



**The 2017 Economic Impact of
Metropolitan Zoological Park and Museum District and Institutions
St. Louis, Missouri
September 2018**

The St. Louis Regional Chamber, working with the Metropolitan Zoological Park and Museum District, has estimated the economic impact of the Zoo Museum District and its institutions – the **Saint Louis Art Museum, Saint Louis Zoological Park, Saint Louis Science Center, Missouri Botanical Garden, and Missouri Historical Society** – on the regional economy. This report summarizes the economic impact of **the District and its five institutions**. The District and its institution provided data about attendance, payroll, and operations expenditures for 2017 as well as capital expenditures and construction spending for 2013 to 2017.

Economic Impact Definitions

The economic impact of a business, organization, or event measures the dollar amount associated with an entity and the way those dollars circulate through the region. Estimates were developed with a computer model called IMPLAN, which stores a profile of the St. Louis metropolitan economy in a database. The model uses production functions for each industry in the region to calculate how spending in one industry circulates through other industries. This economic impact can be expressed either as an annual flow of dollars (output) or an equivalent level of employment.

There are three levels of impact we consider when developing these figures: direct impact, indirect business spending impact, and induced household spending impact. All three impacts can be expressed in terms of an annual flow of dollars (output) or annual total employment. The total impact is the sum of these three factors.

Direct Impact

This is the most basic part of an organization's economic impact that measures the dollars and jobs an organization directly generates. When expressed in dollars, the direct impact approximates a company's total spending or gross output. Alternatively, the direct impact is the average annual value of output associated with the given number of jobs in that industry.

The economic impact of the Zoo Museum District and its institutions is based on the amount of money the organization spends in the local economy through operations and capital improvements as well as the amount out-of-town visitors spend on overnight accommodations, food and drink, shopping, gasoline, and other items in the St. Louis region.

Indirect Business Impact

This is a secondary measure of a business's economic impact representing the revenue dollars and jobs generated by an organization's operating expenses. Examples include purchasing raw materials from a local supplier or using the professional services of an accounting or law firm. This spending generates revenue and employment at the firms supplying those goods or services. Every dollar an organization spends locally to conduct its business supports another business in some way.

Induced Household Spending Impact

This is a tertiary measure of a business' economic impact representing a business' revenue generated by the personal spending of the organization's employees. Think of an organization's employee spending money at the local grocery store. The employee's paychecks support revenue and jobs the same way the organization's spending on equipment supports revenue and jobs.

This summary combines the indirect business impact and the induced household spending impact and refers to these combined impacts as "indirect impacts."

Geography and IMPLAN Definitions

Geography

The local economy for this analysis is defined as the 15-county St. Louis MO-IL MSA. The MSA includes St. Louis City and Franklin, Jefferson, Lincoln, St. Charles, St. Louis, and Warren Counties in Missouri and Bond, Calhoun, Clinton, Jersey, Macoupin, Madison, Monroe, and St. Clair Counties in Illinois.

Definitions

- **Jobs (employment)** include full-time and part-time workers of firms as well as self-employed individuals.
- **Output** represents the value of industry production. For the service sectors, production equals sales.

Operations Expenditures

The District members provided annual revenue, operations and payroll expenditures, and staffing levels for 2017. The direct spending totaled \$217.9 million. This spending generated a total of \$273.3 million in indirect spending, bringing the total operations output impact to \$491.2 million. Annual operations include 1,963 direct jobs and indirect impacts added an additional 1,855 jobs, bringing the total to an estimated 3,818 jobs in the region.

Table 1
Estimated Total Economic Impacts of
Operation of the Zoo Museum District and Institutions
2017

| | Direct | Indirect | Total |
|------------|------------------|------------------|------------------|
| Output | \$ 217.9 million | \$ 273.3 million | \$ 491.2 million |
| Employment | 1,963 | 1,855 | 3,818 |

Notes:

Impacts were calculated using IMPLAN Professional for Windows, ver. 3.0 (base year 2016)

Impacts presented in 2017 dollars

Impact estimates based on 2017 payroll and operating expenditures

Numbers may not add due to rounding

Geographic Area: St. Louis, MO-IL Metropolitan Statistical Area (MSA)

Construction and Capital Expenditures

The five institutions provided construction and capital expenditures data for the 2013 to 2017 period. Construction and capital spending has a one-time impact on the local economy, while operations of the institutions contribute to the regional economy annually. Since construction and capital expenditures can vary widely from year to year, this analysis presents the annual average of spending from 2013 through 2017.

Construction and other capital expenditures totaled \$132.9 million during this five-year period. This analysis presents an annualized expenditure level, estimating a “typical” year of spending. The direct impact of annualized local capital expenditures and construction spending from 2013 through 2017 was \$25.2 million. This direct spending generated another \$ 23.4 million in indirect spending for a total of \$48.6 million. This average activity created 186 direct jobs and 152 indirect jobs for a total of 338 jobs.

Table 2
Estimated Total Economic Impacts of Annualized Construction and Capital Improvement Expenditures of the Zoo Museum District’s Institutions
2013 - 2017

| | Direct | Indirect | Total |
|------------|-----------------|-----------------|-----------------|
| Output | \$ 25.2 million | \$ 23.4 million | \$ 48.6 million |
| Employment | 186 | 152 | 338 |

Notes:

Impacts were calculated using IMPLAN Professional for Windows, ver. 3.0 (base year 2016)
Impacts presented in 2017 dollars
Impact estimates based on construction and capital expenditures
Capital expenditures reflect the impact of gross retail sales (purchase price)
Numbers may not add due to rounding
Geographic Area: St. Louis, MO-IL Metropolitan Statistical Area (MSA)

Out-of-Town Visitor Spending

The five institutions are important tourism assets in the region, drawing visitors from around the country. Together the institutions attracted over 2.5 million out-of-town in 2017.

Estimates of how much out-of-town visitors spend are based on surveys provided by Explore St. Louis. According to a 2017 survey of visitor spending, leisure tourists spend on average \$97 per day per person on lodging, meals, attractions, entertainment, shopping, transportation, and other spending. A portion of this spending is attributed to institutions drawing visitors to the region and correlates with how long those visitors spend their time at the institution. Using the online Google My Business listings for each institution to estimate the length of time a typical visitor spends at an institution, a tourist’s daily spending is apportioned accordingly.

Out-of-town spending generated \$23.8 million in direct impact and another \$25.8 million for a total impact of \$49.6 million. Spending also generated 517 direct jobs and 171 indirect jobs for a total impact of 688 jobs.

Table 3
Estimated Total Economic Impacts of
Out-of-Town Visitor Spending of the Zoo Museum District
2017

| | Direct | Indirect | Total |
|------------|-----------------|-----------------|-----------------|
| Output | \$ 23.8 million | \$ 25.8 million | \$ 49.6 million |
| Employment | 517 | 171 | 688 |

Notes:

Impacts were calculated using IMPLAN Professional for Windows, ver. 3.0 (base year 2016)
 Impacts presented in 2017 dollars
 Impact estimates based on number of out-of-town visitors and typical tourist spending
 Numbers may not add due to rounding
 Geographic Area: St. Louis, MO-IL Metropolitan Statistical Area (MSA)

Total Impact

The Zoo Museum District and its five institution's 2017 operations, average construction, and capital improvement spending along with out-of-town visitors' expenditures had a direct impact of \$266.9 million, an indirect impact of \$322.5 million, and a total regional economic impact of \$589.4 million. This spending generated 2,666 direct jobs and another 2,179 jobs indirectly, bringing the total employment impact to 4,845 jobs in the region.

Table 4
Estimated Total Economic Impacts of
Estimated Total Economic Impacts for the Zoo Museum District and Institutions
2017

| | Direct | Indirect | Total |
|------------|------------------|------------------|------------------|
| Output | \$ 266.9 million | \$ 322.5 million | \$ 589.4 million |
| Employment | 2,666 | 2,179 | 4,845 |

Notes:

Impacts were calculated using IMPLAN Professional for Windows, ver. 3.0 (base year 2016)
 Impacts presented in 2017 dollars
 Numbers may not add due to rounding
 Geographic Area: St. Louis, MO-IL Metropolitan Statistical Area (MSA)

Prepared 9/13/2018



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