New York, New York (men's), Indianapolis, Indiana (women's)
1956	Detroit, Michigan
1960	Detroit, Michigan
1964	Astoria, New York
1968	Long Beach, California (men's), Los Angeles, California (women's)
1972	Chicago, Illinois
1976	Long Beach, California
1980	Irvine, California
1984	Indianapolis, Indiana
1988	Austin, Texas
1992	Indianapolis, Indiana (together with the US Spring Nationals)
1996	Indianapolis, Indiana
2000	Indianapolis, Indiana
2004	Long Beach, California
2008	Omaha, Nebraska (event winners officially considered national champions)

With the assistance of the Omaha Convention and Visitors Bureau, twenty-eight local hotels were contracted and approximately twenty thousand room nights were provided to athletes and visitors. A summary of the residence of attendees is provided in the Table 1.2 below. The estimate for total attendance came from the *2008 U.S. Olympic Swim Trials Final Report*. A survey of visitors attending the Swim Trials was used to estimate the origin of visitors. As is evident, nearly 60 percent of visitors came from out of state, as the trials attracted visitors from throughout the nation. Just over 40 percent of those in attendance came from Nebraska.

<sup>27</sup>[http://en.wikipedia.org/wiki/United\\_States\\_Olympic\\_Trials\\_\(swimming\)](http://en.wikipedia.org/wiki/United_States_Olympic_Trials_(swimming)).

Table 1.2: Summary of Olympic Swim Trial Attendance, Omaha, 2008<sup>28</sup>

<b>Category</b>	<b>Attendance</b>
Total Attendance	160,003
Nebraska Metropolitan Areas	59,633
Nebraska Non-Metropolitan Areas	4,908
Outside Nebraska	95,462

Sources: Goss & Associates surveys and 2008 U.S. Olympic Swim Trials Final Report August 26, 2008

### **NCAA Men’s Regional Basketball Tournament**

The seeds of “March Madness” took root in Evanston, IL in 1939 with an eight-team Men’s College Basketball tournament competing in two regions. 5,500 fans watched Oregon beat Ohio State in the final game at Patten gym. In 1951, the tournament expanded to 16 teams, and in 1952, Seattle hosted the first actual “Final Four.” In 1956, the tournament expanded to four regions, and in 1975 the tournament expanded to 32 teams. After expanding to 40 teams in 1979, teams were seeded for the first time. By 1985, the tournament had expanded to 64 teams. 2002 heralded the arrival of the “pod” system for rounds one and two, allowing the top-seeded teams to play closer to home, and in 2004, the regional games began to be referred to by their host city’s name rather than a geographic region.<sup>29</sup>

Today, this three-week tournament is held at various venues across the United States, involving 65 schools, and drawing more than 700,000 fans. Omaha was chosen to be a site of the in the initial weekend of a 2008 NCAA Men’s Regional Basketball Tournament. Between March 20 and March 22, Omaha hosted first and second round games, filling the Qwest Center with sold-out seats for every game.

Snagging the opportunity to be the venue for the NCAA basketball tournament is becoming more and more desirable. Atlanta committed \$3.5 million to secure a Final Four in 2002.<sup>30</sup>

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<sup>28</sup> Due to NCAA restrictions for the basketball tournament and volleyball championships, we were not able to interview actual attendees and had to instead rely on license plate surveys. Even though we were allowed to survey Olympic Swim Trial attendees, we divided the data as presented in Table 1.2 for the sake of consistency.

<sup>29</sup><http://www.tourneytravel.com/history/index.htm>.

<sup>30</sup><http://www.usatoday.com/money/covers/2002-03-28-atlanta.htm>.

Omaha was significantly impacted as well, given the substantial interest in the event. Over a year in advance, more than thirteen thousand all-session tickets were sold to Qwest Center constituents, such as Creighton men’s basketball season ticket holders, before they were made available to the general public.<sup>31</sup> Total combined attendance at all games was 47,900. Based on a license-plate survey, the origin of those in attendance was estimated. As seen in the table below, nearly half (45%) of those in attendance were from other states, while a majority of attendees were from Nebraska<sup>32</sup>:

Table 1.3: Summary of NCAA Men’s Regional Basketball Tournament Attendance, Omaha, 2008

Category	Attendance
Total Attendance	47,900
Nebraska Metropolitan Areas	20,644
Nebraska Non-Metropolitan Areas	5,735
Outside Nebraska	21,521

Sources: MECA and Goss & Associates License Plate Survey

### NCAA Women’s Volleyball Final Four

Women’s volleyball champions have been determined by an NCAA tournament since 1981. The Qwest Center Omaha hosted the Final Four for the NCAA Division I Women’s Volleyball Tournament on December 18 and 20, 2008, and for the first time in the history of the championship, every top-seeded team made it to the Final Four event.

The tournament began with 64 teams on December 4, 2008 and ended with the Final Four between Penn State, Nebraska, Texas and Stanford. The series culminated with a championship game in Omaha on December 20 with Penn State remaining undefeated over Stanford for its second consecutive and third overall NCAA title. The following link provides sample media coverage of the volleyball tournament.<sup>33</sup> As listed in Table 1.4 below, the total attendance at the

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<sup>31</sup>[http://en.wikipedia.org/wiki/2008 NCAA Men's Division I Basketball Tournament](http://en.wikipedia.org/wiki/2008_NCAA_Men's_Division_I_Basketball_Tournament).

<sup>32</sup> Each session is a separately ticketed event. Tickets can be purchased by session or for the entire strip which means a fan will receive tickets to all games for one price.

<sup>33</sup> [http://www.usatoday.com/sports/college/volleyball/2008-12-16-volleyball-site\\_N.htm](http://www.usatoday.com/sports/college/volleyball/2008-12-16-volleyball-site_N.htm).

Final Four was 26,638. Attendance estimates based on a license plate survey show that most in attendance at the Volleyball tournament were from the State of Nebraska. This finding likely reflects the popularity of volleyball in Nebraska and the appearance of the University of Nebraska-Lincoln as one of the four finalists.

Table 1.4: Summary of NCAA Women’s Volleyball Final Four Attendance, Omaha, 2008

<b>Category</b>	<b>Attendance</b>
Total Attendance	26,638
Nebraska Metropolitan Areas	5,237
Nebraska Non-Metropolitan Areas	18,720
Outside Nebraska	2,681

Sources: MECA and Goss & Associates License Plate Survey

### **Total Visitor Spending for All Three Events**

Based on surveys conducted at all three events, estimated spending was obtained. A summary of this spending is listed in Table 1.5. Table 1.5 shows that the direct impact (i.e., direct spending) generated by the 160,000 visitors to the Olympic Swim Trials was \$14.79 million. Most of this amount - \$13.19 million - was generated by the spending of those in attendance, suggesting an average daily expenditure of \$82.44 per person in attendance. This includes out-of-town visitors purchasing lodging. The impact from lodging is substantial, with an estimated \$4.23 million in spending on hotels. Ticket sales were the next highest category at \$3.32 million. Food and beverage spending accounted for another \$2.64 million. As noted earlier, there was also construction spending at the Qwest Center valued at \$1.6 million in order to prepare Qwest as a swimming venue.

Table 1.5 shows that the direct impact (i.e., direct spending) generated by the 47,000 visitors to the NCAA Men’s Regional Basketball Tournament in Omaha was \$2.75 million. This is \$54.68 in average daily expenditure per person in attendance. The average daily expenditure is lower because only a small share of those in attendance are from out of state, which means less spending on lodging per person.

As presented in Table 1.5, the NCAA Volleyball Tournament added the lowest direct spending while the Swim Trials added the highest level of direct spending. This difference is due to the length of the individual events but also a result of the number of non-Nebraskans attending the events. With the University of Nebraska-Lincoln as one of the four finalists for the NCAA Volleyball Tournament, fewer visitors from outside the state were in attendance. Table 1.5 shows that the direct impact (i.e., direct spending) generated by the 26,600 visitors to the NCAA Women’s Volleyball Final Four in Omaha was \$1.80 million. The largest impact comes from ticket sales (\$873,610), followed by spending on food and beverages (\$404,611). Retail sales also accounted for \$231,988 in spending.

Table 1.5: Direct spending by visitors to Qwest Center, 2008<sup>34</sup>

	Swim Trials	NCAA Regional Basketball Tournament	NCAA Volleyball Final Four
Hotel & motel revenue	\$4,230,922	\$360,688	\$35,517
Retail sales	\$1,516,045	\$427,214	\$231,988
Gasoline/service stations	\$216,496	\$161,963	\$58,206
Food & beverage	\$2,644,140	\$745,105	\$404,611
Miscellaneous spending	\$1,267,542	\$357,187	\$193,962
Ticket sales	\$3,318,505	\$698,010	\$873,610
Construction related to Qwest Center	\$1,600,000	\$0	\$0
Total increase	\$14,793,650	\$2,750,167	\$1,797,893

Source: For the Olympic Swim Trials surveys of actual attendees were used to produce direct spending estimates. On the other hand due to NCAA restrictions of surveying fans, license plate surveys were used to generate direct spending data.

Attendance figures from the Olympic Swim Trials and the two NCAA tournaments and the residence of the fans are the key factors in determining the economic impact of the events. The next Chapter discusses how to measure the economic impact of amateur athletic events.

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<sup>34</sup>Most spending by Nebraska residents is excluded from the data in Table 1.5 since it is assumed that this spending is offset by reduced spending at other Nebraska venues.

## Chapter 2

### Measuring the Economic Impact of an Amateur Athletic Event

To a large degree, nations, states and communities are judged by the quality and availability of competitive sports. For example, when rating agencies rank cities, one of the dimensions that enhances a city's

... the existence of the sporting events creates new spending within the community and does not merely reallocate existing spending.

standing is its quantity and quality of sporting events. While Omaha's sports offerings do not match that of larger cities in the region, such as Kansas City and Minneapolis, the city has successfully hosted college baseball, minor league baseball,

basketball, football, college volleyball, and hockey, as well as the recently completed Olympic Swim Trials. As a result of the widespread distribution of sports, the industry's existence in the state affects the city's economic development in many ways.

First, direct expenditures by sports teams and events generate local jobs and income.

Second, sports team operations and events indirectly affect the overall level of community economic activity.

For example, the office supplies industry provides jobs and income for workers in the region as a result of team spending on computers or other office equipment. Third,

The presence of sporting events increases the attractiveness of the community for workers, visitors and businesses.

the presence of sporting events increases the attractiveness of the community and, in the long run, encourages the startup and/or relocation of retail businesses and manufacturing firms to the region. Finally, the presence of sporting events brings business visitors and tourists to the state. If these individuals ultimately choose to move to Omaha, or if these individuals influence others to move to Omaha, this contributes to the region's "brain gain."<sup>35</sup>

A significant portion of sports team and fan expenditures are made in the local area. The amount spent locally adds to community income. Economic impacts that take place outside the local economy, for example, spending in Des Moines, are called leakages and reduce overall impacts. They are excluded when estimating economic impacts for Omaha.

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<sup>35</sup>In 1995, the Federal Reserve Bank of Kansas City estimated that the state of Nebraska loses over \$246 million per year as a result of the net out-migration of college educated workers (termed "brain drain").

Additionally, sporting events increase retail sales in the region as employees of the team, and visitors who reside outside Omaha, spend a portion of their wages in the area. In other words, sporting events contribute to the region's export of retail goods as visitors spend locally. These sales have a positive impact on the local area by adding jobs and income in the retail and related industries.

...sporting events contribute to the region's export of retail goods as visitors spend locally.

Past studies have validated the importance of sporting events and teams to the local economy. The City Council of Charleston, South Carolina, found that the city's professional sports teams produced an economic impact of \$6 million for 2005.<sup>36</sup> The three teams covered by the council's impact study were the Charleston RiverDogs baseball team, the South Carolina Stingrays hockey team and the Charleston Battery soccer team.

### Visitor Spending

Many tourists will time their visits to Omaha to coincide with the sporting events. To give a specific example, each year the College World Series draws a number of youth baseball tournaments to Omaha, including one of the largest in the U.S. – the SlumpBuster – sponsored by Triple Crown Sports in Fort Collins, Colorado. The 2007 SlumpBuster drew 325 teams and nearly 10,000 players, coaches and fans, according to Keri King of Triple Crown Sports. The participants came from 40 states including Hawaii. The 2007 tournament began June 18 and ended June 27 with many teams coming in to the city on June 15 to catch the opening of the CWS. In 2007, Triple Crown Sports purchased ten thousand general admission tickets. The tickets were used by 9 to 18 year-old players and their coaches attending the tournament. 2007 marked the fifth year that the SlumpBuster was arranged to coincide with the College World Series.<sup>37</sup>

Table 2.1 shows the avenues through which sports teams and events contribute to the economy and to the attractiveness of the community.

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<sup>36</sup>[http://www.charlestonbusiness.com/pub/12\\_23/news/7899-1.html](http://www.charlestonbusiness.com/pub/12_23/news/7899-1.html).

<sup>37</sup><http://www.cwsomaha.com/press-releases/youth-baseball-tournament-attracts-thousands-to-omaha-during-men-s-college-world-s-3.html>.

Table 2.1: Impact of Sports on Omaha

<b>Activity</b>	<b>Economic</b>	<b>Community Attractiveness</b>
Direct Involvement	Wages paid to employees	Increases sense of collective identity; builds social capital
Audience Participation	Tourists spend money at local venues	Builds community pride; personal interaction of diverse individuals
Presence of Sports Organizations	Increases the attractiveness of the area to tourists and businesses; fosters a culture that stimulates growth; encourages revitalization	Improves community image and status; promotes neighborhood cultural diversity; reduces neighborhood crime and delinquency
Philanthropic and/or Government Support	Brings new dollars to the community from area non-professional teams	Matching funds provide a multiple of the initial gift or grant

Source: Adapted from Guetzkow (2002)

Table 2.2: Direct, indirect, and induced impacts of an athletic event for each \$1 million in ticket sales (2009 dollars)

	Direct	Indirect	Induced	Total
Total impact	\$1,000,000	\$308,014	\$439,671	\$1,747,683
Employee compensation	\$292,245	\$87,741	\$141,918	\$521,907
Self-employment income	\$211,048	\$29,673	\$14,044	\$254,764
Jobs	54.7	7.4	4.5	66.5

Source: Implan Multiplier System

Total spending generated by a sporting event is a function of attendance and visits and the level of spending per attendee. Fan spending includes ticket purchases, retail shopping, and food/services spending. Retail shopping and food/services spending include spending both on-site as well as spending outside of the event location in nearby restaurants, bars, gas stations, or stores. A review of studies of minor league hockey teams in Columbus, Ohio<sup>38</sup> and Dover

<sup>38</sup>Sports Impacts, 2004. "The Economic Impact of the Ohio State University Department of Athletics upon the Greater Columbus Region for the 2002-2003 Academic Year." Prepared for the OSU Athletic Department.

Delaware<sup>39</sup> found that the average spending of fans was approximately \$41, with \$11 spent on tickets, \$12 on retail (mostly apparel and gasoline) both on- and off-site, \$17 on food and entertainment, and \$2 on lodging. The \$2 average for lodging results from the fact that many fans are from the local area and do not need to make an overnight stay. Similar spending estimates were derived for concerts and other sporting events, again from the Dover study and also a study of a proposed arena in Lincoln, Nebraska.<sup>40</sup> Total spending equaled \$55 per attendee in this case, primarily because concerts and events such as wrestling or truck racing typically charge higher ticket prices than minor league hockey games.

Spending by visiting teams included food and lodging. Following the impact estimates of the Pensacola Ice Pilots ([www.icepilots.com](http://www.icepilots.com)), this spending averaged \$80 per member of the team, coach, or support crew member. This included lodging costs of \$37 per player, with the remainder going to food and other services. Average spending was higher for performers, competitors, or crew of other athletic events and concerts. These visitors have higher meal and lodging costs since: 1) they are traveling from further away; 2) they may stay for multiple days; and 3) they generally have larger traveling budgets than minor league hockey teams. This spending is estimated at \$140 per crew member.<sup>41</sup>

Figure 2.1 shows other sites that Olympic Swim Trial visitors indicated that they would attend while in Omaha. Of those who indicated they would visit other sites, 28.5 percent stated that they would visit the Old Market, while 32.2 percent stated that they intended to visit the Henry Doorly Zoo while in Omaha. Due to NCAA restrictions, fans at the Regional Basketball Tournament and the Volleyball Final Four were not directly surveyed.

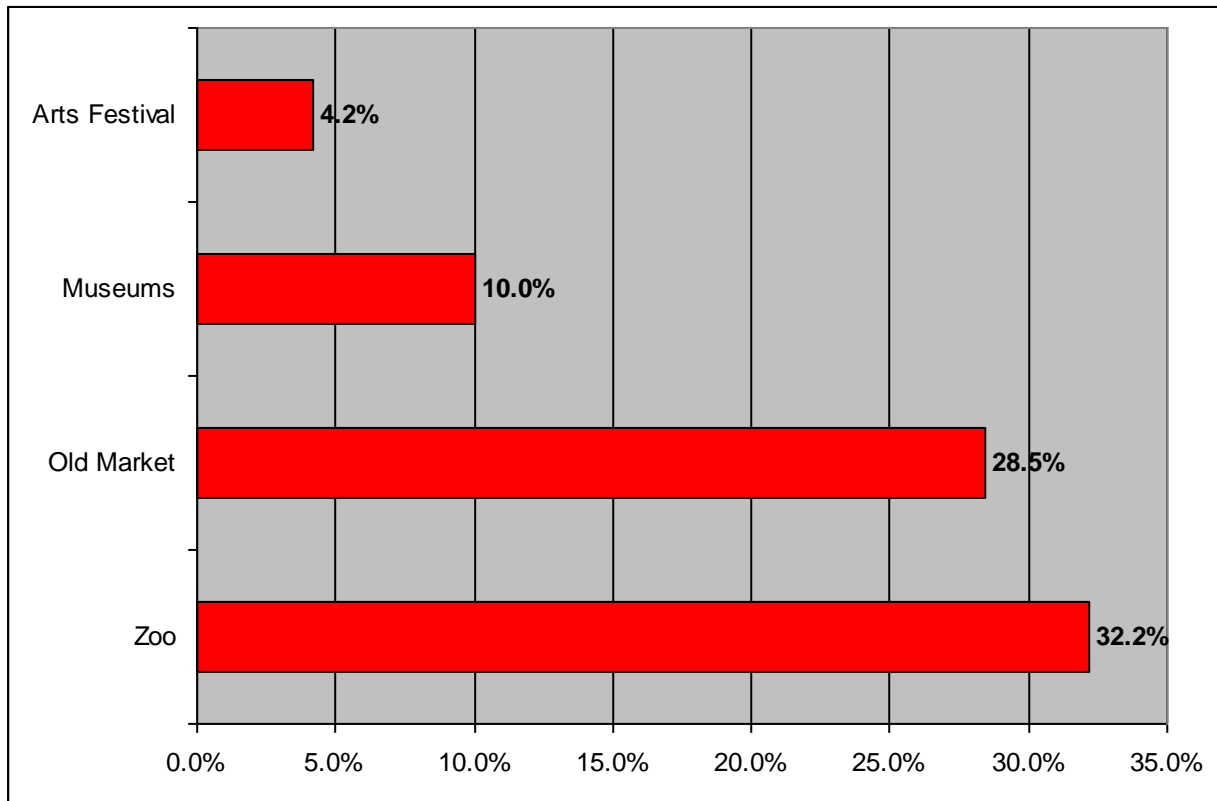
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<sup>39</sup>C.H. Johnson Consulting, Inc., 2005. "Update of Arena Financial Feasibility Study." Prepared for the Delaware Civic Center Corporation.

<sup>40</sup>Convention, Sports, and Leisure, 2004. "Feasibility Analysis for a Proposed New Lincoln Convention Center and Arena." Prepared for the Lincoln, Nebraska Chamber of Commerce.

<sup>41</sup>Hunter Interests Incorporated, 2005. "Economic Impact of the Proposed American Center of Performing Arts." Prepared for the City of Durham, North Carolina.

Figure 2.1: Other attractions visited while in town by non-Omaha residents (Swim Trials)<sup>42</sup>



This off-site spending by persons in attendance suggests a substantial economic impact from the two NCAA tournaments, and the Olympic Swim Trials. We estimate the magnitude of these economic impacts in the next section.

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<sup>42</sup>239 of 656 surveyed named an attraction. Many named more than one event or attraction.

## **Chapter 3: Economic Impacts**

The economic impact of each event is derived from the attendance at the event and the spending of visitors to each event. In the case of the Olympic Swim Trials, there is also an additional impact from the cost of preparing the pool and other facilities at the Qwest Center in order to host the event. The economic impact of each event is estimated below.

### **The Olympic Swim Trials**

As noted in Table 1.2, the Olympic Swim Trials' attendance was 160,000. The spending of these visitors, plus the \$1.6 million in construction-related expenses, is the direct economic impact of the event. In addition to the direct impact, there are also spillover or "multiplier" effects (formally known as indirect and induced effects) that occur throughout the local economy. These spillover effects occur when businesses patronized by Swim Trial visitors spend at other local businesses to buy supplies and services or pay their workers, who then spend money throughout the local economy on normal household purchases such as food, shelter, retail items, health care, or recreation. The total economic impact is the sum of the direct impact and the spillover impact.

We provide a detailed estimate of the total economic impact in aggregate and by industry, in Table 3.1. We also provide an estimate of the impact on state and local tax revenue. A direct impact of \$14.79 million (see Table 1.5) generates a substantial spillover impact at businesses throughout the community. Using IMPLAN economic multipliers (see Appendix C), we estimated a spillover impact of \$7.9 million in businesses throughout the community. The total impact is the sum of the direct impact and the spillover impact. The estimated total economic impact of the Olympic Swim Trials was \$22.69 million. An economic impact of that amount is sufficient to support 386 year-round equivalent jobs with a total payroll of approximately \$7.9 million. These total economic impacts are listed in Table 3.1, which also shows the impact by major industry group. Impacts are created in all major industry groups because the spillover impact leads to business opportunities throughout the economy.

The largest impact, however, occurs in the sectors directly patronized by Olympic Swim Trial visitors such as accommodations and food services and arts, recreation, and entertainment. The total economic impact in the accommodations and food services industry is nearly \$7.3 million. Nearly \$2.5 million in employee compensation would be part of this overall impact. There

is also a sizable impact in construction due to the \$1.6 million in construction activity at the Qwest Center.

Table 3.1: Total Economic Impact by Industry of Olympic Swim Trials

Industry	Total Economic Impact			Jobs
	Output (Millions \$)	Employee Compensation (Millions \$)	Proprietor Income (Millions \$)	
Ag, forestry, fish & hunting	\$0.01	\$0.00	\$0.00	0
Mining	\$0.00	\$0.00	\$0.00	0
Utilities	\$0.12	\$0.01	\$0.02	0
Construction	\$1.72	\$0.59	\$0.23	19
Manufacturing	\$0.72	\$0.12	\$0.00	2
Wholesale trade	\$0.53	\$0.17	\$0.03	3
Transportation & warehousing	\$0.29	\$0.12	\$0.01	3
Retail trade	\$1.66	\$0.65	\$0.05	29
Information	\$0.48	\$0.09	\$0.01	2
Finance & insurance	\$0.75	\$0.22	\$0.01	4
Real estate & rental	\$0.70	\$0.08	\$0.05	6
Professional - scientific & tech services	\$0.64	\$0.24	\$0.05	6
Management of companies	\$0.20	\$0.09	\$0.00	1
Administrative & waste services	\$0.39	\$0.16	\$0.01	6
Educational services	\$0.09	\$0.05	\$0.00	2
Health & social services	\$0.87	\$0.43	\$0.02	10
Arts - entertainment & recreation	\$3.62	\$1.78	\$0.25	142
Accommodation & food services	\$7.27	\$2.46	\$0.05	121
Other services	\$1.69	\$0.55	\$0.09	29
Government	\$0.99	\$0.12	\$0.00	2
<b>Total</b>	<b>\$22.69</b>	<b>\$7.92</b>	<b>\$0.89</b>	<b>386</b>

Source: Authors' estimate

Such a significant economic impact naturally leads to a substantial impact on state and local tax revenue. We estimate that the Swim Trials generated more than \$1.3 million in state and local tax collections. Local tax collections are estimated to have been \$395 thousand while state tax receipts were estimated to have been \$909 thousand. These revenues include corporate and personal income taxes, indirect business taxes, property taxes, sales taxes, and lodging taxes.

### NCAA Men's Regional Basketball Tournament

As noted in Table 1.3, the NCAA Men's Regional Basketball Tournament had a large attendance and attracted a significant number of visitors to the Omaha area. Attendance was not as large as the Olympic Swim Trials, which lasted many more days, but total attendance was nearly 50,000. This means that a significant level of spending was attracted to or retained in Omaha due to the event. We reported the estimated direct spending impact in Table 1.5.

There is still a significant lodging impact, however, of \$360,000. The largest impact comes from spending on food and beverages. This was an estimated \$750,000. Retail sales also accounted for \$430,000 in spending. A direct impact of \$2.75 million generates a substantial spillover impact at businesses throughout the community. Using IMPLAN economic multipliers (see Appendix C), we estimated a spillover impact of \$1.15 million in businesses throughout the community. The total impact is the sum of the direct impact and the spillover impact. The estimated total economic impact of the NCAA Men's Regional Basketball Tournaments was \$3.90 million. An economic impact of that amount is sufficient to support 63 year-round equivalent jobs with a total payroll of approximately \$1.23 million. These total economic impacts are listed in Table 3.2, which also shows the impact by major industry group. Impacts are created in all major industry groups because the spillover impact leads to business opportunities throughout the economy.

Table 3.2: Total Economic Impact by Industry of the NCAA Men's Regional Basketball Tournament

Industry	Total Economic Impact			Jobs
	Output (Millions \$)	Employee Compensation (Millions \$)	Proprietor Income (Millions \$)	
Ag, forestry, fish & hunting	\$0.00	\$0.00	\$0.00	0
Mining	\$0.00	\$0.00	\$0.00	0
Utilities	\$0.02	\$0.00	\$0.00	0
Construction	\$0.02	\$0.01	\$0.00	0
Manufacturing	\$0.15	\$0.02	\$0.00	1
Wholesale trade	\$0.09	\$0.03	\$0.00	1
Transportation & warehousing	\$0.05	\$0.02	\$0.00	1
Retail trade	\$0.45	\$0.17	\$0.01	8
Information	\$0.07	\$0.02	\$0.00	0
Finance & insurance	\$0.12	\$0.04	\$0.00	1
Real estate & rental	\$0.13	\$0.01	\$0.01	1
Professional - scientific & tech ser	\$0.09	\$0.03	\$0.01	1
Management of companies	\$0.04	\$0.02	\$0.00	0
Administrative & waste services	\$0.06	\$0.03	\$0.00	1
Educational services	\$0.01	\$0.01	\$0.00	0
Health & social services	\$0.13	\$0.07	\$0.00	2
Arts - entertainment & recreation	\$0.73	\$0.23	\$0.03	18
Accommodation & food services	\$1.17	\$0.38	\$0.01	22
Other services	\$0.43	\$0.14	\$0.02	8
Government	\$0.15	\$0.02	\$0.00	0
<b>Total</b>	<b>\$3.90</b>	<b>\$1.23</b>	<b>\$0.11</b>	<b>63</b>

Source: Authors' estimate

Economic impacts are concentrated in the industries that work directly with tourists, with the largest impact occurring in the accommodations and food services industry, and the second largest impact in arts, entertainment, and recreation. There is also an impact of nearly one-half of a million dollars on the retail trade industry.

The estimated impact on state and local tax collections from all of this new economic activity is \$256,000. Local tax collections are estimated to have been \$51,000 while state tax receipts were estimated to have been \$205,000.

### **NCAA Women's Volleyball Final Four**

As noted in Table 1.4, the NCAA Women's Volleyball Final Four had attendance of 26,600. Such high attendance is a testament to the popularity of volleyball in the state of Nebraska. This is particularly evident because such a large share of those in attendance at the event came from throughout the State of Nebraska. License plate surveys identified a large share of visitors from outside of metropolitan Nebraska. While the non-metropolitan share appears larger than expected, the main point is valid – that the large majority of those in attendance at this event are from Nebraska.

The direct impact of \$1.80 million generates a substantial spillover impact. We estimated a spillover impact for business throughout the community of \$0.95 million. The total impact, which is the sum of the direct impact and the spillover impact, is estimated to be \$2.75 million. An economic impact of that amount is sufficient to support 61 year-round equivalent jobs with a total payroll of approximately \$1.02 million. These total economic impacts are listed in Table 3.3, which also shows the impact by major industry sector. Impacts are created in all major industry groups because the spillover impact leads to business opportunities throughout the economy.

Economic impacts are concentrated in the industries that work directly with tourists, with the largest impact occurring in arts, entertainment and recreation, and the second largest impact in accommodations and food services industry. There is also an impact of nearly one-quarter of a million dollars for the retail trade industry.

Table 3.3: Total Economic Impact by Industry of the NCAA Women’s Volleyball Final Four

Industry	Total Economic Impact			Jobs
	Output (Millions \$)	Employee Compensation (Millions \$)	Proprietor Income (Millions \$)	
Ag, forestry, fish & hunting	\$0.00	\$0.00	\$0.00	0
Mining	\$0.00	\$0.00	\$0.00	0
Utilities	\$0.01	\$0.00	\$0.00	0
Construction	\$0.01	\$0.00	\$0.00	0
Manufacturing	\$0.10	\$0.02	\$0.00	0
Wholesale trade	\$0.06	\$0.02	\$0.00	0
Transportation & warehousing	\$0.03	\$0.01	\$0.00	0
Retail trade	\$0.25	\$0.09	\$0.01	4
Information	\$0.06	\$0.01	\$0.00	0
Finance & insurance	\$0.09	\$0.03	\$0.00	1
Real estate & rental	\$0.09	\$0.01	\$0.01	1
Professional - scientific & tech ser	\$0.07	\$0.02	\$0.01	1
Management of companies	\$0.02	\$0.01	\$0.00	0
Administrative & waste services	\$0.04	\$0.02	\$0.00	1
Educational services	\$0.01	\$0.01	\$0.00	0
Health & social services	\$0.11	\$0.05	\$0.00	1
Arts - entertainment & recreation	\$0.94	\$0.47	\$0.07	37
Accomodation & food services	\$0.49	\$0.15	\$0.01	10
Other services	\$0.24	\$0.08	\$0.01	4
Government	\$0.12	\$0.01	\$0.00	0
<b>Total</b>	<b>\$2.75</b>	<b>\$1.02</b>	<b>\$0.12</b>	<b>61</b>

Source: Authors’ estimate

The estimated impact on state and local tax collections from all of this new economic activity is \$184,000. Local tax collections are estimated to have been \$30,000 while state tax receipts were estimated to be \$153,000.

Each of the 3 major amateur sports events hosted in Omaha generated a significant economic impact for the City. The total economic impact from all three events was \$29.34 million, including \$10.17 million in employee compensation. This economic impact is sufficient to support 510 year-round equivalent jobs. The new economic activity also generated state and local tax collections of \$1.74 million. In addition to these impacts, there is also an economic impact due to media coverage. That impact is discussed in the next section.

## **Impact of Media Coverage**

One of the most important benefits that Omaha derives from hosting sporting events each year is the considerable positive awareness generated by the media in the course of their tournament or Olympic coverage. The events are unique and powerful vehicles for bringing Omaha's name and positive attributes to millions of American households that otherwise would not be exposed to messaging about the city. The sustained coverage and overwhelmingly positive commentary about Omaha, its people, its amenities and its relationship to the events produced visibility and positive associations for the city. Public awareness and perception of the city is positively influenced by the appearance of 'OMAHA' in thousands of datelined articles that range from sports stories to feature pieces in print, broadcast and online media that praise the hospitality and many unexpected qualities of the city. The 2008 coverage produced by the Olympic Trials and the NCAA games reinforces Omaha's association with college sports and further identifies the city as a desirable place to work, live and visit.

The praise Omaha receives locally and nationally during the events also has an impact on Omaha residents. It reinforces the positive feelings residents already have about their city and strengthens critical perceptions about Omaha's quality-of-life, perceptions that play an important role in shaping how satisfied people are with their community. Subsequently, perceptions about community affect how supportive Omahans are willing to become of local initiatives and causes and the extent to which Omahans actively recommend Omaha to outsiders as a desirable place to work, live, or visit.

It is impossible to quantify precisely the monetary value of the positive media coverage that is generated by the city's role as host to the 2008 events. The positive coverage received is significant, and that it has value is undeniable.

## Summary

The power of impressions and images to expand awareness and change perceptions about everything from consumer products to cities like Omaha is well documented. Estimates of what it would cost to replicate the media coverage that Omaha receives from the Olympic Swim Trials are difficult to pinpoint. It is fair to say, however, that Omaha civic groups and organizations would need to raise advertising budgets significantly if it was necessary to pay for the local and national promotional messaging that is generated when the media's attention turns to Omaha. For this reason, the estimated value of \$24.0 million in media impact from the Olympic Swim Trials is part of our economic impact, and is included in the economic impact summary in Table ES.1 in the executive summary. The two NCAA events undoubtedly also contributed a media impact, but we do not have an estimate of those amounts.

# Appendices

## **Appendix A**

### **Types of Economic Impacts**

Figure A.1 depicts examples of the flow of funds into and out of Omaha as a result of sporting events. As indicated, the total impact is the sum of direct (blue arrows), indirect (yellow arrows) and induced (red arrows) impacts minus leakages (black arrows). Leakages represent event spending outside of Omaha. Input-output multiplier systems are used to estimate each of the impacts in Figure A.1 by industry.

#### **Direct Economic Impacts**

Spending by event visitors has direct economic effects on their local economies by making expenditures for goods and services and by paying employee salaries. The most obvious direct expenditures are payment of wages to workers employed by the event. In addition, expenditures by business visitors to the team in the area produce direct impacts on the region, affecting primarily the wholesale and retail trade industries. Direct economic impacts color coded blue in Figure A.1.

#### **Indirect Economic Impacts**

Sporting events also produce indirect economic effects on the area economy. For example, wholesale firms supplying concessions and merchandise at the games buy from local distributors. Furthermore, team expenditures encourage the startup and expansion of other businesses related to the sporting events. The sporting events generate indirect effects by increasing: (a) the number of firms drawn to a community, (b) the volume of deposits in local financial institutions and, (c) economic development. Examples of indirect economic impacts are color coded yellow on Figure A.1.

## Induced Economic Impacts

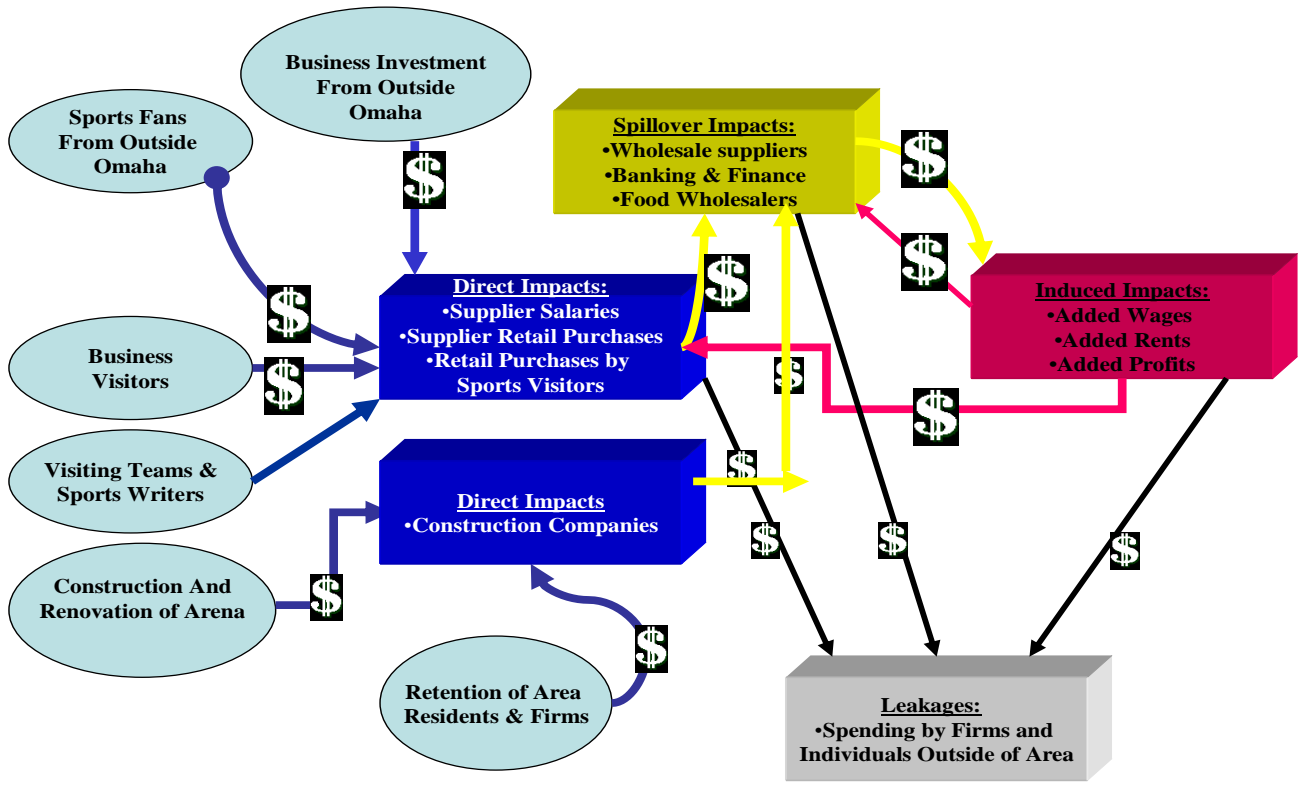
Induced impacts in the region occur as the initial spending feeds back to industries in the

**... the sporting events increase overall income and population, which produces another round of increased spending adding to sales, earnings and jobs for the area.**

region when workers in the area purchase additional output from local firms in a second round of spending.

That is, the sporting events increase overall income and population, which produces another round of increased spending adding to sales, earnings and jobs for the area. Examples of induced economic impacts are color coded red in Figure A.1.

Figure A.1: Diagram of Sports Event Impacts



**Total Impact = Direct + Indirect + Induced - Leakages**

## Appendix B The Multiplier Effect

When event employees spend their salaries within the community, this spending filters through the local economy, causing increased overall spending greater than the initial spending. The impact of this re-spending is known as the multiplier effect. Economic impacts that take place outside the local economy, for example employee spending in Kansas City or Des Moines, are called leakages and reduce the multiplier and overall impacts. They are excluded when estimating regional economic impacts.

**...employee spending outside the local economy, for example, spending in Des Moines, is called a leakage and reduces the multiplier and the overall impacts.**

While the direct effects of a sporting event's spending can be measured by a straightforward methodology, the indirect and induced effects of team spending must be estimated using regional multipliers. Community characteristics that affect leakages, and consequently the multiplier include:

**While the direct effects of a sports team can be measured by a straightforward methodology, the indirect and induced effects of sporting events spending must be estimated using regional multipliers.**

Location. Distance to suppliers affects the willingness to purchase locally. If Nebraska firms are unable to provide team supplies at competitive prices, and there are alternative suppliers in Des Moines who are more price

competitive, then the sports team will be encouraged to spend outside the community. This results in greater leakages, lower multipliers and smaller impacts.

Population size. A larger population provides more opportunities for companies and workers to purchase locally. Larger population areas are associated with fewer leakages and larger multipliers. Thus, in general, sports tourist dollars flowing into Omaha will have larger impacts than the same level of dollars flowing into Beatrice or South Sioux City.

**Thus, in general, tourist dollars flowing into Omaha will have larger impacts than the same level of dollars flowing into Beatrice or South Sioux City.**

Clustering. A community will gain more if the inputs required by local industries for production match local resources and are purchased locally. Thus, over time, as new firms are created to match the requirements of the sporting event, leakages will be fewer, resulting in larger multipliers and impacts. This issue is at the heart of economic development, amplifying the impacts of the clustering of sports investment and jobs. As Omaha gains more and more of sports investment and jobs, educators and training institutions become more proficient and focused on meeting the needs of the industry. Furthermore, suppliers unique to the sporting events are more likely to locate in close proximity to these organizations. This not only expands income and jobs in Omaha, it increases the size of multipliers related to sports.

The next section discusses the selection of an estimation technique to measure the direct, indirect and induced impacts of sporting events on the community and region.

## Appendix C Choosing a Technique to Measure Impacts

The three most common types of impact models are economic base, econometric and input-output (I-O). Many types of public and private-sector decisions require an evaluation of probable regional effects. Since important impacts are often economic, this requirement has created a need for regional economic impact models. Two of the three impact models have inherent disadvantages that markedly reduce their viability for estimating the impact of retail spending on the economy.

Economic Base Model. The economic base model divides the economy into two sectors—the local/service sector and the export sector. The economic base multiplier is an average for all the economy making it impossible to distinguish, for example, the impact of retail spending from that of a new manufacturing plant.

Econometric Models. Econometric models have two major weaknesses. First, the time series data used in constructing econometric models are often unavailable at the state and metropolitan area level, thus precluding county-level analysis. This is especially true for rural counties and for counties with small populations. Second, econometric models are costly to build and maintain.

**I-O models are the most frequently used analysis tools for economic impact assessment.**

Input-Output (I-O) Models. I-O models are the most frequently used types of analysis tool for economic impact assessment. Input-output is a simple general equilibrium approach based on an accounting system of injections and leakages. Input-output analysis assumes that each sector purchases supplies from other sectors and then sells its output to other sectors and/or final consumers.

**IMPLAN and RIMS (Regional Input-Output Modeling System) are two of the most widely used multiplier models.**

Historically, high development costs precluded the extensive use of I-O models in regional impact analysis. However, with the advent of "ready-made" multipliers produced by third parties, such as the U.S. Forestry Service, I-O multipliers became a much more viable option for performing impact analysis.

All purely non-survey techniques or "ready-made" multipliers take a national I-O table as a first approximation of regional inter-industry relationships. The national table is then made region specific by removing those input requirements that are not produced in the region. This study uses the most widely recognized "ready-made" multiplier system, IMPLAN Multipliers.

## **Appendix D**

### **IMPLAN Multipliers Used in this Study**

The Forestry Service of the U.S. Department of Agriculture developed the IMPLAN multipliers in the 1980s (U.S. Forest Service, 1985). For very populous areas, IMPLAN divides the economy into approximately 500 industrial sectors. Industries that do not exist in the region are automatically eliminated during user construction of the model (e.g. coal mining in Omaha). IMPLAN uses an industry-based methodology to derive its input-out coefficients and multipliers. Primary sources for data are *County Business Patterns* data and *Bureau of Economic Analysis* data.

Researchers have used IMPLAN to estimate the impact of changes in military spending on the Washington State economy (Hughes, et. al, 1991).<sup>43</sup> IMPLAN and RIMS (Regional Input-Output Modeling System) are two of the most widely used multiplier models. IMPLAN has been compared to other multiplier systems and found to produce reliable estimates (Rickman and Schwer, 1993).<sup>44</sup> Likewise, Crihfield and Campbell (1991), in estimating the impacts of opening an automobile assembly plant, concluded that IMPLAN's outcomes are, on balance, somewhat more accurate than RIMS.

IMPLAN multipliers possess the following advantages over other I-O Multiplier Systems:

1. Price changes are accounted for in the creation of the multipliers.
2. Employment increases or decreases are assumed to produce immediate in- or out-migration.
3. Multipliers are produced at reasonable costs by third party vendors. In this case, the Minnesota Implan Group produces the multiplier system used in this study.

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<sup>43</sup> Hughes, D., Holland, D. and P. Wandschneider, "The Impact of Changes in Military Expenditures on the Washington State Economy," *The Review of Regional Studies*, Vol. 21(3), pp. 221-234.

<sup>44</sup> Rickman, D. and R.K. Schwer, "A Systematic Comparison of the REMI and IMPLAN Models: The Case of Southern Nevada," *The Review of Regional Studies*, Vol. 23(2), 1993, pp. 143-161.

## **Appendix E Author Biographies**

### **Ernest Goss**

Ernest Goss is currently the MacAllister Chair and Professor of Economics at Creighton University in Omaha, Nebraska. He received his Ph.D. in economics from the University of Tennessee in 1983. He was a visiting scholar with the Congressional Budget Office for 2003-04, and in the fall of 2005, the Nebraska Attorney General appointed Goss to head a task force examining gasoline pricing in the state. He was also a faculty research fellow with the National Aeronautics and Space Administration (NASA) in 1991 and 1992.

He has published over 80 research studies focusing primarily on economic forecasting and on the statistical analysis of business and economic data. His book Changing Attitudes toward Economic Reform during the Yeltsin Era was published by Praeger Press in 2003, and his book Governing Fortune: Casino Gambling in America was published by the University of Michigan Press in 2007.

He is editor of “Economic Trends”, an economics newsletter published three times per year. He is the past president of the Omaha Association of Business Economics, and of the National Purchasing Management Association-Nebraska. He also serves on the Board of Directors of Mosaic, Inc.

To gauge regional economic conditions, Goss conducts a monthly survey of bank CEOs in rural areas of 9 states and two monthly surveys of businesses in 12 states. Results from the three surveys are carried in over 100 newspapers, 20-30 radio stations and numerous other media outlets each month. Recent citations appeared in the Wall Street Journal, Business Week, Forbes, and scores of regional newspapers such as the Denver Post, the Kansas City Star and the Minneapolis Pioneer Press.

### **Eric Thompson**

Eric Thompson is an Associate Professor of Economics at the University of Nebraska-Lincoln, specializing in state and local economic development and policy analysis. As the Director of the Bureau of Business Research at UNL (and before that at the University of Kentucky), Dr. Thompson has conducted numerous economic studies, as well as assessments of public in-

centive programs. He has completed several assessments of the impact of business tax incentive programs in Nebraska. For the past 15 years, Dr. Thompson also has developed county level demographic and economic forecasting models in Nebraska, Kentucky, and West Virginia. Other studies include an analysis of the coal industry in the Central Appalachia, the economic impact of the UNL athletic department, the economic impact of real estate developments in Lincoln, Nebraska, and economic assessments of the arts industry in Kentucky, Mississippi, California, and individual cities in New York, Florida and Ohio. He is also a co-author of the book Entrepreneurship in Nebraska: Conditions, Attitudes, and Actions. He and Dr. Ernie Goss (co-principal investigator) were two of the three members of the Attorney General of Nebraska's Fuel Price Task Force from October 2005 to March 2006, and they recently completed the report *An Action Plan for Growing Nebraska* which was produced for the Nebraska Renaissance Group.