

THE ECONOMIC IMPACT OF FRESNO YOSEMITE INTERNATIONAL AND CHANDLER EXECUTIVE AIRPORT



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AIRPORTS DEPARTMENT
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THE ECONOMIC IMPACT OF FRESNO YOSEMITE INTERNATIONAL AND FRESNO CHANDLER EXECUTIVE AIRPORTS

Executive Summary



Commercial airports, in general, are vital economic engines on a local and regional economy that provide services which are fundamental to businesses that are being recruited, retained and are growing, and require the transport of passengers and air cargo throughout the nation and world, while boosting the growth of jobs, business revenue, payroll and taxes. Tourism is also a catalyst of the aviation industry by bringing visitors into the region to spend money and thus create jobs at local hotels, restaurants, retail shops and entertainment venues.

The Fresno Yosemite International Airport supports the regional economy by the movement of domestic and international passengers as well as air cargo through their terminal. The airport is located just miles from downtown Fresno, in the heart of the San Joaquin Valley, and is serviced by 7 airlines providing air travel to 11 non-stop destinations. The Fresno Chandler Executive Airport is located just a mile and a half west of downtown Fresno and supports general aviation activity in the San Joaquin Valley.

Fresno is the 5th largest city in California and the 34th most populous city in the United States, with a population of nearly 525,000 people. Fresno is geographically located in the center of the state of California and is the closest major city to Yosemite National Park, which is located about 60 miles north of the city. In addition, Sierra National Forest and King Canyon's National Park are also within 60 miles of Fresno. Fresno State, a campus within the California State University system is located approximately 15 minutes from the airport.

The City of Fresno – Airports Department retained the services of Martin Associates to estimate the economic impacts of the Fresno Yosemite International Airport. The purpose of the study is to quantify the economic impacts generated by passenger, freight and general aviation activity at Fresno Yosemite International Airport. In order to measure the impacts in the most defensible manner possible, the methodology utilized is based on interviews, local economic data, and airport statistics.

The impacts on the Fresno area, including the City of Fresno, City of Clovis and Fresno County are quantified in terms of:



- *Employment*
- *Business Revenue*
- *Personal Income*
- *Tax Payments*

The impacts are estimated for the passenger and air cargo activity at the Fresno Yosemite International Airport and the Fresno Chandler Executive Airport for the fiscal year of FY2017.

An airport-specific impact model has been developed for the airport which can be used to estimate the impacts associated with capital construction and expansion projects at the airport, as well as to test the sensitivity of impacts to changes in:

- *Passenger levels;*
- *International versus domestic passengers;*
- *Passenger trip purpose;*
- *Peak hour flight levels and mix of aircraft;*
- *Labor productivity and work rules;*
- *Air cargo levels; and*
- *New construction projects and runway expansions.*

The methodology used in the analysis has been used by Martin Associates to estimate the economic impacts generated by airport activity at major airports such as Miami International Airport, Hartsfield-Jackson Atlanta International Airport, San Francisco International Airport, Washington

Dulles International Airport and Ronald Reagan Washington National Airport, Sea-Tac International Airport, Minneapolis-Saint Paul International Airport, Sacramento International Airport, Baltimore/Washington International Thurgood Marshall Airport, General Mitchell International Airport, Fresno Yosemite International Airport, Nashville International Airport, Portland International Airport and Oakland International Airport.

Fresno Yosemite International Airport, which served 1.3 million annual passengers and 99,835 total aircraft operations in FY2017, as well as handled 19.9 million pounds of air cargo (freight and mail) generates substantial economic impact benefits to the Fresno region. In addition, Fresno Chandler Executive Airport had an estimated 64,000 annual operations in FY2017. This report presents the economic impact of the Fresno Yosemite International Airport and Fresno Chandler Executive Airport for FY2017.

The airport generated impacts (those generated by passenger, air cargo and general aviation activity at the Airports), the visitor industry impacts (those generated by passenger activity at Fresno Yosemite International Airport and Fresno Chandler Executive Airport in the Fresno visitor industry) and the non-aviation real estate impacts (those generated by the non-aviation real estate tenants located on Airport property) are presented separately in Table E-1, as are the combined impacts.



Table E-1
Economic Impacts of the Fresno Yosemite International and Fresno Chandler Executive Airports

IMPACTS	FRESNO AIRPORT- GENERATED	FRESNO VISITOR INDUSTRY	CHANDLER AIRPORT- GENERATED	CHANDLER VISITOR INDUSTRY	FRESNO REAL ESTATE	TOTAL IMPACTS
JOBS						
DIRECT	1,963	2,143	29	53	832	5,021
INDUCED	1,507	710	18	16	256	2,507
INDIRECT	639	614	4	17	506	1,779
TOTAL JOBS	4,109	3,467	51	86	1,594	9,307
PERSONAL INCOME (\$ MILLIONS)						
DIRECT	\$112.2	\$40.6	\$1.2	\$1.0	\$23.7	\$178.7
RE-SPENDING/CONSUMPTION	\$163.3	\$40.1	\$1.7	\$1.0	\$22.6	\$228.7
INDIRECT	\$29.3	\$20.4	\$0.2	\$0.6	\$20.3	\$70.7
TOTAL INCOME	\$304.9	\$101.1	\$3.1	\$2.5	\$66.6	\$478.1
BUSINESS REVENUE (\$ MILLIONS)	\$299.2	\$184.2	\$5.0	\$4.4	\$67.1	\$559.8
LOCAL PURCHASES (\$ MILLIONS)	\$52.0	\$33.2	\$0.3	\$0.9	\$34.1	\$120.6
STATE AND LOCAL TAXES (\$ MILLIONS)	\$29.0	\$7.7	\$0.3	\$0.2	\$6.3	\$43.4
FEDERAL GOVERNMENT AVIATION-SPECIFIC TAXES (\$ MILLIONS)	\$20.8	N/A	\$0.2	N/A	N/A	\$21.0

**** Note: Adding the Business Revenue and the Re-spending/Consumption Impact together represents the overall Economic Activity of \$788.5 million**

Overall, the passenger and air cargo activity at Fresno Yosemite International Airport, the airport activity at Fresno Chandler Executive Airport and the real estate operations of the non-aviation tenants located on Airport property generated 9,307 jobs in the Fresno area, \$478.1 million of direct, induced and indirect personal income, \$559.8 million of business revenue, \$43.4 million of state and local taxes, and \$21.0 million of federal aviation-specific taxes. The total economic activity of the airports is \$788.5 million and is calculated by adding the business revenue (\$559.8 million) and the re-spending/consumption impact (\$228.7 million) together. The majority of the economic impacts are generated by operations at the Fresno Yosemite International Airport.

FRESNO YOSEMITE INTERNATIONAL AIRPORT EMPLOYMENT IMPACTS

Activity at the Fresno Yosemite International Airport supported 7,576 direct, induced and indirect jobs in the Fresno metropolitan area.

Airport Generated Employment Impacts

In FY2017, passenger and airport activity at Fresno Yosemite International Airport generated 1,963 **direct jobs**, of which the majority were employed at the military air units located at the Airport, the maintenance hub, government agencies (including TSA, U.S. Customs, FAA and CHP) and directly with

airlines serving the airport. More than 95% of the direct jobs are held by residents of Fresno County, and specifically about 51% of these direct jobs are held by residents of the City of Fresno.

Because of the local purchases by the 1,963 directly employed, an additional 1,507 ***induced jobs*** were supported in the local economy. The majority of these induced jobs are supported in the local and state government, local grocery stores and restaurants, followed by jobs in the local housing and real estate sector and the professional and personal services sector of the economy.

As the result of \$52.0 million of local purchases by the firms dependent upon the airport, an additional 639 ***indirect jobs*** were supported in local office supply firms, retail and wholesale outlets, telecommunications firms and machine and parts firms.

Visitor Industry Employment Impacts

In FY2017, of the 770,600 passengers boarding flights at Fresno Yosemite International Airport, 280,500 were visitors to the Fresno metropolitan area. An in-terminal survey was conducted as part of this study to develop visitor profiles of expenditure activity while in Fresno, length of stay in the area, purpose of the trip to Fresno, and whether the passenger is a foreign resident or a resident of the United States.

Of these 280,500 visitors to the Fresno metropolitan area in FY2017, about 242,400 are domestic passengers, while the remaining 38,100 are international visitors to the Fresno metropolitan area.

The 280,500 visitors spent \$184.2 million in the Fresno visitor industry in FY2017 for food, lodging, entertainment services, retail purchases and transportation services. These \$184.2 million of visitor industry purchases supported 2,143 ***direct jobs*** in the Fresno metropolitan area visitors industry.

As the result of local purchases by these 2,143 employees of the Fresno visitor industry, an additional 710 ***induced jobs*** were supported in the local economy. Furthermore, as the result of \$184.2 million of local purchases by the firms dependent upon the Fresno visitor industry, an additional 614 ***indirect jobs*** were supported, for a total visitor industry impact of 3,467 direct, induced and indirect jobs.

FRESNO CHANDLER EXECUTIVE AIRPORT EMPLOYMENT IMPACTS

Activity at the Fresno Chandler Executive Airport supported 137 direct, induced and indirect jobs in the Fresno metropolitan area.

Airport Generated Employment Impacts

In FY2017, airport activity at Fresno Chandler Executive Airport generated 29 ***direct jobs***. These jobs include jobs at the flight training schools, FBO, aircraft maintenance and supply firms, Airport

Administration, helicopter service firms, hangar rental companies and the restaurant located at Fresno Chandler Executive Airport.

Because of the local purchases by the 29 directly employed, an additional 18 ***induced jobs*** were supported in the local economy. As the result of \$0.3 million of local purchases by the firms dependent upon the airport, an additional 4 ***indirect jobs*** were supported, for a total airport-generated impact of 51 direct, induced and indirect jobs.

Visitor Industry Employment Impacts

In FY2017, of the 64,000 annual operations at Fresno Chandler Executive Airport, it is estimated that nearly 34,700 passengers boarded general aviation flights at the airport and approximately 7,000 were visitors to the Fresno metropolitan area.

The 7,000 visitors spent \$4.4 million in the Fresno visitor industry in FY2017 for food, lodging, entertainment services, retail purchases and transportation services. These \$4.4 million of visitor industry purchases supported 53 ***direct jobs*** in the Fresno metropolitan area visitors industry.

As the result of local purchases by these 53 employees of the Fresno visitor industry, an additional 16 ***induced jobs*** were supported in the local economy. Furthermore, as the result of \$4.4 million of local purchases by the firms dependent upon the Fresno visitor industry, an additional 17 ***indirect jobs*** were supported, for a total visitor industry impact of 86 direct, induced and indirect jobs.

NON-AVIATION REAL ESTATE EMPLOYMENT IMPACTS

The non-aviation real estate tenants and subtenants create 832 ***direct jobs*** and as the result of local purchases by these direct employees, another 256 ***induced jobs*** are supported in the Fresno regional economy. Due to \$34.1 million of local purchases, 506 ***indirect jobs*** are supported. This indirect impact reflects the dependency on the local economy supply infrastructure for the tenants and subtenants such as business offices. The non-aviation real estate tenants create 1,594 total direct, induced and indirect jobs.

FRESNO YOSEMITE INTERNATIONAL AIRPORT BUSINESS REVENUE IMPACTS

Passenger and air cargo activity at Fresno Yosemite International Airport generated \$483.4 million of business revenue to firms providing services at the airport and to local visitor industry firms.

Airport Generated Business Revenue Impacts

The passenger and air cargo activity at Fresno Yosemite International Airport created \$299.2 million of business revenue to firms supplying passenger and air cargo services at the airport. The majority of this revenue was received by airlines carrying the enplaning passengers at Fresno Yosemite

International Airport, while ground transportation operations generated 6.4% and air cargo operations generated 5.5% of the \$299.2 million of business revenue.

Visitor Industry Revenue Impacts

In FY2017, the local area visitors industry received \$184.2 million in revenue from the 280,500 visitors arriving in the Fresno metropolitan area via the Fresno Yosemite International Airport. These purchases were made for lodging, food, retail, entertainment and transportation services.

FRESNO CHANDLER EXECUTIVE AIRPORT BUSINESS REVENUE IMPACTS

General aviation activity at Fresno Chandler Executive Airport generated \$9.4 million of business revenue to firms providing services at the airport and to local visitor industry firms.

Airport Generated Business Revenue Impacts

The general aviation activity at Fresno Chandler Executive Airport created \$5.0 million of business revenue to firms supplying passenger and training services at the airport.

Visitor Industry Revenue Impacts

In FY2017, the local visitors' industry received \$4.4 million in revenue from the 7,000 visitors using the Fresno Chandler Executive Airport.

NON-AVIATION REAL ESTATE BUSINESS REVENUE IMPACTS

The non-aviation real estate tenants and subtenants received \$67.1 million of revenue, of which \$34.1 million was used for local purchases, as identified from the surveys of these tenants. These local purchases supported the 506 local indirect jobs.

FRESNO YOSEMITE INTERNATIONAL AIRPORT PERSONAL INCOME IMPACTS

A total of \$406.0 million of wages and salaries were generated as the result of passenger and air cargo activity at Fresno Yosemite International Airport in FY2017, including the re-spending impact and indirect income impact.

Airport Generated Income Impacts

In FY2017, the 1,963 direct employees earned \$112.2 million of wages and salaries from airport activity. This represents an average salary of \$57,157. Based on data from the U.S. Department of Commerce, Bureau of Economic Analysis, it is estimated that an additional \$163.3 million of personal income and local consumption expenditures were generated.

In addition, the 639 indirect job holders received \$29.3 million of indirect wages and salaries. Combining the direct, induced and indirect income impact, the total local wage impact of the Fresno Yosemite International Airport is estimated at \$304.9 million in FY2017.

Visitor Industry Income Impacts

The 2,143 directly generated jobs in the Fresno visitors industry received wages and salaries totaling \$40.6 million. As the result of re-spending of this income, an additional \$40.1 million of income and consumption expenditures were generated. Furthermore, the 614 indirect job holders, supported by the \$33.2 million local purchases by Fresno visitor industry firms dependent upon the visitors using the airport, received \$20.4 million of indirect wages and salaries.

FRESNO CHANDLER EXECUTIVE AIRPORT PERSONAL INCOME IMPACTS

A total of \$5.6 million of wages and salaries were generated as the result of general aviation activity at Fresno Chandler Executive Airport, including the re-spending impact and indirect income impact.

Airport Generated Income Impacts

In FY2017, the 29 direct employees earned \$1.2 million of wages and salaries from general aviation activity. This represents an average salary of \$41,380. Based on data from the U.S. Department of Commerce, Bureau of Economic Analysis, it is estimated that an additional \$1.7 million of personal income and local consumption expenditures were generated.

In addition, the 4 indirect job holders received \$0.2 million of indirect wages and salaries. Combining the direct, induced/consumption and indirect income impact, the total local income and local consumption impact of the general aviation activity is estimated at \$3.1 million in FY2017.

Visitor Industry Income Impacts

The 53 directly generated jobs in the Fresno visitors' industry received wages and salaries totaling \$1.0 million. As the result of re-spending of this income, an additional \$1.0 million of income and consumption expenditures were generated. Furthermore, the 17 indirect job holders supported by the \$0.9 million of local purchases by Fresno visitor industry firms dependent upon the visitors using the Fresno Chandler Executive Airport received about \$0.6 million of indirect wages and salaries. Combining the direct, induced/consumption and indirect income impact, the total local income and local consumption impact of the visitors' industry is estimated at \$2.5 million in FY2017.

NON-AVIATION REAL ESTATE INCOME IMPACTS

The 832 directly employed workers received \$23.7 million of wages and salaries. As the result of local purchases by these employees, another \$22.6 million of income and consumption expenditures were

generated, resulting in the induced job impact. The 506 indirect job holders received \$20.3 million of indirect wages and salaries for a total personal income impact of \$66.6 million.

FRESNO YOSEMITE INTERNATIONAL AIRPORT TAX IMPACTS

Airport activity at Fresno Yosemite International Airport, including visitor industry impacts, generated \$36.7 million of state, county, and municipal taxes; and \$20.8 million of federal aviation-specific taxes.

Airport Generated Tax Impacts

Direct airport activity generated approximately \$29.0 million of state and local taxes in FY2017.

As a result of passenger and air cargo activity, \$20.8 million of federal aviation-specific taxes are generated. These taxes include the domestic passenger departure tax, the air cargo tax, and taxes on departing and arriving international passengers, as well as security fees.

Visitor Industry Tax Impacts

As the result of the 280,500 visitors to the Fresno metropolitan area, \$7.7 million of state and local taxes were generated.

FRESNO CHANDLER EXECUTIVE AIRPORT TAX IMPACTS

Airport activity at Fresno Chandler Executive Airport, including visitor industry impacts, generated \$0.5 million of state, county, and municipal taxes.

Airport Generated Tax Impacts

Direct airport activity generated approximately \$0.3 million of state and local taxes in FY2017.

Visitor Industry Tax Impacts

As the result of the 7,000 visitors to the Fresno metropolitan area, \$0.2 million of state and local taxes were generated.

NON-AVIATION REAL ESTATE TAX IMPACTS

The non-aviation real estate tenants and subtenants generated \$6.3 million of state and local taxes.

SUMMARY

In summary, this analysis of impacts demonstrates the economic development contribution of the Fresno Yosemite International Airport and the Fresno Chandler Executive Airport to the Fresno regional economy. In order to continue to grow its economic contribution, it is essential that the City of Fresno – Airports Department continues to adjust and accommodate the growing passenger and air cargo demands with adequate facilities and services.



Chapter 1

Introduction, Overview and Summary of Results



The City of Fresno – Airports Department retained the services of Martin Associates to measure the economic impacts of airport activity generated by the Fresno Yosemite International Airport and the Fresno Chandler Executive Airport. This chapter provides an overview of the methodology used to measure the economic impacts of both airports.

The base year of the analysis is FY2017. The economic impacts created by the airports are measured in terms of jobs, personal income, state and local taxes, and revenue generated directly by airport activity, as well as in terms of the airport's role in providing a gateway for air cargo freight services to the businesses and manufacturing communities of California, as well as the United States.

In order to measure the impacts in the most defensible manner possible, the methodology utilized is based on interviews, local economic data, and airport statistics; i.e., direct measurement. An operational model of the airports were also developed to use in updating the impacts on a short term basis, and to measure the incremental changes in airport generated impacts due to changes in such factors as changes in total passenger and air freight levels, changes in the number of flight operations, changes in domestic and international passenger levels, and changes in work rules by airlines. Also,

the model can be used to test the economic impacts of various capital investment and airport expansion projects.

The remainder of this chapter summarizes the methodology, highlights key assumptions, and summarizes the major findings. The chapter consists of the following sections:

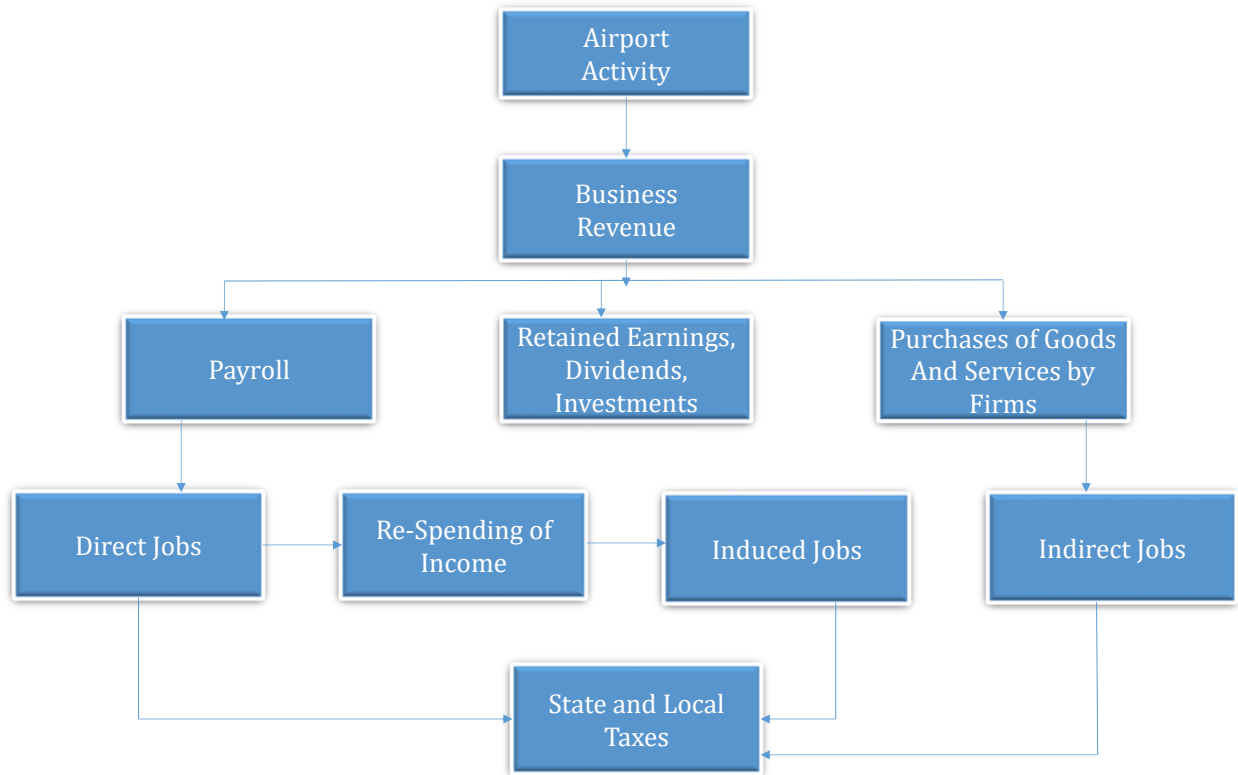
- *Section 1 provides an overview of the impact structure and describes how the airport activity creates and supports jobs, personal income, business revenue, and taxes in the local, regional and state economies.*
- *The detailed categories and sectors of the economy in which the impacts occur are defined and described in Section 2 of this chapter.*
- *Section 3 gives an overview of the data collection methodology and a summary of results.*

1. IMPACT STRUCTURE

Activity at an airport contributes to the local and state economy by generating business revenue for local and national firms providing air passenger service, freight service and support services to the airport and the airlines. These firms, in turn, provide employment and income to individuals and pays taxes to state and local governments. **Exhibit 1-1** shows how air traffic activity at Fresno Yosemite International Airport and Fresno Chandler Executive Airport generates impacts throughout the local, state and national economy. As this exhibit indicates, the impact of an airport on a local, state or national economy cannot be reduced to a single number, but instead, airport activity creates several categories of impacts. These are the Revenue impact, Employment impact, Personal income impact, and Tax impact. These impacts are not additive. For example, the income impact is a part of the revenue impact, and adding these impacts together would result in double counting.



Exhibit 1-1
Flow of Economic Impacts Generated by
Airport Activity



1.1 Revenue Impact

At the outset, activity at the airports generate business revenue for firms which provide air passenger service, concessions, freight service and ground support services. This business revenue impact is dispersed throughout the economy in several ways. It is used to hire people to provide the services, to purchase goods and services, to pay for the use of the airport and to make federal, state and local tax payments.

The remainder is used to pay stockholders, retire debt, make investments, or is held as retained earnings. It is to be emphasized that the only portions of the revenue impact that can be definitely identified as remaining in the Fresno metropolitan area where the airport is located are those portions paid out in salaries to direct employees, local purchases from other firms, state and local taxes and payments to the airport itself.

1.2 Employment Impact

The employment impact of aviation activity consists of three levels of job impacts.

- *Direct employment impact* - jobs directly generated by airport activity, which would vanish if activity at Fresno Yosemite International Airport or Fresno Chandler Executive Airport were to cease. These jobs include jobs with airlines serving the airport, charter airlines, federal and local government workers, retail concessions, rental car agencies, construction, taxi cabs moving passengers to and from the airport, fixed base operators serving the airlines, flight training schools, aircraft parts and repair firms, etc.
- *Induced employment impact* - jobs created throughout the local economy because individuals directly employed due to airport activity spend their wages locally on goods and services such as food, housing and health care. Also included in this category are non-consumption driven jobs supporting the direct jobs such as jobs with state and local government agencies (including public schools) and personal and business services (including private education, real estate and financial services).
- *Indirect employment impact* - jobs generated due to the purchase of goods and services by firms dependent upon airport activity. This includes local purchases by the airport tenants, the airport administration, and the hotels, restaurants, and retail outlets in the area visitors industry.

1.3 Income Impact

The income impact is the measure of personal wages and salaries received by individuals directly employed due to airport activity. This direct personal income is re-spent throughout the region by those that are directly employed. This re-spending effect, in turn, generates additional jobs -- the induced employment impact. This re-spending throughout the Fresno metropolitan area is estimated using a regional personal income multiplier specific to Fresno. The re-spending effect varies by region: a larger re-spending effect occurs in regions that produce a relatively large proportion of the goods and services consumed by residents, while lower re-spending effects are associated with regions that import a relatively large share of consumer goods and services (since personal income "leaks out" of the region for these out-of-state purchases). For this study, separate personal income multipliers are used for airport generated income versus visitor industry generated income. The use of the two multipliers reflects the differences in average wages and, hence, consumption power generated by on-site activity compared to the impacts supported in the visitors industry.

1.4 Tax Impact

Federal, state and local *tax impacts* are tax payments to the federal, state and local governments by firms and by individuals whose jobs are directly dependent upon activity at Fresno Yosemite International Airport and Fresno Chandler Executive Airport. The federal aviation-specific taxes include the Cargo Way Bill Tax, the INS tax on international passengers, security charges, and the domestic departure tax. Customs revenue generated by international air passengers and freight is also included.

The four types of impacts outlined above are estimated for FY2017 passenger, air cargo, and general aviation activity at Fresno Yosemite International Airport and Fresno Chandler Executive Airport.

2. ECONOMIC IMPACT SECTORS

An airport is a diverse economic system. The businesses that have employees at Fresno Yosemite International Airport and Fresno Chandler Executive Airport cover a wide spectrum of trade and service sectors. For the purposes of this study, the airport economic system is divided into six sectors:

- *Airline/airport service;*
- *Freight transportation;*
- *Passenger ground transportation;*
- *Contract construction/consulting services;*
- *Visitor industry services; and*
- *Non-aviation real estate tenants.*



Each of these sectors covers a variety of activities. A discussion of these six categories is provided below, with a description of the major participants in each.

2.1 Airline/Airport Service Sector

The airline/airport service sector consists of airlines providing passenger services, general aviation, airport administration and firms providing support services to the airlines, passengers, and to the airport. This group consists of the following participants:

- *Passenger Airlines;*
- *General Aviation and Aviation Services, (i.e., corporate hangars and business aircraft, not-for-profit aviation services, flying clubs, fixed base operators, aviation parts suppliers, etc.);*
- *Airport Administration (City of Fresno – Airports Department);*
- *Catering Firms;*
- *Janitorial Firms;*

- *Sky Caps;*
- *Security Firms;*
- *Airport Retail Tenants (i.e., newsstands, retail shops, and food concessions);*
- *Federal Government Agencies (i.e., F.A.A., TSA, and U.S. Customs); and*
- *Parking and Miscellaneous (i.e. not-for-profit organizations at the airport).*



Jobs in this category are typically located on airport property.

2.2 Freight Transportation Sector



Freight transportation includes freight airlines, freight forwarders, and trucking firms involved in transporting air freight. The air freight consists of air cargo and mail transported on dedicated freight airlines and in the cargo section of passenger airlines. Included in this group are air couriers, freight forwarders, and common carrier trucking firms located throughout the Fresno metropolitan area. Jobs in this category are located both on and off the airport.¹

2.3 Passenger Ground Transportation Sector

Passenger ground transportation consists of car rental firms and other ground transportation modes, such as buses, taxis and limousines. This group covers all commercial transportation of individuals to and from the airport and includes both drivers and supporting reservation and maintenance employees.



2.4 Contract Construction and Consulting Sector

Individuals employed in this group include those providing construction and remodeling work at the airports, as well as architects and engineers providing planning and design services. This sector measures the annual impact of capital projects.

2.5 Visitor Industry Services Sector

Both domestic and international passengers arrive in the Fresno metropolitan area via Fresno Yosemite International Airport for several purposes, including business and pleasure, including

¹ Jobs with passenger airlines dedicated to handling air freight are counted as jobs with airlines and included with jobs in the airline/airport sector. However, when the impacts are estimated by type of activity - passengers versus air freight – these jobs are counted as dedicated to air freight.

visiting the national parks. As a result of these out-of-town residents purchasing lodging, food and entertainment, jobs are created in the service and retail industries in the Fresno metropolitan area. To evaluate the impacts of visitors in the Fresno area, the results of an in-terminal survey of passengers using Fresno Yosemite International Airport was used to develop expenditure data by air visitors.

Visitor industry impacts are also estimated for the general aviation passenger activity at Fresno Chandler Executive Airport.

This visitor industry impact of Fresno Yosemite International Airport is addressed in Chapter 4 and the visitor industry impact of Fresno Chandler Executive Airport is included in the discussion of the airport in Chapter 6.

2.6 Non-Aviation Real Estate Tenants Sector

In addition, to the airport-generated and visitor industry impacts, the Airport owns real estate property that is leased by several tenants and subtenants for the purposes of non-aviation activities, such as a golf course, gas stations, university and multiple business offices, etc.

The non-aviation real estate impact is discussed in Chapter 5.

3. DATA COLLECTION

Impacts were estimated on the basis of interviews with firms in the six economic impact categories described above. Approximately 90 firms were interviewed as part of this study, which represents more than 95% coverage of the airport community serving Fresno Yosemite International Airport and Fresno Chandler Executive Airport. Because of this coverage, the resulting direct impacts are highly defensible and traceable back to the individual firms. In addition to the airport tenants, service providers and non-aviation real estate tenants, an in-terminal passenger survey was conducted to develop expenditure data and passenger profiles of passengers using Fresno Yosemite International Airport.

Published data were used to complement the interview results, particularly in estimating induced, and indirect job impacts. The major sources of published data are publications by the U.S. Bureau of Census: the Census of Service Industries, Census of Wholesale Industries, Census of Construction, the Census of Retail Industries, County Business Patterns, and the Survey of Manufactures for the Fresno Metropolitan Statistical Area (MSA).



4. SUMMARY OF FINDINGS

The key findings of the analysis are outlined in **Table 1-1**. It is to be emphasized that these measure separate and distinct economic impacts generated by airport activity and are not additive. For example, income and state and local taxes are paid from business revenue. Therefore, if personal income and taxes are added together with business revenue, the results would be double counted, and overstate the monetary impact of the airport. The impacts are also presented separately for airport generated impacts, which are the impacts generated at each airport, as well as for visitor industry impacts, which are the impacts generated in the area's hotels, restaurants, local transportation services, etc. by the out-of-town passengers using Fresno Yosemite International Airport and Fresno Chandler Executive Airport and the non-aviation real estate impacts, which are the impacts generated by the real estate tenants located on Airport property but are not aviation-related businesses.

*Table 1-1
Economic Impacts of the Fresno Yosemite International Airport and the
Fresno Chandler Executive Airport*

IMPACTS	FRESNO AIRPORT- GENERATED	FRESNO VISITOR INDUSTRY	CHANDLER AIRPORT- GENERATED	CHANDLER VISITOR INDUSTRY	FRESNO REAL ESTATE	TOTAL IMPACTS
JOBS						
DIRECT	1,963	2,143	29	53	832	5,021
INDUCED	1,507	710	18	16	256	2,507
INDIRECT	639	614	4	17	506	1,779
TOTAL JOBS	4,109	3,467	51	86	1,594	9,307
PERSONAL INCOME (\$ MILLIONS)						
DIRECT	\$112.2	\$40.6	\$1.2	\$1.0	\$23.7	\$178.7
RE-SPENDING/CONSUMPTION	\$163.3	\$40.1	\$1.7	\$1.0	\$22.6	\$228.7
INDIRECT	\$29.3	\$20.4	\$0.2	\$0.6	\$20.3	\$70.7
TOTAL INCOME	\$304.9	\$101.1	\$3.1	\$2.5	\$66.6	\$478.1
BUSINESS REVENUE (\$ MILLIONS)	\$299.2	\$184.2	\$5.0	\$4.4	\$67.1	\$559.8
LOCAL PURCHASES (\$ MILLIONS)	\$52.0	\$33.2	\$0.3	\$0.9	\$34.1	\$120.6
STATE AND LOCAL TAXES (\$ MILLIONS)	\$29.0	\$7.7	\$0.3	\$0.2	\$6.3	\$43.4
FEDERAL GOVERNMENT AVIATION-SPECIFIC TAXES (\$ MILLIONS)	\$20.8	N/A	\$0.2	N/A	N/A	\$21.0

**** Note: Adding the Business Revenue and the Re-spending/Consumption Impact together represents the overall Economic Activity of \$788.5 million**

Chapter 2

Employment Impacts of Fresno Yosemite International Airport



In this chapter, the employment generated by FY2017 activity at Fresno Yosemite International Airport is estimated. The chapter is organized as follows:

- *First, employment that is totally or partially dependent on the activities at Fresno Yosemite International Airport is estimated.*
- *Second, the subset of total employment that is judged to be totally dependent on airport activity is analyzed in the following ways:*
 - *Jobs are estimated in terms of the economic impact sectors and for job classifications within these categories;*
 - *Direct jobs are estimated by type of activity; and*
 - *Job impacts are allocated to cities and counties within the Fresno metropolitan area based on the residence of those directly dependent upon airport activity.*
- *Third, the induced jobs generated by local purchases by those directly employed are described.*

- *Fourth, the indirect jobs supported by local purchases by the firms directly dependent upon airport activity are presented.*

1. TOTAL JOB IMPACTS

In FY2017, 7,576 jobs are supported by the passenger and air cargo activity at Fresno Yosemite International Airport. Of these 7,576 total jobs:

- *1,963 jobs are directly dependent upon activity at the airport.* These jobs include jobs with airlines serving the airport, retail concessions, rental car companies, fixed base operators, government agencies (i.e., TSA, Federal Aviation Administration, U.S. Customs, etc.), freight forwarders and construction workers involved with airport expansion projects.

These jobs would be discontinued immediately if airport activity ceased, since the firms employing these direct employees are directly dependent upon the passenger and freight activity at the airport. Also, these jobs would be impacted as a result of changes in the number of flights and passenger levels. For example, as the number of flights and passenger activity increases, more airline personnel are needed to check-in passengers and service aircraft, the number of employees with security and custodial firms will increase as the number of passengers using the terminals increase, and the number of employees handling air freight will increase as the amount of air freight handled at the airport increase.

These jobs are measured in terms of full-time equivalent jobs. For example, if a worker works 20 hours per week, this worker is classified as .5 full-time equivalent jobs.

- *1,507 induced jobs are created in the region due to the local purchases of goods and services by those 1,963 individuals directly dependent upon activity at Fresno Yosemite International Airport.* These induced jobs include jobs with the local construction industry providing housing to the direct employees, with grocery stores, restaurants, health care facilities, transportation services firms, and retail stores.
- *639 indirect jobs are created with local companies providing goods and services to the firms directly dependent upon the airport.* These jobs are with such firms as office supply distributors, utilities, communications firms, local transportation services, aircraft parts and machine shops supporting the airlines at Fresno Yosemite International Airport.
- In addition to the 4,109 on-site direct, indirect and induced jobs, 3,467 direct, indirect and induced jobs are also created throughout the Fresno metropolitan area visitor industries. These impacts are described in Chapter 4.

2. DIRECT JOB IMPACTS

In this section, the 1,963 airport-generated direct jobs are discussed in terms of distribution by economic sector; by type of activity -- passenger, air freight, construction and international passenger activity; and by place of residence.

2.1 Direct Jobs by Economic Sector

The distribution of the airport-generated direct job impacts by the four economic impact sectors follows:

- 89.3% Airline/Airport Sector;
- 4.6% Ground Transportation Sector;
- 3.3% Air Freight Sector; and
- 2.8% Construction/Consulting Sector.

Eighty-nine percent of the direct job impact is in the airline/airport service sector. About 3.3 percent of the direct jobs are concentrated with freight airlines, freight forwarders and courier services. This percentage does not include the employees of passenger airlines who are dedicated to air freight which are included in the airline/airport service sector.

About 4.6% of the direct job impact is in the ground transportation sector, including the rental cars, taxis/buses/limos and Lyft. Finally, the direct jobs in the construction and consulting sector reflects the expenditures in FY2017 of \$13.9 million in capital improvements and consulting expenditures at Fresno Yosemite International Airport.



Table 2-1 shows the distribution of employment within each major employment category. The majority of the impacts are concentrated in the airline/airport service sector, and within that sector, the majority of the impacts are concentrated with the military operations, followed by the maintenance and aviation service firms, government agencies (i.e. TSA, FAA, U.S. Customs, etc.) and airlines.

Table 2-1
Direct Job Impacts by Category, FY2017

JOB CATEGORY	DIRECT JOBS
<i>Airline/Airport Services Sector</i>	
Passenger Airlines	185
Security/Skycaps	50
Government Agencies	188
Airport Administration	95
Retail Concessions	72
Maintenance/Aviation Services	240
FBO's	65
Military	849
Parking	9
<i>Subtotal</i>	<i>1,754</i>
<i>Freight Transportation Sector</i>	
Freight Airlines/Couriers	58
Freight Forwarders	7
<i>Subtotal</i>	<i>65</i>
<i>Passenger Ground Transportation Sector</i>	
Rental Cars	69
Taxis/Buses/Limos/Vans	21
<i>Subtotal</i>	<i>90</i>
<i>Construction/Consulting Sector</i>	<i>54</i>
TOTAL JOBS	1,963

2.2 Direct Job Impacts by Type of Activity

The airport-generated direct jobs were allocated by type of activity as follows:

- 93.9% Passenger Activity;
- 3.3% Air Cargo; and
- 2.8% Construction Activity.

2.2.1 Direct Jobs Dependent upon Passenger Activity

A total of 1,844 direct full-time equivalent jobs or 93.9 percent of the total direct jobs were generated by commercial airline passenger activity. Of these 1,844 direct jobs, 185 are with the airlines. These airline jobs include flight crew and pilots living in the Fresno area who are based out of Fresno Yosemite International Airport, ticket agents, dispatchers, equipment mechanics and technicians, custodial workers who are employees of the airlines (and not contractors to the airlines), and airline management and clerical jobs. It is clear from this diverse set of jobs with airlines that certain jobs are dependent upon the number of flights at Fresno Yosemite International Airport, others are dependent upon the number of passengers at the airport, while still other jobs, such as pilots and crew based out of Fresno are dependent upon airlines corporate decisions and airline system activity throughout the U.S.



As a result of this diversity in the types of jobs with airlines and their dependency upon the airport activity, it is clear that changes in the level of airport activity will not have a proportionate impact on the level of total direct airline jobs. For example, the airline flight attendants living in the Fresno area, and based out of the Fresno Yosemite International Airport, as well as system maintenance facilities, are not necessarily dependent upon the level of flights in and out of the Fresno Yosemite International Airport, but instead on the growth in the specific airline system of which they are employees. In contrast, certain jobs are directly dependent on the number of flights at Fresno Yosemite International Airport, such as the equipment service technicians and dispatchers.

Because of this diversity in the types of airline employees at Fresno Yosemite International Airport, it is critical to emphasize that an increase or decrease in flight activity at Fresno Yosemite International Airport will not result in a proportional change in the number of airline employees. For example, if flights are decreased at Fresno Yosemite International Airport, airline employment could actually increase. This would be the case if the passenger load factor increased for the aircraft still using Fresno Yosemite International Airport, or if the size of planes increased (while number of flights declined). Similarly, if a specific airline system activity increased, this could, in turn, result in an increase in the number of flight attendants employed system-wide and based in the Fresno area and the number of system maintenance facility employees.

Based on analysis of employee job classifications for the airlines servicing the Fresno Yosemite International Airport, it was estimated that 80 percent of the direct airline employment would be totally dependent upon the actual number of flights and passengers at Fresno Yosemite International Airport. The remaining 20 percent of the airline employees would include flight crews based in Fresno, but dependent upon airline system-wide performance; system maintenance facility employees; and airline management stationed at Fresno Yosemite International Airport.

The military operations at Fresno Yosemite International Airport include the California Air National Guard 144th Fighter Wing (CANG) and the California Army National Guard Aviation Classification Repair Activity Depot (AVCRAD) creating 849 jobs.

2.2.2 Air Cargo Job Impacts

In FY2017, 19.9 million pounds of air cargo handled moved on commercial air carriers and dedicated air cargo carriers at Fresno Yosemite International Airport. Of the 1,963 jobs directly generated by airport activity, 65 direct jobs, or 3.3 percent of the total direct job impact, are directly generated as a result of air cargo activity at Fresno Yosemite International Airport.

2.2.3 Construction Job Impacts

As a result of \$13.9 million capital and consulting expenditures by Fresno Yosemite International Airport in FY2017, 54 airport-generated direct jobs were created in the local construction industry.

2.3 Geographic Distribution of the Direct Jobs

In order to estimate the local economic impact created by airport activity, data on residency of employees was collected from the interviews with members of the airport community serving Fresno Yosemite International Airport. The direct job impact was then allocated based on county/city of residence. **Table 2-2** shows the distribution of job impacts by major cities (Fresno and Clovis) and Fresno County. This table underscores the importance of the airport as an economic development catalyst throughout local and regional economies. More than 96 percent of the 1,968 direct jobs are held by residents of Fresno County, as presented in the table.

*Table 2-2
Distribution of Job Impacts by
Place of Residence, FY2017*

	PERCENT	DIRECT JOBS
Clovis	16.38%	322
Fresno	50.69%	995
Other Fresno County	29.07%	571
Other CA	3.77%	74
Other US	0.10%	2
TOTAL	100%	1,963

3. INDUCED JOB IMPACT

A portion of the wage and salary income received by those 1,963 directly employed due to airport activity is saved; another portion is used to pay federal, state and local taxes, while another portion is used to purchase goods and services from firms located in the Fresno regional economy, as well as from firms out of the region. The purchases of goods and services from firms in the region create induced jobs for area residents in the firms that are supplying the goods and services. Furthermore, those individuals supplying the goods and services also receive income from their employers and use a portion of it for additional purchases from firms located in the region. This "trickle-down" effect of an initial income expenditure results in a multiplier effect throughout the regional economy known as the personal income multiplier. This income multiplier is discussed in the following chapter, but the resulting induced jobs are measured in this chapter.

The induced employment impact was estimated as follows. The average propensity to consume was developed from a personal income multiplier for the Fresno regional economy that was developed for Martin Associates by the Bureau of Economic Analysis, Regional Input-Output Modeling System (RIMSII). Using this propensity to consume, local consumption expenditures were derived.

- *The percentage of income spent by Fresno regional residents on various expenditure categories of the economy (i.e., manufacturing, housing, services, food, etc.) was developed from the Consumer Expenditure Survey for the Fresno Regional Economy.*
- *The ratio of employment to sales in each of the expenditure categories for both wholesale and retail purchases were calculated for the Fresno MSA, from data published by the U.S. Bureau of the Census.*
- *The airport-induced consumption impact was allocated to the various expenditure categories based on the Bureau of Labor Statistics breakdown for a typical consumer in the Fresno metropolitan area.*
- *The personal consumption impact allocated to each expenditure category was multiplied by the ratio of employment to sales in that category to estimate the number of induced jobs for regional residents.*

Support jobs, such as jobs with business and personal service firms, and jobs with local and state government agencies (including jobs with public schools), are also estimated based on the ratio of jobs in these service sectors to total state employment.

As a result of the local purchases by the 1,963 directly employed, 1,507 induced jobs were supported in the regional economy.

The induced impacts are greatest with the region's municipal and state government agencies and services not elsewhere classified sector. This sector includes public and private schools, municipal and state government services and business and personal services that are not driven directly by consumption expenditures, but are created to support the direct jobs associated with the airport activity. The next largest induced job impact is generated in the local retail and wholesale food and beverage industries, followed by jobs in the local housing and construction industry and by the entertainment industry.

4. INDIRECT JOBS

In addition to these induced jobs created due to purchases by the 1,963 *individuals* directly employed due to activity at Fresno Yosemite International Airport, additional jobs in the regional economy will be created *indirectly* due to the purchase of goods and services by the *firms* involved in airport activity. For example, airlines purchase such items as fuel, catering services, parts and office supplies from local firms, thereby creating jobs in these supplying industries. Similarly, the airport itself purchases such services as contract construction, utilities, and maintenance services from local suppliers, also creating jobs in the local economy. For the most part, the jobs resulting from such purchases are included in the direct job impacts (see Table II-1). For example, the 305 jobs with suppliers of aircraft services (including fixed base operators, fuel handlers and parts suppliers/maintenance jobs), and the 54 jobs with contract construction and consulting firms are all included as direct job impacts. In some studies, impacts in these supplying industries are included as indirect jobs and are measured through the use of a regional input/output model. For the purposes of this study, a more detailed assessment of jobs in the supplying industries was more appropriate since many are located on the airport facility and these impacts are considered as direct job impacts. To estimate these indirect jobs, the local purchases for goods and services were identified from each firm surveyed.

Based on the interview responses, a total of \$52.0 million was spent locally by those firms directly dependent upon the passenger and cargo activity at Fresno Yosemite International Airport.² To estimate the indirect economic impact, the local purchases were grouped by type of purchases (office supplies, utilities, transportation services, airline parts and machine shop repairs, etc.). The types of services were then linked to a producing or supplying industry in the Fresno metropolitan area. The local purchases by airport-dependent firms were then combined with employment to sales ratios in supplying firms, as developed by the U.S. Bureau of Economic Analysis, to estimate the number of indirect jobs that are supported by purchases by the airport dependent firms. A total of 639 indirect jobs were supported in local industries by the purchases by airport dependent firms.

²These purchases by directly dependent firms are for services other than those provided by airport tenants. For example, the indirect jobs do not include jobs with fixed base operators supplying services to the airlines, since these jobs are counted as direct jobs.

Chapter 3

Revenue, Income and Tax Impacts Generated by Fresno Yosemite International Airport



In this chapter the revenue, personal income and tax impacts are described. This chapter is organized as:

- *Section 1 describes the revenue generated by airport activity, and provides a description of how the revenue is distributed across the economic impact sectors and categories.*
- *Section 2 presents the local purchases of the directly dependent firms.*
- *Section 3 details the personal income impact, including a description of the re-spending impact and the indirect personal impact.*
- *Section 4 presents the tax impacts. The tax impacts include state and local tax revenue impacts as well as airport specific taxes that are contributions to the Aviation Trust Fund.*

1. REVENUE IMPACT

The movement of passengers and freight via Fresno Yosemite International Airport generates revenue for firms in each of the four sectors of airport-related activity. For example, in the

airline/airport service sector, revenue is received by the security and skycap firms providing services to the airlines, and by airport tenants who sell retail merchandise to passengers in the airport. In the freight transportation sector, airlines receive revenue from moving the air cargo to and from the airport and freight forwarders receive revenue from arranging air transportation for the cargo. Similarly, the rental car agencies and the firms providing ground transportation receive revenue from transporting passengers to and from the airport, while contract construction and consulting firms receive revenue from the airport and airlines that have contracted these services.

Revenue generated by airport activity is dispersed throughout the economy in several ways. For example, gross revenue is used to pay employee salaries and the whole range of taxes, it is distributed to stockholders, and it is used for purchases of goods and services (as described in the discussion of indirect job impacts in the preceding chapter). Only part of this revenue can be traced geographically with any degree of accuracy -- the portion of the revenue paid out in salaries, in local purchases by the directly dependent firms, and in state and local taxes. These impacts are addressed in separate sections of this chapter.

In FY2017, passenger and air cargo activity at Fresno Yosemite International Airport generated \$299.2 million of business revenue to the airlines and service companies directly dependent on the airport.³ The portions of revenue used for local purchases, paid to the direct employees in wages and salaries, and used for state and local tax payments by the directly dependent firms, represent impacts that can be traced as remaining in a particular region or state. Therefore, the focus of the revenue impact will be on identifying the local purchases of goods and services by the directly dependent firms, the wages and salaries earned by those directly employed, and the tax payments.

While the total revenue impact of \$299.2 million does not represent a local impact, it nonetheless is useful to estimate the revenue received by each category of firms involved with airport activity. The \$299.2 million of revenue impact is distributed across the economic impact sectors as follows:

- 83.4% Airline/Airport Sector;
- 6.4% Ground Transportation Sector;
- 5.5% Air Freight Sector; and
- 4.7% Construction/Consulting Sector.

The majority (83.4 percent) of the \$299.2 million direct revenue impact is received by firms in the airline/airport service sector. About 5.5 percent of the \$299.2 million revenue impact is received by firms providing air cargo handling services, compared to 3.3 percent of the *direct jobs* being held by

³The revenue impact is derived directly from the interview results with each airport tenant. The revenue also includes the revenue from enplaned air passengers. Care is taken to avoid double counting of revenue used to make purchases from other tenants at the airport, and as such user fees and gate charges are not included in the revenue count. For taxis and other non-rental car ground transportation, revenue is based on average fares for cabs, limos, buses, etc., and the share of passengers using those modes of transportation to and from the airport.

firms in the freight sector. The construction and consulting sector earns about 4.7 percent of the direct revenue and the ground transportation sector generates 6.4 percent.

2. LOCAL PURCHASES

In FY2017, it is estimated from the interviews with the airport community that about \$52.0 million of local purchases were made by the firms dependent upon the activity at Fresno Yosemite International Airport. These purchases include purchases for retail goods and office supplies, utilities, communications services, maintenance services and airline parts, etc. As a result of these purchases, 639 local indirect jobs were generated, as detailed in the previous chapter.

3. PERSONAL INCOME IMPACTS

An estimated total of \$112.2 million was paid in wages and salaries to the 1,963 direct airport generated employees. This \$112.2 million income impact is estimated based on the average wage and salaries for each job category multiplied by the corresponding number of jobs in that category. The spending of this personal income within the Fresno metropolitan area creates the additional employment estimated as induced jobs in Chapter II, which results in an additional \$163.3 million of personal income and consumption purchases throughout the region.

Re-spending of income within a region is measured by a regional personal earnings multiplier. The size of the multiplier varies by region depending on the proportion of regional goods and services purchased by individuals. The higher this percentage, the lower the income leakage is out of the region. The personal earnings multiplier is based on data provided by the Bureau of Economic Analysis (BEA), Regional Input-Output Modeling System (RIMSII). The BEA estimates that for every one dollar earned by direct employees of the airport, another \$1.45 of personal income and consumption expenditures would be created as a result of re-spending the income for purchases of goods and services produced locally. Hence, a personal earnings multiplier of 2.45 was used to estimate the total income and consumption impact of \$163.3 million, inclusive of the re-spending and local consumption impact.

It is to be emphasized that the re-spending effect measures the total re-spending impact in the Fresno area. The induced jobs, which are generated by this re-spending of the direct income, only include jobs generated at the retail and wholesale level due to consumer purchases, since it is assumed that these jobs will most likely occur in the Fresno metropolitan area. In addition to these induced retail and wholesale jobs, there are also additional induced and indirect jobs created to support purchases by those induced jobs in the wholesale and retail sectors, i.e., a second round of induced and indirect jobs. These second level induced and indirect jobs are not estimated, since it is not possible to identify with any degree of defensibility the geographic location where these second round induced and indirect jobs are created. Because the total number of induced and indirect jobs (second, third and fourth levels, etc.) generated by airport activity is not estimated, it is not possible to divide the

induced income (\$163.3 million) by the estimated induced jobs (1,507) to estimate the salary and wage income associated with the estimated induced jobs. To do so would result in a gross overestimation of the personal income associated with the induced jobs.

In addition to the direct and induced income and consumption impacts, the 639 indirect jobholders earned \$29.3 million in indirect personal wages and salaries.

Thus, the total airport generated direct, induced and indirect personal income and consumption impact is estimated at \$304.9 million.

4. TAX IMPACTS

Airport activity in FY2017 generated state and local tax revenues paid by the 1,963 individuals directly employed and induced due to airport activity. Furthermore, the firms purchasing the services also paid state and local taxes. As shown in **Table 3-1**, in FY2017, airport activity at Fresno Yosemite International Airport generated \$29.0 million of state and local taxes and \$20.8 million to the federal government, in terms of airport specific taxes.⁴

*Table 3-1
Summary of Annual Tax Impacts
Millions of Dollars, FY2017*

TYPE OF TAX	TAXES (MILLIONS)
STATE AND LOCAL TAXES	\$29.0
FEDERAL AVIATION-SPECIFIC TAXES	
CARGO WAYBILL	\$1.0
INS	\$1.9
DOMESTIC PASSENGER TAX	\$16.0
INTERNATIONAL DEPARTURE	<u>\$1.9</u>
TOTAL FEDERAL AVIATION-SPECIFIC	\$20.8

⁴Federal taxes paid by individuals and companies are not included in the tax impact. Only federal tax revenue generated by airport-specific federal taxes is included in this study. The state and local tax impacts are estimated using tax indices for the state of California as identified by the Tax Foundation. These indices multiplied by the direct, induced and indirect income impacts are used to estimate the state and local taxes.

Chapter 4

Visitor Industry Impacts Generated by Fresno Yosemite International Airport



The impact of visitors on the local and regional economy is measured in terms of jobs, revenue, and taxes generated by expenditures for hotels, retail, entertainment activities, and transportation service firms.

Travelers on business and pleasure visits are vital elements to the local area economy. Fresno Yosemite International Airport is the primary gateway to the region, and as such, provides air services key to the area's visitor industry. Individuals visit the Fresno metropolitan area for a variety of reasons, including business, pleasure and visiting the local national parks. Visitors purchase hotel rooms, pay for meals and entertainment, and make retail purchases while in the Fresno area. These purchases of goods and services stimulate the local economy, in turn generating jobs with hotels, restaurants, retail outlets, and local entertainment establishments. Those individuals employed in the Fresno visitor industry due to visitors' purchases receive income. This income is re-spent in the local economy generating induced jobs in the regional economy.

The magnitude of the economic impact generated by the visitors using Fresno Yosemite International Airport varies directly with the volume of out-of-town visitors and the length of time the visitors stay in the Fresno area. Also, the impacts depend upon the amount of money spent by visitors on a daily

basis as well as the type of purchases made. The volume of air visitors to the area depends upon the number of origin and destination passengers compared to connecting passengers and the number of out-of-town airport users versus the number of local resident users of the airport. The length of time visitors spend in the Fresno area, and how they spend their money, further depends upon the purpose of the trip to Fresno and whether the visitor is a domestic air traveler or an international visitor. For example, domestic business travelers tend to spend more per day on hotels than a visitor on a pleasure trip, but the pleasure traveler may spend more on retail and entertainment and stay in the Fresno area for a longer period of time.

To estimate the economic impact of visitors arriving via Fresno Yosemite International Airport, a 500 passenger in-terminal intercept survey of enplaning passengers was conducted during the week of October 2nd, 2017. The passenger survey sample was selected to parallel the distribution of the passengers by the key air routings representing the top destination markets of the passenger traffic at the Fresno Yosemite International Airport. The survey results were used to develop passenger characteristics, including:

- *Location of permanent residence;*
- *Primary purpose of stay while in the Fresno area;*
- *Number of nights stayed in the Fresno area;*
- *Type of overnight accommodations (e.g. hotel, private home, etc.);*
- *Amount of off-airport purchases and spending (e.g. lodging, rental car, food/beverage, retail purchases, entertainment and in-town taxi cabs);*
- *Number of people covered by these expenses;*
- *Method of arrival to the Fresno Yosemite International Airport (e.g. private car, rental car, limo, hotel shuttle, taxi, etc.).*

In FY2017, about 770,600 passengers boarded commercial aircraft at Fresno Yosemite International Airport. Of the 770,600 enplaning passengers, about 280,500 were visitors to the area. The remaining 490,100 enplaning passengers were residents of the area (there are no connecting flights). It is the travel and spending characteristics of the 280,500 visitors that will contribute to the local and state economy through lodging, retail purchases, eating in restaurants, and local transportation services. **Table 4-1** shows the trip purpose of the 280,500 non-resident visitors departing via air.



The majority, 61 percent, of the 280,500 visitors consists of domestic pleasure travelers, while 25 percent of the visitors are domestic business travelers. International business and pleasure travelers account for about 14 percent of the total visitors.

Table 4-1
Estimated Non-Resident Visitors by Trip Purpose

TRIP PURPOSE	ESTIMATED ENPLANEMENTS
DOMESTIC:	
DOMESTIC BUSINESS	70,546
DOMESTIC PLEASURE	<u>171,881</u>
TOTAL DOMESTIC VISITORS	242,427
INTERNATIONAL:	
INTERNATIONAL BUSINESS	2,239
INTERNATIONAL PLEASURE	<u>35,837</u>
TOTAL INTERNATIONAL VISITORS	38,075
TOTAL VISITORS	280,502

Visitor spending and length of stay patterns vary depending on the type of visitor. **Table 4-2** shows the average length of stay and average daily expenditures by purpose of trip. Domestic business travelers stay an average of 3.5 days and spend an average of \$180 daily. Domestic visitors on vacation or visiting friends and relatives stay an average of 7.5 days and spend about \$178 per day. International visitors on vacation or visiting relatives stay an average of 9.2 days, and spend an estimated \$178 per day, while international business travelers stay an average of 3.0 days and spend about \$226 per day. Together, these guests from out-of-town brought \$184.2 million to the Fresno area in FY2017.

Table 4-2
Length of Stay and Daily Expenditures

TRIP PURPOSE	LENGTH OF STAY (DAYS)	EXPENDITURES PER DAY
DOMESTIC:		
DOMESTIC BUSINESS	3.5	\$180
DOMESTIC PLEASURE	7.5	\$178
INTERNATIONAL:		
INTERNATIONAL BUSINESS	3.0	\$226
INTERNATIONAL PLEASURE	9.2	\$178

1. VISITOR INDUSTRY JOB IMPACT

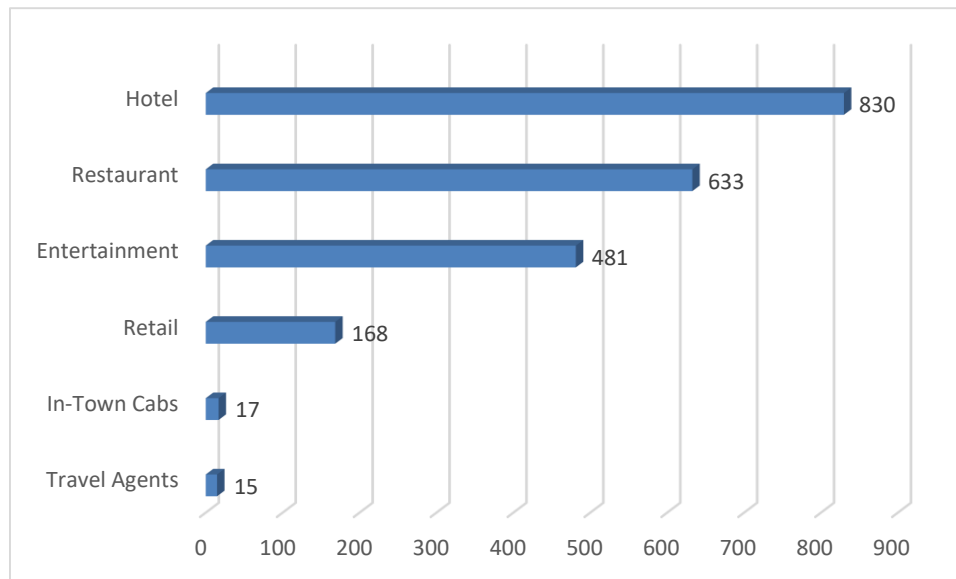
A summary of visitor impacts are presented in **Table 4-3**.

*Table 4-3
Fresno Visitor Industry Impacts, FY2017*

IMPACTS	FRESNO VISITOR INDUSTRY
JOBS	
DIRECT	2,143
INDUCED	710
INDIRECT	<u>614</u>
TOTAL JOBS	3,467
PERSONAL INCOME (\$ MILLIONS)	
DIRECT	\$40.6
RE-SPENDING/CONSUMPTION	\$40.1
INDIRECT	<u>\$20.4</u>
TOTAL INCOME	\$101.1
BUSINESS REVENUE (\$ MILLIONS)	\$184.2
LOCAL PURCHASES (\$ MILLIONS)	\$33.2
STATE AND LOCAL TAXES (\$ MILLIONS)	\$7.7

Using the results of the passenger survey, the 280,500 visitors arriving via Fresno Yosemite International Airport are estimated to have spent \$184.2 million in the Fresno area for lodging, food, entertainment, and transportation. This spending supported 2,143 direct jobs in the Fresno area. **Exhibit 4-1** summarizes these direct visitor industry impacts.

Exhibit 4-1
Direct Job Impacts Due to Visitors Arriving via
Fresno Yosemite International Airport



The majority of the impacts are generated in area hotels (830), followed by 633 jobs with area restaurants. Approximately 481 jobs are created with entertainment/recreational activities, 168 with local retail outlets, 17 jobs with local transportation firms and 15 jobs with local travel agents.⁵

As the result of local purchases by those 2,143 directly employed individuals, 710 induced jobs are supported in the Fresno area economy.

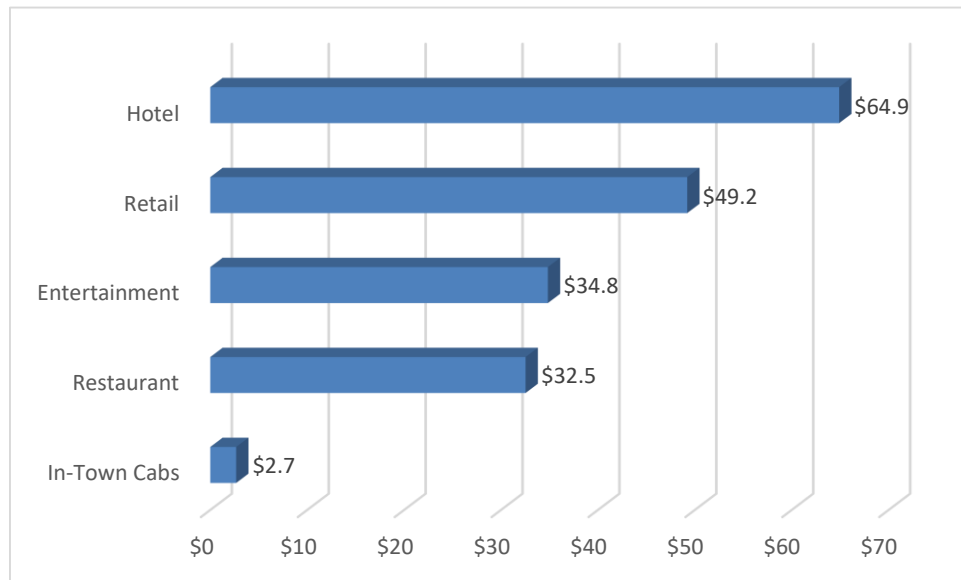
No local purchase data was collected from hotels and other sectors of the visitors industry. Instead, the Bureau of Economic Analysis developed indirect job multipliers for the various sectors of the Fresno visitors industry. These multipliers were combined with the direct job impacts by visitor industry sector to estimate the indirect impacts. Using the indirect job multipliers for the Fresno visitors industry, it is estimated that \$33.2 million of local purchases were made by the visitor industry firms for goods and services to support the visitor generated operations. These purchases supported 614 indirect jobs in the area economy.

2. BUSINESS REVENUE IMPACT

The purchases made by visitors to the Fresno area in FY2017 generated \$184.2 million of business revenue to hotels, restaurants, retail outlets, entertainment establishments, and local transportation firms. The distribution of the business revenue by visitor sector industry is described in **Exhibit 4-2**.

⁵ The local transportation jobs exclude the airport generated jobs with rental cars, cabs, limos and buses moving passengers to and from the Airport.

Exhibit 4-2
Distribution of Visitor Industry Expenditures, FY2017
(Millions of Dollars)



As this exhibit demonstrates, local hotels received \$64.9 million due to visitors using the airport, while \$49.2 million was spent on retail purchases by visitors using Fresno Yosemite International Airport. Visitors spent \$34.8 million on local entertainment and recreational activities, and \$32.5 million on food and beverage purchases at local restaurants, while \$2.7 million was spent on local transportation.

3. PERSONAL INCOME AND TAX IMPACTS

The 2,143 individuals directly employed in the Fresno area visitor industry as a result of expenditures by the 280,500 visitors to the area received \$40.6 million in wages and salaries. A portion of this personal income is also used for regional purchases of goods and services, creating induced jobs. Applying the personal income multiplier for the local area visitors industry (estimated by the U.S. Bureau of Economic Analysis), an additional re-spending and consumption income impact of \$40.1 million was generated locally.

The 710 indirect job holders received \$20.4 million of indirect wages and salaries. Therefore, the total personal income and consumption impact generated by visitors arriving via the Fresno Yosemite International Airport is \$101.1 million. Finally, as a result of the visitors arriving via the Fresno Yosemite International Airport, \$7.7 million of state and local taxes are created, including local hotel tax receipts.

Chapter 5

Non-Aviation Real Estate Impacts of Airport Property



The impacts created with the non-aviation real estate tenants of Fresno Yosemite International Airport are generated by the demand for the goods and services produced by these tenants, and not by activity specific to airport activity provided by the Fresno Yosemite International Airport. As a result, the impacts generated by tenants of the Airport's real estate holdings are not as directly dependent upon Fresno Yosemite International Airport and its investment as are the passenger and visitor industry impacts.

The impact analysis of the non-aviation real estate tenants are based on a survey of the tenants and subtenants located on Airport property and not included in other airport operations. Martin Associates developed a separate real estate impact model to estimate the impacts of these tenants on the Fresno regional economy. In addition, the impact model can be used to assess the impacts of potential uses of airport-owned property, including, office, restaurant, retail and industrial uses.

Table 5-1 summarizes the economic impacts of the non-aviation real estate tenants of the Fresno Yosemite International Airport.

Table 5-1
Economic Impacts of the Non-Aviation Real Estate Tenants
Fresno Yosemite International Airport, FY2017

IMPACTS	FRESNO REAL ESTATE
JOBS	
DIRECT	832
INDUCED	256
INDIRECT	<u>506</u>
TOTAL JOBS	1,594
PERSONAL INCOME (\$ MILLIONS)	
DIRECT	\$23.7
RE-SPENDING/CONSUMPTION	\$22.6
INDIRECT	<u>\$20.3</u>
TOTAL INCOME	\$66.6
BUSINESS REVENUE (\$ MILLIONS)	\$67.1
LOCAL PURCHASES (\$ MILLIONS)	\$34.1
STATE AND LOCAL TAXES (\$ MILLIONS)	\$6.3

As summarized in Table 5-1, Fresno Yosemite International Airport's non-aviation real estate tenants create the following economic impacts:

- 832 direct jobs are generated by these tenants, and as the result of local purchases by these direct employees, another 256 induced jobs are supported in the Fresno regional economy. Due to \$34.1 million of local purchases, 506 indirect jobs are supported. This indirect impact reflects the dependency on the local economy supply infrastructure for port tenants such as business offices;
- The 832 directly employed workers received \$23.7 million of wages and salaries. As the result of the local purchases by these employees, another \$22.6 million of income and consumption expenditures were generated, resulting in the induced job impact. The 506 indirect jobholders received \$20.3 million of indirect wages and salaries for a total personal income impact of \$66.6 million;
- The non-aviation real estate tenants and subtenants received \$67.1 million of revenue, of which \$34.1 million was used for local purchases, as identified from the surveys of these tenants. These local purchases supported the 506 local indirect jobs; and

- Fresno Yosemite International Airport's non-aviation real estate tenants and subtenants generated \$6.3 million of state and local taxes.

The majority of the direct jobholders with the non-aviation real estate tenants and subtenants reside in the City of Fresno, followed by other Fresno County and the City of Clovis. Overall, 96.3% of the direct jobs with the Fresno Yosemite International Airport's non-aviation real estate tenants reside in Fresno County. **Table 5-2** presents the distribution of the direct jobs by place of residency.

Table 5-2
Direct Real Estate Employees by Place of Residence

	PERCENT	DIRECT JOBS
Clovis	13.22%	110
Fresno	54.21%	451
Other Fresno County	28.90%	240
Other CA	2.88%	24
Other US	<u>0.79%</u>	<u>7</u>
TOTAL	100%	832

Chapter 6

Economic Impacts of Fresno Chandler Executive Airport



In addition to Fresno Yosemite International Airport, Martin Associates estimated the economic impacts generated as a result of general aviation activities at Fresno Chandler Executive Airport. The airport is located about a mile and half west of downtown Fresno. The general aviation airport services approximately 64,000 annual operations. There are 149 T-hangars, 70 permanent tie-downs, 10 covered tie-downs and 8 transient tie-downs.

In FY2017, there were approximately 64,000 estimated operations at Fresno Chandler Executive Airport and nearly 69,400 passengers used this airport for business and pleasure travel on private aircraft. The airport is home to several FBOs, aircraft parts and repair firms and flight training schools.

1. TOTAL ECONOMIC IMPACTS

Activity at Fresno Chandler Executive Airport supports 137 direct, induced and indirect jobs in the local Fresno area, including the local visitors industry. **Table 6-1** summarizes the impacts of the airport, both airport generated impacts as well as impacts generated by the visitors to the Fresno metropolitan area using this airport.

Table 6-1
Economic Impacts Generated by Fresno Chandler Executive Airport

IMPACTS	CHANDLER AIRPORT- GENERATED	CHANDLER VISITOR INDUSTRY	TOTAL IMPACTS
JOBS			
DIRECT	29	53	82
INDUCED	18	16	34
INDIRECT	<u>4</u>	<u>17</u>	<u>21</u>
TOTAL JOBS	51	86	137
PERSONAL INCOME (\$ MILLIONS)			
DIRECT	\$1.2	\$1.0	\$2.2
RE-SPENDING/CONSUMPTION	\$1.7	\$1.0	\$2.7
INDIRECT	<u>\$0.2</u>	<u>\$0.6</u>	<u>\$0.7</u>
TOTAL INCOME	\$3.1	\$2.5	\$5.6
BUSINESS REVENUE (\$ MILLIONS)	\$5.0	\$4.4	\$9.4
LOCAL PURCHASES (\$ MILLIONS)	\$0.3	\$0.9	\$1.3
STATE AND LOCAL TAXES (\$ MILLIONS)	\$0.3	\$0.2	\$0.5
FEDERAL GOVERNMENT AVIATION- SPECIFIC TAXES (\$ MILLIONS)	\$0.2	N/A	\$0.2

2. EMPLOYMENT IMPACTS

Activity at the Fresno Chandler Executive Airport supported 137 direct, induced and indirect jobs in the Fresno metropolitan area.

Airport Generated Employment Impacts

In FY2017, airport activity at Fresno Chandler Executive Airport generated 29 **direct jobs**. These jobs include jobs at the flight training schools, FBO, aircraft maintenance and supply firms, Airport Administration, helicopter service firms, hangar rental companies and the restaurant located at Fresno Chandler Executive Airport.

Because of the local purchases by the 29 directly employed, an additional 18 ***induced jobs*** were supported in the local economy. As the result of \$0.3 million of local purchases by the firms dependent upon the airport, an additional 4 ***indirect jobs*** were supported, for a total airport-generated impact of 51 direct, induced and indirect jobs.

Visitor Industry Employment Impacts

In FY2017, of the 64,000 annual operations at Fresno Chandler Executive Airport, it is estimated that nearly 34,700 passengers boarded general aviation flights at the airport and approximately 7,000 were visitors to the Fresno metropolitan area.

The 7,000 visitors spent \$4.4 million in the Fresno visitor industry in FY2017 for food, lodging, entertainment services, retail purchases and transportation services. These \$4.4 million of visitor industry purchases supported 53 ***direct jobs*** in the Fresno metropolitan area visitors industry.

As the result of local purchases by these 53 employees of the Fresno visitor industry, an additional 16 ***induced jobs*** were supported in the local economy. Furthermore, as the result of \$4.4 million of local purchases by the firms dependent upon the Fresno visitor industry, an additional 17 ***indirect jobs*** were supported, for a total visitor industry impact of 86 direct, induced and indirect jobs.

3. BUSINESS REVENUE IMPACTS

General aviation activity at Fresno Chandler Executive Airport generated \$9.4 million of business revenue to firms providing services at the airport and to local visitor industry firms.

Airport Generated Business Revenue Impacts

The general aviation activity at Fresno Chandler Executive Airport created \$5.0 million of business revenue to firms supplying passenger and training services at the airport.

Visitor Industry Revenue Impacts

In FY2017, the local visitors' industry received \$4.4 million in revenue from the 7,000 visitors using the Fresno Chandler Executive Airport.

4. PERSONAL INCOME IMPACTS

A total of \$5.6 million of wages and salaries were generated as the result of general aviation activity at Fresno Chandler Executive Airport, including the re-spending impact and indirect income impact.

Airport Generated Income Impacts

In FY2017, the 29 direct employees earned \$1.2 million of wages and salaries from general aviation activity. This represents an average salary of \$41,380. Based on data from the U.S. Department of Commerce, Bureau of Economic Analysis, it is estimated that an additional \$1.7 million of personal income and local consumption expenditures were generated.

In addition, the 4 indirect job holders received \$0.2 million of indirect wages and salaries. Combining the direct, induced/consumption and indirect income impact, the total local income and local consumption impact of the general aviation activity is estimated at \$3.1 million in FY2017.

Visitor Industry Income Impacts

The 53 directly generated jobs in the Fresno visitors' industry received wages and salaries totaling \$1.0 million. As the result of re-spending of this income, an additional \$1.0 million of income and consumption expenditures were generated. Furthermore, the 17 indirect job holders supported by the \$0.9 million of local purchases by Fresno visitor industry firms dependent upon the visitors using the Fresno Chandler Executive Airport received about \$0.6 million of indirect wages and salaries. Combining the direct, induced/consumption and indirect income impact, the total local income and local consumption impact of the visitors' industry is estimated at \$2.5 million in FY2017.

5. TAX IMPACTS

Airport activity at Fresno Chandler Executive Airport, including visitor industry impacts, generated \$0.5 million of state, county, and municipal taxes.

Airport Generated Tax Impacts

Direct airport activity generated approximately \$0.3 million of state and local taxes in FY2017.

Visitor Industry Tax Impacts

As the result of the 7,000 visitors to the Fresno metropolitan area, \$0.2 million of state and local taxes were generated.