



Economic Impact of the Brazos County Expo Complex

Fiscal Year 2016

**Rebekka Dudensing, PhD
February 2017**

**TEXAS A&M
AGRILIFE
EXTENSION**

Expo Events

The Brazos County Expo hosted 176 events over 322 days in Fiscal Year 2016, compared with 159 events over 305 days in FY2015. Annual attendance was estimated at 92,216, up from 72,405 in FY2015. Additionally, the Brazos Valley Fair hosted 16,000 participants and attendees, bringing facility attendance to 108,216. Person-days¹ totaled 147,971 in FY2016 as compared to 132,084 last year. Person-days totaled 163,971 including the fair. Table 1 shows the number of events, event days, attendance, and person-days by event type.

Table 1. Expo events by type, event count, days, attendance and bill, FY 2016.

| Type | Count | Days | Attendees | Person-Days |
|--|------------|------------|----------------|----------------|
| Horse Shows | 20 | 65 | 7,335 | 25,120 |
| Livestock Shows | 13 | 38 | 5,075 | 16,225 |
| Dog Shows | 3 | 5 | 235 | 395 |
| Rodeos, Ropings, and Barrel Races | 17 | 48 | 12,050 | 31,360 |
| Misc. Spectator Event | 9 | 14 | 10,020 | 10,720 |
| Conferences and Career Fairs | 10 | 16 | 6,654 | 8,654 |
| Trade Shows | 14 | 26 | 12,485 | 14,885 |
| Meetings, Seminars, and Educational Events | 17 | 30 | 4,394 | 6,244 |
| Private Events | 71 | 78 | 33,848 | 34,248 |
| Local Service | 2 | 2 | 120 | 120 |
| Total w/o Fair | 176 | 322 | 92,216 | 147,971 |
| Fair | 1 | 3 | 16,000 | 16,000 |
| Total w Fair | 177 | 325 | 108,216 | 163,971 |

The table above includes partnership events. Partnership events held at the Expo likely would have been held in Brazos County even if the Expo did not exist. Partnerships reflect the availability of the Expo for local events such as the fundraisers, weddings, meetings, educational events, and corporate parties. These partnership events are not included in the analysis of spending and economic impacts although they provide an important service to local residents and businesses. Local service events include services for county residents, including health screening and livestock validation. Again, there is no visitor impact, but the services are important to local residents.

Revenue-generation is a priority for Expo management and staff, but Expo visitors generate more economic activity in Brazos County outside the complex than within it. Crompton and Culpepper note that publically owned facilities are often important parts of the economy because they attract visitors and non-local spending.² Indeed, such facilities are often built with a goal of garnering such outside spending as well as providing a venue for local events and fostering pride in the community through hosting a variety of events. The spending component of the facility's purpose suggests the appropriateness of an economic impact study.

¹ While attendance counts people, person-days are a measure of the number of days each of those people attended. For example, a Quarter Horse show with 500 attendees competing over four days would result in in 2,000 person-days. However, a career fair with 200 non-local vendors who attended two days (400 person days) and 550 attendees spread over three days would result in 950 person-days.

² Crompton, John, and Juddson Culpepper. 2006. The Economic Contribution of Texas State Parks in FY 2006. Texas A&M University, Department of Recreation, Parks, and Tourism Sciences, College Station, TX, December.

Visitor Spending by Event Category

Expo staff survey event participants throughout the year to determine how much they are spending at hotels, restaurants, etc. Each event, and each individual participant, has a different expenditure pattern, although similar types of events tend to produce similar spending patterns. A different sample of events is surveyed each year in order to capture the spending patterns of a broad array of events. In addition to 2016 spending, an inflation-adjusted three-year-average of spending is used to improve the reliability of expenditure data as the survey captures these different events. Only responses from visitors to the county are used to calculate spending impacts, and only the non-local portion of event participants is included in the economic analysis.

Spending averages are weighted by person-days for each of the surveyed events in each event category. The 2014-2016 average and the 2016 calculation are presented in Tables 2 and 3 to provide a range of expenditures and impacts. Only the three-year-average is discussed in the text. Overall spending in 2016 was higher relative to the three-year average of \$5.6 million, although spending was lower in 2016 for the trade shows and rodeos after accounting for non-local access fees. Horse show and conference/career fair spending were up sharply in 2016. Again, this variation is largely a function of events surveyed from year to year and highlights the importance of focusing on the average spending, which includes a broader and thus more representative range of spending patterns.

Table 2. 2014-2016 Non-local Person-Day Expenditures by Event Category.

| | Lodging | Food | Gas | Retail | Recreation | Access | Other | Total |
|---------------------------|--------------------|--------------------|------------------|------------------|-------------------|--------------------|------------------|--------------------|
| Horse Shows | \$588,902 | \$370,632 | \$205,056 | \$167,109 | \$12,072 | \$333,177 | \$80,638 | \$1,757,587 |
| Livestock Shows | \$361,697 | \$198,515 | \$122,146 | \$68,338 | \$14,583 | \$98,356 | \$36,951 | \$900,586 |
| Dog Shows | \$7,754 | \$3,964 | \$5,663 | \$2,658 | \$18 | \$0 | \$43 | \$20,100 |
| Rodeos | \$303,973 | \$338,323 | \$286,956 | \$117,350 | \$35,096 | \$908,532 | \$122,216 | \$2,112,447 |
| Spectator Events | \$48,491 | \$53,971 | \$45,776 | \$18,720 | \$5,599 | \$0 | \$19,496 | \$192,053 |
| Conferences, Career Fairs | \$112,989 | \$51,526 | \$19,530 | \$4,471 | \$732 | \$227,853 | \$4,271 | \$421,372 |
| Trade Shows | \$45,003 | \$30,782 | \$25,659 | \$21,039 | \$682 | \$28,740 | \$17,181 | \$169,086 |
| Total | \$1,468,809 | \$1,047,713 | \$710,787 | \$399,686 | \$68,782 | \$1,596,658 | \$280,797 | \$5,573,231 |

Table 3. 2016 Non-local Person-Day Expenditures by Event Category.

| Event Type | Lodging | Food | Gas | Retail | Recreation | Access | Other | Total |
|---------------------------|--------------------|--------------------|------------------|------------------|-------------------|--------------------|------------------|--------------------|
| Horse Shows | \$815,726 | \$566,350 | \$178,620 | \$231,574 | \$13,868 | \$762,164 | \$65,949 | \$2,634,251 |
| Livestock Shows | \$468,176 | \$218,870 | \$46,386 | \$74,507 | \$3,614 | \$206,668 | \$6,268 | \$1,024,488 |
| Dog Shows | \$7,754 | \$3,964 | \$5,663 | \$2,658 | \$18 | \$0 | \$43 | \$20,100 |
| Rodeos | \$236,034 | \$376,703 | \$240,134 | \$68,848 | \$48,662 | \$879,851 | \$17,771 | \$1,868,002 |
| Spectator Events | \$37,653 | \$60,093 | \$38,307 | \$10,983 | \$7,763 | \$0 | \$2,835 | \$157,634 |
| Conferences, Career Fairs | \$216,640 | \$108,960 | \$26,080 | \$1,280 | \$0 | \$642,703 | \$800 | \$996,463 |
| Trade Shows | \$13,693 | \$16,110 | \$7,478 | \$13,088 | \$0 | \$10,665 | \$15,465 | \$76,498 |
| Total | \$1,795,676 | \$1,351,050 | \$542,666 | \$402,937 | \$73,924 | \$2,502,050 | \$109,131 | \$6,777,435 |

It should be noted that only access fees that remain in the Brazos County economy are included in spending. For example, if an event is hosted by local organizers, fees are included in the analysis. If an event is hosted by an association headquartered outside the county, fees for that event are not included the spending totals reported above and used in the impact analysis. This is accomplished by only applying person-day access fees to non-local person-days for events organized within Brazos County. All other access fees are excluded from the analysis.

Economic Impacts of Expo Events in the Brazos County Economy

The direct spending by visitors to the Expo Complex is not the only benefit to the local economy. Economic contribution analysis is based on the idea that a dollar spent in a region stimulates additional economic activity, or multiplies as it circulates through the economy. This multiplier effect recognizes that the total effect on output, employment, personal income, and government revenue in the region is greater than the initial dollar spent. A visitor's expenditure at a local restaurant or store contributes not only to that business, but to its suppliers and its suppliers' suppliers (the indirect effect), the incomes of each of their employees who then spend their earnings (the induced effect), and tax revenues. Of course, some of the original expenditure leaks out of the regional economy, for example as inventory is imported from other regions, employees commute from other regions, and businesses and households pay state and federal taxes.

Multipliers are calculated based on the purchasing patterns of industries and institutions in the regional economy. The total effects are the sum of direct, indirect and induced for each of the outcomes: employment, labor income, total value added (contribution to gross regional product) and output (gross sales). Only expenditures by visitors are included in the economic impact analysis because their spending represents new money in the county economy. It is assumed that local county residents might have spent their money elsewhere in the county if they had not attended an Expo event; thus, there is no economic impact. Access fees are excluded from the impact analysis because the fee is often paid to an event sponsor located outside Brazos County, and much of the fee is likely an immediate leakage from the local economy.

Four types of multiplier effects are reported in the impact analyses. The *Output or sales multiplier* measures the effect of external spending on overall economic activity in the region. The output multiplier provides the largest economic impact value and therefore is reported in many studies; however, the output multiplier says nothing about how the event affects the welfare of households or the profitability of businesses.

The *value-added multiplier* is a more appropriate measure of regional welfare. The value-added multiplier measures Expo visitors' contribution to regional gross domestic product (GDP). It is the value added to the regional economy or the return to local resources used in the production of goods and services in Brazos County.

The *labor income multiplier* is part of the value-added multiplier but is often reported alone. The wage and proprietor's income multiplier measures the effect of final demand spending on the incomes of households in the region and is appropriate for discerning the benefit of an event to a region's residents.

The *employment multiplier* measures the effect of the event on regional employment. Calculation of the employment multiplier assumes that existing employees are fully occupied and does not distinguish between full-time and part-time workers.

Horse Shows

Horse shows made up 20 of 176 events at the Expo. Using 2014-2016 average spending, an estimated \$1.8 million was spent by out-of-county participants and attendees at the 20 Expo horse shows in FY 2016, resulting in an economic impact of \$2.4 million in output and 26.4 jobs (Tables 4 and 5).

Table 4. Economic impact of visitors at all horse shows, FY 2016 (2014-2016 average spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|---------------------|--------------------|--------------------|---------------------|-------------------|
| Direct Effect | \$1,757,600 | \$870,100 | \$449,000 | 20.8 |
| Indirect Effect | \$348,300 | \$172,900 | \$103,700 | 2.8 |
| Induced Effect | \$332,900 | \$187,000 | \$99,400 | 2.8 |
| Total Effect | \$2,438,700 | \$1,230,000 | \$652,200 | 26.4 |

Table 5. Economic impact of visitors at all horse shows, FY 2016 (2016 reported spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|---------------------|--------------------|--------------------|---------------------|-------------------|
| Direct Effect | \$2,634,300 | \$1,450,200 | \$708,400 | 31.9 |
| Indirect Effect | \$535,600 | \$265,700 | \$159,000 | 4.3 |
| Induced Effect | \$522,400 | \$293,400 | \$156,100 | 4.3 |
| Total Effect | \$3,692,200 | \$2,009,200 | \$1,023,500 | 40.5 |

Livestock Shows

Livestock shows made up 13 events. An estimated \$900,600 was spent by out-of-county livestock show participants and attendees at those 13 events (using 2014-2016 average spending), resulting in an economic impact of \$1.3 million in output and 13.9 jobs (Tables 6 and 7).

Table 6. Economic impact of visitors at all livestock shows, FY 2016 (2014-2016 average spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$900,600 | \$427,300 | \$229,300 | 10.9 |
| Indirect Effect | \$187,500 | \$93,100 | \$56,300 | 1.5 |
| Induced Effect | \$172,000 | \$96,600 | \$51,400 | 1.4 |
| Total Effect | \$1,260,100 | \$616,900 | \$336,900 | 13.9 |

Table 7. Economic impact of visitors at all livestock shows, FY 2016 (2016 reported spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$1,024,500 | \$566,400 | \$282,100 | 13.2 |
| Indirect Effect | \$235,700 | \$116,700 | \$71,200 | 1.9 |
| Induced Effect | \$212,800 | \$119,500 | \$63,600 | 1.8 |
| Total Effect | \$1,473,000 | \$802,600 | \$416,900 | 16.8 |

Dog Shows

The Expo hosted its first major dog show in FY2015 and hosted three much smaller dog events in FY2016. Those events were not surveyed so impacts are estimated based on inflated 2015 spending. An estimated \$20,100 was spent by nonlocal dog show participants and attendees, resulting in an economic impact of \$27,300 in output (Table 8).

Table 8. Economic impact of visitors at all dog shows, FY 2016 (based on inflated 2015 spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$20,100 | \$7,700 | \$4,600 | 0.2 |
| Indirect Effect | \$3,700 | \$1,900 | \$1,100 | 0 |
| Induced Effect | \$3,400 | \$1,900 | \$1,000 | 0 |
| Total Effect | \$27,300 | \$11,400 | \$6,700 | 0.3 |

Rodeos and Other Equine Events

The expo hosted 17 rodeos, ropings, and barrel races in 2016. An estimated \$2.1 million was spent by out-of-county rodeo and other equine event participants and attendees at those 17 events, resulting in an economic impact of \$2.8 million in output and 26.6 jobs (Tables 9 and 10).

Table 9. Economic impact of visitors at all rodeos and other equine events, FY 2016 (2014-2016 average spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$2,112,400 | \$1,156,100 | \$512,400 | 20.9 |
| Indirect Effect | \$350,100 | \$174,000 | \$101,900 | 2.7 |
| Induced Effect | \$369,900 | \$207,700 | \$110,500 | 3 |
| Total Effect | \$2,832,400 | \$1,537,700 | \$724,800 | 26.6 |

Table 10. Economic impact of visitors at all rodeos and other equine events, FY 2016 (2016 reported spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$1,868,000 | \$1,086,700 | \$484,700 | 20 |
| Indirect Effect | \$324,200 | \$161,100 | \$93,800 | 2.5 |
| Induced Effect | \$348,300 | \$195,600 | \$104,100 | 2.9 |
| Total Effect | \$2,540,500 | \$1,443,400 | \$682,500 | 25.4 |

Miscellaneous Spectator Events

The Expo hosted nine miscellaneous spectator events in 2016, including sporting events and car shows. This category, while not new, is a growing share of Expo business. Spectator events were not surveyed in 2016, but these events have a profile similar to rodeos so the rodeo spending pattern was used to estimate the impact of these miscellaneous spectator events. Future efforts will focus on surveying spectator events. Spending by nonlocal participants was estimated at \$192,100, resulting in an economic impact of \$258,100 in output and 2.8 jobs (Tables 11 and 12).

Table 11. Economic impact of visitors at all miscellaneous sporting events, FY 2016 (2014-2016 average spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$192,100 | \$70,900 | \$45,500 | 2.3 |
| Indirect Effect | \$32,900 | \$16,400 | \$9,600 | 0.3 |
| Induced Effect | \$33,100 | \$18,600 | \$9,900 | 0.3 |
| Total Effect | \$258,100 | \$106,000 | \$64,900 | 2.8 |

Table 12. Economic impact of visitors at all miscellaneous sporting events, FY 2016 (2016 reported spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$157,600 | \$63,500 | \$42,200 | 2.2 |
| Indirect Effect | \$29,500 | \$14,700 | \$8,500 | 0.2 |
| Induced Effect | \$30,500 | \$17,100 | \$9,100 | 0.3 |
| Total Effect | \$217,600 | \$95,300 | \$59,800 | 2.7 |

Conferences and Career Fairs

Ten conferences and career fairs were held in 2016. Aggregate average spending of \$421,400 by nonlocal attendees at those six career fairs and four conferences was associated with an economic impact of \$585,700 in output and 5.6 jobs (Table 13). Differences between the figures in Tables 13 and 14 reflect 2016 spending that was sharply higher than in the previous two years, although 2016 spending levels remained well below 2013 conference spending. The results show the variation in spending between events and highlight the importance of focusing on the three-year-average.

Table 13. Economic impact of visitors at all conferences and career fairs, FY 2016 (2014-2016 average spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$421,400 | \$272,200 | \$109,200 | 4.2 |
| Indirect Effect | \$83,600 | \$41,300 | \$25,000 | 0.7 |
| Induced Effect | \$80,800 | \$45,400 | \$24,100 | 0.6 |
| Total Effect | \$585,700 | \$358,900 | \$158,300 | 5.6 |

Table 14. Economic impact of visitors at all conferences and career fairs, FY 2016 (2016 reported spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$996,500 | \$683,100 | \$261,500 | 9.8 |
| Indirect Effect | \$193,200 | \$95,400 | \$57,500 | 1.5 |
| Induced Effect | \$192,000 | \$107,800 | \$57,400 | 1.5 |
| Total Effect | \$1,381,600 | \$886,300 | \$376,300 | 12.9 |

Trade Shows

The Expo hosted 14 trade shows in 2016. An estimated \$169,100 was spent by out-of-county participants (primarily vendors) at those events, resulting in an economic impact of \$227,800 in output and 2.3 jobs (Table 15). No trade shows were surveyed in 2016, so 2016 impacts are calculated using inflated 2015 spending (Table 16). The 2015 spending levels were much lower than the 2014 spending included in the three-year-average.

Table 15. Economic impact of visitors at all trade shows, FY 2016 (2014-2016 average spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$169,100 | \$75,500 | \$39,800 | 1.8 |
| Indirect Effect | \$29,500 | \$14,700 | \$8,700 | 0.2 |
| Induced Effect | \$29,200 | \$16,400 | \$8,700 | 0.2 |
| Total Effect | \$227,800 | \$106,500 | \$57,200 | 2.3 |

Table 16. Economic impact of visitors at all trade shows, FY 2016 (based on inflated 2015 spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|--------------------|---------------|--------------------|---------------------|-------------------|
| Direct Effect | \$76,500 | \$31,700 | \$18,000 | 0.9 |
| Indirect Effect | \$12,100 | \$6,000 | \$3,500 | 0.1 |
| Induced Effect | \$12,900 | \$7,300 | \$3,900 | 0.1 |
| Total Effect | \$101,500 | \$45,000 | \$25,300 | 1.0 |

Summary

Across the seven types of events studied, nonlocal visitors to the Expo spent an estimated \$5.5 million, calculated by average FY 2014-2016 spending. This figure is the direct output effect in Table 17 and excludes access fees paid to entities outside the region. These visitors contributed approximately \$7.6 million in total sales, \$4.0 million in value added (GDP), \$2.0 million in labor income, and 77.9 full and part-time jobs across the county economy. Value added and labor income are subsets of GDP, so these figures cannot be summed.

Table 17. Economic impact of Expo visitors extrapolated across five event types, FY 2016 (2014-2016 average spending).

| Impact Type | Output | Value Added | Labor Income | Employment |
|---------------------|--------------------|--------------------|---------------------|-------------------|
| Direct Effect | \$5,573,200 | \$2,879,800 | \$1,389,700 | 61.1 |
| Indirect Effect | \$1,035,600 | \$514,100 | \$306,300 | 8.2 |
| Induced Effect | \$1,021,300 | \$573,600 | \$305,100 | 8.3 |
| Total Effect | \$7,630,100 | \$3,967,500 | \$2,001,100 | 77.9 |

When relying solely on 2016 reported spending, overall impact was higher due to higher spending per person-day was higher at horse shows and at conferences and careers fairs surveyed in 2016 (Table 18). Conversely, the latest reported spending was lower than average at rodeos after accounting for non-local access fees and at trade shows. Relative to 2015, larger impacts also reflect a 12% increase in person-days at the Expo.

Table 18. Economic impact of Expo visitors extrapolated across seven event types, FY 2016 (2016 reported spending, except where noted for dog shows and trade shows).

| Impact Type | Output | Value Added | Labor Income | Employment |
|---------------------|--------------------|--------------------|---------------------|-------------------|
| Direct Effect | \$6,777,400 | \$3,889,100 | \$1,801,300 | 78.2 |
| Indirect Effect | \$1,333,900 | \$661,400 | \$394,600 | 10.5 |
| Induced Effect | \$1,322,400 | \$742,700 | \$395,100 | 10.9 |
| Total Effect | \$9,433,700 | \$5,293,200 | \$2,591,000 | 99.6 |

The above estimate does not include the contribution of the Brazos Valley Fair & Expo. Furthermore, it does not reflect the expenditures of people attending wedding receptions and other private events at the Expo. Nor does it reflect the value of expenditures by locals attending Expo events or the value of having a venue where locals can host and attend community events.

The growth in total economic output attributable to the Expo has been at least 10% annually since 2013, when the first full study was completed. Output growth topped 20% in 2016, driven by higher spending and a larger number of person-days. Outputs reported in Table 19 are based on two- or three-year average spending (only two years of data were available in 2013). These figures are presented as shown in previous reports and are not further adjusted for inflation. Employment has been more stable and is dependent upon the purchasing patterns by surveyed participants as well as relationships between employees and industries in the economy.

Table 19. Reported economic impact of Expo visitors extrapolated across event types, FY 2014 – FY 2016.

| Impact Type | Output | Employment | Output Growth |
|--------------------|--------------------|-------------------|----------------------|
| 2013 | \$5,132,300 | 66.5 | -- |
| 2014 | \$5,729,900 | 67.8 | 11.6% |
| 2015 | \$6,316,200 | 67.7 | 10.2% |
| 2016 | \$7,630,100 | 77.9 | 20.80% |