

SAN DIEGO ZOO GLOBAL 2016 ECONOMIC & FISCAL IMPACT ANALYSIS

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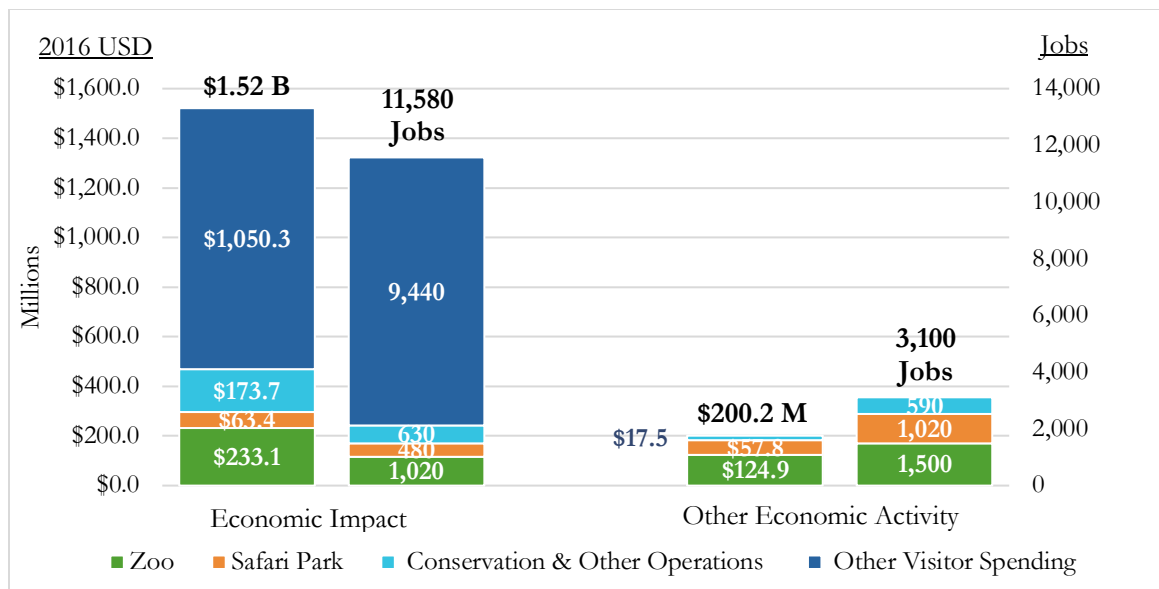
Executive Summary

The purpose of the study is to provide a deeper understanding of the role San Diego Zoo Global plays in San Diego’s regional economy. It examines the associated economic and fiscal impacts of both ongoing operations and visitor spending attracted to the region by San Diego Zoo Global. These economic impacts produce ongoing streams of economic benefits throughout the community.

In 2016, San Diego Zoo Global employed over 2,700 San Diegans at the San Diego Zoo, at the Safari Park (previously known as the Wild Animal Park), and in other operations such as the Conservation Center. In its Centennial Year, almost two-thirds (61%) of San Diego Zoo attendees were local San Diegans, while locals make up about three-quarters (75%) of all guests at the Safari Park. But all San Diegans, even those who did not visit the attractions and did not work at these facilities, benefited from San Diego Zoo Global through a stronger regional economy. By attracting tourists to San Diego, San Diego Zoo Global can be credited with bringing outside spending into the regional economy, and ultimately creating more jobs outside of their own operations.

In 2013, the San Diego County Taxpayers Association studied the economic impact of San Diego Zoo Global and estimated that it had an impact of \$875.8 million on the regional economy. The report also showed that it supported 7,420 additional jobs across San Diego. This report was prepared by the San Diego Taxpayers Educational Foundation—the research arm of the San Diego County Taxpayers Association—and outlines the results of the latest update to that study, looking into the impacts of San Diego Zoo Global during the Zoo’s Centennial Year.

Figure 1: San Diego Zoo Global’s Economic Impact and Other Associated Economic Activity (2016)



Sources: SDTEF, Applied Development Economics, IMPLAN, San Diego Tourism Authority, San Diego Zoo Global
 Note: Figures may not add due to rounding.

Key Findings (Figures Reflect Calendar Year 2016)

- A. **San Diego Zoo Global is responsible for an estimated 11,580 additional San Diego jobs and has an economic impact of \$1.52 billion on the local economy** through operations and the associated activity throughout the region.
 - This marks a 56% increase in additional jobs and a 74% increase in economic impact from 2013.
- B. San Diego Zoo Global directly employs approximately 2,700 people, over 60% of whom qualify for health and retirement benefits.
 - This marks a 17% increase in the number of individuals directly employed by San Diego Zoo Global since 2013.
- C. San Diego Zoo Global provides revenues to state and local governments directly by collecting taxes on operating revenues and by attracting visitors that pay lodging and retail taxes. **Including indirect and induced impacts, San Diego Zoo Global is responsible for an estimated \$115.6 million of revenue to state and local governments.**
 - This marks a 52% increase in estimated tax revenue related to San Diego Zoo Global's operations and related visitor spending.
- D. In total, 14,680 San Diegan jobs and \$1.7 billion in economic activity are linked to San Diego Zoo Global through operations, attracting visitors, and all of the associated activity throughout the region. As opposed to economic impact, these figures measure the economic reach of San Diego Zoo Global.
 - This marks a 48% increase in jobs and 42% increase in economic activity from the results of the 2013 report.

Economic Impact vs. Economic Activity:

True **economic impact** is the net change in economic activity after acknowledging that spending by local residents would most likely have been used on other local similar goods or services. To acknowledge this reality, **this report only presents the spending within the region that originated from outside of the region as economic impact.**

Conversely, if we were able to estimate with confidence the spending associated with local residents choosing to go to the San Diego Zoo or Safari Park over another attraction outside of San Diego, this would be accurately categorized as an economic impact to the region. We did not include such impacts in our analysis, **thus producing conservative estimates of economic impact.**

Measuring economic activity associated with San Diego Zoo Global is also a beneficial exercise. **Economic activity** refers to all transactions associated with a particular entity. The overall economic activity associated with San Diego Zoo Global provides evidence as to the value of San Diego Zoo Global to the San Diego region that a figure estimating only economic impact does not.

For example, when a consumer chooses one good or service over another, we can conclude that the consumer values their chosen transaction more than the alternative. When thousands of San Diegans decide to visit the San Diego Zoo, we can conclude that San Diego Zoo Global brings increased entertainment and/or educational value to San Diegans despite that benefit not being reflected within estimates of economic impact. It is for reasons such as this that we also report economic activity estimates when appropriate, which are inclusive of economic impact.

Introduction

In 2013, the San Diego County Taxpayers Association studied the economic impact of San Diego Zoo Global and estimated that it had an impact of \$875.8 million on the regional economy. The report also showed that it supported 7,420 additional jobs across San Diego. This report was prepared by the San Diego Taxpayers Educational Foundation—the research arm of the San Diego County Taxpayers Association—and outlines the results of the latest update to that study, looking into the impacts of San Diego Zoo Global during the Zoo’s Centennial Year.

The purpose of the study is to provide a deeper understanding of the role San Diego Zoo Global plays in San Diego’s regional economy. It examines the associated economic and fiscal impacts of both ongoing operations and visitor spending attracted to the region by San Diego Zoo Global. These economic impacts produce ongoing streams of economic benefits throughout the community.

The San Diego Zoo officially founded in 1916 and celebrated its Centennial Year in 2016. The Safari Park (previously known as the Wild Animal Park) opened in 1972. San Diego Zoo Global operations also includes conservation, research, and education programs. The San Diego Zoo, in particular, is a Balboa Park landmark to San Diegans and tourists alike.

Thousands of San Diegans visit or work at San Diego Zoo Global every day. In recent years, just under two-thirds (61%) of San Diego Zoo attendees were local San Diegans, while locals make up about three-quarters (75%) of all guests at the Safari Park. In addition, San Diego Zoo Global employed over 2,700 San Diegans in 2016 at the San Diego Zoo, the Safari Park, and in other operations such as the Conservation Center.

All San Diegans, even those who did not visit the attractions and did not work there, benefited from San Diego Zoo Global through a stronger regional economy. By attracting tourists to San Diego, San Diego Zoo Global can be credited with bringing outside spending into the regional economy, and ultimately creating more jobs outside of their own operations.





Total Economic Activity & Net Economic Impact

The economic impact and activity of San Diego Zoo Global is split into two categories throughout this report:

- (1) Activity attributable to operations of the San Diego Zoo, Safari Park, and other operations including the conservation center, and
- (2) Activity attributable to spending outside of the attractions by visitors that are in San Diego to visit either the San Diego Zoo or Safari Park.

In this section, we report the overall economic activity associated with San Diego Zoo Global, as well as the economic impact attributable to San Diego Zoo Global. Both economic activity and economic impact include **direct**, **indirect**, and **induced** impacts. The distinction between economic activity and economic impact is important, as they are interpreted differently.

For the purposes of this report, economic impact measures only the spending within the region that originated from outside of the region. This measurement is appropriate, as the “true” economic impact is the net change in economic activity after considering local spending by residents would have most likely been used on other similar goods or services.

The measure of economic impact can be interpreted as the net economic change to the San Diego region as a result of San Diego Zoo Global. **In 2016, San Diego Zoo Global was estimated to be responsible for an additional 11,580 San Diego jobs and had an economic impact of \$1.52 billion on the local economy.**

The term “**direct**” refers to the initial transaction creating an impact, or economic activity in general.

Described as the “**multiplier effect**,” direct activity occurs within an interconnected economy, positively affecting other industries through “indirect” and “induced” activity.

The term “**indirect**” refers to economic impact, or economic activity in general, that occurs through business transactions such as supply purchases or professional services contracts.

The term “**induced**” refers to economic impact, or economic activity in general, that occurs through the expenditures of employees.

Figure 2: Net Economic Impact (San Diego Zoo Global: 2016)

	Total	San Diego Zoo Global Operations	Other Visitor Spending Attracted by San Diego Zoo Global
2016 USD	\$1,520,600,000	\$470,300,000	\$1,050,300,000
Direct	\$643,900,000	\$138,100,000	\$505,800,000
Indirect	\$278,000,000	\$117,100,000	\$160,900,000
Induced	\$598,700,000	\$215,100,000	\$383,600,000
Employment	11,580	2,140	9,440
Direct	6,860	1,080	5,780
Indirect	1,370	370	1,000
Induced	3,340	690	2,650

Sources: SDTEF, Applied Development Economics, IMPLAN, San Diego Tourism Authority, San Diego Zoo Global
 Note: Figures may not add due to rounding.

Economic activity refers to all transactions associated with San Diego Zoo Global. Estimating overall economic activity provides evidence as to the regional value of San Diego Zoo Global that estimating only economic impact does not.

“...approximately 14,680 San Diego jobs and \$1.7 billion in economic activity were linked to San Diego Zoo Global in 2016.”

For example, when a consumer chooses one good or service over another, we can conclude that the consumer values their chosen transaction more than the alternative. It is for reasons such as this that this report also estimates economic activity, which is inclusive of economic impact.

The measure of economic activity is inclusive of economic impact and can be interpreted as the degree to which San Diego Zoo Global is economically involved within the County of San Diego. Through operations and associated regional economic activity, approximately 14,680 San Diego jobs and \$1.7 billion in economic activity were linked to San Diego Zoo Global in 2016.

Figure 3 Total Economic Activity (San Diego Zoo Global: 2016)

	Total	San Diego Zoo Global Operations	Other Visitor Spending Attracted by San Diego Zoo Global
2016 USD	\$1,720,800,000	\$670,500,000	\$1,050,300,000
Direct	\$808,300,000	\$302,500,000	\$505,800,000
Indirect	\$290,600,000	\$129,700,000	\$160,900,000
Induced	\$621,800,000	\$238,300,000	\$383,600,000
Employment	14,680	5,240	9,440
Direct	8,520	2,740	5,780
Indirect	1,870	870	1,000
Induced	4,290	1,630	2,650

Sources: SDTEF, Applied Development Economics, IMPLAN, San Diego Tourism Authority, San Diego Zoo Global
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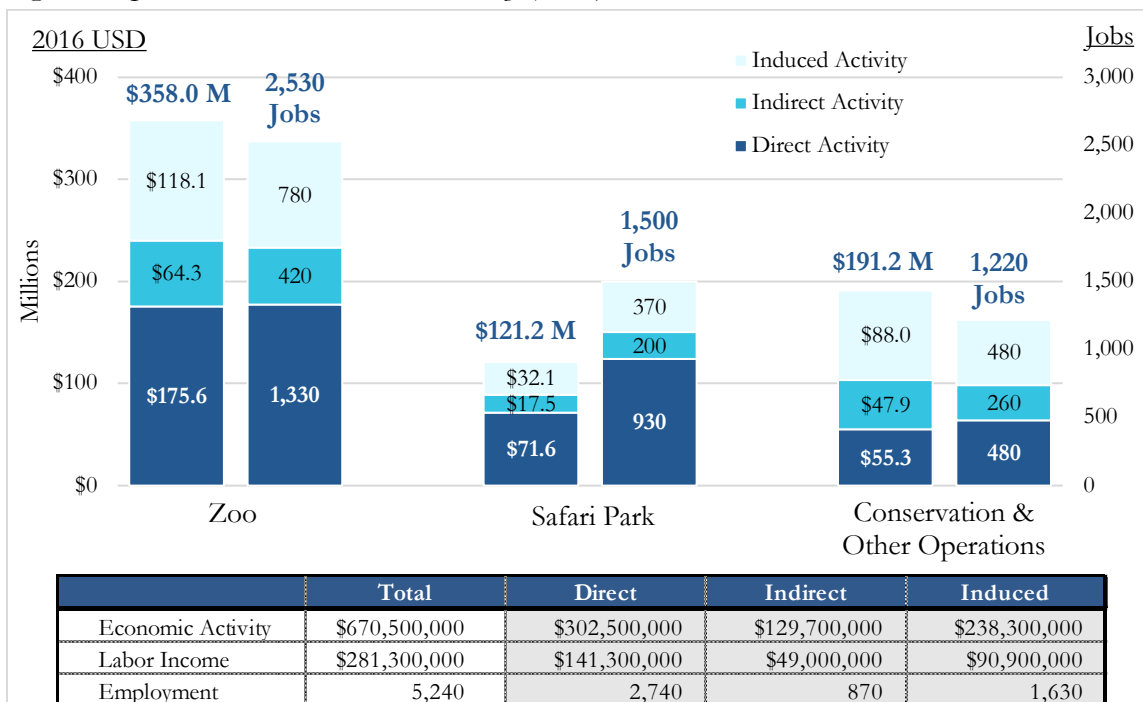
San Diego Zoo Global Operations & the Economy

Economic Activity

San Diego Zoo Global—including the San Diego Zoo, Safari Park, and Conservation Center—directly impact the regional economy through their day-to-day operations. In 2016, San Diego Zoo Global employed approximately 2,700 employees and 64 percent of their workforce earned benefits. The same year, San Diego Zoo Global employees were paid \$141.3 million in wages.

In 2016, San Diego Zoo Global operations generated \$302.5 million in direct economic activity. When also considering associated economic activity such as employees spending their wages and business going to suppliers, San Diego Zoo Global was associated with \$670.5 million in regional economic activity, 5,240 jobs, and \$281.3 million in labor income.

Figure 4: Operations Related Economic Activity (2016)



Sources: SDTEF, Applied Development Economics, IMPLAN, San Diego Tourism Authority, San Diego Zoo Global
 Note: Figures may not add due to rounding.

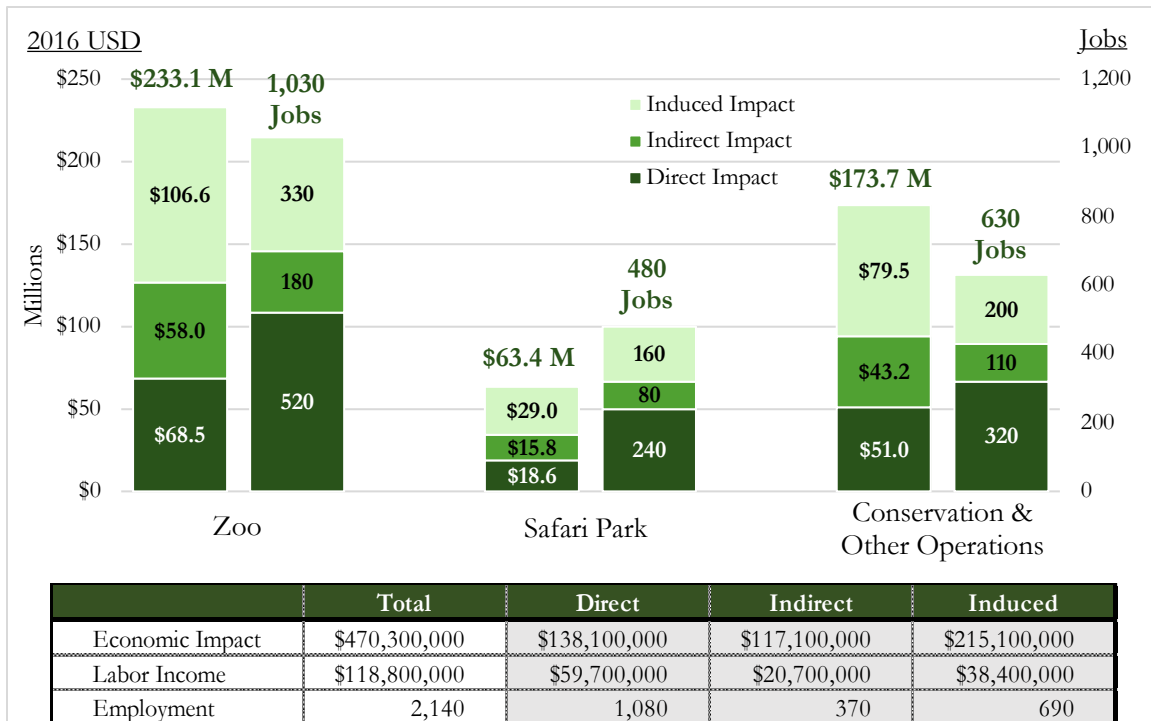
Economic Impact

Revenues that are the result of local spending are treated differently from revenues originating outside of San Diego in this analysis as they may be diverted from other local businesses. Revenues that are the result of local spending are classified as other economic activity. Revenues that are introduced into San Diego have a positive impact on the regional economy and are known as economic impact.

In 2016, nearly four out of every ten (39%) San Diego Zoo attendees were tourists originating outside of San Diego County. For the Safari Park, tourists made up just over one quarter (26%) of attendees. Because it is logical to conclude that tourists spend more inside San Diego Zoo Global by purchasing more souvenirs for example, we can conservatively use the same percentages to estimate the split between revenues from local sources, and tourists.

Through 2016 operations, San Diego Zoo Global is estimated to have been directly responsible for 1,080 more jobs being in the County of San Diego. When including indirect and induced impacts the estimate increases to 2,138 more jobs being in the County of San Diego due to San Diego Zoo Global operations. Additionally, San Diego Zoo Global is estimated to have been responsible for \$118.8 million dollars in labor income, and \$470.3 million of overall economic impact through its operations.

Figure 5: Operations Related Economic Impact (2016)



Sources: SDTEF, Applied Development Economics, IMPLAN, San Diego Zoo Global
 Note: Figures may not add due to rounding.



Source: Google Earth

Visitor Spending Attracted to Other Local Businesses

In this section, we present the findings of our analysis regarding the economic impact of visitor spending brought to other local businesses as a result of San Diego Zoo Global. To estimate this impact, we use results from a survey of San Diego visitors and the IMPLAN economic input-output model developed by the Minnesota IMPLAN Group.

The San Diego Zoo and Safari Park serve as cultural and retail magnets for the County of San Diego, enhancing an already robust tourism base. San Diego is home to 549 hotels and motels with a combined 61,456 rooms as of January 2018, according to the San Diego Tourism Authority. It is also home to Mission Bay, SeaWorld, Legoland and numerous other attractions. San Diego Zoo Global provides the region with a stream of visitors and the associated increases in spending at local lodging, dining, entertainment, and retail establishments.

Spending by these visitors has substantial economic impacts and helps to support the region's economy in a variety of industries. SDCTA estimates 2016 spending at other local businesses by visitors that were in town to visit the San Diego Zoo or Safari Park created \$1.05 billion and produced 9,440 jobs paying \$406.2 million in wages and other compensation.

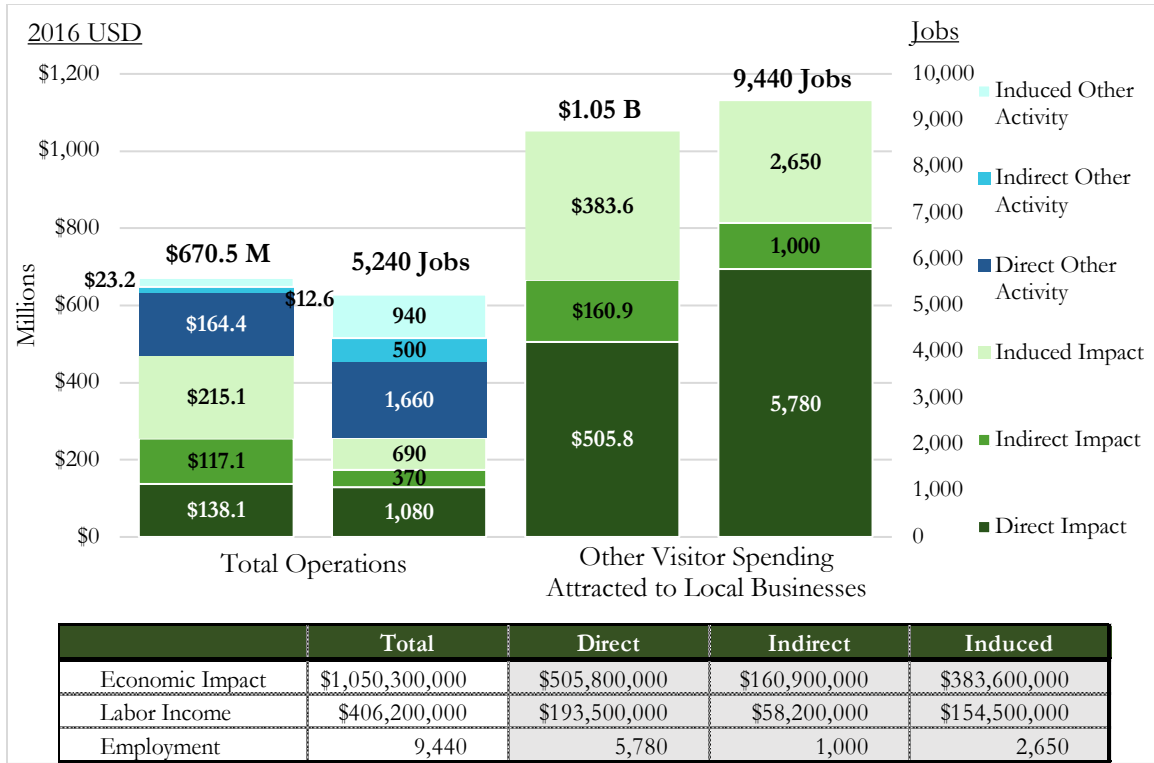
The IMPLAN Model

The IMPLAN input-output model, widely used in professional and academic research, is utilized in estimating the induced and indirect impacts and activity associated with any given direct activity.

The IMPLAN input-output model is designed by the Minnesota IMPLAN Group to track how spending flows through a region as well as to allow for customization to a particular region. The model provides estimates of the total economic impact and activity including direct, indirect, and induced activity based on the activities of a given entity.

When added together, the sum of all the activity from direct, indirect, and induced activity is, by definition, greater than the direct activity. This is known as the “multiplier effect.” The model estimates the total level of economic activity (transactions) supported by the base spending and the resulting activity.

Figure 6: Operations Driven and Other Visitor Spending Related Economic Impact (2016)



Sources: SDTEF, Applied Development Economics, IMPLAN, San Diego Tourism Authority, San Diego Zoo Global
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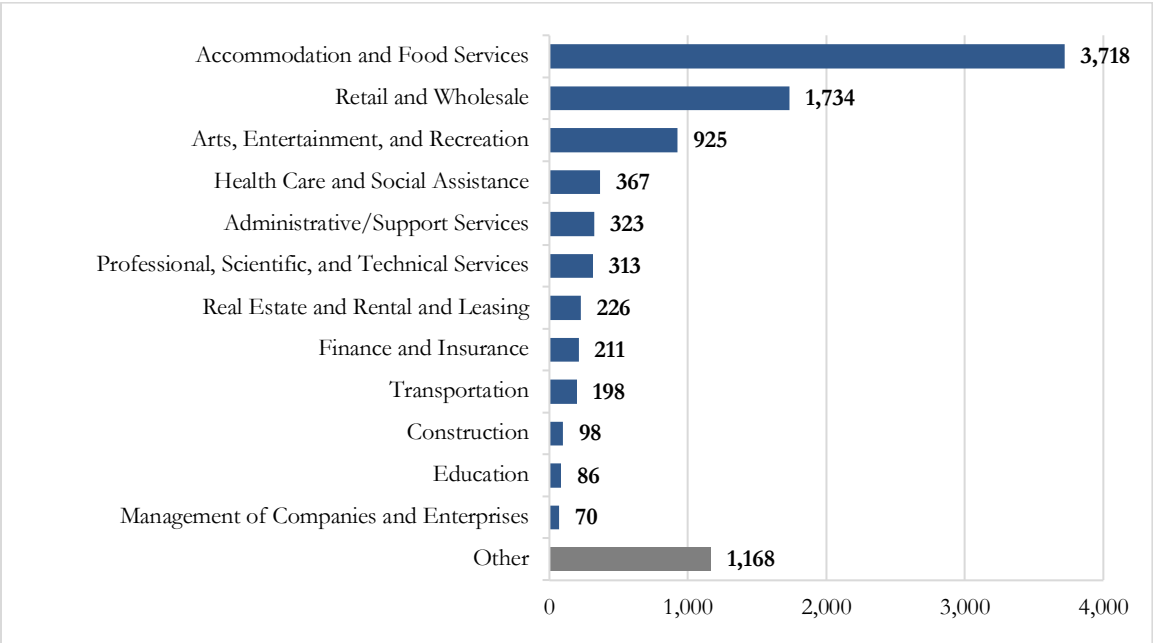


Economic Activity Across Industries

Industry sectors do not operate in a vacuum. A region’s tourism and hospitality sector has strong linkages with key supporting industries. Because industries that support the tourism and hospitality sector do not do so exclusively, they also provide the economic infrastructure to support other sectors. In this way, a growing tourism and hospitality sector facilitates growth across all sectors of the regional economy.

By incorporating data provided by San Diego Zoo Global and IMPLAN, SDTEF identified the links between San Diego’s other economic sectors and the strength of those linkages. The following figure shows the jobs facilitated by San Diego Zoo Global driven tourism and operations by industry including professional services, education, healthcare and several others. Employees of San Diego Zoo Global were removed from the figure below.

Figure 7: Jobs Linked to San Diego Zoo Global by Industry (2016)



Sources: SDTEF, Applied Development Economics, IMPLAN, San Diego Zoo Global
 Note: Figures may not add due to rounding.

Fiscal Impact to State & Local Government

San Diego Zoo Global contributes directly to local and state government through generating sales tax revenues, and by attracting tourists to San Diego that pay Transient Occupancy Taxes (TOT) and Tourism Marketing District (TMD) taxes. In total, San Diego Zoo Global is estimated to increase state and local government revenues \$76.1 million through operations, by attracting visitor spending, and related economic activity.

In 2012, San Diego Zoo Global made on-behalf sales tax payments of \$5.2 million, \$2.7 million of which derived from visitor spending and is consequently a net increase to the region. In addition, San Diego Zoo Global created sales tax revenues off-site totaling \$6.7 million. Including the fiscal impacts associated with employee spending and supplier relationships, San Diego Zoo Global produced a total of \$27.5 million in sales tax revenue through operations, by attracting visitor spending, and related economic activity.

SDTEF estimates \$7.9 million to have been paid in Transient Occupancy Tax and Tourism Marketing District tax as a result of visitor spending by tourists attracted by San Diego Zoo Global's attractions. A total of approximately \$11.1 million dollars of tax revenues attributable to San Diego Zoo Global stayed within the County of San Diego. This does not include property tax revenues that fund local public schools because the additional revenues lower the State's required level of funding.

Figure 8: State and Local Government Tax and Fee Revenue Impact (2016)

	Total	Direct	Indirect/Induced
Sales Tax	\$46,319,000	\$16,880,000	\$29,439,000
Transient Occupancy Tax	\$15,479,000	\$15,479,000	--
Tourism Marketing District Tax	\$2,490,000	\$2,490,000	--
Property Tax	\$24,872,000	--	\$24,872,000
Income Tax	\$14,697,000	--	\$14,697,000
Other Production and Import Taxes and Fees	\$5,203,000	--	\$5,203,000
Corporate Profits Tax	\$2,795,000	--	\$2,795,000
Fees (Including Fines and Vehicle Licensing Fee)	\$2,683,000	--	\$2,683,000
Other State and Local Taxes and Fees	\$1,023,000	--	\$1,023,000
Total	\$115,562,000	\$34,850,000	\$80,712,000

Sources: SDTEF, Applied Development Economics, IMPLAN, San Diego Tourism Authority, San Diego Tourism Marketing District

Note: Figures may not add due to rounding.



Appendix: Methodology

The Region

The region is defined as the County of San Diego. The San Diego Tourism Authority visitor survey defined local as living within the County of San Diego. To use this information, the region was defined as the County of San Diego for all purposes in this study.

A smaller region would have increased the dollars that would have been considered impact as opposed to activity, thus increasing direct impacts; however, this would have been offset, however, to some degree by the lesser multiplier effects that would have been computed as multiplier effects are only computed within the defined region. A larger region would have had the opposite effects.

Economic Impact vs. Economic Activity

True economic impact is the net change in economic activity after acknowledging that spending by local residents would most likely have been used on other local similar goods or services. To acknowledge this reality, this report only presents the spending within the region that originated from outside of the region as economic impact.

Conversely, if we were able to estimate with confidence the spending associated with local residents choosing to go to San Diego Zoo Global over another theme park outside of San Diego, this would be accurately categorized as an economic impact to the region. We did not include such impacts in our analysis.

Measuring economic activity associated with San Diego Zoo Global is also a beneficial exercise. Economic activity refers to all transactions associated with a particular entity or event. The overall economic activity associated with San Diego Zoo Global provides evidence as to the value of San Diego Zoo Global to the San Diego region that a figure estimating only economic impact does not.

For example, when a consumer chooses one good or service over another, we can conclude that the consumer values their chosen transaction more than the alternative. When thousands of San Diegans decide to visit the San Diego Zoo, we can conclude that the San Diego Zoo brings increased entertainment and/or educational value to San Diegans despite that benefit not being reflected within estimates of economic impact. It is for reasons such as this that this report also estimates economic activity, which is inclusive of economic impact.

Direct Impacts

Sources

Data from two primary sources are used in this analysis. The estimated visitor spending is from a survey conducted for the San Diego Tourism Authority by CIC Research. The information regarding operations was provided by San Diego Zoo Global. While the economic activity associated with operations was used in calculations, only the portion estimated to be a result of visitors from outside of the County of San Diego were included as impacts.

Operations Related Impacts

San Diego Zoo Global provided 2016 economic transactions for the Zoo, Safari Park, and three other types of operations. In addition, San Diego Zoo Global provided the percentage of visitors that come from outside of the county for both the Zoo and the Safari Park.

The other types of operations include the “Society,” “Development,” and “Conservation.”

- “Society” includes the corporate departments and cross-departmental collaborative groups. Examples would be Human Resources, Marketing, Finance, Legal, & Information Systems. As these are figures that are part of general operations, impact is calculated as the percentage of operations that serves visitors.
- “Development” is responsible for seeking charitable gifts, grants, and bequests. Sub-departments of Development include Membership & Donor Clubs, Grants (corporate, foundation, and government), Estates & Bequests, and Donor & Fundraising Events. Each of these are categorized as impacts as this money is not local serving.
- Conservation (formally known as San Diego Zoo Institute for Conservation Research) is the research centers. Because research can be performed anywhere, and it is not local serving, it is also considered all impact.

Visitor Spending Survey and Computations

The San Diego Tourism Authority retained CIC Research to perform an intercept survey of visitors to San Diego. The most recent occurrence of this survey was performed in 2015. The survey obtained the level of spending per visitor in several categories. This is the basis of the visitor spending estimates. These survey results were extrapolated by the number of visitors attending the Zoo and Safari Park by the San Diego Tourism Authority and CIC Research to obtain total visitor spending. The San Diego Tourism Authority and CIC Research also presented which areas of the economy received direct impact by presenting a per-visitor breakdown of spending by category separately for both Zoo and Safari Park visitors.

SDCTA performed the following steps for both Zoo and Safari Park visitor spending:

Allocated the total visitor spending by spending category:

The total visitor spending is allocated by spending category based on the distribution reflected in the per-visitor spending breakdown.

Backed out taxes:

The intercept survey results are believed (by the surveyor CIC Research) to include taxes because it is believed that respondents do not remove taxes when they respond to survey questions. Taxes are backed out of each spending category for two reasons: (1) because fiscal impact will be presented separately, and (2) to appropriately work with the IMPLAN model.

CIC Research removed taxes before reporting airport expenditures. Taxes for the other categories were removed by the Taxpayers Association. The tax rate for meals, alcohol, non-food shopping and “other” are set at the standard 8.00 percent for 2015. Taxes did not need to be removed from amusement/attraction or grocery spending as these categories are not subject to sales tax.

The tax rate for lodging was calculated by taking the results of the intercept survey question asking what hotels visitors stayed at and determining the appropriate Transient Occupancy Tax rate and whether the Tourism Marketing District Tax was applicable for each hotel used. An average was calculated and weighted by how many respondents stayed at each hotel.

The 2015 tax rate for transportation (18.9%) was calculated by dividing the total gas taxes paid per gallon in California (\$0.61 as reported by the Tax Foundation) by the average price of gas in California (\$3.22 as reported by the U.S. Energy Information Administration).

Adjusted the figures to estimate 2016 spending:

The most recent visitor spending intercept survey figures available are for 2015; however SDTEF adjusted the San Diego County 2015 local survey figures to reflect the statewide trends in each of the spending categories. This was done by using the following:

A San Diego Tourism Authority’s [San Diego Visitor Industry Summary](#) reported figure that visitor spending in San Diego has increased by 4.8 percent between 2015 and 2016, and

A [California Travel & Tourism Commission report](#) detailing an overall increase in statewide visitor spending of 2.7 percent between 2015 and 2016.

A calculation is made to express the degree to which each category of statewide spending changed from 2015 to 2016 with respect to the total statewide visitor

spending increase for the same period. This is then used to estimate the local changes for each category while remaining consistent with the overall increase in visitor spending specific to San Diego of 4.8 percent as reported by the San Diego Tourism Authority.

Because these figures reflect not only increases in per visitor spending, but also an increase in number of visitors (San Diego Tourism Authority's San Diego Visitor Industry Summary reported the figure 1.9 percent), an additional calculation is performed in order to adjust the per visitor survey figures.

Backed out the portion of this spending that is believed to occur on site at the Zoo and Safari Park:

The survey data includes the spending that occurred onsite at the Zoo and Safari Park. That spending is reflected in the impact estimate derived from the operations information. To avoid double counting, the portion of this spending that is estimated to occur onsite at the Zoo and Safari Park is backed out of this category.

Indirect and Induced Impacts and Activity

As discussed throughout this report, the analysis of the economic impact and economic activity attributable to San Diego Zoo Global includes all spending associated with internal operations as well as associated visitor spending. This is true when considering indirect and induced economic activity, as well as direct economic activity.

Indirect Impacts and Activity

Indirect economic activity (or impact) can be described as additional economic activity due to supplier relationships. For example, when San Diego Zoo Global purchases everything from animal care products and animal feed, to office supplies and outside professional services such as IT support, those expenditures turn into revenue for their suppliers and service providers. These are known as indirect activities and can be estimated using an industry accepted regression-based input-output model such as IMPLAN.

Induced Impacts and Activity

Induced economic activity (or impact) can be described as the additional economic activity due to the expenditures of employees. In 2012, San Diego Zoo Global employed approximately 2,300 full and part-time employees. In take-home pay and benefits, San Diego Zoo Global spent \$117.1 million. While labor costs are accounted for in the direct economic activity, the economic activity associated with them multiply as those employees spend their wages on housing, food, healthcare, and other expenses. These are known as induced activity and can be estimated using an industry accepted regression-based input-output model such as IMPLAN.

The IMPLAN Model

Data provided by San Diego Zoo Global, the San Diego Convention & Visitors Bureau and other sources were incorporated into the direct impact and direct activity analysis. The IMPLAN input-output model, widely used in professional and academic research, is used in estimating the induced and indirect impacts and activity associated with the direct activity.

The IMPLAN input-output model is designed by the Minnesota IMPLAN Group to track how spending flows through a region as well as to allow for customization to a particular region. For use in this analysis, the IMPLAN model has been customized to the County of San Diego. The analysis encompasses San Diego County. The model provides estimates of the total economic impact and activity including direct, indirect, and induced activity based on the activities of a given entity.

The IMPLAN model provides activity estimates at the regional level and adjusts the impact estimates for spending that “leaks” out of the local economy. An illustrative example of a “leak” is the limited oil refining in the San Diego region. The IMPLAN model therefore counts only a small portion of this purchase as contributing to the local economy. In turn, nearly all of these purchases are recognized by the model as an import from outside our region, or a “leak.” When added together, the sum of all the activity from direct, indirect, and induced activity is, by definition, greater than the direct activity. This is known as the “multiplier effect.” The model estimates the total level of economic activity (transactions) supported by the base spending and resulting jobs and economic activity.

The IMPLAN model includes datasets that account for the specific trade flow relationships between different industries within a specified geographic area. In addition, the model includes functions for creating customized industry spending patterns. This allows for economic impact results to more closely match the actual supplier relationships and operational characteristics for a particular business operation. For this analysis, detailed operational data from San Diego Zoo Global was compiled to match the IMPLAN model to the spending patterns for these operations.