SAN DIEGO INTERNATIONAL AIRPORT
ECONOMIC IMPACT STUDY
June 2018

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Introduction
San Diego International Airport is a major transportation focal point for Southern California and the surrounding region. As such, it is one of the region’s largest employers and centers of economic activity. The San Diego International Airport Economic Impact Study, conducted by the San Diego County Regional Airport Authority (SDCRAA), estimates the significant economic impacts of the airport and demonstrates the important role the airport plays in providing and supporting vital air transportation links, economic development, and jobs in the San Diego region.

The airport’s economic impacts can be traced to a wide variety of sources, including businesses and government organizations located on the airport itself, and off-airport parking and air cargo facilities affiliated with the airport. Spending by visitors that arrive in the region via the airport also contributes to the airport’s total economic impact. In addition, on-airport construction projects generate substantial economic impacts.

This study analyzes each of these items in detail to illustrate the important role that San Diego International Airport plays as not just a vital transportation node, but also as a critical economic engine.

Study Background
With a population of 1.4 million people in 2016,¹ the City of San Diego is the second-largest city in California and the eighth-largest city in the United States. San Diego is located within San Diego County, which had a population of 3.3 million residents in 2016.² This ranks the county second-largest in California and fifth-largest in the United States in terms of population. San Diego International Airport is the primary source of air travel for these residents and the region’s businesses. It is also the primary source of air travel for millions of business and leisure visitors who come to “America’s Finest City” each year to conduct business and enjoy this world-class destination’s beaches, parks, cultural experiences, and warm climate. These factors all greatly contribute to San Diego

¹ U.S. Census Bureau
² Ibid.
International Airport’s total economic impact.

The purpose of this study is to analyze, estimate, and highlight the various and significant economic impacts of San Diego International Airport by quantifying employment, payroll, and economic output. The analysis presented in this study considers the annual economic impacts associated with aviation-related businesses and government organizations (tenants) located on the airport, the SDCRAA’s ongoing Capital Improvement Program and construction projects undertaken by other on-airport tenants, the spending of visitors who arrive via commercial airlines and privately-owned general aviation aircraft, and off-airport parking and air cargo operators associated with the airport. It is important to note that this study provides a “snapshot in time” with respect to airport operations and economic activities at San Diego International Airport. The data collection processes, economic modeling, and the state of the economy for this study are all specifically related to 2017.

**Study Findings**

In 2017, San Diego International Airport accommodated more than 22 million passengers and handled more than 209,000 aircraft operations, which were primarily conducted by the air carriers serving the airport. In addition, the airport processed nearly 190,000 tons of freight and mail. The airport’s lone runway supported this considerable level of activity, making San Diego International Airport the busiest single-runway commercial service airport in the United States.

This study found that direct impacts, which are those generated by on-airport tenants such as the passenger airlines and visitor expenditures, produced approximately $6.0 billion in economic output and supported more than 67,200 jobs earning over $2.0 billion in payroll in 2017. Multiplier impacts are generated as the direct on-airport tenant and visitor impacts circulate through the regional economy. The study found that these impacts accounted for more than 49,300 jobs, nearly $1.9 billion in annual payroll, and over $5.7 billion in annual output.

Summing the direct and multiplier impacts yields the total impacts produced by the on-airport tenants and visitor expenditures in 2017. These impacts were as follows:

- Employment – 116,571 jobs,
- Annual Payroll – $3.9 billion, and
- Annual Output – $11.7 billion.

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3 “Air Traffic Report December 2017,” San Diego County Regional Airport Authority.
4 Ibid.
5 [http://www.san.org/Education/History](http://www.san.org/Education/History)
6 The SDCRAA is included with the on-airport tenants. In addition, the direct impacts generated by on-airport construction projects are included in these figures.
Associated off-airport parking and air cargo facilities also contributed significant economic impacts in 2017. Including multiplier impacts, these activities accounted for an estimated 1,400 total jobs, $57.5 million in total annual payroll, and $180.7 million in total annual output.

**Table 1-1** summarizes the 2017 economic impacts of San Diego International Airport. These impacts are the result of the activities of over 140 on-airport tenants, construction projects such as pavement maintenance and terminal improvements, spending by visitors arriving in the region via passenger airlines and general aviation aircraft, associated off-airport air cargo and parking operators, and the multiplier impacts created by the recirculation of the direct impacts through the regional economy. As shown in Table 1-1, when all direct and multiplier impacts for on-airport tenants, visitors, and off-airport parking and air cargo facilities are summed, San Diego International Airport’s total economic impacts on the San Diego region in 2017 were as follows:

- Employment – 117,971 jobs,
- Annual Payroll – $3.9 billion, and
- Annual Output – $11.9 billion.

### Table 1-1

**Total Economic Impacts, San Diego International Airport, 2017**

<table>
<thead>
<tr>
<th></th>
<th>Direct Impacts</th>
<th>Multiplier Impacts</th>
<th>Total Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EMPLOYMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Airport Tenants¹</td>
<td>8,349</td>
<td>10,389</td>
<td>18,738</td>
</tr>
<tr>
<td>Visitors²</td>
<td>58,875</td>
<td>38,958</td>
<td>97,833</td>
</tr>
<tr>
<td>Airport Total</td>
<td>67,224</td>
<td>49,347</td>
<td>116,571</td>
</tr>
<tr>
<td>Off-Airport Parking and Air Cargo Facilities</td>
<td>604</td>
<td>796</td>
<td>1,400</td>
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<tr>
<td>Airport and Off-Airport Facilities Total</td>
<td>67,828</td>
<td>50,143</td>
<td>117,971</td>
</tr>
<tr>
<td><strong>PAYROLL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Airport Tenants¹</td>
<td>$413,010,000</td>
<td>$371,299,000</td>
<td>$784,309,000</td>
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<tr>
<td>Visitors²</td>
<td>$1,603,170,000</td>
<td>$1,483,978,000</td>
<td>$3,087,148,000</td>
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<tr>
<td>Airport Total</td>
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<td>Off-Airport Parking and Air Cargo Facilities</td>
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<td>$29,456,000</td>
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<td>Airport and Off-Airport Facilities Total</td>
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<tr>
<td><strong>OUTPUT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Airport Tenants¹</td>
<td>$1,319,751,000</td>
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<tr>
<td>Visitors²</td>
<td>$4,687,878,000</td>
<td>$4,416,441,000</td>
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<tr>
<td>Airport Total</td>
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<td>$5,706,268,000</td>
<td>$11,713,897,000</td>
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<tr>
<td>Off-Airport Parking and Air Cargo Facilities</td>
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<td>$88,492,000</td>
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</tr>
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<td>$6,099,876,000</td>
<td>$5,794,760,000</td>
<td>$11,894,636,000</td>
</tr>
</tbody>
</table>

¹Includes associated on-airport construction activity.
²Includes commercial service and general aviation visitors.

Source: CDM Smith

The economic impacts presented in Table 1-1 clearly illustrate San Diego International Airport’s crucial role as a major engine of employment and economic activity for the San Diego region. The
airport’s contribution to the regional economy is even more notable when the total employment supported by its activities is compared to the total employment in San Diego County. In 2017, nearly 118,000 residents in the region were employed directly or indirectly due to the activities at San Diego International Airport. This figure represents 5.7 percent of the nearly 2.1 million employed persons in San Diego County in 2017.

Additionally, business and leisure visitors arriving in the region via San Diego International Airport provide a robust contribution to the regional economy. The spending of nearly 6.0 million estimated commercial service and general aviation visitors arriving at the airport in 2017 generated more than 97,800 total jobs earning nearly $3.1 billion in total annual payroll. These visitors also supported over $9.1 billion in total economic output. The 97,800 jobs and $9.1 billion in output represent 83 percent of the total jobs and 77 percent of the total output supported by San Diego International Airport (which includes the off-airport parking and air cargo facilities).

San Diego International Airport’s economic impacts have grown significantly since the last economic impact study was conducted for the airport in 2013. In that study, which followed the same methodology as this analysis, the base year was 2012. The study found that the airport and associated off-airport parking and air cargo facilities supported the following total economic impacts (including direct and multiplier impacts):

- Employment – 89,743 jobs,
- Annual Payroll – $2.7 billion, and
- Annual Output – $9.2 billion.

Since 2012, total employment supported by the airport has increased by 31 percent and total output has grown by 29 percent. The airport’s surge in passengers since 2012 has been the primary cause of this tremendous growth in economic impacts. In 2012, San Diego International Airport accommodated nearly 17.3 million passengers, which grew to almost 22.2 million passengers in 2017.8

**Conclusion**

The *San Diego International Airport Economic Impact Study* highlights San Diego International Airport’s role as far more than a vital transportation resource for the San Diego region. The airport is also a critical catalyst for the regional economy.

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7 “Air Traffic Report December 2012,” San Diego County Regional Airport Authority.
8 “Air Traffic Report December 2017,” San Diego County Regional Airport Authority.
Chapter 1: Study Summary

The analysis conducted for this study estimated that on-airport tenants (along with their construction activity) and visitors arriving at San Diego International Airport supported nearly 116,600 total jobs earning a total annual payroll approaching $3.9 billion. The total annual economic activity (output) generated by on-airport tenants and visitors is estimated at more than $11.7 billion. These total impacts include the multiplier impacts created by the recirculation of the direct impacts within the economy. When associated off-airport parking and air cargo facilities are added to the total impacts supported by on-airport tenants and visitors, the airport’s economic impacts increase to nearly 118,000 total jobs, more than $3.9 billion in total annual payroll, and nearly $11.9 billion in total annual economic activity. Total employment and total output supported by the airport and the associated off-airport parking and air cargo facilities have increased by 31 percent and 29 percent, respectively, since 2012 due primarily to the airport’s strong growth in passengers.
San Diego International Airport is located three miles northwest of downtown San Diego in San Diego County (see Figure 2-1). The airport is owned and operated by the San Diego County Regional Airport Authority, with highway access to the 661-acre site provided by Interstate 5, located less than one to the east, and Interstate 8, located less than two miles to the north. The airport primarily accommodates passenger airline and air cargo operations, but also supports some general aviation and military activity. This chapter provides an overview of San Diego International Airport, including a summary of the airport’s history, identification of major facilities and tenants, and discussion of recent trends in passenger enplanements and aircraft operations.

**Figure 2-1**

San Diego International Airport Location

Source: CDM Smith
Airport History

In 1927, Charles A. Lindbergh piloted his Spirit of St. Louis from San Diego to New York and Paris on the first-ever solo, nonstop transatlantic flight. The next year, San Diego Municipal Airport – Lindbergh Field opened on a 125-acre site with a 2,500-foot long runway and was dedicated in honor of Lindbergh's historic flight. The airport became San Diego International Airport in 1934 following the U.S. Treasury Department's action to declare the airport a permanent international airport of entry.¹

Major improvements were made to the airport’s runways during World War II when the U.S. Army Air Corps assumed ownership of the airport and converted the facility into a modern aviation transportation center. The airport’s current runway was constructed in 1942 as an 8,750-foot “mega-runway,” which enabled the airport to accommodate the World War II-era long-range bombers manufactured in the San Diego region.²

In 1962, ownership and operation of the airport transferred to the San Diego Unified Port District, which focused on transforming the facility into a major commercial service airport. The East Terminal (now Terminal 1) opened in 1967, the West Terminal (now Terminal 2) opened in 1979, the Commuter Terminal opened in 1996, and a 300,000 square-foot expansion of Terminal 2 opened in 1998.³

Ownership and operation of San Diego International Airport changed again in 2003 following the creation of the San Diego County Regional Airport Authority (SDCAA). Since 2003, the SDCAA has continued the work initiated by the San Diego Unified Port District in the 1960s by creating a world-class commercial service airport. In 2013, the SDCAA completed the $1 billion expansion of Terminal 2 West and airport roadway improvements. Known as “The Green Build,” the expansion was the largest capital improvement project in the airport’s history. A new Consolidated Rental Car Center opened on the airport’s north side in 2016. Scheduled to open in 2018 include a new 3,000-space Terminal 2 Parking Plaza and a new international arrivals (Customs) facility.⁴

Airport Facilities

San Diego International Airport has a single runway measuring 9,401 feet in length and 200 feet in width with associated taxiways and aprons. Runway 9/27 is equipped with an instrument landing system (ILS) approach to Runway 9, while Runway 27, which is predominantly used due to the prevailing westerly winds, is equipped with both localizer and GPS approaches with vertical guidance. An airport traffic control tower (ATCT) staffed by the Federal Aviation Administration

¹ [http://www.san.org/Education/History](http://www.san.org/Education/History)
² Ibid.
³ Ibid.
⁴ [http://events.san.org/90-years-of-go/](http://events.san.org/90-years-of-go/)
(FAA) operates on a 24-hour basis and directs arrivals, departures, and ground movements at the airport.

The airport is comprised of two passenger terminals: Terminal 1 and Terminal 2. Terminal 1, located east of Terminal 2, has an east wing and a west wing. Alaska Airlines and Frontier Airlines are located in the west wing, while Southwest Airlines operates out of the east wing. Terminal 2 is similarly subdivided into Terminal 2 West and Terminal 2 East. Airlines serving Terminal 2 West include Air Canada, Delta Air Lines, Edelweiss Air, Hawaiian Airlines, JetBlue Airways, Lufthansa, Spirit Airlines, Sun Country Airlines, and United Airlines. Allegiant Air, American Airlines, British Airways, Japan Airlines, and WestJet Airlines operate out of Terminal 2 East.

In 2015, the SDCRAA completed its Concession Development Program (CDP), which completely transformed the shopping and dining opportunities located at the airport. The CDP increased the number of concessions options in the terminals from 55 to 84 and focused on incorporating several outposts of San Diego’s favorite shops and restaurants, such as Banker’s Hill Bar & Restaurant and Jack-in-the-Box in Terminal 1, and Phil’s B.B.Q., Prado at the Airport, Saffron Thai, Stone Brewing, and Warwick’s of La Jolla in Terminal 2.

A third passenger terminal, the Commuter Terminal, existed up until June 2015, at which point the airport’s commuter flights, most of which provided service to Los Angeles International Airport, were relocated to Terminals 1 and 2. The SDCRAA’s administrative offices now occupy the Commuter Terminal.

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5 Lufthansa did not operate at San Diego International Airport until 2018.
6 https://sanmap.san.org/Html5Viewer/Index.html?viewer=sanmap
7 http://www.san.org/News/Article-Detail/ArtMID/952/ArticleID/78/San-Diego-International-Airport-Wins-%E2%80%9CBest-Overall-Concessions-Program%E2%80%9D-at-the-Airport-Revenue-News-Awards
Other major facilities at San Diego International Airport include the Consolidated Rental Car Center and Signature Flight Support’s fixed-base operator (FBO) building. The Consolidated Rental Car Center opened in 2016 on the airport’s north side, combining the operations of most of the rental car companies serving the airport into one facility. The two million-square-foot building includes a customer service area, maintenance, fueling and washing, and a 5,400-car ready/return area. Passengers are transported to and from the terminals on an interior airport roadway using shuttles operated by the SDCRAA. Prior to its construction, the major rental car companies operated out of separate, off-airport facilities on the south side of North Harbor Drive and used their own shuttles to transport passengers. Signature Flight Support (previously Landmark Aviation) opened its new FBO on the airport’s north side in 2014. The facility features a 19,000-square-foot terminal, a 250,000-square-foot ramp, and five hangars on 12.4 acres.

**Major Airport Tenants**

San Diego International Airport was home to more than 140 aviation-related tenants in 2017, the base year of this study. These tenants included passenger and cargo airlines, airline support services providers (e.g., ground handling, cargo handling, in-flight catering, and security), general aviation aircraft services providers, concessionaires, corporate flight departments, and government agencies. The airport’s major tenants are discussed in this section.

**Passenger Airlines**

In 2017, twenty-one passenger airlines served San Diego International Airport. These airlines included:

- Air Canada
- Alaska Airlines
- Allegiant Air
- American Airlines
- British Airways
- Compass Airlines
- Condor Airlines
- Delta Air Lines
- Edelweiss Air
- Frontier Airlines
- Hawaiian Airlines
- Horizon Air
- Japan Airlines
- JetBlue Airways
- Skywest Airlines
- Southwest Airlines
- Spirit Airlines
- Sun Country Airlines
- United Airlines
- Virgin America
- WestJet

**Figure 2-2** shows enplanement market share at San Diego International Airport for the fiscal year ending June 30, 2017. As shown in Figure 2-2, Southwest Airlines (37.4 percent) had the largest

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9 [http://www.san.org/News/Article-Detail/ArtMID/952/ArticleID/107/New-Rental-Car-Center-Opens-on-San-Diego-International-Airport%E2%80%99s-North-Side](http://www.san.org/News/Article-Detail/ArtMID/952/ArticleID/107/New-Rental-Car-Center-Opens-on-San-Diego-International-Airport%E2%80%99s-North-Side)


11 [http://www.san.org/News/Article-Detail/ArtMID/952/ArticleID/107/New-Rental-Car-Center-Opens-on-San-Diego-International-Airport%E2%80%99s-North-Side](http://www.san.org/News/Article-Detail/ArtMID/952/ArticleID/107/New-Rental-Car-Center-Opens-on-San-Diego-International-Airport%E2%80%99s-North-Side)

12 [http://www.san.org/Airport-Projects/North-Side-Improvements](http://www.san.org/Airport-Projects/North-Side-Improvements)

13 Condor began serving San Diego International Airport in May 2017 and ended operations at the airport in October 2017.

14 Virgin America was acquired by Alaska Air Group in 2016 and ceased operations under the Virgin America brand in April 2018.
market share at the airport by a wide margin. American Airlines (12.6 percent), United Airlines (11.9 percent), and Delta Air Lines (10.3 percent) followed with the next largest market shares.\footnote{Comprehensive Annual Financial Report – Fiscal Year Ended June 30, 2017, San Diego County Regional Airport Authority}

**Figure 2-2**

Enplanement Market Share for the Fiscal Year Ending June 30, 2017
San Diego International Airport

Terminal Concessionaires
Numerous airport tenants provide food, beverage, retail, and other services to passengers in the airport’s terminals. Concessionaires providing food and beverage services are the largest among these tenants, employing hundreds of workers to support the needs of thousands of passengers each day. The three largest food and beverage concessionaires at San Diego International Airport in 2017 in terms of employment were HMSHost, High Flying Foods San Diego, and SSP America. Examples of establishments operated by these tenants in the airport’s terminals include Bubbles Seafood & Wine Bar, PGA Tour Grill, and Tommy V’s Pizzeria (HMSHost); Artisan Market,

\footnote{Comprehensive Annual Financial Report – Fiscal Year Ended June 30, 2017, San Diego County Regional Airport Authority}
Saffron Thai, and Stone Brewing Co. (High Flying Foods San Diego); and Urban Crave, Prado at the Airport, and Pacifica Breeze Cafe (SSP America).

**Transportation Security Administration**

The Transportation Security Administration (TSA) plays a critical role at commercial service airports throughout the United States, providing passenger screening and security services to ensure the freedom of movement for people and commerce. At San Diego International Airport, millions of passengers are screened prior to boarding their flights in the secure area of the terminals each year. The TSA keeps a large presence at the airport to effectively and efficiently maintain the security of the traveling public.

**Rental Car Agencies**

The San Diego region is a popular tourist destination and major conference, trade show, and convention site. Many visitors arriving at San Diego International Airport require rental cars during their stay in the San Diego area to conduct business or enjoy the wide variety of world-class attractions and activities. To support the ground transportation needs of visitors arriving at the airport, a host of rental car agencies are located on- and off-airport. The largest rental car agencies are located on-airport at the airport’s new Consolidated Rental Car Center and include Avis Budget Group (Avis Rent a Car, Budget Rent a Car, and ZipCar), Enterprise Holdings (Enterprise Rent-A-Car, National Car Rental, and Alamo Rent a Car), and Hertz Corporation (Hertz Rent a Car, Dollar Rent a Car, Thrifty Car Rental, and Firefly Car Rental).

**Cargo Airlines**

In addition to transporting passengers, San Diego International Airport handles a significant amount of air cargo, which is transported by the cargo and passenger airlines serving the airport. Nearly 190,000 tons of freight and mail were processed at the airport in 2017. According to data from Airports Council International-North America, San Diego International Airport ranked 31st among U.S. airports in terms of total cargo handled in 2016. Cargo airlines based at the airport in 2017 included DHL Air, Federal Express (FedEx), United Parcel Service (UPS), and West Air. Of these airlines, FedEx had the largest market share at the airport for the fiscal year ending June 30, 2017. FedEx operates routes from San Diego International Airport to their global hub in Memphis, Tennessee, as well as routes to their national hub in Indianapolis, Indiana and regional hub in Oakland, California.

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16 [http://www.aci-na.org/content/airport-traffic-reports](http://www.aci-na.org/content/airport-traffic-reports)
17 West Air provides turboprop feeder service for FedEx utilizing a Cessna 208 Caravan from San Diego International Airport to Imperial County Airport in Imperial, California.
Airline Support Services Providers
San Diego International Airport is a major commercial service airport accommodating millions of passengers and thousands of tons of cargo and mail each year. To support this activity, a multitude of tenants provide services to the passenger and cargo airlines, including aircraft fueling, ground handling, cargo/mail handling and screening, aircraft cleaning (interior and exterior), in-flight catering, aircraft maintenance, ground service equipment maintenance, passenger services (baggage, check-in, porter, skycap, and wheelchair), aircraft security, and passenger security. Examples of some of the larger tenants providing these services in 2017 included DAL Global Services, G2 Secure Staff, GAT Airline Ground Support, Gate Gourmet, Primeflight Aviation Services, SAS Services Group, and Worldwide Flight Services.

Signature Flight Support
As explained above, Signature Flight Support is the FBO serving San Diego International Airport’s general aviation activity. Occupying a new 19,000-square-foot terminal building situated on 12.4 acres on the north side of the airport, Signature Flight Support provides a full range of services such as fueling, customs and immigration clearance, agricultural clearance, long term aircraft parking, catering, courtesy cars, sports charter handling, aircraft maintenance, weather planning service, and concierge services. Amenities include a snooze room, VIP lounge, fitness center, office space, viewing deck, executive conference room, and a café.19 Amenities include a snooze room, VIP lounge, fitness center, office space, viewing deck, executive conference room, and a café. 20

19 http://www.signatureflight.com/locations/san
Figure 2-3 identifies the locations of select major tenants at San Diego International Airport.

**Figure 2-3**
Major Tenants at San Diego International Airport, 2017

Source: San Diego County Regional Airport Authority and CDM Smith

**Airport Activity**

After Los Angeles International Airport and San Francisco International Airport, San Diego International Airport is the third-busiest airport in California by passenger enplanements and the 27th-busiest in the U.S., based on data for 2016 from the Federal Aviation Administration.21 Annual enplanement data for the 2008 to 2017-time period are shown in Figure 2-4. As seen in Figure 2-4, annual enplanements have grown from nearly 9.4 million in 2008 to nearly 10.6 million in 2017, an increase of almost 13 percent. The strongest growth occurred between 2014 and 2015, when enplanements climbed by nearly seven percent.

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In terms of aircraft operations, San Diego International Airport is the busiest single-runway commercial service airport in the U.S. Figure 2-5 shows the total annual aircraft operations at the airport from 2008 to 2017. As can be seen, operations dropped from a high of more than 226,100 in 2008 to 2011 due to the downturn in the global economy. Operations have rebounded since 2011, however, as the global economy has improved. In 2017, the airport supported more than 209,400 operations, with the vast majority conducted by the air carriers.

Figure 2-5
Annual Aircraft Operations at San Diego International Airport, 2008-2017

Source: San Diego County Regional Airport Authority

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http://www.san.org/Education/History
Summary
San Diego International Airport is the busiest single-runway commercial service airport in the United States and a crucial part of the transportation network of Southern California and the San Diego region. It is owned and operated by SDCRAA. The airport was founded as San Diego Municipal Airport – Lindbergh Field in 1928 and was renamed in 1934. The airport’s current, single runway was constructed in 1942 during World War II as an 8,750-foot runway and has since been extended to 9,401 feet in length. Operations at the airport are supported by an ILS, localizer, GPS approaches with vertical guidance, and an FAA-operated ATCT.

The airport was served by 21 passenger airlines, including domestic and international carriers. Like many airports, San Diego International Airport saw a decrease in enplanements and operations during the recession of 2008 to 2010 but has since seen its activity increase dramatically. Annual enplaned passengers have increased from approximately 8.6 million in 2010 to 11.1 million in 2017. With over 37 percent of the airport’s total passenger enplanements in 2017, Southwest Airlines is the busiest air carrier at San Diego International Airport. Total aircraft operations have also increased over this period, albeit at a lower rate than enplanements.

The airport’s commercial service operations are supported by two passenger terminals that include numerous food, beverage, and retail concessionaires as well as other businesses supporting the needs of passengers. Rental car services were recently relocated to the airport’s Consolidated Rental Car Center, which houses Avis Budget Group, Enterprise Holdings, Hertz Corporation, and other rental car agencies. In addition to the airport’s scheduled passenger service, several companies operate air cargo operations at San Diego International Airport, including FedEx, UPS, DHL Air, and West Air. General aviation operations at the airport are supported by the airport’s FBO, Signature Flight Support, and its 19,000-square foot terminal building.

Commercial passenger, cargo, and general aviation, are all supported by companies providing various services such as fueling, ground handling, aircraft maintenance, cargo/mail handling, in-flight catering, passenger security screening, and many more. As subsequent chapters will illustrate, all the above activities contribute greatly to the total economic impact of San Diego International Airport.
Market Area Overview

An airport’s market or catchment area is the region from which the airport attracts the population that uses its aviation-related services. San Diego International Airport’s market area is divided into two levels: the primary and secondary market areas. The primary market area, which is the focus of this study, is where the majority of the population using the airport is located. Additional users are located within the secondary market area. While a significant portion of San Diego International Airport’s air traffic is generated by tourism, a larger percentage is driven by the San Diego region’s residents and businesses. Typically, as population, employment, and income levels rise in the region, demand for air carrier, air cargo, and other aviation-related services also rises.

The following sections define the boundaries of San Diego International Airport’s primary and secondary market areas and examine the primary market area’s socioeconomic trends from 2010 through 2025. This information helps to highlight the primary market area’s strong demand for air travel, which generates the economic impacts measured in this study.
Chapter 3: Market Area Overview

**Primary Market Area**
San Diego County is the primary market area for San Diego International Airport and is the location where the majority of the airport’s economic impacts occur. San Diego County is the fifth largest county in the United States and the second largest in California.\(^1\)\(^2\) Located within San Diego County, the City of San Diego ranks as the second largest city in California and the eighth largest city in the United States.\(^3\) Figure 3-1 shows the primary market area.

![Figure 3-1 Primary and Secondary Market Areas for San Diego International Airport](image)

Source: CDM Smith

**Secondary Market Area**
Imperial, Orange, and Riverside Counties, as well as Tijuana, Mexico constitute San Diego International Airport’s secondary market area. This area stretches across the United States-Mexico border and extends northward toward Los Angeles and eastward toward the Arizona border. Airport users in the secondary market area are partially drawn to San Diego International Airport because of low-cost carriers (LCCs) such as Allegiant Air, Frontier Airlines, JetBlue Airways, Southwest Airlines, Spirit Airlines, and Sun Country Airlines maintaining a strong presence at the airport, attracting more cost-conscious travelers. Users in the secondary market area also choose the airport due to factors such as its closer distance compared to other competing airports and

\(^1\) [dof.ca.gov/Forecasting/Demographics/Estimates/E-1/](dof.ca.gov/Forecasting/Demographics/Estimates/E-1/)
\(^2\) [sandiego.org/about.aspx](sandiego.org/about.aspx)
\(^3\) [https://www.sandiego.org/articles/about-san-diego-ca.aspx](https://www.sandiego.org/articles/about-san-diego-ca.aspx)
flight options (e.g., direct flights, destination, and schedule). The secondary market area is shown in Figure 3-1 along with the primary market area.

**Socioeconomic Overview of San Diego County**

As explained above, San Diego County, which comprises San Diego International Airport’s primary market area, is the focus of this study. To better understand how San Diego County’s economy has functioned in the past and is expected to perform in the future, this section examines the county’s socioeconomic trends and forecasts for the period 2010 to 2025. Since 2010, San Diego County has seen growth in all three facets of the economy that are examined: population, employment, and per capita personal income.

**Population Trends**

Changes in San Diego County's population directly impact San Diego International Airport's economic impact due to corresponding changes in demand for aviation services. Data from the U.S. Census Bureau indicates that San Diego County’s population has grown since 2010. In 2017, the estimated population of the county exceeded 3.3 million people, an increase of nearly 242,400 residents.4 San Diego County’s population growth rate during the 2010 to 2017 period exceeded the growth rate of California and the United States, growing at a compound annual growth rate (CAGR) of 1.1 percent compared to 0.9 percent on the state level and 0.8 percent nationally.

By 2025, San Diego County is anticipated to have a population exceeding 3.7 million people.5 Forecasts indicate that San Diego County will continue to outpace the growth of California and the United States from 2017 to 2025, with the county anticipating 1.3 percent annual growth compared to 1.1 percent and 1.0 percent annual growth for California and the United States, respectively. Historic and projected population growth for San Diego County are graphically depicted in Figure 3-2.

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4 U.S. Census Bureau  
5 Woods and Poole Economics, Inc., 2017 Complete Economic and Demographic Data Source (CEDDS)

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**Figure 3-2**
San Diego County Socioeconomic Trends, 2010-2025
**Employment Trends**
San Diego County employment grew to nearly 2.1 million workers in 2016, up from 1.8 million workers in 2010, according to the U.S. Bureau of Economic Analysis (BEA). This increase of nearly 274,000 employees represents a CAGR of 2.4 percent, and indicates an expanding economy following the economic downturn of 2009. Statewide and nationally, employment grew at CAGRs of 2.9 percent and 1.9 percent, respectively. Moving forward, employment growth is expected to continue, although at a slower pace, with total employment projected to approach 2.4 million by 2025, which reflects a CAGR of 1.4 percent. This pace is slightly above the 1.3 percent growth rate forecast for California and the United States during the same period. Figure 3-2 shows the employment growth trend for the county for the 2010 to 2025 period.

San Diego County has a diverse economy, as evidenced by total employment exceeding 100,000 workers in ten different industries in 2016 (see Table 3-1). The government sector has historically been a significant employer, and remains so, with more than 341,000 workers. Within the government sector, the military is especially important to the county's economy. According to a recent economic impact study of the military's presence in San Diego, the region is home to the largest concentration of military in the world, with San Diego County employing approximately 140,000 members of the Navy, Marine Corps, Reserves, Coast Guard and civilians who work for the Department of Defense, Department of Homeland Security, or Department of Veterans Affairs. Other major employers in San Diego County include the University of California at San Diego, Sharp Health Care, Scripps Health, and Qualcomm Inc, all of which employed more than 10,000 workers in 2016.

Recent employment growth in the region has centered on education, health care, and leisure and hospitality. Continued growth in healthcare is expected with additional growth anticipated in other key sectors such as life sciences, clean energy, information and communication technologies, and advanced manufacturing.

**Per Capita Personal Income Trends**
The purchasing power of San Diego County's residents can be measured in terms of per capita personal income. As residents' incomes rise, it can be assumed that consumption of goods and

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6 2016 is the most recent year of employment data available at the county level from the BEA.
7 Woods and Poole Economics, Inc., 2017 Complete Economic and Demographic Data Source (CEDDS)
services, including aviation-related services at San Diego International Airport, increases. In 2016, per capita personal income in San Diego County stood at $55,168, up from $43,995 in 2010, according to data from the BEA. This growth occurred at a CAGR of 3.8 percent. For comparison, per capita personal income grew from $43,323 in 2010 to $56,308 in 2016 at a CAGR of 4.5 percent in California and from $40,278 to $49,204 at a CAGR of 3.4 percent in the United States. The county’s high per capita personal income relative to the United States is influenced by the San Diego region’s highly educated workforce. In a recent study conducted by ValuePenguin, an online source for information and tools to help consumers make spending decisions, the San Diego-Carlsbad Metropolitan Statistical Area (MSA) ranked 17th on the study’s list of the 200 most educated cities in the United States in 2016 based on attainment, education and poverty, school quality, and education and employment.

### Table 3-1
San Diego County Employment by Industry, 2016

<table>
<thead>
<tr>
<th>Industry</th>
<th>Employment</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>341,322</td>
<td>16.4%</td>
</tr>
<tr>
<td>State and Local</td>
<td>193,709</td>
<td>9.3%</td>
</tr>
<tr>
<td>Military</td>
<td>100,239</td>
<td>4.8%</td>
</tr>
<tr>
<td>Federal Civilian</td>
<td>47,374</td>
<td>2.3%</td>
</tr>
<tr>
<td>Professional, Scientific, and Technical Services</td>
<td>211,165</td>
<td>10.2%</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>198,903</td>
<td>9.6%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>185,053</td>
<td>8.9%</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>174,315</td>
<td>8.4%</td>
</tr>
<tr>
<td>Other Services</td>
<td>127,512</td>
<td>6.1%</td>
</tr>
<tr>
<td>Administrative and Waste Management Services</td>
<td>126,993</td>
<td>6.1%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>117,174</td>
<td>5.6%</td>
</tr>
<tr>
<td>Real Estate and Rental and Leasing</td>
<td>109,955</td>
<td>5.3%</td>
</tr>
<tr>
<td>Construction</td>
<td>103,712</td>
<td>5.0%</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>89,470</td>
<td>4.3%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>62,595</td>
<td>3.0%</td>
</tr>
<tr>
<td>Arts, Entertainment, and Recreation</td>
<td>53,601</td>
<td>2.6%</td>
</tr>
<tr>
<td>Educational Services</td>
<td>49,962</td>
<td>2.4%</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>49,723</td>
<td>2.4%</td>
</tr>
<tr>
<td>Information</td>
<td>30,105</td>
<td>1.4%</td>
</tr>
<tr>
<td>Management of Companies and Enterprises</td>
<td>23,915</td>
<td>1.2%</td>
</tr>
<tr>
<td>Farming</td>
<td>11,468</td>
<td>0.6%</td>
</tr>
<tr>
<td>Utilities</td>
<td>5,785</td>
<td>0.3%</td>
</tr>
<tr>
<td>Forestry, Fishing, and Related Activities</td>
<td>2,476</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,079,124</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Source: U.S. Bureau of Economic Analysis

By 2025, per capita personal income in San Diego County is projected to rise to $74,620. The county’s growth during the 2016 to 2025 period is projected to occur at a pace similar to income increases forecast for California (3.3 percent) and the United States (3.7 percent). Like population and employment trends, per capita personal income trends for the 2010 to 2025 period are illustrated in Figure 3-2.

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11 2016 is the most recent year of per capita personal income data available at the county level from the BEA.
13 Woods and Poole Economics, Inc., 2017 Complete Economic and Demographic Data Source (CEDDS)
Summary
The majority of the population using the aviation-related services provided at San Diego International Airport are located in San Diego County, which comprises the airport’s primary market area. Additional users of the airport are located in the secondary market area, which consists of Imperial, Orange, and Riverside Counties, as well as Tijuana, Mexico. Users in the secondary market area are drawn to the airport due to the presence of numerous LCCs, as well as other factors, such as airport distance and flight options.

The socioeconomic trends identified in this chapter focused on San Diego County, since it is the location where the majority of San Diego International Airport’s economic impacts occur. Since 2010, San Diego County has seen strong growth in key economic indicators. The county’s population growth has outpaced the growth observed statewide and nationally. Employment and per capita personal income growth have trailed behind California but have stayed ahead of the United States. Forecasts of these indicators show continued growth for the county. The county’s population growth rate is projected to increase through 2025, while employment and per capita personal income growth will occur at a slower pace. With all three economic indicators showing continued growth through 2025, the demand for aviation-related services at San Diego International Airport will continue to increase, and an associated increase in the airport’s economic impacts can be expected.
Study Approach

Introduction
This study followed the Federal Aviation Administration’s (FAA) approved methodology for conducting airport economic impact studies. This chapter explains the data collection and modeling process used to estimate the economic impacts for San Diego International Airport. The total economic impacts of the airport are quantified in terms of employment, payroll, and output. Output represents total spending or economic activity and accounts for the total value of aviation-related activities supported by the airport. Employment, payroll, and output were estimated for the following three aviation-related groups:

- **On-Airport Tenants** – On-airport tenants include businesses such as airlines, terminal concessionaires, rental car agencies, and ground handlers, and government organizations such as the San Diego County Regional Airport Authority (SDCRAA) and Transportation Security Administration (TSA). Included in this group are the on-airport construction projects undertaken by these tenants.

- **Visitors** – San Diego International Airport has two categories of users: residents of the San Diego region and visitors to the San Diego region arriving on passenger airlines and general aviation aircraft. The focus of this study is the visitors to the San Diego region.

- **Off-Airport Parking and Air Cargo Facilities** – San Diego International Airport has several airport-associated air cargo and automobile parking facilities located off airport property. The economic impacts of these facilities are directly tied to the airport.

Included in this chapter are example calculations that illustrate how certain estimates were derived.

The Economic Modeling Process
The economic impacts for San Diego International Airport were estimated using an input-output model. The input-output model expresses the airport’s contribution to the economy in terms of the following three types of impacts:

- **Direct Impacts** – Direct impacts account for the initial point where expenditures generated by aviation-related activities enter the economy. These expenditures are produced by businesses such as terminal concessionaires, passenger airlines, rental car companies, and in-flight catering operators and government entities such as the SDCRAA and FAA that are located on the airport itself. Capital expenditures of these businesses and government entities are also considered direct impacts. Visitors arriving at the airport on passenger airlines and general
aviation aircraft contribute to direct impacts through their off-airport spending, which typically includes expenditures for food and beverage, lodging, ground transportation, retail purchases, and entertainment. At San Diego International Airport, direct impacts also produced by the spending at off-airport parking and air cargo facilities associated with the airport.

- **Multiplier Impacts** – Multiplier impacts result from the recirculation and re-spending of direct impacts within the economy. This re-spending of money can occur multiple times and takes two forms: indirect and induced. Indirect expenditures are the spending by on-airport tenants and off-airport parking and air cargo facilities for goods and services. For example, when a terminal concessionaire purchases food from a supplier, this expenditure circulates through the regional economy. Induced expenditures stem from aviation-related employees spending their earnings on goods and services in the San Diego region. For example, as airport employees spend their salary for housing, food, and services, those expenditures also circulate through the economy resulting in increased spending, payroll, and employment throughout the region. This “ripple effect” of expenditures is illustrated in Figure 4-1. As this money is spent several times, it eventually leaks beyond the region’s boundaries where it no longer benefits the region’s residents. The economic model uses parameters specific to California to estimate the leakage effect associated with the multiplier impacts. Multiplier impacts are the output of the economic model.

![Figure 4-1
Ripple Effect Associated with Induced Impacts](source: CDM Smith)

- **Total Impacts** – Total impacts are the sum of all direct (on-airport tenants, visitor spending, and off-airport parking and air cargo facilities) and multiplier (indirect and induced) economic activities attributable to San Diego International Airport.

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1 Any on-airport spending by visitors is included with the expenditures generated by on-airport businesses.
Direct impacts are measured through surveys of businesses, government organizations, and visitors. Because multiplier impacts are not as easy to measure as direct impacts, it is important to employ a reliable method of estimating multiplier impacts. A leading method used to estimate multiplier impacts is the input-output model.

The Impact Analysis for Planning (IMPLAN) input-output model was used to quantify multiplier impacts in this study. IMPLAN is a linear model that estimates purchases and sales between various sectors of the economy and is considered one of the leading methods available for estimating the total economic impact of a given industry (in this study, that industry is aviation).

The IMPLAN model contains a large economic database that is used to generate input-output tables. IMPLAN multipliers and data tables specific to California’s industrial sectors were used in this study. The IMPLAN input-output model used for this analysis requires direct impact estimates for three separate measures of the economy. These measures of economic impact are:

- **Employment** – Employment is based on the total number of full-time equivalent (FTE) jobs. In this analysis, two part-time positions are equal to one full-time job.
- **Payroll** – Payroll includes the salaries, wages, and benefits paid to all employees.
- **Economic Output (Spending)** – Output for on- and off-airport aviation-related entities is typically assumed to be the sum of annual gross sales and average annual capital expenditures. While this assumption works well for profit-oriented organizations, it must be modified for those that do not generate sales, such as government agencies. To estimate the impact of these important activities, output is assumed to be the sum of payroll, operating expenditures, and average annual construction expenditures. It should be noted that although airlines generate sales, ticket revenue is usually transferred outside the area being modeled. This makes it difficult to assign that revenue to a specific airport, so output for airlines is also assumed to be the sum of payroll, operating expenditures, and average annual construction expenditures. For visitors using an airport, output is assumed to equal visitor spending.

Note that payroll and economic output cannot be directly combined because some elements related to payroll are also contained in the output estimate. Each of the three impact components (employment, payroll, and economic output) stands alone as a measure of San Diego International Airport’s total economic impact.

**Data Requirements and Collection Methods**

A large data collection effort was undertaken to gather information related to economic activity occurring at San Diego International Airport. The data collected during this phase of the study served as inputs to the modeling process to identify total economic impacts. Direct impact data was collected for three aviation-related groups: on-airport tenants and associated construction activity, visitors, and off-airport parking and air cargo facilities. These aviation-related groups and the methods used to collect direct impact data for them are explained in the following sections.
On-Airport Tenants

On-airport tenants are the aviation-related businesses at San Diego International Airport such as the passenger airlines, air cargo operators, ground handling companies, aircraft maintenance providers, rental car companies, and terminal concessionaires as well as government agencies such as the SDCRAA, the FAA, and the TSA. SDCRAA staff provided contact information for each airport tenant at San Diego International Airport. All airport tenants having aviation-related employees on the airport during 2017 were contacted to collect information regarding their economic activity. An Airport Tenant Survey was provided to each aviation-related tenant and follow-ups were made to obtain responses and to verify information on returned surveys. The Airport Tenant Survey requested the following information from tenants regarding their activity at San Diego International Airport only:

- Type of aviation activity conducted by the tenant,
- Number of full-time and part-time employees in 2017,
- Estimated total annual payroll (salary, wages, and benefits) paid to employees in 2017,
- Estimated total construction expenditures for 2015, 2016, and 2017 (allows for the estimate of average annual construction expenditures),
- Estimated total operating expenses (excluding payroll and construction expenditures) for 2017, and
- Estimated total gross sales (where applicable) for 2017.2

To aid in the economic modeling process, airport tenants were grouped into 16 categories. These categories consisted of the following:

- Air cargo
- Air charter
- Airline support
- Airlines
- Aircraft maintenance
- Airport management
- Air traffic control
- Corporate flight departments
- Fixed-base operators (FBOs)
- Federal government (not including the TSA)
- Local government
- Non-profit
- Parking
- Rental car companies
- Terminal concessionaires
- TSA

A high survey response rate was crucial to the economic modeling process. When necessary, follow-up calls were made to non-responding businesses and entities to collect the highest response rate.

2 The SDCRAA provided gross sales data for many of the airport’s tenants, including terminal concessionaires, rental car agencies, and airline support services providers. The Airport Tenant Survey was used to collect gross sales data for tenants where SDCRAA data was not available.
and most accurate data possible, particularly for estimates of on-airport employment. Airport employee security badge data provided by the SDCRAA filled in gaps for tenants that did not provide employment data. If a tenant did not provide complete data on payroll, expenses, and gross sales, estimates were made using ratios of payroll, expenses, and gross sales per employee. In some cases, these ratios were developed from survey data obtained from those tenants who did respond to the survey. For those categories of tenants that did not have sufficient San Diego-specific data to provide reliable averages, additional data was used from CDM Smith’s in-house database compiled from airport economic impact studies conducted throughout the United States.

To estimate multiplier impacts, airport tenant categories were consolidated into three groups based on the nature of their activity: aviation, concession, and government. This facilitated subsequent modeling using IMPLAN multipliers. For this analysis, a set of aviation multipliers was used for tenants such as air cargo operators, airline support providers, airlines, and corporate flight departments. Terminal concessionaires, rental car agencies, and parking tenants used a set of concession multipliers to estimate multiplier impacts. Government-related entities such as the SDCRAA and TSA received their own set of multipliers for estimating impacts. Impacts stemming from construction projects were broken out from each tenant, so a set of construction-related multipliers could be applied to direct construction impacts.

**On-Airport Tenant Construction Activity**
The SDCRAA develops a Capital Improvement Program annually for San Diego International Airport, which includes projects such as pavement rehabilitation, security enhancements, and terminal improvements. One major construction project currently underway at the airport is the new three-story Parking Plaza, which will provide approximately 3,000 parking spaces in front of Terminal 2. The Parking Plaza will open in the summer of 2018 after 20 months of construction.³ Other businesses and government organizations located on the airport also undertake construction projects. These projects all employ construction workers, architects, engineers, and consultants, adding to the economic impact of the airport. The following methodology was used to estimate these economic impacts:

- Construction expenditure data for each year from 2015 through 2017 was gathered from the SDCRAA and on-airport tenants.
- An average construction expenditure over this period was calculated to avoid peaks or troughs in construction activity and estimate a more accurate profile of construction impacts.

³ [http://www.san.org/Airport-Projects/Parking-Plaza](http://www.san.org/Airport-Projects/Parking-Plaza)
• The IMPLAN model indicates that every $1 million spent annually on construction activity supports approximately 8.2 construction-related jobs in California. These jobs include construction workers, equipment operators, foremen, engineers, architects, consultants, and managers.

• The average annual salary for the construction sector in the San Diego region ($43,900) was obtained from the Bureau of Labor Statistics (BLS) and applied to the estimate of employment to calculate the payroll impacts for construction-related workers.

**Visitors**
This group includes estimated non-local passengers (visitors) arriving at San Diego International Airport via the passenger airlines. As explained in Chapter 2, the airport was served by 21 passenger airlines in 2017, which bring visitors to the San Diego region from all over the country and the world to conduct business and enjoy the region’s world-class attractions, cultural events, fine dining, miles of beaches, and year-round beautiful weather. Spending by these visitors at local businesses such as hotels, restaurants, and retail establishments significantly adds to the economic impact of the airport.

Estimating the economic impact generated by visitors required several types of data. Enplanement data for the airport for 2017 and U.S. Department of Transportation (US DOT) Origin and Destination Survey data identifying the percentage of enplaning passengers who are visitors to the San Diego region were obtained from the SDCRAA. Data from the San Diego Tourism Authority was used to estimate average visitor spending. The percentage of visiting passengers was applied to total enplanements to estimate annual visitors. The results are shown in **Table 4-1**.

<table>
<thead>
<tr>
<th>2017 Enplaned Passengers</th>
<th>Percentage of Enplanements Who Were Visitors to the Region</th>
<th>Annual Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>11,107,078</td>
<td>53.4%</td>
<td>5,931,180</td>
</tr>
</tbody>
</table>

*Source: San Diego County Regional Airport Authority; U.S. Department of Transportation Origin & Destination Survey*

The calculations used to estimate visitor impacts are explained below:

• A total of 11,107,078 enplaned passengers departed San Diego International Airport in 2017. According to US DOT Origin and Destination Survey data, 53.4 percent of these enplanements

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4 Rounded numbers are used in this explanation, and any variation in calculations is the result of rounding.
were visitors to the region, or 5,931,180 visitors traveled through San Diego International Airport.

11,107,078 enplanements x 53.4 percent visitors = 5,931,180 visitors

• According to data from the San Diego Tourism Authority, San Diego International Airport visitors spend an estimated average of $835 per visitor during their stay. This average was used to calculate visitors’ annual spending (or output) of nearly $5.0 billion.

5,931,180 visitors x $835 per visitor per stay = $5.0 billion

To avoid double counting output associated with rental car activity, the on-airport rental car output ($280.7 million) must be subtracted from the commercial service visitor spending. Subtracting this output results in nearly $4.7 billion in commercial service visitor expenditures.

$5.0 billion - $280.7 million = $4.7 billion

• To estimate employment associated with commercial service visitor expenditures, California-specific employment ratios per $1.0 million of visitor output from the IMPLAN model were developed. It was estimated that approximately 12.0 persons were employed in the San Diego region because of every $1.0 million in commercial service visitor output. This yields an estimated 59,453 visitor-related jobs associated with the spending by visitors arriving via the passenger airlines at San Diego International Airport.

$5.0 billion x 12.0 ÷ $1.0 million = 59,453 jobs

To avoid double counting employment associated with rental car activity, the on-airport rental car jobs (771 jobs) must be subtracted from the jobs associated with commercial service visitor spending. Subtracting these jobs results in 58,682 jobs.

59,453 jobs - 771 jobs = 58,682 jobs

• To estimate payroll impacts associated with employment supported by commercial service visitors, average regional wages for appropriate industry sectors were applied to the estimated number of employees supported by commercial service visitor spending. Most visitor expenditures take place at hotels, restaurants, retail stores, entertainment and recreation venues, and other establishments supporting business and leisure visitors. Based on data obtained from the Bureau of Labor Statistics (BLS), an average payroll of $27,300 per employee in the San Diego region was assumed for jobs at these establishments.

59,453 jobs x $27,300 = $1.6 billion annual payroll

To avoid double counting payroll associated with rental car activity, the on-airport rental car payroll ($25.2 million) must be subtracted from the payroll associated with commercial service visitor spending. Subtracting this payroll yields nearly $1.6 billion in annual payroll.

$1.6 billion - $25.2 million = $1.6 billion annual payroll

A similar methodology was used to estimate employment, payroll, and output impacts for visitors arriving at San Diego International Airport via general aviation aircraft. Direct general aviation visitor spending was estimated at $16.0 million, supporting an estimated 193 jobs with an annual payroll of nearly $5.3 million.
The direct employment, payroll, and output impacts associated with commercial service and general aviation visitors arriving via San Diego International Airport in 2017 are summarized in Table 4-2. As shown, nearly $4.7 billion in visitor spending supported 58,875 jobs earning an annual payroll exceeding $1.6 billion.

### Table 4-2
**Direct Visitor Employment, Payroll, and Output Impacts**  
San Diego International Airport, 2017

<table>
<thead>
<tr>
<th>Visitors*</th>
<th>Employment</th>
<th>Payroll</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>58,875</td>
<td>$1,603,170,000</td>
<td>$4,687,878,000</td>
<td></td>
</tr>
</tbody>
</table>

*Includes visitors arriving via passenger airlines and general aviation aircraft

**Off-Airport Parking and Air Cargo Facilities**  
This group is comprised of off-airport parking lots and garages that cater to passengers using San Diego International Airport as well as off-airport air cargo facilities operated by FedEx and UPS. This section details the methodology used to estimate direct employment, payroll, and economic output attributable to these facilities.

**Off-Airport Parking Facilities**  
Several off-airport parking facilities that compete with airport parking provided by the SDCRAA are located near San Diego International Airport. Because these facilities cater to passengers using the airport, their activities add to the airport’s economic impact.

Satellite imagery and internet research were used to identify the off-airport parking facilities. A total of 10 off-airport parking facilities not associated with the SDCRAA were identified. Employment for some of these facilities was obtained from Manta, a business advertising and networking website that contains information on millions of businesses worldwide. For others, employment was estimated using ratios developed from the square footages and employment of the off-airport parking facilities researched on Manta. Payroll and output were estimated based on ratios of payroll, expenses, and gross sales per employee developed from CDM Smith’s in-house database.

**Off-Airport Air Cargo Facilities**  
A significant amount of air cargo activity and associated economic impact takes place on San Diego International Airport. However, because of the airport’s physical constraints, most of the economic impact related to air cargo operators takes place off-airport. To provide a more complete estimate of the total economic impact for all air cargo activities involving San Diego International Airport, one must look beyond the boundaries of the airport, as the logistics networks of handling air cargo do not stop at the edge of the airport.

Complex coordination of truck movements between station-to-station as well as station-to-airport is required to move freight between the point of pick-up/delivery. Integrated express carriers such as FedEx Express\(^5\), UPS, and to a lesser extent DHL\(^6\), have a significant number of off-airport stations to support their regional operations at San Diego International Airport. These local market stations are located off-airport throughout the San Diego region, supporting the overnight and

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\(^5\) It is noteworthy to point out that FedEx has several services that do not include air cargo. These include: FedEx Ground, FedEx Freight, FedEx Custom Critical and FedEx LTL. FedEx Express is the only part of the company that utilizes air cargo aircraft.

\(^6\) DHL ceased providing domestic integrated express services in 2009, focusing instead on international air freight logistics.
second-day parcel delivery services for their respective carrier. Their primary function is to act as a consolidation point for packages and parcels moving between the airport and the customer.

Integrated express carrier website location tools were used to determine the direct economic impacts associated with off-airport air cargo activity. Staffed FedEx World Service Centers and UPS Customer Centers were identified using their facility locator tools. A search radius of approximately 45-miles from San Diego International Airport was used to identify stations within the San Diego region. This prevented the overlap of stations that fall within the Los Angeles World Airports air cargo market area. Authorized shipping centers such as FedEx Kinkos and The UPS Store were not included since they serve functions other than the transport of air cargo. Five FedEx and three UPS stations dedicated to air cargo traffic were identified within the San Diego region.

CDM Smith’s in-house database of air cargo and airport economic impact studies conducted throughout the United States was used to develop estimates of direct employment, payroll, and operating expenses. FedEx and UPS have differing logistics models which are largely attributed to the fact that FedEx began as a cargo airline and UPS began as a cargo trucking company. For FedEx, 100 percent of the estimated employees at each off-airport FedEx Express station are aviation-related. UPS indicates that their air/overnight product comprises approximately 15 percent of all UPS activity. As a result, only 15 percent of the estimated employees for each UPS station are considered aviation-related. Employment estimates for integrated express stations were developed based on facility size ratios and market size.

**Multiplier Impacts**

As explained above, multiplier impacts – including indirect and induced impacts – result from the recirculation of direct impacts in the economy. Indirect expenditures are the spending by on- and off-airport businesses for goods and services, while induced expenditures come from aviation-related employees spending their earnings on goods and services in California. When this money recirculates in the economy, it supports additional employment, payroll, and output.

Multiplier impacts arise from various interdependencies within an economic system. For example, the operation of an airport requires inputs in the form of supplies, equipment, and maintenance. These inputs generate a boost in sales for those businesses providing these services and products. Moreover, the goods and services themselves require inputs for their production. The process continues as numerous impacts recirculate through the economy. The total requirement for goods and services is the multiple of the direct needs of San Diego International Airport; hence it is referred to using the term “multiplier.”

Multipliers developed specifically to measure the economic impacts of San Diego International Airport were used in this study. The IMPLAN model was used to create multipliers that were applied to the various categories of economic activity taking place at the airport. These multipliers are summarized in Table 4-3.
Table 4-3
IMPLAN Multipliers by Economy Sector

<table>
<thead>
<tr>
<th>Economy Sector</th>
<th>Employment Multiplier</th>
<th>Payroll Multiplier</th>
<th>Output Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-Airport Tenants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>2.22</td>
<td>1.71</td>
<td>1.96</td>
</tr>
<tr>
<td>Construction</td>
<td>1.86</td>
<td>1.70</td>
<td>2.12</td>
</tr>
<tr>
<td>Concessions</td>
<td>1.37</td>
<td>1.68</td>
<td>1.93</td>
</tr>
<tr>
<td>Aviation</td>
<td>2.73</td>
<td>2.14</td>
<td>1.97</td>
</tr>
<tr>
<td>Visitor Expenditures</td>
<td>1.66</td>
<td>1.93</td>
<td>1.94</td>
</tr>
<tr>
<td>Off-Airport Parking and Air Cargo Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking</td>
<td>1.37</td>
<td>1.68</td>
<td>1.93</td>
</tr>
<tr>
<td>Air Cargo</td>
<td>2.73</td>
<td>2.14</td>
<td>1.97</td>
</tr>
</tbody>
</table>

1Government multipliers are the weighted average of the Other State and Local Government Enterprises and Other Federal Government Enterprises multipliers.
2Construction multipliers are the weighted average of the Construct Other New Nonresidential Structures; Maintenance and Repair of Nonresidential Structures; and Architectural, Engineering and Related Services multipliers.
3Concessions and parking multipliers are the weighted average of the Food Services and Drinking Places; Business Support Services; and Retail Stores – Miscellaneous multipliers.
4Aviation multipliers are the weighted average of the Transport by Air; Aircraft Manufacturing; Aircraft Engine and Engine Parts Manufacturing; and Other Aircraft Parts and Auxiliary Equipment Manufacturing multipliers.
5Visitor expenditures multipliers are the weighted average of the Food Services and Drinking Places; Automotive Equipment Rental and Leasing; Hotels and Motels; and Retail Stores – Miscellaneous multipliers.

Source: CDM Smith and IMPLAN multipliers

The multipliers presented in Table 4-3 were used to estimate the indirect and induced expenditures in this analysis. For example, $100 in direct expenditures (output) in the Aviation sector supports a total output impact equivalent to $197 ($100 times the multiplier of 1.97). Multiplier impacts would therefore be $97 (total impacts of $197 minus direct impacts of $100).

Total Impacts
Total impacts are the sum of the direct and multiplier impacts. When referring to San Diego International Airport’s economic impacts, this generally means the total employment, total payroll, and total output of the airport.

Summary
As explained in this chapter, the total economic impact of San Diego International Airport is quantified in this study in terms of employment, payroll, and output for three aviation-related groups: on-airport tenants (businesses and government organizations) and their associated construction activity; visitors arriving at the airport via passenger airlines and general aviation aircraft; and off-airport parking and air cargo facilities with ties to San Diego International Airport. Direct impacts and multiplier impacts (indirect and induced) were estimated for each of these groups, which were then summed to determine the respective group’s total impacts. The methodology then involved summing each group’s total impacts to estimate total employment, total annual payroll, and total annual output/spending supported by the airport.
San Diego International Airport is a major contributor to the economic vitality of the San Diego region through its support of jobs, payroll, and output. Economic activity at the airport and throughout the region is generated by businesses and government organizations (tenants) operating on the airport, construction projects undertaken by the on-airport-tenants, business and leisure visitors arriving via passenger airlines and general aviation aircraft who use the airport as a gateway to the region, and off-airport parking and air cargo facilities associated with the airport. This chapter identifies the direct, multiplier, and total economic impacts of San Diego International Airport in 2017 generated by these aviation-related groups. The economic impacts are discussed in terms of employment, annual payroll, and total annual economic activity (output), and are presented by category of aviation-related group.

### On-Airport Tenants

In 2017, there were more than 140 aviation-related tenants operating on San Diego International Airport. For discussion purposes, tenants were grouped together by function. The categories used to present the direct, multiplier, and total impacts supported by on-airport tenants include the following:

- **Aviation** – Passenger airlines, air cargo operators, ground handling companies, airport fixed-base operator (FBO), corporate flight departments, and other aviation-related businesses.
- **Concessions** – Terminal restaurants and retail stores, car rental agencies, and on-airport parking operators.
- **Government** – San Diego County Regional Airport Authority (SDCRAA), Federal Aviation Administration (FAA), Transportation Security
Administration (TSA), San Diego Fire-Rescue Department, and other government entities.

- **Construction** – Construction projects undertaken by on-airport tenants.

**Direct Impacts**
The direct impacts of on-airport tenants at San Diego International Airport accounted for more than 8,300 employees with an annual payroll exceeding $413.0 million, producing over $1.3 billion in economic output, as shown in Table 5-1. Economic impacts generated by the SDCRAA are included in these figures. The largest contributors to the airport’s employment and payroll impacts were the aviation-related tenants, such as the passenger airlines, air cargo operators, and airline support services providers, which were responsible for more than 3,400 employees earning nearly $163.9 million in annual payroll. The airport’s concessionaires produced the largest share of economic output, which approached $455.7 million.

<table>
<thead>
<tr>
<th>On-Airport Tenant Category</th>
<th>Employment</th>
<th>Payroll</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>3,442</td>
<td>$163,894,000</td>
<td>$411,470,000</td>
</tr>
<tr>
<td>Concessions</td>
<td>1,921</td>
<td>$65,385,000</td>
<td>$455,663,000</td>
</tr>
<tr>
<td>Government</td>
<td>1,304</td>
<td>$109,891,000</td>
<td>$248,011,000</td>
</tr>
<tr>
<td>Construction</td>
<td>1,682</td>
<td>$73,840,000</td>
<td>$204,607,000</td>
</tr>
<tr>
<td><strong>Total Direct Impacts</strong></td>
<td><strong>8,349</strong></td>
<td><strong>$413,010,000</strong></td>
<td><strong>$1,319,751,000</strong></td>
</tr>
</tbody>
</table>

Source: CDM Smith and IMPLAN multipliers

**Multiplier Impacts**
As explained in Chapter 4, multiplier impacts result from the recirculation of direct impacts in the economy. For example, when a construction laborer working on the new Parking Plaza at San Diego International Airport spent their wages on housing, food, and services in the San Diego region in 2017, those expenditures “ripped” through the economy, producing additional employment, payroll, and output throughout the region. Spending by employees of on-airport tenants and spending by the tenants themselves for goods and services produced multiplier impacts. Multiplier impacts stemming from on-airport tenants at San Diego International Airport accounted for nearly 10,400 jobs in the San Diego region; these employees received $371.3 million in annual payroll (see Table 5-2). The on-airport tenants were responsible for almost $1.3 billion in annual output.
Chapter 5: Economic Impacts of San Diego International Airport

Table 5-2
Multiplier Impacts from On-Airport Tenants
San Diego International Airport, 2017

<table>
<thead>
<tr>
<th>On-Airport Tenant Category</th>
<th>Employment</th>
<th>Payroll</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>5,951</td>
<td>$186,603,000</td>
<td>$400,209,000</td>
</tr>
<tr>
<td>Concessions</td>
<td>1,407</td>
<td>$55,696,000</td>
<td>$422,937,000</td>
</tr>
<tr>
<td>Government</td>
<td>1,592</td>
<td>$77,645,000</td>
<td>$237,362,000</td>
</tr>
<tr>
<td>Construction</td>
<td>1,439</td>
<td>$51,355,000</td>
<td>$229,319,000</td>
</tr>
<tr>
<td><strong>Total Multiplier Impacts</strong></td>
<td><strong>10,389</strong></td>
<td><strong>$371,299,000</strong></td>
<td><strong>$1,289,827,000</strong></td>
</tr>
</tbody>
</table>

Source: CDM Smith and IMPLAN multipliers

Total Impacts
Table 5-3 presents the total economic impacts (direct and multiplier impacts) supported by aviation-related businesses and government organizations operating on San Diego International Airport in 2017. On-airport tenants supported more than 18,700 jobs with a total annual payroll of $784.3 million. Total annual output exceeded $2.6 billion.

Table 5-3
Total Impacts from On-Airport Tenants
San Diego International Airport, 2017

<table>
<thead>
<tr>
<th>On-Airport Tenant Category</th>
<th>Employment</th>
<th>Payroll</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>9,393</td>
<td>$350,497,000</td>
<td>$811,679,000</td>
</tr>
<tr>
<td>Concessions</td>
<td>3,328</td>
<td>$121,081,000</td>
<td>$878,600,000</td>
</tr>
<tr>
<td>Government</td>
<td>2,896</td>
<td>$187,536,000</td>
<td>$485,373,000</td>
</tr>
<tr>
<td>Construction</td>
<td>3,121</td>
<td>$125,195,000</td>
<td>$433,926,000</td>
</tr>
<tr>
<td><strong>Total Impacts</strong></td>
<td><strong>18,738</strong></td>
<td><strong>$784,309,000</strong></td>
<td><strong>$2,609,578,000</strong></td>
</tr>
</tbody>
</table>

Source: CDM Smith and IMPLAN multipliers

Visitors
San Diego’s picturesque beaches, beautiful year-round weather, thriving dining scene, and marquee attractions such as the San Diego Zoo Safari Park, SeaWorld San Diego, Balboa Park, and LEGOLAND California make the region a world-renowned tourist destination. The region also ranks as one of the top five destinations for conventions and meetings in the United States.1 Data from the SDCRAA’s most recent passenger survey effort shows that 58 percent of visitors to the region travel for leisure, 36 percent travel for business (including attending a convention or conference), and the remainder travel for other reasons, such as military duty or travel on a cruise ship.2 These visitors stay an

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average of 4.5 nights in San Diego. Business, leisure, and other visitors arriving at San Diego International Airport via passenger airlines and general aviation aircraft spend money while visiting the San Diego region, thereby helping to support additional economic impacts. The estimate of economic impacts attributed to visitors in this study included each flight operated by the passenger airlines at the airport in 2017.

**Direct Impacts**

In 2017, there were more than 11.1 million passenger enplanements at San Diego International Airport. According to data from the U.S. Department of Transportation’s Origin and Destination Survey, 53.4 percent of those enplanements were visitors to the region. Data from the San Diego Tourism Authority shows these visitors spent an average of $835 per person per trip for lodging, food and beverage, ground transportation, retail, and recreation/entertainment. The results of applying these averages to the airport’s 11.1 million enplanements in 2017 are presented in Table 5-4. More than 5.9 million visitors to the region spent nearly $5.0 billion in the regional economy in 2017. Since car rental impacts were assessed as on-airport tenant impacts, it was necessary to subtract this portion of the visitor expenditures from the visitor impact total. The employment, payroll, and expenditure (output) impacts for car rental agencies were subtracted from the estimated region-wide direct commercial service visitor impacts to avoid double counting.

**Table 5-4**

*Commercial Service Visitor Expenditures Estimate*

<table>
<thead>
<tr>
<th>San Diego International Airport, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 Enplaned Passengers</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>11,107,078</td>
</tr>
</tbody>
</table>

Source: SDCRAA; San Diego Tourism Authority; U.S. Department of Transportation Origin & Destination Survey

**Table 5-5** summarizes the direct employment, payroll, and output impacts for visitors at San Diego International Airport in 2017 after adjusting for car rental revenues and adding impacts for visitors arriving on general aviation aircraft. As shown in Table 5-5, commercial service and general aviation visitors supported direct impacts totaling nearly $4.7 billion in annual output and nearly 58,900 jobs earning an annual payroll of more than $1.6 billion.

**Table 5-5**

*Direct Impacts from Visitors*

<table>
<thead>
<tr>
<th>San Diego International Airport, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitors*</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>58,875</td>
</tr>
</tbody>
</table>

*Includes visitors arriving via passenger airlines and general aviation aircraft.
Impacts supported by car rental expenditures removed to avoid double counting.
Source: CDM Smith and IMPLAN multipliers.

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3 San Diego Tourism Authority
4 Direct employment, payroll, and output impacts for visitors arriving at San Diego International Airport via general aviation aircraft were estimated using a methodology similar to that used for visitors arriving via passenger airlines. San Diego International Airport had 9,485 itinerant general aviation aircraft operations in 2017. The analysis estimated that 4,268 of these aircraft operations brought a total of 19,207 visitors to the San Diego region. Direct general aviation visitor spending is estimated at $16.0 million, which supports an estimated 193 jobs with an annual payroll of nearly $5.3 million.
**Multiplier Impacts**
The recirculation or re-spending of the direct visitor impacts in Table 5-5 produced an additional 39,000 jobs, nearly $1.5 billion in annual payroll, and more than $4.4 billion in annual output (see Table 5-6).

<table>
<thead>
<tr>
<th>Table 5-6</th>
<th>Multiplier Impacts from Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>San Diego International Airport, 2017</td>
</tr>
<tr>
<td>Visitors*</td>
<td>Employment</td>
</tr>
<tr>
<td>Visitors*</td>
<td>38,958</td>
</tr>
</tbody>
</table>

*Includes visitors arriving via passenger airlines and general aviation aircraft. Impacts supported by car rental expenditures removed to avoid double counting. Source: CDM Smith and IMPLAN multipliers.

**Total Impacts**
Table 5-7 shows the total impacts of visitors using San Diego International Airport to access the San Diego region. The combination of direct and multiplier visitor impacts generated over 97,800 total jobs with a total annual payroll approaching $3.1 billion. Total annual output was estimated at more than $9.1 billion.

<table>
<thead>
<tr>
<th>Table 5-7</th>
<th>Total Impacts from Visitors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>San Diego International Airport, 2017</td>
</tr>
<tr>
<td>Visitors*</td>
<td>Employment</td>
</tr>
<tr>
<td>Visitors*</td>
<td>97,833</td>
</tr>
</tbody>
</table>

*Includes visitors arriving via passenger airlines and general aviation aircraft. Impacts supported by car rental expenditures removed to avoid double counting. Source: CDM Smith and IMPLAN multipliers.

**Off-Airport Parking and Air Cargo Facilities**
San Diego International Airport’s economic impacts are not exclusively generated by aviation-related activities occurring on the airport itself. As discussed in Chapter 4, there are several parking lots and parking garages located near the airport that cater to air passengers. There are also air cargo facilities located farther from the airport that are operated by FedEx and UPS. The direct, multiplier, and total impacts supported by these facilities are discussed below.

**Direct Impacts**
In 2017, off-airport parking and air cargo facilities in the San Diego region generated over $92.2 million in direct output (see Table 5-8). This output supported approximately 600 direct jobs earning $28.0 million in annual payroll.
### Table 5-8
**Direct Impacts from Off-Airport Parking and Air Cargo Facilities**
San Diego International Airport, 2017

<table>
<thead>
<tr>
<th>Off-Airport Facility Category</th>
<th>Employment</th>
<th>Payroll</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking</td>
<td>183</td>
<td>$5,358,000</td>
<td>$28,135,000</td>
</tr>
<tr>
<td>Air Cargo</td>
<td>421</td>
<td>$22,667,000</td>
<td>$64,112,000</td>
</tr>
<tr>
<td><strong>Total Direct Impacts</strong></td>
<td><strong>604</strong></td>
<td><strong>$28,025,000</strong></td>
<td><strong>$92,247,000</strong></td>
</tr>
</tbody>
</table>

Source: CDM Smith

### Multiplier Impacts
IMPLAN multipliers were used to estimate the multiplier impacts produced by the recirculation of the direct off-airport facilities impacts. These impacts are presented in Table 5-9 and include nearly 800 jobs earning almost $29.5 million. Annual output was estimated at $88.5 million.

<table>
<thead>
<tr>
<th>Off-Airport Facility Category</th>
<th>Employment</th>
<th>Payroll</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking</td>
<td>68</td>
<td>$3,648,000</td>
<td>$26,135,000</td>
</tr>
<tr>
<td>Air Cargo</td>
<td>728</td>
<td>$25,808,000</td>
<td>$62,357,000</td>
</tr>
<tr>
<td><strong>Total Direct Impacts</strong></td>
<td><strong>796</strong></td>
<td><strong>$29,456,000</strong></td>
<td><strong>$88,492,000</strong></td>
</tr>
</tbody>
</table>

Source: CDM Smith

### Total Impacts
Total impacts (including direct and multiplier impacts) supported by the off-airport parking and air cargo facilities are shown in Table 5-10. Total employment and total annual payroll were estimated at 1,400 jobs earning nearly $57.5 million. Total annual output was more than $180.7 million.

<table>
<thead>
<tr>
<th>Off-Airport Facility Category</th>
<th>Employment</th>
<th>Payroll</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking</td>
<td>251</td>
<td>$9,006,000</td>
<td>$54,270,000</td>
</tr>
<tr>
<td>Air Cargo</td>
<td>1,149</td>
<td>$48,475,000</td>
<td>$126,469,000</td>
</tr>
<tr>
<td><strong>Total Direct Impacts</strong></td>
<td><strong>1,400</strong></td>
<td><strong>$57,481,000</strong></td>
<td><strong>$180,739,000</strong></td>
</tr>
</tbody>
</table>

Source: CDM Smith

### Total Economic Impacts of San Diego International Airport
Table 5-11 summarizes the economic impacts of San Diego International Airport and associated off-airport parking and air cargo facilities in 2017, as discussed in the preceding sections. As shown in Table 5-11, on-airport tenants (including associated construction projects) and visitors (including those arriving on passenger airlines and general aviation aircraft) at the airport supported:

- 116,571 total jobs,
- nearly $3.9 billion in total annual payroll, and
- more than $11.7 billion in total annual output.

These impacts include direct and multiplier impacts, but do not include impacts generated by the off-airport parking and air cargo facilities. If those facilities associated with the airport are added to
the impacts above, the total economic impacts supported by San Diego International Airport increase to:

- 117,971 total jobs,
- more than $3.9 billion in total annual payroll, and
- nearly $11.9 billion in total annual output.

Table 5-11
Economic Impacts of San Diego International Airport, 2017

<table>
<thead>
<tr>
<th></th>
<th>Direct Impacts</th>
<th>Multiplier Impacts</th>
<th>Total Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EMPLOYMENT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Airport Tenants¹</td>
<td>8,349</td>
<td>10,389</td>
<td>18,738</td>
</tr>
<tr>
<td>Visitors²</td>
<td>58,875</td>
<td>38,958</td>
<td>97,833</td>
</tr>
<tr>
<td>Airport Total</td>
<td>67,224</td>
<td>49,347</td>
<td>116,571</td>
</tr>
<tr>
<td>Off-Airport Parking and Air Cargo Facilities</td>
<td>604</td>
<td>796</td>
<td>1,400</td>
</tr>
<tr>
<td>Airport and Off-Airport Facilities Total</td>
<td>67,828</td>
<td>50,143</td>
<td>117,971</td>
</tr>
<tr>
<td><strong>PAYROLL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Airport Tenants¹</td>
<td>$413,010,000</td>
<td>$371,299,000</td>
<td>$784,309,000</td>
</tr>
<tr>
<td>Visitors²</td>
<td>$1,603,170,000</td>
<td>$1,483,978,000</td>
<td>$3,087,148,000</td>
</tr>
<tr>
<td>Airport Total</td>
<td>$2,016,180,000</td>
<td>$1,855,277,000</td>
<td>$3,871,457,000</td>
</tr>
<tr>
<td>Off-Airport Parking and Air Cargo Facilities</td>
<td>$28,025,000</td>
<td>$29,456,000</td>
<td>$57,481,000</td>
</tr>
<tr>
<td>Airport and Off-Airport Facilities Total</td>
<td>$2,044,205,000</td>
<td>$1,884,733,000</td>
<td>$3,928,938,000</td>
</tr>
<tr>
<td><strong>OUTPUT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>On-Airport Tenants¹</td>
<td>$1,319,751,000</td>
<td>$1,289,827,000</td>
<td>$2,609,578,000</td>
</tr>
<tr>
<td>Visitors²</td>
<td>$4,687,878,000</td>
<td>$4,416,441,000</td>
<td>$9,104,319,000</td>
</tr>
<tr>
<td>Airport Total</td>
<td>$6,007,629,000</td>
<td>$5,706,268,000</td>
<td>$11,713,897,000</td>
</tr>
<tr>
<td>Off-Airport Parking and Air Cargo Facilities</td>
<td>$92,247,000</td>
<td>$88,492,000</td>
<td>$180,739,000</td>
</tr>
<tr>
<td>Airport and Off-Airport Facilities Total</td>
<td>$6,099,876,000</td>
<td>$5,794,760,000</td>
<td>$11,894,636,000</td>
</tr>
</tbody>
</table>

¹Includes on-airport construction projects.
²Includes visitors arriving via passenger airlines and general aviation aircraft.
Source: CDM Smith and IMPLAN multipliers

As discussed in Chapter 3, San Diego International Airport’s market area is divided into two levels: the primary market area and the secondary market area. The primary market area is defined as San Diego County, which is the location where the majority of the airport’s economic impacts occur. Additional economic impacts occur in the secondary market area, which is defined as Imperial, Orange, and Riverside Counties, as well as Tijuana, Mexico. An additional analysis was conducted to estimate the distribution of total employment and output impacts (including direct and multiplier impacts) supported by on-airport tenants (including associated construction projects), visitors, and off-airport parking and air cargo facilities in Table 5-11 between the primary and secondary market areas.⁵

⁵ Tijuana, Mexico was not included in this additional analysis.
Because visitor impacts comprise such a significant portion of San Diego International Airport’s total economic impacts (see Table 5-11), the analysis used data from the San Diego Tourism Authority to estimate the distribution of total impacts between the primary and secondary market areas. According to San Diego Tourism Authority data, the main destination in the state of California of 96 percent of visitors arriving at San Diego International Airport is San Diego. The Tourism Authority’s data also shows that the main destination of the remaining percentage of visitors (0.9 percent) being other locations within California. These percentages were applied to the total employment and output impacts of the airport and off-airport facilities in Table 5-11 to allocate the impacts among the counties.6

The results of the analysis are presented in Table 5-12. As shown in Figure 5-12, more than $11.4 billion of San Diego International Airport’s total output was generated in San Diego County in 2017. This output supported approximately 113,300 total jobs in the county. At the secondary market area level, nearly $475.8 million of the airport’s total output was generated in Orange, Riverside, and other California counties, which supported more than 4,700 total jobs in those counties.7

<table>
<thead>
<tr>
<th>Market Area Level</th>
<th>Total Employment</th>
<th>Total Output</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Market Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Diego County</td>
<td>113,252</td>
<td>$11,418,850,560</td>
<td>96.0%</td>
</tr>
<tr>
<td>Secondary Market Area</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange County</td>
<td>2,713</td>
<td>$273,576,628</td>
<td>2.3%</td>
</tr>
<tr>
<td>Riverside County</td>
<td>826</td>
<td>$83,262,452</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other California counties</td>
<td>1,180</td>
<td>$118,946,360</td>
<td>1.0%</td>
</tr>
<tr>
<td>Secondary Market Area Total</td>
<td>4,719</td>
<td>$475,785,440</td>
<td>4.0%</td>
</tr>
<tr>
<td>Market Area Total</td>
<td>117,971</td>
<td>$11,894,636,000</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: CDM Smith

Summary
This chapter has demonstrated that San Diego International Airport is a major catalyst for the San Diego region’s economy. The airport is home to more than 140 aviation-related businesses and government organizations and serves as the primary gateway for visitors arriving in the region via air transportation. In 2017, when direct and multiplier impacts are included, all on-airport tenants (and associated construction activity) and visitors at the airport:

- supported 116,571 total jobs,
- generated nearly $3.9 billion in total annual payroll, and
- produced more than $11.7 billion in total annual economic activity (output).

6 Because the secondary market area consists of three counties, the 3.1 percent of visitors whose main destination is the secondary market area was further subdivided between Imperial, Orange and Riverside Counties based on Gross Domestic Product (GDP) data at the metropolitan statistical area (MSA) level and employment data at the county level, which were available from the Bureau of Economic Analysis.
7 Imperial County was combined with other counties in California in Table 5-12, since its portion of the 3.1 percent of visitors whose main destination is the secondary market area is so small.
When the total impacts (including direct and multiplier impacts) associated with the off-airport parking and air cargo facilities are included, the airport and off-airport facilities:

- supported 117,971 total jobs,
- generated more than $3.9 billion in total annual payroll, and
- produced nearly $11.9 billion in total annual output.

These economic impacts represent a considerable increase from the impacts estimated in an economic impact study conducted for the airport in 2013 that followed the same methodology. In that study, the base year for which was 2012, the total impacts (including direct and multiplier impacts) associated with on-airport tenants and construction activity, visitors, and off-airport parking and air cargo facilities were as follows:

- 89,743 total jobs,
- nearly $2.7 billion in total annual payroll, and
- more than $9.2 billion in total annual economic activity (output).

Since 2012, total employment and total output have increased by 31 percent and 29 percent, respectively. The primary driver of the increase in economic impacts is the significant growth in passengers using the airport (see Figure 2-4 in Chapter 2).