Reassessing the Economic Impact of Fair Park and the State Fair

April 2016

A healthy city—a vibrant, visionary city—makes policy and investment decisions about its future on the basis of good information and a transparent process. Otherwise, the city is shaping strategy in the dark.

Dallas has important decisions to make about the future of Fair Park and its surrounding neighborhoods. Those decisions must be based on reliable and verifiable information.

Past estimates of the economic impacts of Fair Park and the State Fair are extremely high, vary widely, and provide little documentation, rendering the conclusions questionable at best.

This study attempts to provide reliable data based on the evidence available to help determine the economic impact of Fair Park and the Park’s largest tenant, the State Fair of Texas.

Direct spending—new dollars generated by the State Fair—is about $30 million or less.

Researchers

Tom Kelly, Ph.D.
Professor of Economics,
Director of Baylor University
Center for Business and Economic Research

Bennet Hickok
MS in Economics student,
Baylor University
Project Overview

Located just blocks from downtown, 277-acre Fair Park, owned by the City of Dallas, is a sporadically-used hub for culture, history and entertainment. Many of its current buildings, including one of the greatest collections of Art Deco buildings in the country, were constructed for the Texas Centennial Exposition in 1936.

In addition to museums, music venues, and a football stadium, the park is the annual home of the State Fair of Texas. The State Fair is a 501(c)(3) organization that leases the 40-acre Midway from the City of Dallas year-round and controls most of the rest of the Park four months a year.

Together, with the various events that take place throughout the park, these attractions bring a number of out-of-town visitors into Dallas each year. The precise number of visitors, however, is difficult to determine.

Because attendance at the State Fair and other Fair Park venues is crucial to responsible economic impact assessment, and in the absence of the precise counting of visitors by most Fair Park venues, we have attempted to determine realistic attendance figures through other means. Specifically, we have compared the attendance-to-revenue ratio of the State Fair to the premier state fair in the country on ethics and transparency. And we have analyzed hotel occupancy data in Dallas County during the Fair and throughout the year.

We have then applied standard Department of Commerce multipliers to arrive at a range of economic impact estimates—from realistic figures based on the reliable data available and maximum figures based on published claims.

CURRENT STATE FAIR ESTIMATES

The State Fair has made several economic impact claims over the years. None of them distinguishes total Fair Park spending from its net impact. In fact, the State Fair has not provided supporting evidence for any of its claims nor has it released a single economic impact study. The estimates themselves vary so widely that future city planning based on them would be both difficult and unwise.

In 2003, two different economic impact numbers were reported: about $51 million of new dollars to the local economy, which includes the football games played at the Cotton Bowl, and $350 million in total impact. In 2013, in a briefing for the City of Dallas, the economic impact of the State Fair was reported to be $300 million. Currently, the State Fair’s website claims that the economic impact of the State Fair has more than doubled in three years to $608 million.

The wild fluctuation of these totals, unaccompanied by any attributed cause or correlation for the variations and with no published data to support them, renders their usefulness questionable at best.

However, these figures are important to the City of Dallas because, based on them, the State Fair has received tens of millions of dollars in public bond and other subsidies (e.g., for Cotton Bowl improvements) that mainly benefit the Fair.

In 2013, the State Fair claimed its economic impact was $300 million.

The State Fair currently claims its economic impact is $608 million.

The Fair offers no evidence and has published no studies to confirm these figures.
TOTAL SPENDING AND NET ECONOMIC IMPACT

Total spending by all attendees to Fair Park events and venues is an important measure of the Park’s impact as a part of the hospitality industry in Dallas. But total spending is not the same as its economic impact.

Specifically, the economic impact of Fair Park on Dallas County is the additional spending by out-of-county visitors who bring dollars into the area to purchase hospitality services that are produced in Dallas.

This additional direct spending by visitors injects new dollars into the community to pay for Fair Park services, local hotel accommodations, food and other retail goods.

These dollars create multiplier effects, first through indirect spending (income from Fair Park visitors used to buy goods and services provided by other local establishments) and also through induced spending (increased household spending by those who make money from Fair Park venues and events.)

However, total spending by all Fair Park attendees overestimates the direct effect of new dollars infused into the economy because it includes both local and non-local spending. In the case of Fair Park most spending is by residents of Dallas and nearby communities.

Without the Fair Park events, spending by area residents would merely shift to other local venues. Which is to say, spending at Fair Park by local residents does not increase the economic impact of hospitality spending on Dallas income.

Moreover, while the economic impact of Fair Park measures the positive effect of visitor spending on the local circular flow of income, it does not consider operational costs or financial losses, nor does it include the depreciation or devaluation of properties.

Estimates of the economic impact of the State Fair and Fair Park, then, should be clear as to what is being measured and how it relates to the value of existing assets and future expenses that will affect growth in net income in the area. (See Appendix 2 for a more detailed discussion of methodology.)

Key to a trustworthy assessment of economic impact is an accurate and verifiable accounting of attendance. The lack of precise attendance figures at most Fair Park venues, particularly the State Fair, is a particular concern, as we shall see.

FACTORs AFFECTING NET IMPACT OF FAIR PARK:

- Buildings are deteriorating; many are vacant; the Park is empty much of the year.
- More than 85 percent of State Fair goers are local, generating no new dollars to the City.
- Property values in nearby neighborhoods are decreasing due to proximity to the Park.
Attendance

State Fair

Determining accurate attendance for the State Fair has proven to be difficult. According to the Dallas Department of Park and Recreation, the State Fair’s annual attendance each year from 2004 to 2008 was exactly 3.5 million visitors. In 2009, this number fell to exactly 3 million where it has remained since. Clearly these precise figures do not reflect actual gate counts.

Estimates of State Fair attendance have been published by other entities whose figures, we have to assume, were provided by the State Fair. Fair Guide USA lists State Fair attendance in round numbers: 3 million in 2015, 2,855,000 in 2014, and 2.5 million in both 2012 and 2013. MCW lists State Fair attendance as 3,503,268 in 2015 and 2,855,949 in 2014.

We have no evidence that any of these figures reflects actual visitor counts. In fact, according to State Fair officials quoted in various news sources, the Fair stopped tracking daily attendance as early as 1980, making accurate and verifiable attendance calculations impossible. Since visitors to the Fair are not actually counted, there are no reliable data confirming any of the published estimates. When we inquired of the State Fair president what the attendance figures were and how they were acquired, we received no response.

According to Texas A&M researcher John Crompton, when a park and recreation venue does not engage in counting, as is the case with the State Fair, attendance estimates are usually overstated: “In these cases, attendance counts are frequently guestimates made by the organizers who sometimes are tempted to exaggerate them.”

Such a practice is common. In Crompton’s words, “Most economic impact studies are commissioned to legitimize a political position rather than to search for economic truth.” Crompton cites one study of Texas parks in which published attendance estimates were determined to be almost double the actual count.

If that dynamic were at play at the State Fair, attendance would be as low as 1.5 million.

While initially basing our economic impact calculations for the State Fair on the 3 million attendance estimate cited by Park and Recreation, it now seems clear that this figure is unreliable, which our further analysis confirms.

If the published attendance figure is compared to the State Fair’s 2013 total revenue, each person attending the Fair would have generated approximately $14 in operating revenue. This revenue-per-person appears extremely low given the costs associated with attending the Fair.

For example, when compared to the Minnesota State Fair, a gold standard in the industry for both performance and reporting accuracy, a calculation using Minnesota State Fair’s attendance records and its 2013 tax returns indicates that the 1.7 million visitors to that fair generated approximately $22.90 in operating revenue per person. That figure reflects 60% more revenue per person than at the Texas fair (assuming 3 million in attendance) even though the prices for parking and admission at the Minnesota fair were lower.

The Minnesota State Fair is the only state Fair in America to have won the Torch Award for Ethics from the Better Business Bureau. It receives no public funds. It is marked by transparent financial management, detailed public audits, high attendance (without football games), extensive year-round activities, and positive impact on its community. In 2015, USA Today named it the best state fair in the country.

If attendance numbers for the State Fair of Texas were consistent with the revenues per person found in Minnesota, attendance at the State Fair would be 1.9 million visitors. But when we examined State Fair attendance figures through the lens of hotel occupancy during the Fair, even 1.9 million visitors is difficult to defend.

The State Fair stopped taking daily attendance more than thirty years ago.

No reliable data confirm State Fair attendance is 3 million as published. Available evidence indicates attendance, not counting employees or football games, is between 1.5-1.7 million.
Hotel Occupancy

Year after year, daily hotel occupancy and revenue rates during the days of the State Fair remain consistent with daily figures and monthly averages in Dallas County for the rest of the year and are in line with expectations based on national seasonal trends. In fact, the only significant increase in hotel occupancy during the Fair occurs on the Texas-OU weekend. But these visitors would attend that game regardless of when or where it was held.

October monthly data on Dallas County hotel occupancy, during the days of the State Fair, reveal a 6.22% seasonal increase, but virtually all of this increase occurred during the weekend of the Texas-OU football game.

Increases in hotel occupancy during the State Fair are so negligible that even a conservative estimate of 1.9 million State Fair visitors appears to be high. When compared to these figures, the current attendance claims by State Fair and Fair Park are impossible to defend.

We have calculated the economic impact of the State Fair on a realistic figure of 1.7 million attendees, not counting football games played in the Cotton Bowl. Moreover, the essentially flat trend line in hotel occupancy during the State Fair calls into question any substantial net economic impact of the Fair.

Out-of-County Visitors

The economic impact of Fair Park is based on direct spending by out-of-county visitors bringing new dollars to Dallas.

To calculate how many visitors to Fair Park events come from outside the county, we used the 1993 analysis of Gross and Weinstein who determined that the proportion of out-of-area visitors to Fair Park was 15% for the State Fair, 20% for museums, and 7% for special events. These same visitor demographic numbers were reported in the 2010 State Fair’s Visitor Guide. Additionally, we estimated that 95% of visitors coming for sports events in the Cotton Bowl were non-local, though we suspect this figure is high. None of these estimates can currently be confirmed by actual counts.

According to Gross and Weinstein, of these out-of-town visitors, approximately 60% stay in hotels, while 40% stay with friends or relatives. Based on prior studies on local spending, we combined these figures to estimate direct visitor spending.

Other Fair Park Venues

Gathering attendance figures at other Fair Park venues has been equally challenging since precise attendance is not calculated for most activities and events. For that reason, we have had to assume the same over-assessments are at play in Fair Park attendance estimates as they are at the State Fair.

Our economic impact assessments, then, are based on a range of attendance calculations—from optimal figures reflecting realistic attendance estimates to maximum figures reflecting published estimates.
Gross Economic Impact

Direct Visitor Spending

The tables in Appendix One show estimates of attendance and direct visitor spending for Fair Park events and venues, including the State Fair, museums, music and theatre venues, spectator sports, and special events. 30 percent of visitor spending has been estimated for hotel stays and 70 percent for parking, attendance, food, and other direct spending. These estimates are based on standard Department of Commerce formulas.

Table 1 shows what we believe are realistic estimates of attendance and direct spending at Fair Park venues. Table 2 shows direct spending estimates based on published attendance figures. Though we believe there is no credible evidence to support the published attendance figures, the economic impact calculations make it clear that even the most generous assumptions of attendance do not produce totals anywhere close to published claims.

Based on estimates of annual Fair Park person-day attendance in Table 1, out-of-country visitors accounted for 18.9 percent of total Fair Park person-day attendance who spent $71.6 million, or about $121 per person day on direct spending at Fair Park venues, local hotels and restaurants, and other local retail establishments. When the multiplier effects on indirect and induced spending are added, the economic impact of Fair Park visitor spending amounted to $125.9 million.

The calculations do not reflect actual hotel occupancy figures, which are about 20 percent lower than calculations using the standard Department of Commerce multipliers. This discrepancy means that either the real State Fair attendance rates are much lower than the 1.7 million estimate, or the proportion of out-of-county visitors is significantly less than 15 percent, or both.

Gross economic impact overestimates the new dollars infused into a local economy. In the future, more exact measures of total attendance, place of residence, person-days in the area, and local spending and other costs should be gathered for each venue throughout the year in order to calculate the net economic impact, a truer measure of how Fair Park affects the City of Dallas.

Realistic Estimate of Economic Impact

In addition to direct visitor spending, we have calculated ways this spending multiplies within the City, generating total area output, wage and salary income, employment, and tax revenue.

Table 1 applies the RIMS II multiplier effects for Dallas County generated by a realistic estimate of Fair Park attendance in order to measure a baseline economic impact on local output, income, and employment.

Maximum Estimate of Economic Impact

Even though published reports of attendance, as we have seen, are neither verifiable nor credible, we have calculated the economic impact of Fair Park based on the published attendance numbers, beginning with the claimed State Fair attendance of 3 million visitors. The calculations include total area output, wage and salary income, employment, and tax revenue. These estimates are summarized in Table 2.

Whatever the attendance estimates, these calculations reflect gross economic impacts. The net impacts would require accurate and detailed information about expenses, other costs, and depreciation of property both inside and near Fair Park.

Either State Fair attendance is lower than 1.7 million or the proportion of out-of-county visitors is less than 15 percent—or both.
Impact on Neighborhoods

While our estimates provide useful measures of the current economic impact of Fair Park on Dallas County, they are even more important for the immediate neighborhood.

The economic benefit from events at Fair Park is not distributed evenly throughout Dallas County. Theoretically, most of the economic impact on earnings should provide added benefits to those residents who live closest to a park. However, this is not the case for Fair Park.

An econometric analysis of the relationship between the price of a home and its proximity to Fair Park shows that property values are actually lower for homes closer to the Park. Moreover, an analysis of the relationship between cumulative days on the market and proximity to Fair Park shows that the closer a house is to Fair Park, the longer it stays on the market.

These correlations run counter to the average positive impact that parks typically have on home values, which nationally increase approximately 20 percent.

Reasons for the negative impact of Fair Park on the surrounding neighborhood deserve further study, but the adverse relationship between the desirability of homes and their proximity to Fair Park suggests that the costs outweigh the benefits, at least for the immediate community.

Since this negative relationship between park and community runs counter to national and local trends, city officials should use every means necessary to determine the ways Fair Park is undermining property values in the surrounding neighborhoods and work to alleviate the causes of this economic loss for the sake of the neighborhood residents and the City of Dallas as a whole.

“Lost Opportunity” Costs

Although beyond the scope of this report, due consideration should be given to the opportunity costs of operating Fair Park in its present form. In other words, what is being lost by the Park remaining as it is? What would be added to the City of Dallas if Fair Park were a thriving park year round? What taxes would be gained? What benefits would the neighbors receive, economic and otherwise?

How can the operation of Fair Park achieve the highest and best use of available or potential resources? Its current opportunity costs represent the value of its best alternative use that, for whatever reason, has not been pursued.

It is widely recognized that signature parks create a “park premium,” an increase in value to the surrounding area. This positive impact, growing out of increased visitor attendance, would result in rising retail spending and increased property values created by new commercial and real estate development in the immediate neighborhoods.

We believe the City, before anything else, should create a great park. Putting a park in Fair Park is crucial to bringing people, opportunities, and jobs to the neighborhood and new tax dollars to the City. Beyond that, the City should also provide alternative programing in Fair Park as well as repurposing and activating the mostly vacant historical buildings and museums as part of a cost/benefit analysis. In that light, money to revitalize Fair Park and to increase the impact of its venues, including the State Fair, should be considered not an expense but an investment.

The closer a property is to Fair Park, the lower its value.

Property for sale near Fair Park stays on the market longer than equivalent property elsewhere.
Crucial Questions

Important data about Fair Park and the State Fair are not readily available to the public. For this reason, several crucial questions deserve clear answers if the City of Dallas is to make wise decisions about the future of Fair Park.

- What is the actual, verifiable, daily and total attendance for the State Fair and other Fair Park venues?
- How many out-of-town visitors attend each Fair Park venue or event? Where do they come from? Where do they stay? How long do they stay? How much do they spend and for what?
- What are the detailed and verifiable revenue and expense figures for the State Fair and all other Fair Park venues?
- In detail, how have city tax dollars and bond revenues dedicated to Fair Park been spent?
- Do State Fair’s net profits go back into improving the Park? If so, other than recent spending on the Cotton Bowl, where and how is this money spent? How has Fair Park improved as a result?
- How much of the profits made by State Fair vendors and carnival rides leave the county?
- Why do city-owned Fair Park buildings remain in such a state of disrepair? How much are the empty and deteriorating buildings in Fair Park depreciating in value? How are these accounted for in annual audits?
- What are property values in the nearby neighborhoods? What is their annual gain or loss in value?
- What is the net economic impact of Fair Park?
- What are the overall opportunity costs of maintaining the status quo? How much tax money is being lost to the city?
- What can the City do to make sure Fair Park and all its venues operate an open and transparent financial and management system?

Conclusions

The recent economic impact figures cited by the State Fair—$608 million in 2015 and $300 million in 2013—are unsupported by the evidence.

Our study provides a generous assessment of the area output of the State Fair and Fair Park—about $49.4 million for the State Fair and $125.9 million for all Fair Park events and venues, not taking into consideration costs, losses, and depreciation.

But taken by themselves, even these figures are misleading. They assume attendance estimates that may still be too high. They assume 15 percent of State Fair visitors come from out of the county, 60 percent of whom stay in hotels. They assume 95% of guests to games in the Cotton Bowl are from out of county. None of these assumptions is supported by regular, accurate, and verifiable attendance counts.

All of these factors reduce the economic impact of Fair Park and its venues. The real question is not what the gross economic impact is but whether the net impact, based on verifiable figures, leads to a positive bottom line. For that question, there is as yet no clear answer.

Here is perhaps our most important conclusion. If previous assessments of Fair Park’s economic impact have caused officials to think that the status quo is working well, then the City of Dallas is misinformed.

An ongoing, realistic, and transparent assessment is crucial, providing decision makers an accurate baseline from which to work, spurring them to focus on ways in which the economic impact of Fair Park and all its venues and events can increase, not just for the City as a whole but particularly for the residents who live within the shadow of Fair Park.

Realistic estimates of economic impact—
STATE FAIR: direct spending: $30.9M, overall: $49.4M
FAIR PARK: direct spending: $71.6M, overall: $125.9M

Net economic impact (reflecting costs, losses, and depreciation) is considerably less. Whether the net impact is positive is not yet known.
Appendix One: Tables

Table 1 represents calculations of economic impact based on realistic attendance figures.

Table 2 reflects published attendance figures. In most cases, these figures are not based on actual counting and appear to be substantially inflated. The figures are shown here not because we believe attendance figures justify the calculations but to provide a basis for comparison.

All calculations use standard local regional multipliers determined by the U.S. Department of Commerce’s Bureau of Economic Analysis (BEA) Regional Input-Output Model System (RIMS-II).

#### Table 1: Realistic Estimates of Fair Park Attendance, Direct Spending, and Annual Economic Impact

<table>
<thead>
<tr>
<th>Venues</th>
<th>Total Attendance</th>
<th>Out-of-County Attendance</th>
<th>Hotel Room Nights</th>
<th>Hotel Spending</th>
<th>Other Direct Spending</th>
<th>Total Direct Spending</th>
<th>Total Direct Output</th>
<th>Total Area Income</th>
<th>Total Area Employment</th>
<th>Local Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Fair</td>
<td>1,700,000</td>
<td>255,000</td>
<td>91,800</td>
<td>$9,271,800</td>
<td>$23,634,200</td>
<td>$30,906,000</td>
<td>$8,829,844</td>
<td>147</td>
<td>$1,132,816</td>
<td></td>
</tr>
<tr>
<td>Museums</td>
<td>330,893</td>
<td>66,179</td>
<td>23,284</td>
<td>$2,806,254</td>
<td>$6,014,592</td>
<td>$8,820,846</td>
<td>$16,883,777</td>
<td>99</td>
<td>$3,069,578</td>
<td></td>
</tr>
<tr>
<td>Music Venues</td>
<td>430,294</td>
<td>86,059</td>
<td>30,983</td>
<td>$3,129,088</td>
<td>$7,301,229</td>
<td>$10,430,327</td>
<td>$19,713,317</td>
<td>209</td>
<td>$3,883,211</td>
<td></td>
</tr>
<tr>
<td>Spectator Sports*</td>
<td>156,274</td>
<td>148,460</td>
<td>53,446</td>
<td>$5,398,017</td>
<td>$12,595,372</td>
<td>$17,993,388</td>
<td>$31,698,364</td>
<td>219</td>
<td>$9,450,128</td>
<td></td>
</tr>
<tr>
<td>Special Events</td>
<td>509,960</td>
<td>35,697</td>
<td>12,851</td>
<td>$1,207,050</td>
<td>$3,028,550</td>
<td>$4,126,501</td>
<td>$6,263,616</td>
<td>67</td>
<td>$136,285</td>
<td></td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>3,127,421</strong></td>
<td><strong>591,395</strong></td>
<td><strong>212,902</strong></td>
<td><strong>$21,503,119</strong></td>
<td><strong>$50,173,043</strong></td>
<td><strong>$71,677,062</strong></td>
<td><strong>$125,038,674</strong></td>
<td><strong>741</strong></td>
<td><strong>$2,396,904</strong></td>
<td></td>
</tr>
</tbody>
</table>

* total attendance at the 2014 games.

#### Table 2: Maximum Estimates of Fair Park Attendance, Direct Spending, and Annual Economic Impact

<table>
<thead>
<tr>
<th>Venues</th>
<th>Total Attendance</th>
<th>Out-of-County Attendance</th>
<th>Hotel Room Nights</th>
<th>Hotel Spending</th>
<th>Other Direct Spending</th>
<th>Total Direct Spending</th>
<th>Total Direct Output</th>
<th>Total Area Income</th>
<th>Total Area Employment</th>
<th>Local Taxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Fair</td>
<td>3,000,000</td>
<td>450,000</td>
<td>162,000</td>
<td>$16,362,000</td>
<td>$38,178,000</td>
<td>$54,640,000</td>
<td>$87,264,000</td>
<td>$15,582,078</td>
<td>260</td>
<td>$1,963,440</td>
</tr>
<tr>
<td>Museums</td>
<td>522,737</td>
<td>104,547</td>
<td>37,637</td>
<td>$8,801,343</td>
<td>$8,689,801</td>
<td>$12,671,145</td>
<td>$26,609,404</td>
<td>$4,849,247</td>
<td>156</td>
<td>$899,141</td>
</tr>
<tr>
<td>Spectator Sports</td>
<td>178,634</td>
<td>169,702</td>
<td>61,093</td>
<td>$6,170,376</td>
<td>$14,397,545</td>
<td>$20,547,919</td>
<td>$36,199,537</td>
<td>$10,802,271</td>
<td>250</td>
<td>$447,889</td>
</tr>
<tr>
<td>Special Events</td>
<td>805,624</td>
<td>56,394</td>
<td>20,302</td>
<td>$2,050,474</td>
<td>$4,784,440</td>
<td>$6,834,914</td>
<td>$13,054,656</td>
<td>$2,332,756</td>
<td>106</td>
<td>$215,300</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>5,186,791</strong></td>
<td><strong>916,603</strong></td>
<td><strong>229,797</strong></td>
<td><strong>$33,927,670</strong></td>
<td><strong>$77,764,565</strong></td>
<td><strong>$111,092,233</strong></td>
<td><strong>$194,271,529</strong></td>
<td><strong>$39,701,207</strong></td>
<td><strong>1,102</strong></td>
<td><strong>$3,744,835</strong></td>
</tr>
</tbody>
</table>

1 assumes out-of-county visitors: State Fair (18%), Museums (20%), Music Venues (20%), Spectator Sports (95%), Special Events (7%)

2 assumes 40% stayed with friends, 40% stayed in hotels, 2.1 average nights, 3.5 persons per room

3 RIMS-II Multipliers of direct spending by visitors output, income, and employment for each venue:

<table>
<thead>
<tr>
<th>Industry</th>
<th>Output multiplier</th>
<th>Income multiplier</th>
<th>Employment multiplier*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amusement Parks and Arcades</td>
<td>1.6019</td>
<td>0.2857</td>
<td>4.7733</td>
</tr>
<tr>
<td>Museums, Historical Sites, Zoos, and Parks</td>
<td>2.0959</td>
<td>0.3827</td>
<td>12.3042</td>
</tr>
<tr>
<td>Performing Arts Companies</td>
<td>1.8842</td>
<td>0.3723</td>
<td>20.0186</td>
</tr>
<tr>
<td>Spectator Sports</td>
<td>1.7599</td>
<td>0.5252</td>
<td>12.1634</td>
</tr>
<tr>
<td>Other Amusement And Recreation Industries</td>
<td>1.9088</td>
<td>0.3413</td>
<td>15.5691</td>
</tr>
</tbody>
</table>

* per $1 million of direct spending
Appendix Two: Methodology

The analysis of the economic impact of Fair Park uses an input-output model to estimate the combined direct, indirect, and induced effects of visitor spending on aggregate output, personal income, and employment in the local economy.

The direct effect is the amount of spending by out-of-county residents that is generated by Fair Park operations. The indirect effect consists of purchases from local vendors of resources used to produce this aggregate output. The induced effect is spending by all affected employees of a portion of their wage and salary incomes on consumption in the local economy.

The indirect and induced components result in multiplier effects on direct spending among area industries that measure the combined impact of visitor spending on total area output, wage and salary income, and employment.

The area chosen to define Fair Park’s economic impact consists of Dallas County, the smallest geographic area surrounding Fair Park that provides local regional multipliers determined by the U.S. Department of Commerce’s Bureau of Economic Analysis (BEA) Regional Input-Output Model System (RIMS-II).

In general, for a given total attendance the smaller the surrounding geographic area the larger the number of out-of-area visitors that generate direct spending; however, the smaller the area the greater the leakage from indirect and induced spending that reduces the value of the multiplier effect. The two effects are partially offsetting, but their combined effect more fully captures the influence of visitor spending in the Fair Park area than alternative combinations that include surrounding counties.

Figure 1 shows the causal effects of direct visitor spending among primary sectors of the local economy that when combined with subsequent indirect and induced “multiplier” effects on total area production, income, employment, and taxes. This model assumes that the initial “injections” of direct visitor spending cause further increases in the flow of area income until induced “leakages” from the area income stream due to nonlocal savings, taxes, and imports equals the initial injection. Direct spending by visitors plus the subsequent multiplier effects on local spending can be used to predict the economic impacts of tourism on local output, income, and employment. In addition to these measures, estimates of the number of hotel room nights and total visitor retail spending are used to estimate local tax revenues generated by the park in the form of sales taxes and hotel occupancy taxes.

![Figure 1: Economic Impact of Visitor Spending](image)
Methodology, continued

Out-of-county visitors. The economic impact of Fair Park is based on direct spending by visitors who bring additional income into Dallas County. Table 1 shows a minimum estimate of the number of out-of-county visitors to Fair Park derived from a number of sources, including an analysis of Fair Park attendance by Drs. Harold T. Gross and Bernard L. Weinstein from the University of North Texas who determined that the proportion of visitors who came to Fair Park from out of town was 15% for the State Fair, 20% for museums, and 7% for special events. The same visitor demographic figures were reported in 2010 in the State Fair’s Visitor Guide.

Additionally, we estimated that 95% of visitors coming for sports events were non-local, based upon recent research by Dr. John Crompton. Of these out-of-town visitors, we found estimates that approximately 60% stayed in hotels, while 40% stayed with friends or relatives. We then combined this with prior studies on local spending in order to estimate direct visitor spending.

Direct visitor spending. Based on reported and estimated out-of-county attendance figures for Fair Park venues, Table 1 shows estimates of minimum direct visitor spending for Fair Park events and alternative venues, including the State Fair, Museums, Music Venues, Spectator Sports, and Special events. Based on estimates of annual person-day attendance for all venues, out-of-county visitors accounted for 18.9 percent of total Fair Park person days who spent $71.7 million, or an average of $121 per person day on total direct spending by visitors at Fair Park and other local lodging, restaurants, and retail establishments. In aggregate amounts about 30% of visitor spending is for hotel accommodations and 70% is for parking, attendance, food, and other direct spending.

Realistic Economic impact. Direct visitor spending adds to local area output and income that creates subsequent indirect and induced multiplier effects on total area output, wage and salary income, employment, and tax revenue. Table 1 applies the RIMS II multiplier effects for Dallas County estimated by the U.S. Bureau of Economic Analysis to direct spending generated by Fair Park visitors to measure a baseline economic impact on local output, income, and employment.

Baseline annual direct visitor spending at the State Fair is $30.9 million that added $49.9 million to Dallas County total spending. The total annual direct visitor spending for Fair Park amounted to $71.7 million that added $125.9 million to the Dallas economy, $26.7 million to local area wage and salary income, and generated 741 jobs. Based on a hotel occupancy tax of 7% and a sales tax of 1.5% this adds approximately $2.4 million annually to local tax revenues generated by Fair Park out of county visitors.

Economic Impact Based on Current Fair Park Attendance Estimates. The figures in Tables 1 are based on minimum estimates based on evidence from comparable studies. Exact attendance estimates cannot be verified based on current reports. However, it is useful to contrast our estimates with the projected economic impact of Fair Park based on current estimated attendance numbers, beginning with an estimate of State Fair attendance of 3 million persons. The current attendance estimates for all Fair Park venues are summarized in Table 2. In the future more exact measures of total attendance, place of residence, person-days in the area, and local spending patterns can be gathered for each venue throughout the year.

Based on out-of-county visitors among venues equal to the same percentage of total visitors, direct spending is generated by an additional 916,603 out-of-area visitors. The economic impact of direct spending by visitors based on these current attendance estimates is shown in Table 2. Based on the maximum reported Fair Park attendance estimated visitor spending increases from $125.9 million to $194.3 million. The assumed higher direct spending by visitors with subsequent indirect and induced multiplier effects not only adds $68.4 million to annual total local output, but it generates an additional 361 jobs that adds $13 million to area wage and salary income and $1.35 million to local tax receipts. This range between the minimum and maximum impacts clearly makes a case for the future gathering of primary data for each venue and event throughout the year in order to assess the contribution of Fair Park; however, the annual economic impact is likely to be closer to the realistic value of $125.9 million rather than the maximum value of $194.7 million. It is also in stark contrast with the recent $608 million estimate recently reported only for the State Fair.

Researchers

Dr. Tom Kelly is a professor of economics in the Hankamer School of Business at Baylor University, where he has served since 1969. He has been Director of the Baylor Center for Business and Economic Research for 28 years. Dr. Kelly is a frequent consultant to civic and business leaders in Texas and elsewhere. He has developed a number of models to measure the economic impact of local investments, such as the AT&T Stadium in Arlington and F.C. Dallas in Frisco.

Bennet Hickok is a graduate student and researcher in the Department of Economics in the Hankamer School of Business at Baylor University. He is currently completing his MS degree in economics. He completed his baccalaureate degree in economics at TCU.
Endnotes

3. http://bigtex.com/about/
13. STR data is available only to subscribers and cannot be reproduced or distributed. However, the data may be obtained directly from STR Global.