

The Impact of the 2007 Cox Classic Golf Tournament on the City of Omaha: Survey Results and the Impact on the Metropolitan Economy

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Prepared for:

Cox Classic Golf Tournament
Presented by Chevrolet
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Executive Summary

Since 1996, The Cox Classic Golf Tournament has been and continues to be one of the premier sporting events held in Omaha, Nebraska. Taking place at the Champion's Run Country Club located in West Omaha since the tournament's inception, the Cox Classic has grown in popularity with spectator attendance averaging in recent years between 82,000 and 110,000 over the event week. Moreover, its impact on the city of Omaha has been significant, particularly for local charities. Since it began in 1996, more than \$1.5 million has been raised for local charities.

With an estimated operating and sponsorship revenue of \$1.894 million and operating expenses of \$1.61 million, the 2007 Cox Classic is clearly a successful financial venture. However, beyond that, the event creates a vibrant and exciting experience for attendees and adds to Omaha's economic vitality by exposing visitors to many other city attractions: fine restaurants, many charming and unique retail establishments, entertainment activities. From a broader economic standpoint then, these spill-over benefits to the city as a whole further highlight the success of the tournament. Below are a few of the main highlights of the economic impact study of the 2007 tournament

- In 2007, Cox Classic attracted an estimated 82,000 visitors. Based on this year's survey results, about 31 percent (an estimated 25,420 guests) visited from outside of the local Omaha area (defined below). Approximately 10 percent of the attendees traveled from outside of the State of Nebraska to attend this nationally-recognized event.
- In 2007, Cox Classic had a total economic impact on the City of Omaha business volume of \$8.8 million, comprising \$5.4 million in direct impact and a further \$3.4 million in indirect and induced impacts.
- The sales tax impact, excluding hotels and other lodging, of the 2007 tournament was \$235,279. The State of Nebraska received an estimated \$184,683 in sales tax revenues from the direct economic activity produced by event attendees. The local economy received a total of \$50,417 in sales tax revenues.
- Tournament attendees spent \$1.6 million at local hotels and other lodging. Hotel expenditures generated an estimated \$202,430 in occupancy tax revenues to the city of Omaha and \$82,212 in sales tax revenues to the state.
- Travel to and from the event increased gas expenditures in Omaha by \$431,041 million, and generated an estimated \$12,174 in gasoline excise taxes for the state of Nebraska.
- The three favorite activities at the Cox Classic in 2007 (as indicated by survey respondents) were the tournament play itself (26.3 percent), the 19th Hole (22.9 percent), and the fireworks display (18.4 percent).

- Fifty percent of 2007 visitors have attended the Cox Classic for three or fewer years. Roughly 8 percent of the guests have experienced it for 10 or more years.
- The event appeals to a wide variety of demographic groups. Most of the attendees (27.4 percent) were between the ages of 35 and 49 years of age. About 20.2 percent were between the ages of 25 and 34. The average group size was 3.4 persons, 54.2 percent attended the event with a group of friends and/or relatives, and about 19 percent attended with their children.
- Roughly 81 percent of attendees had post-high school education. Forty-two percent indicated having a four-year college degree. About 20 percent of attendees indicated a household income between \$80,000 and \$100,000 a year and nearly 22 percent of respondents indicated earning incomes in excess of \$120,000.
- In terms of sponsorship recognition, 46.4 percent of respondents indicated Cox Communication and 31.8 percent indicated Chevrolet as sponsors. In addition, other sponsors, such as First National Bank of Omaha and Budweiser also received recognition.
- Nearly all (96.4 percent) of the survey respondents agreed corporate sponsorship makes the Cox Classic possible, and 94% of respondents indicated having a positive attitude toward tournament sponsors because of their association. The majority of respondents (81%) were more likely to purchase brands from tournament sponsors because of their association.
- Ninety-two percent of respondents indicated that they were either satisfied or very satisfied with the Cox Classic and its various activities and venues in 2007.

Introduction

The Cox Classic Golf Tournament is one of the premier sporting events held in Omaha Nebraska. The inaugural tournament, then called the “Omaha Classic”, took place in August of 1996. In 2000, Cox Communications signed a four year contract to serve as the event sponsor and in 2004 agreed to a three year contract to serve as the event’s title sponsor. In 2006 it extended its partnership with tournament organizers for another three years. Through the years the tournament has attracted many high-profile companies to serve as the event’s sponsor, including The Blackstone Group, Cox Communications, Sprint PCS, and most recently, Chevrolet. In 2005 Chevrolet signed a three year contract to serve as the Cox Classics presenting sponsor.

Since the tournament's inception, the Cox Classic has grown in popularity with spectator attendance averaging in recent years between 82,000 and 110,000 over the event week. Moreover, its impact on the city of Omaha has been significant, particularly for local charities. Since it began in 1996, more than \$1.5 million has been raised for local charities.

The event takes place at the Champion’s Run Country Club located in west Omaha. The 200 acre area contains a nationally recognized 18-hole championship golf course and is surrounded by a number of vibrant and growing commercial establishments, department stores, and restaurants.

The tournament sponsors many activities over the week beyond the tournament itself, from impressive fireworks displays to youth clinics. The event thus appeals to many people, from the most avid gulf fans to families wishing to enjoy many unique experiences. Many stakeholders play a role in the success of the event; among those are vendors, ticket holders, professional contestants, local government, retailers, restaurants, and volunteers.

The event itself plays an important role in the economy of Omaha. Research shows that it stimulates local businesses and government. This takes a variety of forms including sponsorship dollars, investment by local governmental entities regarding policing, and other services to support the event. What follows is a detailed account of the substantial ways in which spectator attendance at the Cox Classic Golf Tournament positively impacts the economy and community of the Heartland.

Data Collection

Prior to the event, Cox Classic planners and volunteers developed/modified a 2-page questionnaire (see Appendix A). During the event, these surveys were distributed to some 347 random attendees. Once this data was collected, Professor Christopher Decker of the University of Nebraska at Omaha was hired by the Cox Classic to measure the economic impact for the 2007 Cox Classic Golf Tournament on the city of Omaha, Nebraska. Such information is crucial to event decision-making since putting on such an event is a costly and time-consuming venture. An impact study can offer insights as to the return on this

investment for the Cox Classic as well as for event sponsors, local government, and nearby Omaha business community. Second, the Cox Classic is interested in gauging the demographics and opinions of attendees. These broader questions serve to further develop the annual event, thereby enhancing the social and economic value to Omaha and the State of Nebraska.

In order to obtain a reasonable set of statistical results, a sufficient number of surveys must be administered to offer a reasonable picture of the demographic and economic make of the entire population attending the event. In 2007, a total of 347 surveys were completed during the tournament. With the total number of attendees estimated to be 82,000, this sample size amounts to a statistical significance of ± 6.2 percent at a 95 percent confidence interval. Statistically speaking, this implies that the answers supplied by the survey respondents reflect the characteristics of the entire population of event attendees, within a six percent margin of error. As a result, the various mean percentages, mean dollar values of expenditures, proportions of Omaha and non-Omaha residents, etc., calculated from our survey results are reasonably statistically representative of the 82,000 population of attendees.

Economic Impact Analysis

To measure the impact of any given activity or event, like the construction of a new power plant, de-regulation of electricity rates, or a cultural event of special significance, survey data is often collected and then combined with specific information on the characteristics of a local economy. The survey data is collected to provide a measure of direct monetary expenditures, or injections, as the result of a specific event. Once these estimates are obtained, they are typically applied to an input-output (IO) model. While IO models have been around for many years, it is still widely used to this day. For instance Hubacek, Erikson, and Duchin (2002) use an IO model to measure the economic impact of the Adirondack State Park on the New York State economy and Thomassin and Baker (2000) use an IO model to estimate the economic impact of new ethanol fuel plants on the Canadian economy.

An IO model, originally developed by Nobel-prize-winning economist Wesley Lontief (1936), describes an economy as a series of inter-linked industries or sectors. A stimulus to one sector, say power production, then impacts all other sectors, to varying degrees, through a “multiplier effect.”

The multiplier effect is the indirect and induced impact of a direct injection in that local vendors receive this additional direct revenue and can then re-spend some of this additional revenue at other local area industries, who then re-spend that additional revenue, etc., and ultimately to final consumers.¹ This “re-spending” of the original direct

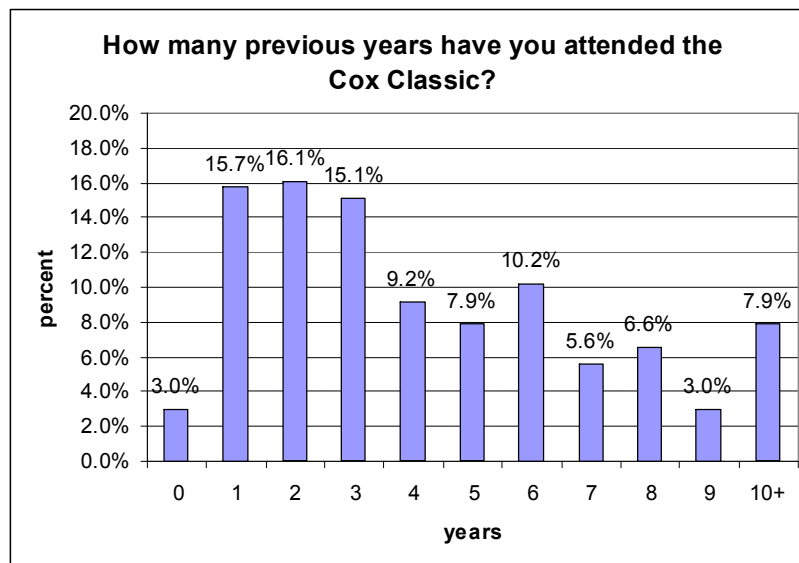
¹ As a matter of technical exposition, *indirect* effects are those re-spending effects that filter through other industries in an economy. For instance, suppose a *direct* impact on hotel expenditures boots demand for cleaning services at these hotels (a first indirect effect). This stimulates demand for cleaning capital and products (a second indirect effect), etc. The sum of all these effects on other industries is the total indirect effect. The *induced* effect is the effect on final demand in an economy. That is, all of these sectors employ people locally. The extent to which employee incomes increase as a result of these indirect and direct

injection accumulates through to the local economy. For instance, \$10 of direct injection may ultimately lead to an indirect and induced injection of, say, \$20 as the original injection churns through the economy. The multiplier in this case would be 2.0 and the total economic impact would be \$30.² For a brief mathematical discussion of how multipliers are constructed see Appendix C.

The key then to a complete impact study is to measure both direct injections and the resulting indirect and induced effects that results from the multiplier effect. Creating multipliers requires an input-output model and can be costly and data-intensive. Fortunately, there are many sources of such models and multipliers. One of the most common models used is IMPLAN, developed by the Minnesota IMPLAN Group, Inc. (MIG, Inc.).³ The IMPLAN model provides substantial industry detail (a desirable characteristic as multipliers will vary from industry to industry), provides substantial detail on direct injections and indirect effects, and is quite flexible in that it allows users to input a variety of market characteristics that may be unique to a particular area of the country. IMPLAN will be used in this analysis.

Attendee Demographics

The Cox Classic appears to generate a lot of repeat interest. The survey data shows that 7.9% percent of respondents indicated that they have been attending the tournament for ten or more years. Moreover, a large percentage of respondents, 34.8 percent, indicated that they have attended either for the first time or for the last one to two years.

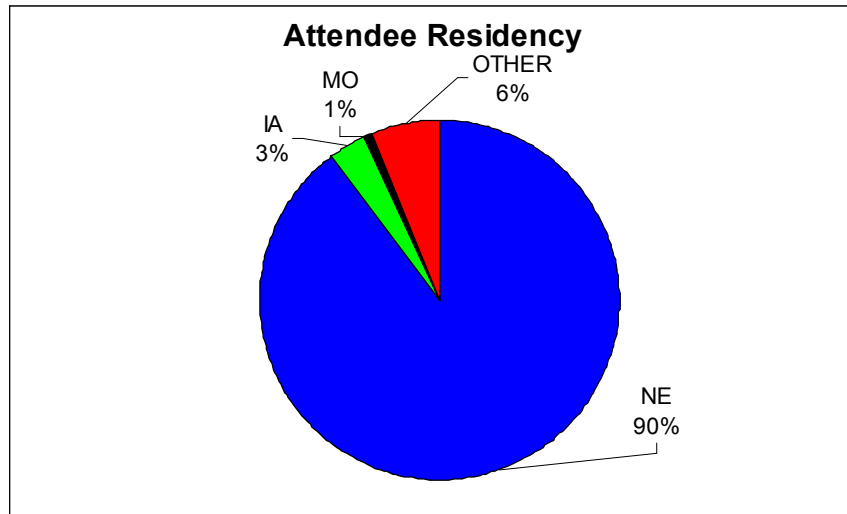


injections is the measure of induced effects. For additional detail see Raa (2005), Yan (1969) and Hewings (1985).

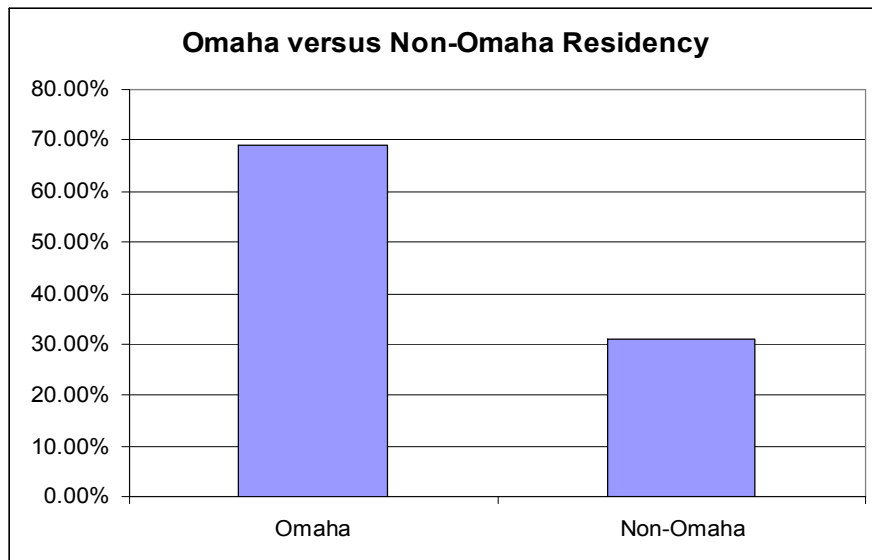
² For a complete survey of IO models, and their various strengths and weaknesses, the reader is referred to several excellent surveys. See, for example, Raa (2005), Yan (1969), and Hewings (1985).

³ For details regarding IMPLAN, visit <http://www.implan.com>.

According to survey data, the Cox Classic does appear to draw mostly from the local population. Fully 90 percent of respondents reside in Nebraska with only 10 percent from other states. Most of those other state attendees are from Iowa. That said, one should not conclude that the tournament is only for local interest. First, survey results did show residents from Florida, Colorado, Nevada, Arizona, and California were in attendance as well.

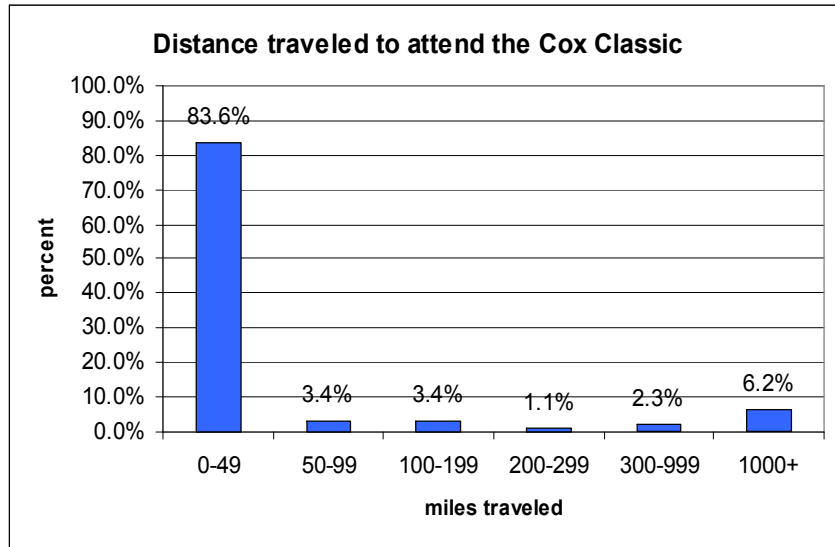


Second, the bar chart below shows the breakdown of Omaha, Nebraska versus non-Omaha, Nebraska resident attendees.⁴ Note that 30.8 percent of those surveyed indicated residence outside Omaha.

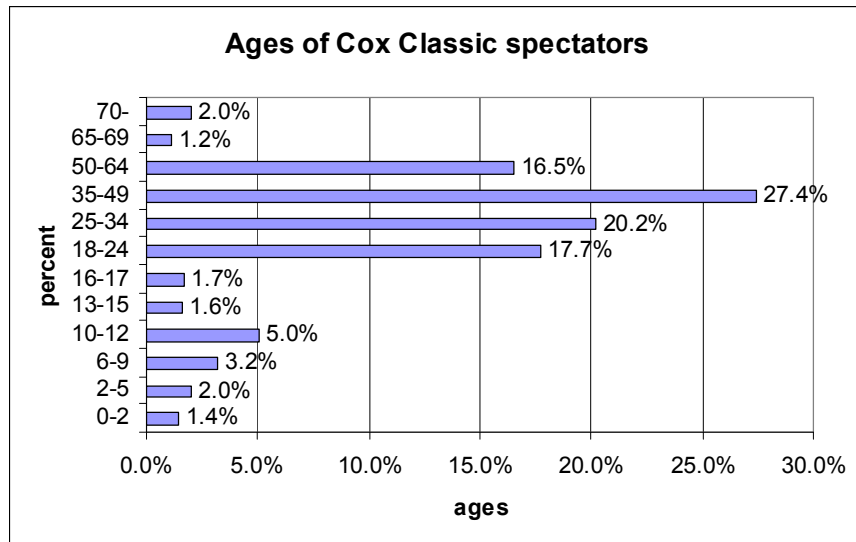


⁴ Omaha residents are defined as those who indicated that they were from Omaha, Bellevue, Millard, LaVista, Papillion, Ralston, (all in NE) and Council Bluffs, IA.

Finally, survey results suggest that the average distance traveled is about 98.5 miles. The majority of respondents, 83.6 percent, traveled between zero and 50 miles to attend the event but a measurable 6.2 percent traveled between 1000 miles or more.



The Cox Classic event offers a variety of activities and attractions that appeal to a broad spectrum of visitors of all ages. The chart below illustrates this demographic breakdown. During the 2007 event, the greatest number of attendees, 27.4 percent, were between the ages of 35 and 49, and 16.5 percent of respondents were between the ages of 50 and 64. Still, the tournament is an attractive event for younger people and families with young children as well. Nearly 15 percent of respondents were seventeen years or younger in age and 37.9 percent of respondents were between the ages of 18 and 34.

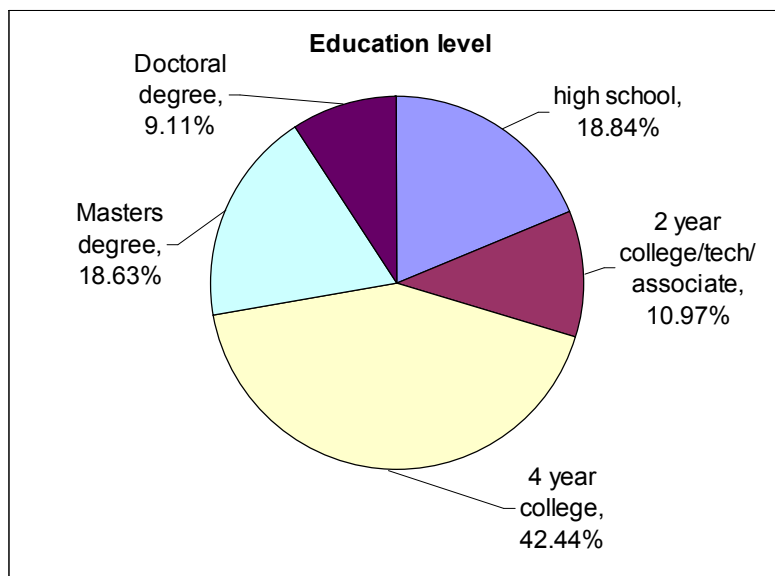


The average party size is 3.4 persons, ranging from one attendee to a group of 40. The most frequently encountered party size is 2 persons, accounting for 32.2 percent of total respondents, followed by parties of 4 at 20.2 percent.

Many respondents attended the Cox Classic with group of friends and/or relatives (54.0 percent) and 22.3 percent attended with their spouse or partner. About 19.0 percent of surveyed attendees brought their children.

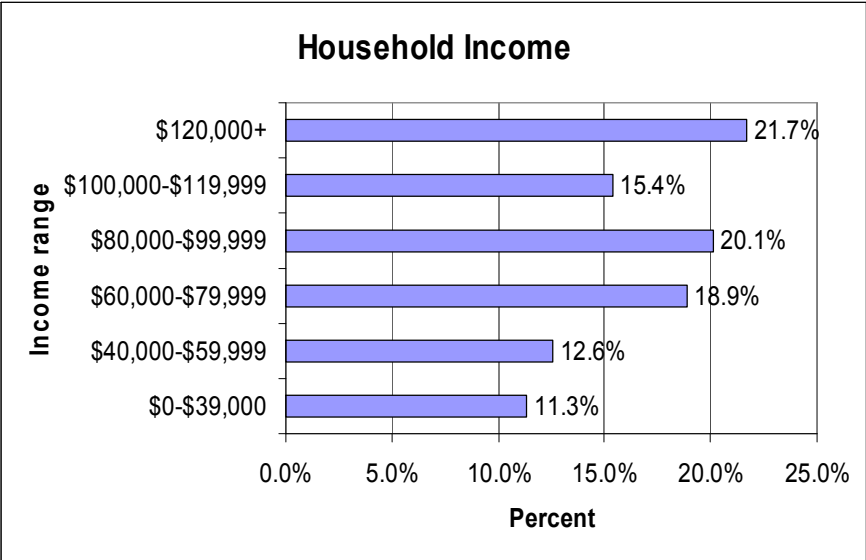
Most of the respondents were married (57.7 percent). However, a number of attendees were single (31.5 percent) and divorced/separated (5.2 percent). About half (49.2 percent) of attendees had children under the age of 18.

Most respondents were males (61.3 percent). In terms of ethnic breakdown, 82.6 percent of respondents classified themselves as Caucasian, 6.1 percent as Hispanic, 2.1 percent Native American, and 2.4 percent African American.



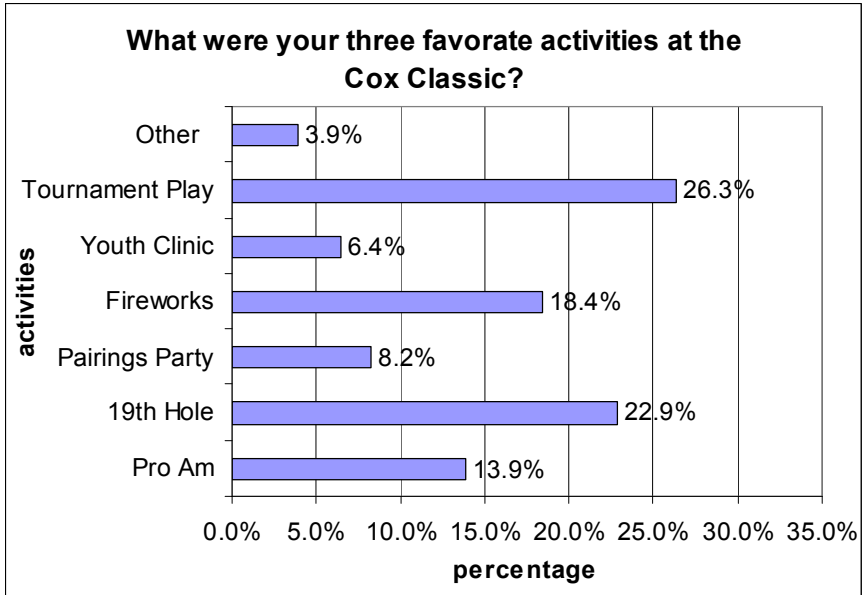
The graph above describes the education status of Cox Classic respondents. Overall, attendees appear to be well educated, with 42.44 percent having obtained a four-year degree and 27.7 percent have at least a masters degree. Over 10 percent have obtained a two-year technical or associates degree as well. Just under 20 percent have received high-school education.

The majority of attendees (58.1 percent) indicated that they work full time, and 15.9 percent indicated that they are self-employed. About 4.0 percent of respondents were retirees, 7.8 percent indicated that they are employed part time, and 5.0 percent indicated that they are homemakers.



The chart above depicts the income situation for Cox Classic survey respondents. Most household incomes (21.7 percent) were in the \$120,000 plus range, followed by incomes between \$80,000 and \$100,000 (20.1 percent). However, many attendees earn incomes of between \$60,000 and \$80,000 (18.9 percent). By means of comparison, according to the US Census Bureau, median household income for the state of Nebraska is \$46, 587 per year in 2005.⁵ The implication then is that the Cox Classic does attract relatively high-income families.

The Cox Classic offers a wide variety of activities that attendees can enjoy. The chart below delineates the relative popularity of each of the major event exhibits.⁶



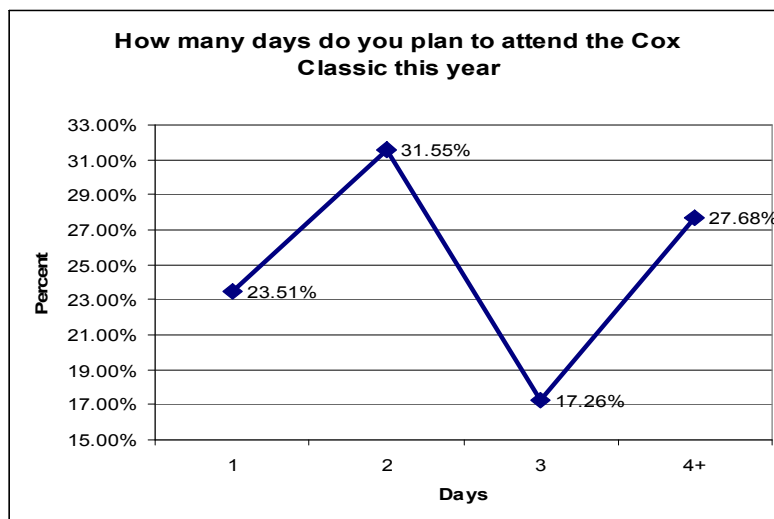
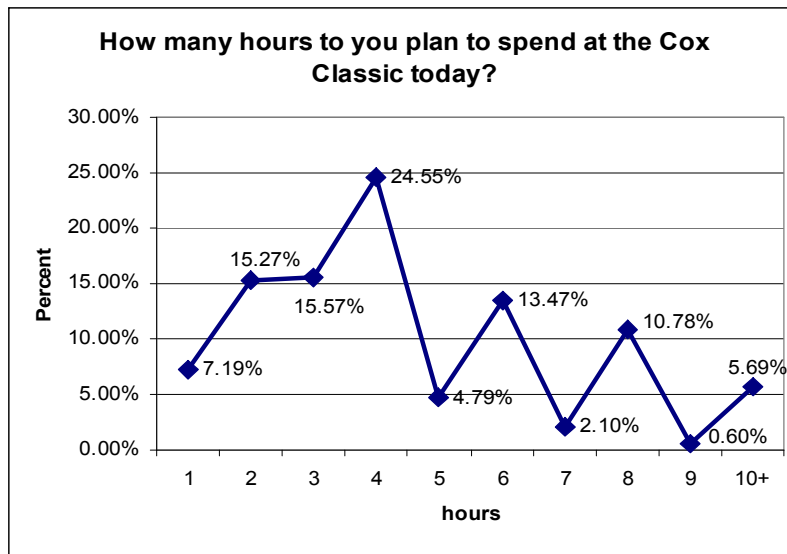
⁵ See US Census at <http://www.census.gov/hhes/www/income/income05/statemhi2.html>.

⁶ Because respondents were asked to check three activities, the percent total is greater than 100 percent.

Perhaps not too surprisingly, the most popular venue was the tournament play itself, with 26.3 percent of respondents indicating it to be a top-three favorite. The 19th Hole appeared to draw attention, with 22.9 percent of respondents indicating it to be a favorite. Fireworks (at 18.4 percent) and Pro Am (at 13.9 percent) were also very popular venues.

The numerous activities that the tournament offers are certainly a local, regional, and even national draw to the city of Omaha. Respondents indicated overwhelmingly (to the tune of 76.7 percent) plans to attend the event next year. Only 2.4 percent indicated they would not attend, and only 20.9 percent indicated uncertainty.

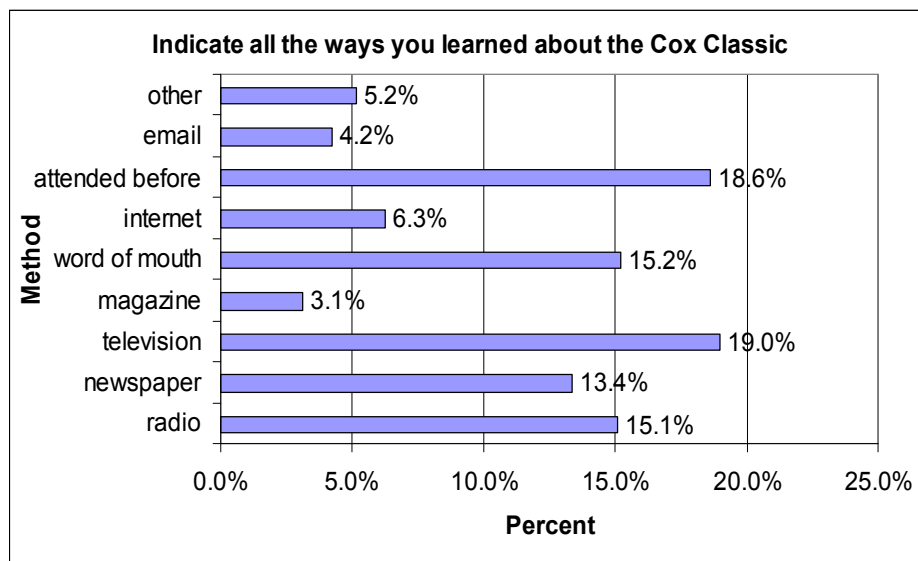
As a testimony to the event’s popularity, many respondents indicated plans to attend events over several days and spend many hours at the various activities.



As is illustrated in the charts on the previous page, most respondents indicated plans to spend between one and two days (55.6 percent). However, a relatively strong percentage (27.7 percent) planned on spending four or more days at the event. The average days spent as the event is 2.5 days. As for per-day event attendance, most respondents (55.4 percent) indicated that they will spend between 2 and 4 hours at the various activities.

Marketing

The chart below indicates the various ways in which information about the Cox Classic reached survey respondents.⁷ Most, 19 percent, respondents indicated television advertising. The second most common means of learning about the event (18.6 percent) was previous attendance, following by word-of-mouth (15.2 percent) and radio (15.1 percent). Newspaper (13.4 percent), internet (6.3 percent), magazine (3.1 percent) and email (4.2 percent), round out the remaining identifiable means of advertising the event. The fact that television appears to be of greater value than radio and newspaper ads, might suggest that promotion of event can be effectively done via this means. However, given that radio and newspaper advertising together (28.5 percent) appear to do better than television, from a cost perspective, since radio and newspaper advertising tends to be less expensive, these are still effective means of promotion.



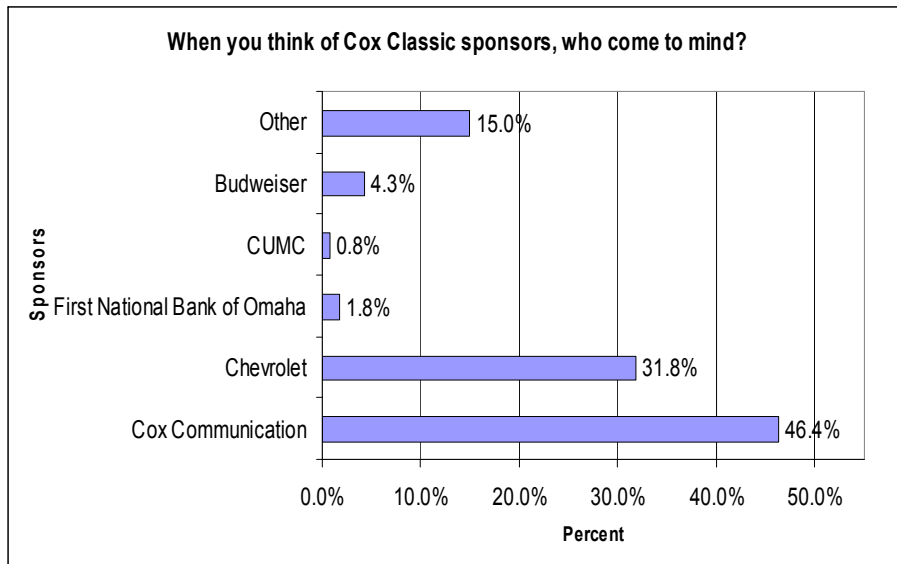
Sponsorship Awareness

The importance of sponsorship support is critical to the success of the event. Sponsors are vital to the event's financial health. The Cox Classic offers various means of sponsorship opportunities. Channels such as skybox availability, program advertisement, etc., are used to maximize marketing and philanthropic dollars. Financial and other support comes from banks, manufacturers, retailers, professional service establishments, and radio and television stations.

⁷ Because respondents were asked to check all that apply, the percent total is greater than 100 percent.

How, then, are sponsors rewarded for their participation? The survey results indicate the following:

- Ninety-two percent of respondents indicate that they were either satisfied or very satisfied with the Cox Classic and its various venues in 2007.
- There was nearly universal agreement that corporate sponsorship makes the tournament possible as indicated by the fact that 96.4 percent of respondents indicate agreement or strong agreement with this proposition.
- About 94 percent of respondents indicated they have a positive attitude toward the event sponsors because of their association with it.
- Over 81 percent of respondents indicated that they are more likely to purchase brands from Cox Classic sponsors because of their association with it.



Survey results highlight more indicate substantial recognition for Cox Communication (with 46.4 percent of respondents indicating its involvement) and Chevrolet with 31.8 percent of respondents indicating its sponsorship.

Economic Impact

The dollar impact of sizable events such as the Cox Classic is crucial to event decision-making since putting on such an event is a costly and time-consuming venture. An impact study can offer insights as to the return on this investment for the Cox Classic organization as well as for event sponsors, local government, and the downtown Omaha business community. For instance, the Cox Classic operating budget for the event is estimated at \$1.61 million. Moreover, local government stands to benefit from increased

expenditure on taxable retail items, such as clothing, food at local restaurants, and gasoline/diesel. Finally, local businesses are likely to benefit as well as increased local area consumer traffic offers increased sales opportunities.

In this section, we present data on the direct and indirect business volume as well as government revenues generated because of gulf tournament. Economic impact studies are usually designed to measure the injection of new money from outside a local economy as the result of some event. Spending by local residents is generally not included under the presumption that local expenditures merely represent a redistribution of existing money already within the community itself. That is, a dollar spent by a local resident at the Cox Classic is simply a dollar that would have been spent somewhere else in the local economy and therefore local spending during the event is simply a transfer of expenditure.

While this is not an unreasonable presumption (and, indeed, in the analysis below we emphasize the estimated dollar impact of non-Omaha area residents), it may very well be that not including at least some of the effect that events like this have on expenditures by local citizens, which according to our data does have substantial local appeal, may underestimate the overall impact of the event on the local economy.

Indeed, including some local resident expenditure may be reasonable in this case for several reasons. First, our data shows a proportion of respondents live sufficiently far away from west Omaha. Hence, they may be drawn to this area largely due to certain “special” events, such as tournament. If one reasonably presumes that any off-event grounds spending (fuel costs, restaurant spending, etc.) would likely have occurred were it not for the local respondents being drawn to tournament, then this is expenditure that is being injected into the local economy as a direct result of the event, for which there will be a corresponding multiplier effect.

Second, given the special appeal of Cox Classic to local residents, it is not unreasonable to presume that, as local citizens consider their family recreational activities, they planned on attending this particular event instead of spending their money at amusement parks, or other cultural events, in other nearby cities like Kansas City, MO or Des Moines, IA. Hence, without the Cox Classic, these locally-spent dollars may have been spent outside the Omaha economy. The event may have kept some local money from “leaking” outside of the Omaha metropolitan area.

Third, even if the above argument is not true, it’s not necessarily the case that dollars spent by Omaha-resident attendees are dollars that simply would have been spent somewhere else. It may be that the event was anticipated and families budgeted sufficient funds in anticipation of attendance. Hence, this expenditure may not have necessarily occurred, in fact some or all of the planned expenditure on event-related activities might simply have been saved had it not been for Cox Classic.

Finally, even if the above arguments are not completely true, it is not clear that local spending is a net expenditure wash since multipliers differ from sector to sector. For

instance, if local attendees spend an average of \$100 on, say, some general merchandise items in a nearby store (which has a specific multiplier), it is not necessarily the case this same \$100 would be spent on \$100 on general merchandise elsewhere in the local economy. It might be that had this money not been spent at these retailers, it might have been spent on, say, movies and restaurants in south Omaha, sectors which have multipliers that differ from that of retail. Hence, part of our analysis attempts to estimate this injection from local area attendees.⁸

That said, it is, as a matter of complete accuracy, *not* advisable to simply include *all* local expenditure. It would be better, for instance, to only count expenditures by those individuals who are very infrequent attendees of such special events (such as the Cox Classic) and infrequent visitors to West Omaha.⁹ These individuals are more likely to plan for such events, save for such events and only offer injections into a local economy when such events are taking place.¹⁰ Unfortunately, our survey results do not capture such figures. However, our survey did collect distance traveled to the tournament. One can reasonably postulate that local residents traveling significant distances from their homes to the tournament likely represent infrequent attendees to special events and infrequent visitors to West Omaha. Given Omaha's relative size, we suggest that any local visitor traveling more than ten miles to the tournament are likely infrequent attendees of special events. This amounted to 35 percent of all local attendees. It is then this percentage that is applied to local direct spending which is used to estimate total event impact from local residents. For details regarding the creating of these direct expenditure numbers for both non-Omaha and local residents, see Appendix B.

With every direct injection of expenditure into an economy, there will be a multiplier effect as described in detail in the introduction. Recalling that multipliers can and do vary from sector to sector, in Table 1 below, we present direct expenditure injections from non-Omaha and Omaha residents as estimated from survey results for restaurants, non-event entertainment, retail purchases, hotel and other lodging, ground transportation, fuel, and miscellaneous spending. We then input these direct expenditures into the IMPLAN model (which contains the necessary industry multipliers). The results obtained from solving the IMPLAN model produces the indirect, induced and total economic effects (see footnote 1).

Business Volume Impact

According to the estimates provided, in 2007 the Cox Classic had an economic impact on the City of Omaha from non-Omaha residents of \$7 million, comprising \$4.3 million in

⁸ For the purposes of this analysis, respondents who indicated they lived in Omaha, LaVista, Papillion, and Ralston, NE as well as those who indicated residences in Council Bluffs, IA were considered "local" Omaha residences. Other means to delineate local versus non-local, such as distance traveled and whether or not there was any over-night lodging accommodations, provided fairly similar numerical breakdowns.

⁹ See Decker (2006) for additional details.

¹⁰ This stands in some contrast to those individuals who partake frequently in event happens, or visit west Omaha frequently. It is more likely that such individuals would in fact have spent money absent events like the Cox Classic and therefore it may not be advisable to include such spending in our direct expenditure measures.

direct injections, \$1.2 million in indirect injections (i.e. benefits to other businesses in the city), and \$1.5 million in induced injections (i.e. benefits to final consumers). Not surprisingly, the economic impact from local area spending due to the event amounted to less, where \$1.1 million in direct expenditures was added to the Omaha area with corresponding indirect and induced injections of \$310,407 and \$383,343 respectively. The total economic impact of the tournament week then is estimated at about \$8.8 million with about \$5.4 million estimated to be direct injection, \$1.5 million in indirect injections, and \$1.8 million in induced expenditure injection. To put these figures in some perspective, according the Greater Omaha Chamber of Commerce, net taxable sales for the entire city of Omaha have averaged about \$736 million per month over the first six months of 2007. The total injection of \$8.8 million from the tournament alone represents a little over one percent of this monthly average.

Table 1. Direct, Indirect, Induced, and Total Economic Impacts on the City of Omaha During The Cox Classic Week (dollar denominated values)

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Non-Omaha Residents				
Food and drink restaurants	791,511			
Non-Cox entertainment	474,437			
Retail purchases/Misc.*	484,515			
Hotel and other lodging	1,622,038			
Ground transport (taxi, car rental, etc.)	627,043			
Gasoline/diesel purchases	296,878			
Total	4,299,492	1,202,207	1,462,386	6,964,085
Omaha Residents**				
Food and drink restaurants	268,024			
Non-Cox entertainment	340,742			
Retail purchases/Misc.*	218,401			
Ground transport (taxi, car rental, etc.)	156,468			
Gasoline/diesel purchases	134,163			
Total	1,119,183	310,407	383,343	1,812,933
Total Omaha and Non-Omaha Residents Effect	5,418,674	1,512,614	1,845,729	8,777,018

* Since there is no "miscellaneous" multiplier in IMPLAN, the retail sales multiplier was used. The IMPLAN program then aggregated the two categories together and it is this aggregation that is reported.

** These figures are based on the proportion of survey respondents who indicated that they were from Omaha, Bellevue, Millard, LaVista, Papillion, Ralston, and Council Bluffs, IA, and who are assumed to be infrequent attendees of special events (see text). This amounts to about 10 percent of local respondents.

Table 2 provides a list of the top 15 sectors benefiting from the Cox Classic Tournament, broken down by local and non-local expenditure. The biggest beneficiary from non-local expenditure is the hotel sector realizing a total impact (direct, indirect, and induced) of \$1.6 million, followed by the food and drink restaurant sector, experiencing a total impact

of about \$897,435 million. Retail, entertainment, and ground transportation were also large beneficiaries of the Cox Classic event.

Local spending also generated substantial gains for restaurants (\$295,673), entertainment (\$343,948), retail (\$221,270) as well as many other sectors.

Table 2: Top 15 Sectors Impacted by the Cox Classic Tournament (dollar denominated values)

Sector	Total Effect
Non-local spending:	
1 Hotels and motels - including casino hotels	1,630,351
2 Food and drink restaurants	897,435
3 Transit and ground passenger transportation	639,913
4 Retail purchases/misc.*	495,534
5 Non-Cox entertainment	486,660
6 Gasoline/diesel purchases	307,432
7 Owner-occupied dwellings	196,723
8 Real estate	177,446
9 Wholesale trade	168,850
10 Hospitals and emergency rooms	86,103
11 Management of companies and enterprises	79,890
12 State and local government electric utilities	79,258
13 Offices of physicians & dentists	79,033
14 Monetary authorities and depository credit intermediaries	72,497
15 Insurance carriers	72,294
Local spending:	
1 Non-Cox entertainment	343,948
2 Food and drink restaurants	295,673
3 Retail purchases/misc.*	221,270
4 Ground transportation (taxi, car rental, etc.)	159,092
5 Gasoline/diesel purchases	136,900
6 Real estate	52,406
7 Owner-occupied dwellings	51,586
8 Wholesale trade	47,101
9 Hospitals and emergency rooms	22,571
10 Management of companies and enterprises	20,904
11 Offices of physicians & dentists	20,715
12 Insurance carriers	19,077
13 State and local government electric utilities	18,988
14 Monetary authorities and depository credit intermediaries	17,323
15 Nondepository credit intermediation	15,446

Government Revenue Impact

When events like the Cox Classic bring money injections into an economy, tax revenues are generated for local and state governments. Tax revenues are paid directly by event

attendees on items purchased at retail establishments, meals and restaurants, fuel for transportation purposes, and rooms at local area hotels and other lodging establishments. Following previous studies, when calculating the dollar estimates of tax revenues generated, this study will only focus on the direct injection expenditure.

Sales Tax Revenue (Excluding Hotel)

Consistent with an earlier study of the categories listed above, those that are considered directly affected by sale tax collection in this section are restaurants, entertainment, retail establishments, ground transportation, and the miscellaneous category.¹¹ Direct expenditures for these categories are \$2.4 million from non-Omaha residents and \$983,635 from residents. The sales tax in the state of Nebraska is 5.5 percent and the sales tax in Omaha is 1.5 percent.

Non-Omaha Residents	
Taxable Categories	\$2,377,506.00
State tax collections	\$130,762.80
City tax collections	\$35,662.59
Omaha Residents	
Taxable Categories	\$983,635.06
State tax collections	\$54,099.93
City tax collections	\$14,754.53
Total State Collections	\$184,862.73
Total city Collections	\$50,417.12
Total Collections	\$235,279.84

From non-Omaha residents, state tax collections from the Cox Classic are estimated at \$130,763 and city tax collections from the same group are \$35,663. From residents, the state tax revenue take is \$54,100 and the revenues collected for the city are \$14,755. Total state tax revenues collected from direct expenditure by event attendees' amount to \$184,863 and city revenues \$50,417.

Hotel Tax Revenue

The state of Nebraska applies a 5.5 percent sales tax on hotel accommodations. In addition, the city of Omaha applies an occupancy tax of 12.48 percent.¹² Based on these percentages and the direct expenditure figure of \$1.622 million, the state collected

¹¹ Hotels are subject to a 5.5 percent sales tax per room per night as well. This will be figured into the Hotel Tax section below.

¹² These rates were supplied to the author from a sales and booking representative at the Doubletree Hotel Omaha-Downtown, 1616 Dodge Street, Omaha, NE, 68102.

\$89,212 over the period of the event and the city collected \$202,430 in occupancy tax revenue.

Gasoline Tax Revenue

Out-of-area attendees spent and estimated \$296,878 on gasoline/diesel over the period of the event. Infrequent local area visitors spent an estimated \$134,163. With a state gasoline tax of 24.5 cents per gallon, non-area residents contributed an estimated \$26,940 in gasoline tax revenue to state coffers. Area residents contributed an estimated \$12,174.¹³

Additional Impacts Allocable to the Cox Classic

While direct spending by event attendees (and the resulting multiplier effect) measure to a large extent the tournament's economic impact on Omaha, there are other spending impacts on the local economy. The following are brief presentations of these other ways in which the Cox Classic impacts the city of Omaha. While these additional impacts are not explicitly included in the above estimates and there only limited ways to incorporate each one of these categories impacts in dollar terms, they are nonetheless real benefits.

Direct Spending by the Cox Classic on services, supplies, capital improvements, and wages

In 2007, the operating budget for the Cox Classic was \$1.61 million, most of it spent locally.¹⁴ This budget was largely comprised of sponsor dollars, most coming from corporations and organizations headquartered locally. It also includes the sale of tickets to out-of-area attendees and vendor commissions and fees. This budget, thus, represents direct spending that will generate additional sales to local businesses and tax revenue to state and local government.

Vendor/Partner Revenue and Spending

Each year the Cox Classic contracts with local area retailers, manufactures, restaurants, public nonprofit organizations, equipment suppliers, and others. The event generates a sales channel and where these vendors have an opportunity to advertise and grow revenues. Indeed, many partners consistently offer positive feedback to event coordinators year in and year out. Total sponsorship revenues were on the order of \$1.59 million in 2007.

These sponsors generate money for the state and metro area as well. In taking part in the event, vendors purchase goods, material, equipment, food, entertainment and other services, most of which are subject to sales taxation. In addition, they promote sales of

¹³ This figure is based on an average per gallon price of \$2.70 per gallon.

¹⁴ Note that this expenditure was not included as a direct impact since the focus of this study is on the impact that Cox Classic spectators has on the city of Omaha.

their own goods and services, also subject to taxation. Hence, government revenue is enhanced further.

Promoting the City and Region

The Cox Classic is a very popular event, attracting people from all over the United States, injecting millions of dollars into the local Omaha metropolitan economy. More than that, however, televised exposure is also likely to have a strong effect on future tourist activity. For instance, the Cox Classic aired on the Golf Channel and received exposure on other media outlets, reaching an estimated 31 million households. This promotes additional visitation to the city of Omaha and may increase future attendance at the Cox Classic as well as stimulate increased visitation to Omaha itself.

Volunteers

Volunteers are a major part of the Cox Classic. Their involvement enhances the scale and quality of the events and enables more activities to be undertaken. This in turn helps businesses realize revenue gains as more participation leads to more local area sales.

The event had over 950 volunteers in 2007. While these volunteers may also have spent money on meals and other items while downtown, which might too have a modest impact on the figures estimated above, their major impact, though quite real, is much more difficult to measure. Their willingness to serve, stimulate interest in the events and aid in their efficient execution are all invaluable tasks that certainly enhanced the economic impact of the tournament.

Conclusion

The Cox Classic is a major sporting event for the city of Omaha. In 2007, the total economic impact on the city was \$8.8 million with about \$5.4 million estimated to be direct injection, \$1.5 million in indirect injections, and \$1.8 million in induced expenditure injections. The sales tax impact, excluding hotels and other lodging, was \$235,280. The State of Nebraska received an estimated \$184,863 in sales tax revenues from the direct economic activity produced by event attendees. The local economy received a total \$50,417 in sales tax revenues. Event attendees spent \$1.6 million at local hotels and other lodging. Hotel expenditures generated an estimated \$202,430 in occupancy tax revenues to the city of Omaha and \$89,212 in sales tax revenues to the state. Travel to and from the event increased gas expenditures in Omaha by \$431,041, and generated an estimated \$39,113 in gasoline excise tax for the state of Nebraska.

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Appendix A: The Survey



The Cox Classic thanks you for completing this survey.

1. What are your 3 favorite activities at the Cox Classic presented by Chevrolet? (Please check 3)
 - Pro Am
 - Pairings Party
 - Youth Clinic
 - Tournament Play
 - 19th Hole
 - Fireworks
 - Other _____

2. Indicate all the ways you learned about the Cox Classic and its events. (Check all that apply).
 - Radio
 - Television
 - Word of mouth
 - Attended before
 - Newspaper
 - Magazine
 - Internet
 - Email
 - Other _____

3. Are you aware that the Cox Classic is televised on the Golf Channel? Yes No

4. How important is it to you or your group that the Cox Classic is televised nationally on the Golf Channel?
 - Very important
 - Somewhat important
 - Not important

5. What is the main transportation method you used to get to the Cox Classic? (Check one)
 - Own car
 - Bike/Walk
 - Airplane
 - Other _____
 - Car pool
 - Bus
 - Shuttle

6. a. Including yourself, how many people are in your group today? _____People.
 b. Your group includes: (Check all that apply.)
 - Your children
 - Friends/relatives (Age 18+)
 - Child(ren) of friend/relative
 - Spouse/partner

- c. What are the ages of people in your visiting party?

Adult Ages <input type="checkbox"/> 18 – 24 (how many? _____) <input type="checkbox"/> 25 – 34 (how many? _____) <input type="checkbox"/> 35 – 49 (how many? _____) <input type="checkbox"/> 50 – 64 (how many? _____) <input type="checkbox"/> 65 – 70 (how many? _____) <input type="checkbox"/> Over 70 (how many? _____)	Children Ages <input type="checkbox"/> 2 or less (how many? _____) <input type="checkbox"/> 2 – 5 (how many? _____) <input type="checkbox"/> 6 – 9 (how many? _____) <input type="checkbox"/> 10 – 12 (how many? _____) <input type="checkbox"/> 13 – 15 (how many? _____) <input type="checkbox"/> 16 – 17 (how many? _____)
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- d. How many hours do you plan on spending at the Cox Classic today? _____Hours.
- e. How many total days do you plan to attend the Cox Classic? _____Days.
- f. How many years have you attended in the past? _____Years
- g. Do you plan to attend the Cox Classic next year? Yes No Maybe

5. How would you rate your overall satisfaction of the Cox Classic presented by Chevrolet?
 - Very Satisfied
 - Satisfied
 - Average
 - Dissatisfied
 - Very Dissatisfied

6. When you think of the Cox Classic's sponsors, which sponsors come to mind?

7. Please mark the box that best reflects your opinion:

Opinion	Strongly Agree	Agree	Disagree	Strongly Disagree
Corporate sponsorship makes the Cox Classic possible				
I tend to have a positive attitude toward the Cox Classic Sponsors because of their association				
I am more likely to purchase brands' from the Cox Classic Sponsors because of their association				

8. The days you attend the Cox Classic, how much money has your entire group spent OUTSIDE the tournament tickets?

Note: These estimates will help us determine the economic impact of the event.

Food & drink at restaurants, bars, etc. (not at Cox Classic) \$ _____ per day
 Non-Cox Classic entertainment (ex: movies, museums, etc.) \$ _____ per day
 Retail purchases (ex: clothing, souvenirs, crafts, etc.) \$ _____ per day
 Overnight accommodations (ex: hotel, B&B, campground, etc.) \$ _____ per day
 Ground Transportation (ex: bus, cab, car rental, etc.) \$ _____ per day
 Gasoline/diesel purchase \$ _____ per day
 Miscellaneous items and services \$ _____ per day

9. a. How many nights will you spend away from home and in the local area? _____

b. Where are you staying overnight? *If applicable*

- Hotel or motel Campground Other _____
 Inn/bed & breakfast At the home of a friend/family

Demographics

10. a. Where do you reside? City: _____ Zip Code _____

b. How far did you travel? _____ Miles.

11. What is your gender? Male Female

12. Ethnic background? Caucasian Hispanic Native American African American
 Asian American Other _____

13. Marital Status: Single Married Partner Separated/Divorced/Widowed

14. Are there any children under 18 years of age living at your home? Yes No

15. What is the last grade of school you and your significant other (*if applicable*) had the opportunity to complete?

You

- High school
 2-yr college/technical/associate degree
 4-yr college degree
 Masters degree
 Doctoral degree

Significant Other

- High school
 2-yr college/technical/associate degree
 4-yr college degree
 Masters degree
 Doctoral degree

16. What is the working status of you and your significant other (*if applicable*)? (Check all that apply.)

- Employed full-time Self-employed Retired Student
 Employed part-time Unemployed Homemaker Other _____

17. What is your total household income?

- Less than \$40,000 \$60,000 - \$79,999 \$100,000 - \$119,999
 \$40,000 - \$59,999 \$80,000 - \$99,999 \$120,000 +

Thank you! Your answers will assist organizers in the planning for future Cox Classic Tournaments.



Appendix B: Statistical measures of direct impacts

Estimating the dollar value of the direct injections into the Omaha economy as a result of the Cox Classic requires that sufficient observations are gathered to statistically reflect the population of attendees. With a sample of 347 randomly distributed surveys, and a total estimated number of individual attendees at 82,000, then statistically speaking, this implies that the answers supplied by the survey respondents reflect the characteristics of the entire population of event attendees, within a six percent margin of error. As a result, the various mean percentages, mean dollar values of expenditures, proportions of Omaha and non-Omaha residents, etc., calculated from our survey results are reasonably statistically representative of the 82,000 population of attendees. That is, there are enough sampling observations to infer that average expenditures by survey respondents reasonably reflect the average expenditures that would have been observed had the entire population been surveyed.

In terms of the dollar values for each category (restaurants, Non-Cox entertainment, Retail purchases, Hotel and other lodging, Ground transportation (taxi, car rental, etc.), Gasoline/diesel purchases, and Miscellaneous spending), on question 8 of the survey, respondents were asked to estimate how much money they spent or plan to spend *per day* on these various items *for their entire group*. Since we have a “per day” figure, a “group” figure, and a total number of individual attendees figure, we need to generate a per day *per individual* average for each of these categories.¹⁵ This was done as follows.

First, since we have both non-local (non-Omaha) respondents and local (Omaha) respondents, we split the survey observations between these two groups in different databases. The first group comprised the non-local observations. As stated above, we treated any respondent who indicated a local residence (question 10a) *other than* Omaha, Bellevue, Millard, LaVista, Papillion, Ralston (all in Nebraska), and Council Bluffs, IA as non-Omaha residences. This amounted to 107 observations or 31 percent of the total number of surveys administered. This percentage was applied to the 82,000 total attendee estimate to come up with the 25,420 figure for non-Omaha attendees.

For the remaining 69 percent of local respondents (56,580 estimated local attendees), we then applied a percentage indicating, based on miles traveled to the Cox Classic (see text) infrequent special event attendees (i.e. those traveling more than ten miles to the event). This percentage is roughly 35 percent. Therefore, we applied this to our 56,580 figure for estimated local attendees resulting in 19,803 local individuals who are likely only drawn to the special nature of the event. It was then this figure that was used to calculate the estimate for the Omaha resident direct injections prompted by the Cox Classic Tournament.

¹⁵ It might be that dividing by group size is advisable for some categories but not all. Take hotels for instance. It's likely the case the respondents put down a room rate that would apply to one person or two (i.e. if the room rate is \$90, it would likely be \$90 for a party of 1 or a married couple). Under this scenario, then, perhaps a per person daily expenditure would not seem too logical. However, to effectively implant this, we would need a group population estimate as well as a individual population estimate, which is not available. As a result, however, it is possible that our hotel direct expenditure figure may slightly understate the actual direct expenditure value.

Then for each spending category, we divided the dollar value supplied by the total number of group members (question 6a from the survey). This was done for every survey. This provided an estimate of the per-individual expenditures per day for each category. We then averaged the resulting spending (called avg_exp_per_indiv_survey_i below).

Next, we calculated the average number of days spent at the event (question 6e, called avg_days_non(local) below).¹⁶ These two averages were then multiplied together to get the average expenditure per individual over the entire planned stay at the tournament events.

Once these averages were calculated, we multiplied each by the number of total estimated attendees who were either non-local or local, depending on the group of interest. Specifically, the equation for the non-local residents, the mathematical formula used for each spending group *i* was:

$$\text{direct expenditure}_i = (\text{avg_exp_per_indiv_survey}_i) * (\text{avg_days_nonlocal}) * 25,420 \quad (\text{B1})$$

For the local residents the following was used for all categories except hotels and other lodging):

$$\text{direct expenditure}_i = (\text{avg_exp_per_indiv_survey}_i) * (\text{avg_days_local}) * 19,803 \quad (\text{B2})$$

From the perspective of economic impact analysis, two categories require particular attention: gasoline/diesel purchases and retail/miscellaneous purchases. IMPLAN, like all input output models, are production-based models. The questions then that IMPLAN address center around how direct expenditures impact what different businesses “produce” and how that increased demand prompts business to purchase from other businesses. The main problem with gasoline/diesel and retail stores is that, in general, they don’t produce what they sell. They buy final products for re-sale and mark-up. What these sectors then “produce” is the service and convenience of stocking and re-selling items produced by other businesses. Moreover, particularly for the gasoline/diesel case, no production of crude oil into refined product takes place in the Omaha MSA. Therefore, to attribute all the spending done by consumers to the gasoline retail sector over-states the impact this sector will have on productive activities within the Omaha MSA, thereby representing a misuse of the IMPLAN model. The IMPLAN model, however, will apply “margins (percentage of total output in a retail-type sector that represents local area “production”) to such sectors. For these two sectors, the margins are roughly 40 percent. Hence, the actual aggregate survey values for these sectors are

¹⁶ For hotels, we considered using the number of nights stayed (question 9a) in the calculation. However, this average was very close to the question 6e average (days at the event) so it did not alter the results significantly.

multiplied by 0.4 (within IMPLAN) and then are introduced into the input output model as direct injections.

Appendix C: Basic Input-Output (IO) modeling and derivation of IO Multipliers

Since its development in the mid-1930s, Input-Output (IO) models have been used extensively by economist and policy analysis to quantitatively measure the impact on an economy (either national or regional) from a variety of economic phenomena such as tax policy, pollution regulation, oil price spikes, military base closings, and industrial entry. The main strength to the IO approach is that, with a primary focus on production, it recognizes that production processes are complex and that production of on good or service draws as inputs from other sectors (or industries) in an economy. Hence, it quantitatively measures the inter-dependency that exists between all industries in an economy. Something that impacts one market, say higher labor costs in the construction sector, will have subsequent impacts on many other sectors in the economy. Other regional models, such as Economic Base Theory, do not account for this interdependency. The magnitudes of these “ripple effects” are ultimately what determine the magnitudes of the various multipliers discussed in the text. The purpose of this appendix is to briefly describe the essential elements of an IO model from the perspective of highlighting where these multipliers come from. It is not designed to be a complete discussion of IO models in general¹⁷.

In general the following assumptions regarding IO models are made.

1. Each industry (i) produces only one homogeneous commodity or service (i).
2. Each industry uses a fixed input ratio (or factor combination) for the production of its output.
3. Production in every industry is subject to constant returns to scale, so that a k-fold increase in every input will result in a k-fold increase in output.

From these assumptions it will be the case that the production of one unit of the j th commodity requires a fixed proportion a_{ij} ($0 \leq a_{ij} < 1$) of the i th input.

The key to the IO model is the IO matrix which incorporates these fixed proportions. Consider, for instance, the following (simplified) IO matrix (denoted as **A**)

		Output					
		1	2	3	...	n	
Input	1	a_{11}	a_{12}	a_{13}	...	a_{1n}	d_1
	2	a_{21}	a_{22}	a_{23}	...	a_{2n}	d_2
	3	a_{31}	a_{32}	a_{33}	...	a_{3n}	d_3

	n	a_{n1}	a_{n2}	a_{n3}	...	a_{nn}	d_n
		v_1	v_2	v_3	...	v_n	

The *columns* of this matrix represent the input requirements from industries 1, 2, 3,...n need for the production of commodity 1. Hence, to produce x_1 units of commodity 1

¹⁷ For such a discussion, the reader is referred to Mouhammed (2000), Hewings (1985), and Hoover and Giarratani (1984).

requires as inputs the proportions of other commodities in the matrix: $a_{21}x_2$, $a_{31}x_3$, etc., as well some primary input v_1 (a labor and/or capital input for example). Algebraically, then, by reading down the first *column* of \mathbf{A} we can describe a fixed proportions production function for commodity 1:

$$x_1 = a_{11}x_1 + a_{21}x_2 + a_{31}x_3 + \dots + a_{n1}x_n + v_1 \quad (\text{D1})$$

The rows of this matrix can be used to determine the total output necessary from a given industry to produce all the other commodities in the economy, as well as meet final (or end user) demand (households for instance) for that given industry. For example, if industry 1 is to produce an output level sufficient to meet the input requirements of the n commodities as well as final demand, commodity 1's output level, x_1 , must be (reading across the first *row* of A):

$$x_1 = a_{11}x_1 + a_{12}x_2 + a_{13}x_3 + \dots + a_{1n}x_n + d_1, \quad (\text{D2})$$

where d_1 is the final demand for commodity 1. To calculate the OI multipliers, we first solve (A2) for d_1 :

$$x_1(1 - a_{11}) - a_{12}x_2 - a_{13}x_3 - \dots - a_{1n}x_n = d_1. \quad (\text{D3})$$

We then do this same operation for the remaining industries comprising our economy. In so doing, we can represent the resulting system of equations compactly using matrix algebra notation:

$$(\mathbf{I} - \mathbf{A})\mathbf{x} = \mathbf{d}, \quad (\text{D4})$$

where \mathbf{x} is a $(n \times 1)$ output vector, \mathbf{d} is and $(n \times 1)$ final demand vector, and \mathbf{I} is an $(n \times n)$ identity matrix. The matrix $\mathbf{I} - \mathbf{A}$ is often referred to as the *technology matrix* and is critical to deriving IO multipliers. Notice that if we solve for our vector of industry output levels we obtain:

$$\mathbf{x} = (\mathbf{I} - \mathbf{A})^{-1}\mathbf{d}, \quad (\text{D5})$$

where, letting $\mathbf{B} = (\mathbf{I} - \mathbf{A})^{-1}$, comprises a matrix of individual industry multiplier effects and therefore can be summed to obtain the total output multiplier effect from an increase in a given final demand sector. To see this, expand (D5) and, for the sake of simplicity, assume only two sectors, 1 and 2. In so doing, we obtain:

$$\begin{bmatrix} x_1 \\ x_2 \end{bmatrix} = \begin{bmatrix} b_{11} & b_{12} \\ b_{21} & b_{22} \end{bmatrix} \begin{bmatrix} d_1 \\ d_2 \end{bmatrix}. \quad (\text{D6})$$

Using matrix multiplication, this system becomes:

$$\begin{aligned}x_1 &= b_{11}d_1 + b_{12}d_2 \\x_2 &= b_{21}d_1 + b_{22}d_2\end{aligned}\tag{D7}$$

Notice now that the *direct* impact of a one dollar increase in final demand in sector 1 yields a b_{11} dollar increase in output from x_1 . Notice further, however, that that same dollar increase in sector 1's final demand has in *indirect* impact equal to d_{21} dollars on sector 2's output. The total output multiplier (i.e. the total *direct* and *indirect* effects) from a one dollar increase in sector 1's final demand is $b_{11}+b_{21}$. In general then, to determine the total output multiplier from an increase in final demand from a given sector i , we simply add up the elements in our **B** matrix corresponding to the i th *column* in **B**.

As stated above, the IO modeling framework has been and is currently used extensively in applied economic analysis because it has a number of desirable attributes that other model structures do not possess. However, there are some limitations as well. For completeness, these strengths and limitations are listed below.

Strengths of the IO modeling framework:

1. More industry detail than is typically provided in most regional econometric models.
2. The simultaneous nature of IO models allow for direct and indirect effects to be measured. Such feedback or ripple effects are generally not possible in most regional econometric models.
3. Ease and flexibility in simulation analysis.

Limitations of the IO Modeling framework:

1. The coefficients in production are fixed in the IO matrix. This does not allow for input substitution in response to relative input price changes.
2. IO matrixes are usually developed accurately for a particular year. Over time, it is reasonable to assume the matrix coefficients to change, perhaps due to technological innovations in production or processing. However, this sort of flexibility is generally lacking in IO models.
3. The IO framework by construction imposes constant returns to scale for all industries in the economy.
4. IO models assume the same production technology (i.e. a single, linear production function) is used in a particular industry. This has two potentially troubling implications. First, it assumes that all firms within a particular market employ the same production technology which may or may not be true in practice. Perhaps more troubling, however, is that often the definition of a "sector" may involve several relatively distinct industries. For instance, there exists an IO production function for the "Utility Sector." However, this sector is comprised of both electricity generation and electricity distribution, water supply systems, and natural gas production and distribution. It is unlikely that all of these industries would have the same production technology. Clearly then, more detail in an IO matrix is better than less. Unfortunately, cost and data limitations often limit the detail on most readily available models.