

The Economic Impact of the 2008 Ak-Sar-Ben Coronation Ball on the Omaha Metropolitan Economy

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I. Introduction

Since 1895, the Knights of Ak-Sar-Ben has sponsored its annual Coronation Ball. This important civic event raises funds to support the Ak-Sar-Ben Youth Scholarship Fund. Recently, the Knights of Ak-Sar-Ben developed a partnership with the Horatio Alger Scholarship Program, resulting in the awarding of 50 scholarships to talented and hard-working students from Nebraska and Western Iowa.

In 2008, the ball generated \$644,449 in net income. This revenue is exclusively directed to support the scholarships the Knights of Ak-Sar-Ben gives out.¹ Nineteen women volunteer their time and energy to planning and organizing the event. Information from the 2007 Coronation Ball's annual report shows 252 Court Members, \$384,213 in direct contributions to youth, 20 workers (the nineteen volunteers and one paid staff member) devoted 15,060 hours to the event. While the current year's data is not yet available, it is expected that they will mirror 2007. In addition, a \$2.8 million endowment exists to help fund the scholarships for the Ball. In 2008, the Coronation Ball gave out \$287,000 in scholarships on top of the money that was raised at the Ball last year.

The ball attracts attendees from across the state, as far west as Scottsbluff, and the country, from states such as Arizona. Compared to other events, such as the Knights of Ak-Sar-Ben's River City Roundup, the Coronation Ball is an event that attracts a smaller audience. An estimated 2,000 attendees partook in the ball in 2008. That said, it nonetheless does generate a substantial amount of economic activity for the city of Omaha. As detailed below, the Coronation Ball generated nearly \$1 million in economic activity in 2008 for the city.

In what follows, we address the economic contribution the Knights of Ak-Sar-Ben's Coronation Ball has on the City of Omaha. We first review issues related to data collection and offer some general background on the structure of economic impact analysis. We then discuss the quantitative impact the 2008 Coronation Ball on the Omaha economy, and on state and local government revenues.

a. Data Collection

Professor Christopher Decker of the University of Nebraska at Omaha was hired by the Knights of Ak-Sar-Ben to measure the economic impact for Ak-Sar-Ben's Coronation Ball. 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 Knights of Ak-Sar-Ben as well as for local government, and the downtown Omaha business community.

¹ The revenues are generated from fees and donations and the expenses include wages, Qwest Center Expenses and vendor expenses. The Knights of Ak-Sar-Ben's Foundation also hosts an for the Court Members associated with the Ball, with a budget of \$40,000.

The following study utilizes a survey to collect data from Ak-Sar-Ben's Coronation Ball attendees. Prior to the event, Knights of Ak-Sar-Ben planners developed a small questionnaire that solicited information from respondents regarding length of stay in Omaha and estimated expenditures of a variety of items and activities. During the event, under the Knights of Ak-Sar-Ben direction, these surveys were distributed and collected.

Once tabulated, the data was analyzed and compared with other survey data from existing Knights of Ak-Sar-Ben events to gauge data reliability.² Once completed, measures of direct expenditures from event attendees are then estimated and used as inputs necessary to quantify the overall economic impact of the Coronation Ball on the city of Omaha.

b. 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, they are still widely used to this day.

An IO model, originally developed Wassily Lontief (1936) and therefore often called Lontief models, describes an economy as a series of inter-linked industries or sectors. A stimulus to one sector, say an increased wage earning labor force, then impacts all other sectors in the economy, to varying degrees, through a "multiplier effect." This is illustrated in the figure below.

The multiplier effect measures the "indirect" and "induced" impact of a direct injection. As a matter of technical exposition, "indirect" effects are those re-spending effects that filter through other industries in an economy as a result of the direct injection. For instance, suppose a direct impact on hotel expenditures boosts demand for cleaning services at these hotels (a first indirect effect). This stimulates demand for cleaning capital and cleaning products (a second indirect effect). This second indirect effect stimulates demand in other sectors, and so on. The sum of all these effects on other industries is the "indirect" effect. The "induced" effect is the effect on final demand in an economy. Final demand can be characterized in the following way. All of these sectors employ people locally. Increased demand for output from these sectors induces additional labor inputs, paid for via wages and salaries. The resulting increase in employee incomes induces additional spending locally. This additional spending is the "induced" effect. The

² There were relatively few surveys administered and collected, suggesting some potential bias in the resulting estimates. To address this issue, we compared the implied expenditure results from data taken from the Knights of Ak-Sar-Ben's River City Roundup, a much larger event where a substantial number of surveys were collected, to see if there are any reasonable similarities between the results. For the most part, the per day, per person expenditures appear to be comparable and within reason. That said, future impact analyses should be done on this event with a larger set of survey data to verify the results presented here. See Appendix A for details on the survey data and how it was used to generate the results presented in this study.

continual “re-spending” of the original direct injection accumulates through to the local economy.³

The total effect is then the sum of the direct, indirect, and induced effects. From these figures, we obtain economic multipliers, which can be thought of as measures of the impact of one dollar’s worth of direct injections. For instance, if an additional \$100 of direct expenditure is spent on, say, groceries, this would stimulate spending by the grocery sector to source grocery items from suppliers. This spending might be \$40. In turn, there may be a need for additional labor in the grocery sector, generating additional income and thus additional spending, of say, \$15. Taken together, the aggregate impact of the initial \$100 injection was \$155 to the economy.

As is generally done, these effects are normalized to one dollar, meaning that, in our example, one dollar of direct spending results in an additional 55 cents added to the economy; the overall impact is \$1.55. This figure is commonly referred to as the final demand multiplier. The overall dollar impact on an economy is often called the “multiplier effect.”

The key then to a complete impact study is to measure both direct injections and the resulting indirect and induced effects that result 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.).⁴ 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.

II. The Economic Impact of the Knights of Ak-Sar-Ben’s Coronation Ball

In this section, we present data on the direct and indirect business volume as well as government revenues generated due to Ak-Sar-Ben’s Coronation Ball. 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 any local expenditures merely represent a redistribution of existing money already within the community itself. That is, a dollar spent by a local resident at Ak-Sar-Ben’s Coronation Ball 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.

³ 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). For a review of the basic mathematical structure of IO models, see Decker (2008).

⁴ For details regarding IMPLAN, visit <http://www.implan.com>.

While this is not an unreasonable presumption, there are reasons why including some local spending would be desirable (see, Decker, 2008, for a detailed discussion). However, inclusion of such spending does require data indicating that local residents are 1) *infrequent* visitors to the local economy (i.e. downtown Omaha) and are unlikely to spend time or money in the local economy otherwise and 2) view the event a special enough as to serve as a *substitute* for events that individuals could have attended outside the local economy (thereby preventing spending leakages out of the economy).

Absent such data it is advisable to only include data from visitors from outside the local economy. The survey used in this study as well as other data on the Coronation Ball available does allow for reasonable estimates of such attendee activity (see Appendix A), but does *not* allow for reasonable measures of local resident interest that would warrant inclusion of such spending. Hence, for the purpose of this study, we will focus attention on the economic impact on the downtown Omaha economy from non-Omaha residents' spending due to the Coronation Ball.

a. Business Volume Impact

Table 1 provides the breakdown of the direct, indirect, induced, and total economic effects. Hotel and lodging, restaurants, non-Coronation Ball entertainment and gasoline/diesel fuel were the primary sources of direct injections from non-resident attendees. A total of \$525,522 worth of spending is estimated to have been directly injected into the Omaha economy as a result of the Knights of Ak-Sar-Ben's Coronation Ball.

The total economic impact of the Coronation Ball was estimated at \$943,092 in 2008 with approximately \$213,841 estimated indirect injection, and \$194,729 estimated induced injection expenditure.

Table 1. Direct, Indirect, Induced, and Total Economic Impacts on downtown Omaha During the KOA Coronation Ball (dollar denominated values)

	Direct Effect	Indirect Effect	Induced Effect	Total Effect
Sectors				
Food and drink restaurants	\$109,741			
Non-Coronation Ball entertainment	\$44,709			
Retail purchases	\$18,290			
Hotel and other lodging**	\$201,061			
Ground transport (taxi, car rental, etc.)	\$34,142			
Gasoline/diesel purchases	\$75,773			
Miscellaneous*	\$41,806			
Total	\$525,522	\$213,841	\$194,729	\$934,092

* Since there is no "miscellaneous" multiplier in IMPLAN, the retail sales sector was used.

** These figures are based on sample data available from the Knights of Ak-Sar-Ben regarding home location of attendees. Based on this information analyst judgment was applied to determine what proportion of this sample in all likelihood would require overnight accommodations. This proportion was then applied to the total number of attendees. See Appendix A for details.

Table 2 below depicts the top 15 sectors impacted by the Knights of Ak-Sar-Ben's Coronation Ball. The hotel sector was the most impacted, realizing a \$225,338 total impact, followed by restaurants and gasoline/diesel vendors. General retail and other recreation-oriented firms also realized a positive impact as a result of the 2008 Coronation Ball.

Table 2: Top 15 Sectors Impacted by the Coronation Ball (dollar denominated values)

Sector	Total Effect
1 Hotels and motels	\$225,338
2 Food and drink restaurants	\$133,371
3 Gasoline/diesel purchases	\$85,273
4 General Merchandise	\$70,302
5 Amusement and Recreation	\$51,175
6 Transit and ground passenger transportation	\$39,500
7 Real Estate	\$30,197
8 Owner-occupied dwellings	\$22,262
9 Wholesale trade	\$21,331
10 Management of companies and enterprises	\$13,006
11 Hospitals and emergency rooms	\$10,339
12 State and local government electric utilities	\$9,818
13 Monetary authorities and depository credit intermediaries	\$9,611
14 Offices of physicians & dentists	\$9,393
15 Insurance carriers	\$7,830

b. Government Revenue Impact

When events like Ak-Sar-Ben's Coronation Ball 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.

i. Sales Tax Revenue (Excluding Hotel)

The sectors directly affected by sale tax collection in this section are restaurants, entertainment, retail establishments, ground transportation, and the miscellaneous category.⁵ Direct expenditures for these categories total \$248,207 from the Coronation Ball. The sales tax in the state of Nebraska is 5.5 percent and the sales tax in Omaha is 1.5 percent.

⁵ 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.

As shown in Table 3, state tax collections from this event are estimated at \$13,677.80 and city tax collections from the same group are \$3,730.31. From Omaha residents, the state tax revenue take was \$6,382 and the revenues collected for the city were \$1,741. Total tax revenues collected thus amounted to \$17,408.11 in 2008.

Table 3. Sales Tax Revenues from Direct Expenditure

State tax: 5.5 percent, City tax: 1.5 percent

Taxable categories	\$248,687.22
State tax collections	\$13,677.80
City tax collections	\$3,730.31
Total Taxable sales	\$17,408.11

ii. 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.⁶ Based on these percentages and the direct expenditure figure of \$201,061, the state collected \$11,058 from spending activity during the event and the city collected \$25,092.41 in occupancy tax revenue.

iii. Gasoline Tax Revenue

Attendees spent an estimated \$75,773 on gasoline/diesel during their visit to downtown Omaha. With a state gasoline tax of 24.5 cents per gallon, non-resident attendees contributed an estimated \$4,950.52 in gasoline tax revenue to state coffers.⁷

V. Conclusion

While a relatively small event, Ak-Sar-Ben's Coronation Ball does generate a fair amount of business activity for the city of Omaha. In 2008, the total economic impact on the city was \$934,092, comprising \$525,522 in direct impact and an additional \$408,570 in indirect and induced spending. The sales tax impact, excluding hotels and other lodging, was \$17,408.11. The state of Nebraska received an estimated \$13,677.80 in sales tax revenues from the direct economic activity produced by event attendees. The local economy received a total of \$3,730.31 in sales tax revenues. Event attendees spent \$201,061 at local hotels and other lodging. Hotel expenditures generated an estimated \$11,058 in occupancy tax revenues to the city of Omaha and \$25,092.41 in sales tax revenues to the state. Travel to and from the event increased gas expenditures in Omaha by \$75,773 million, and generated an estimated \$4,950.52 in gasoline excise tax for Nebraska.

⁶ 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.

⁷ This figure is based on an average per gallon price of \$3.70 per gallon.

The Knights Of Ak-Sar-Ben's Coronation Ball has been an annual event in Omaha since 1895. For its size, this event's contribution to the economy is quite significant and will continue to contribute to the growth and heritage of Omaha for years to come.

References

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Appendix A: Statistical measures of direct impacts

Estimating the dollar value of the direct injections into the Omaha economy as a result of Ak-Sar-Ben's Coronation Ball requires that sufficient observations are gathered to statistically reflect the population of attendees. With a sample of 11 surveys, and a total estimated number of individual attendees at 2,000, statistically speaking there is concern over margin of error in the estimates. However, when the per person, per day expenditures for the categories tracked in this survey are compared with attendees at the Knights of Ak-Sar-Ben's River City Roundup, a much larger event with substantially more survey data, the results are relatively close. As a result, the information obtained from Coronation Ball attendees is more likely to be representative of the overall population of guests at the event.

In terms of the dollar values for each category (Food and drink restaurants, Non-Coronation Ball entertainment, Retail purchases, Hotel and other lodging, Ground transportation (taxi, car rental, etc.), Gasoline/diesel purchases, and Miscellaneous spending), respondents were asked to estimate how much money they spent or plan to spend *per day* on these various items. We utilized this information in the following way.

First, we needed to obtain reasonable estimates for non-resident attendees. This was done using information supplied by the Knights of Ak-Sar-Ben on the home location of 106 attendees. Of these, it was determined that 47 (about 44 percent) were non-Omaha residents. Under the assumption that these 106 attendees are reasonably representative of the total 2,000 attendees, then we assume that 44 percent (or about 887 attendees) were non-resident attendees whose new spending can be counted as a direct injection into the Omaha economy.

Second, a fair number of attendees appear to have come from cities and towns, such as Lincoln and Fremont, within one or so hours drive of Omaha. These individuals we assumed would not require lodging. However, there were about 25 attendees (24 percent of the 106 attendees tracked) who clearly traveled a substantial distance to Omaha for the Coronation Ball. For instance, one attendee came from Scottbluff, Nebraska and another from Paradise City, Arizona. Again, assuming that this data is representative of the total population of attendees, we can infer that about 24 percent (or about 472 attendees) would require hotel lodging. This percentage was then applied to the per person expenditures on hotels to obtain a direct injection measure.

Third, the survey did ask how long each attendee would be spending in Omaha. From this data we could then adjust our per-day expenditure estimates to obtain a per-visitation period level of expenditure.

Mathematically, then, we obtained our direct expenditure measures in the following way. For each category *i* (except hotels), we calculated:

$$\text{direct expenditure}_i = (\text{avg_exp_per_indiv_survey}_i) * (\text{avg_days}) * 887 \quad (\text{A1})$$

For the hotels expenditure figure we calculated:

$$\text{direct expenditure}_{\text{hotels}} = (\text{avg_exp_per_indiv_survey}_{\text{hotels}}) * (\text{avg_days_local}) * 472 \quad (\text{A2})$$

The average days spent for non-Omaha residents was 4.13 days.

As with all survey data, there are responses that are too unusual to be considered correct responses to the question posed. For instance, one respondent estimated per day retail expenditures on the order \$1,000. These estimates may represent a mis-interpretation of the survey question and had these results been included in our average expenditure measures our estimates would have been biased upwards significantly. Hence, some responses had to be treated as outliers and were removed from the data. This amounted to about 3 surveys. Given the limited number of surveys collected, this is a bit concerning. However, as stated earlier, the resulting per day expenditures appear in line with other survey evidence from other Knights of Ak-Sar-Ben events.