CAMARILLO AIRPORT
ECONOMIC BENEFIT ANALYSIS

Prepared for

Coffman Associates
In association with
Dr. Lee McPheters, Arizona State University

June 2019

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INTRODUCTION

This report presents an analysis of economic benefits created by Camarillo Airport (CMA), a general aviation airport owned by the County of Ventura Department of Airports. Ventura County lies to the west of Los Angeles County and is the southernmost county in the scenic California Central Coast region. With a population exceeding 850,000 in 2018, Ventura County was the largest Central Coast county, and the only county among contingent counties without commercial air service.

Camarillo Airport is located three miles west of Camarillo city hall and the downtown business district. The airport property encompasses 650 acres, with one runway of 6,013 feet. A southwest section of the airport is designated for ultralight aircraft. Approaching and departing aircraft are served by Camarillo Tower between 0700-2300 hours.

Camarillo Airport is home to 400 based aircraft. Seventy percent of these are single engine (**Table 1**). There are 285 single engine aircraft, 37 multi-engine, 35 based jets, and 13 helicopters.

TABLE 1 | Based Aircraft

Type	Based Aircraft
Single Engine	285
Multi Engine	37
Jet	35
Helicopter	13
Ultra-Light	30
Total	**400**

Source: Department of Airports

Camarillo Airport offers a range of FBO services such as fueling, inspections, maintenance, charter, as well as aircraft sales and rentals. Scenic flights to the Channel Islands are popular with visitors and residents. The County of Ventura Sheriff's helicopter unit based at the airport serves the community supporting firefighting, emergency transport, and law enforcement missions. The airport is also home to a WWII Aviation Museum maintained by the Southern California Wing of the Commemorative Air Force. A number of WWII aircraft are on display, as well as other memorabilia.

Camarillo Airport has averaged 143,535 annual operations over the past 5 years. Historical figures for operations (take-offs or landings) from 2002 - 2018 are shown in **Table 2**. Peak total operations (203,94) during the past two decades were recorded in 2002. Total operations for 2018 were 140,598, a 31 percent decrease from the 2002 high. Total operations are made up of local operations (flights that remain in the airport traffic pattern, for training and practice) and itinerant operations. Itinerant operations (aircraft arrivals from outside the airport area or departing and leaving the airport area) are particularly relevant for economic benefit analysis, since itinerant aircraft arrivals represent potential visitors to the region as well as sales and revenues to FBO firms and other on-site businesses. Itinerant air taxi operations include various non-scheduled charter, cargo, and "work" flights (such as agriculture or photography). General aviation (GA) operations represent the private transport component of civil aviation, including corporate aircraft, private business travel,

tourism, recreation, and all types of personal travel, not for hire. There were 107,365 itinerant general aviation operations in the peak year 2002. Itinerant general aviation operations have averaged 71,728 over the most recent five years and were 67,314 in 2018.

TABLE 2 | Aircraft Operations

Year	*Itinerant Operations*				Local	Total
	Air Taxi	General Aviation	Military	Total Itinerant		
2002	2,823	107,365	92	110,280	93,661	203,941
2003	2,377	102,716	172	105,273	80,614	185,887
2004	2,367	91,503	176	94,046	68,843	162,889
2005	2,543	86,865	134	89,545	63,956	153,501
2006	2,996	81,266	147	84,409	65,416	149,825
2007	2,314	78,718	78	63,340	67,408	148,518
2008	2,151	80,074	102	45,751	75,918	158,245
2009	3,924	75,642	47	79,613	82,557	162,170
2010	3,782	67,547	40	71,371	75,492	146,863
2011	3,927	67,712	71	71,710	61,693	133,403
2012	3,286	65,965	114	69,365	63,314	132,679
2013	2,325	67,154	257	69,736	66,774	136,510
2014	2,969	74,330	285	77,584	67,053	144,637
2015	3,145	74,875	371	78,396	68,624	147,020
2016	3,228	69,180	427	72,836	62,681	135,517
2017	3,637	72,940	662	77,239	72,663	149,902
2018	3,637	67,314	593	71,544	69,054	140,598

Source: FAA Air Traffic Activity Data System

MEASURING ECONOMIC BENEFITS

Airports bring many benefits that extend beyond the aviation community to impact economic growth and development as well as the quality of life of residents. The availability of air transport is invariably listed by business executives as a key criterion for business location and expansion. Airports contribute to public safety by supporting police operations, firefighting teams and border security. Private aviation firms provide medical transport and assist businesses with mapping, aerial photography, and transport to reach customers quickly and efficiently.

Although qualitative advantages created by an airport are important, they are also challenging to measure. In studying the economic benefits of airports and aviation, analysts have emphasized economic benefits that can be quantified:

- **Employment** is the number of jobs supported by economic activity created by the presence of the airport.

- **Payroll** includes income to workers as employee compensation (the dollar value of payments received by workers as wages and benefits) and proprietor's income to business owners.

- **Output** is the value of the production of private firms and public agencies. For a private firm, output is equal to the annual value of revenue or gross sales at producer prices (before addition of further margins or transportation costs), including sales or excise taxes. Output, revenue, and sales are interchangeable synonymous terms used throughout this study and in turn, these are equal to spending or expenditures from the perspective of the buyer. For government units, the agency budget is used as the measure of output.

Economic benefit studies differ from cost-benefit analyses, which are often used to support a "go-no go" decision to undertake a proposed project. Analysis of economic benefits is related to measurement of the economic contribution of an industry or a particular component of the economy. This methodology was standardized in the publication by the Federal Aviation Administration, *Estimating the Regional Economic Significance of Airports*, Washington DC, 1992, and has been closely followed in recent years by public and private sector aviation analysts. Consistent with the FAA methodology, this study views Camarillo Airport as a source of measurable benefits that impact Camarillo and Ventura County. Aviation activity creates revenues for firms, and employment and income for workers on and off the airport.

On-airport activity by private aviation related firms and government agencies located on the airport is a source of output, jobs, and worker payrolls. Business spending on the airport injects revenues into the community when firms and public sector agencies buy products from local and regional suppliers and again when employees of the airport spend for goods and services in their communities.

Included in on-airport economic benefits are capital improvement projects that provide for growth and enhance air safety, as well as expenditures by tenants for modernization or expansion of existing space and facilities.

Off-airport spending by visitors that arrive by itinerant general aviation aircraft is a second source of economic benefits. Air visitor spending creates jobs, income, and revenues in the region's lodging, food service, ground transportation, retail, and recreation industries.

DIRECT, SECONDARY, AND TOTAL ECONOMIC BENEFITS

Economic activity (such as purchase of fuel by an aircraft pilot) creates an initial economic impact or direct benefit when the purchase is made. The spending by the pilot provides revenue to the Fixed Base Operator, a portion of which is retained as margin and the remainder is used for payments to suppliers or to pay salaries to workers (who then spend their wages in their home communities). As payments are received by suppliers or spent by workers, the initial direct spending

from the fuel purchase recirculates in the economy bringing secondary benefits known as multiplier or "ripple effects," illustrated in **Figure A**. These combined direct and secondary benefits summed together provide a measure of total economic benefits.

FIGURE A: DIRECT, SECONDARY AND TOTAL ECONOMIC BENEFITS

The characteristics and components of direct and secondary benefits are explained below in further detail.

- **Total economic benefits** are the combined sum of direct and secondary benefits created both on and off the airport.

- **Direct benefits** measure the initial output, employment, and payroll when businesses and agencies on the airport generate sales and revenues, hire workers, and make payments to employees. Off-airport direct benefits result when visitors that arrive by air spend for goods and services including lodging, restaurants, auto rental, retail items, or recreational activity. The on-airport direct benefits are tabulated by obtaining data on revenues received by airport employers, the number of workers, and compensation paid. Air visitor direct spending benefits are based on the number of visitors and their outlays for goods and services. These initial direct benefit figures are the "inputs" to an input-output model to estimate secondary benefits.

- **Secondary benefits** are created when the initial spending at system airports or by visitors circulates and recycles through the economy. The secondary benefits measure the magnitude of successive rounds of re-spending in the broader regional economy.

There are two types of secondary benefits:

- **Indirect benefits** include activity by suppliers and vendors who sell to airport or hospitality businesses, along with the jobs created and incomes paid to workers by these suppliers. For example, businesses and agencies on the airport purchase services such as insurance and hard goods such as tools or office furniture from off-airport providers. The revenues to suppliers and jobs supported as well as wages paid are indirect benefits.

- **Induced benefits** measure the consumer spending of workers who produced both the direct or indirect goods and services. For example, when an aircraft technician's salary is spent for consumer goods such as groceries or medical services, this contributes to additional employment and income in the general economy for providers of these goods and services.

Economic benefit studies rely on multiplier factors from input-output models to estimate how direct spending on the goods and services of a particular industry or set of industries creates secondary indirect and induced benefits or multiplier effects. An input-output model incorporates inter-industry or "supply chain" relationships within the region that account for changes in employment, payroll, and output in related industries set off by a change in demand in an initial industry.

The input-output model used for this study was the IMPLAN model, based on data and coefficients for the Ventura County economy from the U. S. Bureau of Economic Analysis. This model is frequently used for studying the economic benefits of airports and aviation across the nation, as well as economic impacts associated with changes in regional economies, such as closing of a military base or construction of a major sports venue. Because the airport is an existing facility, the current IMPLAN application should be viewed as a contribution study, analyzing the benefits the airport creates annually for the local economy. The time period studied is calendar year 2018 and figures are expressed in 2018 dollars.

ECONOMIC BENEFIT HIGHLIGHTS

Camarillo Airport created total 2018 economic benefits of $230.8 million of output, 1,764 total jobs supported, and payrolls for workers of $115.3 million (**Figure B**). The total benefits include both direct and secondary benefits, measuring the airport's overall contribution to the regional economy.

FIGURE B: CAMARILLO AIRPORT TOTAL ECONOMIC BENEFITS

Highlights of the economic benefits of Camarillo Airport include the following:

- The CMA direct on-airport economic benefits resulted from the activity of 54 private tenants, 10 public agencies, and capital improvement projects. Direct on-airport output was $123.5 million, with payroll to 1,002 on-airport workers of $76.0 million.
- The average compensation (including benefits) of workers on the airport was $75,832. The U.S. Bureau of Economic Analysis reports the average compensation for all of Ventura County was $72,471 (adjusted to 2018 by CPI). On-airport compensation was 5% greater than the average job in the area.
- The direct economic benefit of air visitors to Camarillo Airport in 2018 brought an injection of $4.1 million of visitor spending into the economy, creating employment for 35 workers in the hospitality industry, with payroll of $1.1 million.
- The combined direct benefits of on-airport and visitor activity summed to output of $127.7 million, 1,037 direct jobs created, and payroll of $77.1 million. The combined secondary benefits, computed through IMPLAN, created an additional $103.1 million of revenues, jobs for 727 additional workers, and payroll of $38.2 million as the initial spending recycled through the region.

Economic benefits of Camarillo Airport by source are shown in **Table 3**. Comparison of total benefits with the initial direct benefits provides insight into the multiplier process that causes benefits due to the presence of the airport to be distributed across the regional economy. For example, the 1,037 combined direct on-airport and air visitor jobs supported total employment of 1,764, a multiple of 1.7.

TABLE 3 | Economic Benefits Summary

SOURCE	EMPLOYMENT	PAYROLL	OUTPUT
Direct Economic Benefits			
On-Airport Benefits: Activity by Aviation & Non-Aviation Private Firms, Government Agencies, Capital Projects	1,002	$75,984,000	$123,553,000
Air Visitor Benefits: Activity by General Aviation Travelers	35	$1,109,000	$4,148,000
Direct Benefits	**1,037**	**$77,093,000**	**$127,701,000**
Secondary Economic Benefits			
Indirect Benefits: Activity by Suppliers & Vendors	203	$11,891,000	$28,517,000
Induced Benefits: Activity by Employees as Consumers	524	$26,346,000	$74,607,000
Secondary Benefits	**727**	**$38,237,000**	**$103,124,000**
Total Benefits	**1,764**	**$115,330,000**	**$230,825,000**

Sources: On-airport employment information obtained through on-site tenant interviews. Output estimates computed from the IMPLAN input-output model, with coefficients for Ventura County. General Aviation operations from FAA and FlightAware data system. Air visitor spending estimates from Ventura Visitors and Convention Bureau. Secondary benefits (indirect and induced) computed from the IMPLAN model. All Values are in 2018 dollars.

The economic interpretation is that, on average, each 100 direct jobs supported an additional 70 jobs in the general economy. Similarly, each million dollars of direct output is associated with additional secondary output of $820,000, derived from calculation of the ratio of total output

($230,825,000) to direct output ($127,701,000) of 1.807. Multipliers vary by industry and geographical location. For this study, multipliers specific to Ventura County industries from the IMPLAN model were applied.

A DAY AT CAMARILLO AIRPORT

Airports are available to serve the flying public and support the economy every day of the year. The Camarillo Airport is a consistent source of revenues, employment, and income for the service area economy. During an average day in 2018, the airport generated $632,000 of total economic benefits (including secondary or multiplier benefits) and supported 1,764 workers bringing home daily income of $316,000 for spending in their home communities (**Table 4**).

The airport supports commerce in the Camarillo area, allowing swift and efficient delivery of cargo and access for 400 based aircraft to recreational, person, and business travel throughout Southern California, the western states, and the nation. The airport provides aviation training and aircraft rental options for groups or individuals who may not currently own an aircraft. Non-aviation businesses such as real estate firms often rely on aerial photography of site locations and property not immediately accessible by ground travel. Day or night, during times of need, the airport supports fire control, public safety, and traffic management to improve public security and well-being.

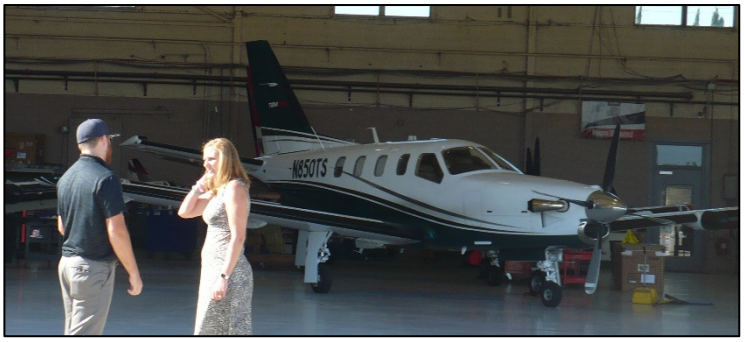
On an average day at the airport, there are more than 385 operations by aircraft involved in local or itinerant activity including touch-and-go operations, corporate travel on business jets, or private general aviation flights bringing passengers visiting the area for personal travel or on business. On an average day in 2018 there were 104 air visitors in the area spending for lodging, food and drink, retail goods and services, recreation and ground transportation. Visitor spending injected $11,000 per day into the regional economy. In 2018 the airport provided on-site employment for 1,002 workers, bringing home $208,000 per day for spending in their home communities for consumer goods and services.

TABLE 4 | Economic Benefits for an Average Day

Activity	Average Day
All Aircraft Operations	386 Daily Aircraft Operations
On-Airport Employment	1,002 Workers on the Airport
On-Airport Payrolls	$208,000 Paid to Airport Workers
General Aviation Air Visitors	104 Air Visitors in the Area Daily*
Air Visitor Spending	$11,000 Daily Visitor Spending
Total Employment	1,764 Total Area Jobs Supported
Total Payrolls	$316,000 Paid to Area Workers
Total Economic Benefits	**$632,000 Daily Economic Benefits**

*Includes overnight visitors as well as those who remained for only part of a day

ON-AIRPORT ECONOMIC BENEFITS



Economic benefits on the airport flow from the employment, payroll, and output created by the private firms and public agencies located on the airport, as well as capital improvement projects undertaken by private contractors that come onto the airport.

Information about employers on the airport was obtained through surveys and interviews with managers conducted at mid-year 2018. Final follow-up tallies were completed over the following weeks. Survey participants were informed that the individual employer results were confidential and only aggregate totals would appear in the written report.

The Ventura County Department of Airports provided substantial data and collaboration in support of this study. Department staff shared records, facilitated on-site interviews with business owners and managers, and provided specialized knowledge regarding airport operations.

For the year 2018, the 64 employers on the airport reported 1,002 employees (**Table 5**). There were 34 aviation-related employers and 30 non-aviation employers.

TABLE 5 | On-Airport Economic Benefits

SOURCE	EMPLOYMENT	PAYROLL	OUTPUT
Direct Economic Benefits			
Private Aviation Employers (31)	340	$20,592,000	$48,941,000
Public Aviation Employers (3)	54	$6,912,000	$14,148,000
Total Aviation Benefits	*394*	*$27,504,000*	*$63,089,000*
Private Non-Aviation Employers (23)	289	$14,128,000	$17,915,000
Public Non-Aviation Employers (7)	278	$31,712,000	$35,733,000
Total Non-Aviation Benefits	*567*	*$45,840,000*	*$53,648,000*
Capital Improvement Projects	41	$2,640,000	$6,816,000
Total Direct Benefits	**1,002**	**$75,984,000**	**$123,553,000**
Secondary Economic Benefits			
Indirect Benefits: *Activity by Suppliers & Vendors*	197	$11,560,000	$27,640,000
Induced Benefits: *Activity by Workers as Consumers*	512	$25,708,000	$72,929,000
Total Secondary Benefits	**709**	**$37,268,000**	**$100,569,000**
Total Direct and Secondary Benefits	**1,711**	**$113,252,000**	**$224,122,000**

Source: On-airport employment was obtained through on-site interviews and records maintained by Department of Airports administrative staff. Payroll figures based on Ventura County wage data from U. S. Bureau of Labor Statistics Quarterly Census of Employment and Wages. Output estimates were computed from the IMPLAN input-output model, with coefficients for Ventura County. Values are in 2018 dollars.

Private aviation related employers on-site at Camarillo Airport included FBO firms providing fueling, maintenance, inspections, and repairs, as well as businesses offering aviation parts, supplies,

and various services such as flight training, charters, and food services. The 31 private aviation tenants provided jobs for 340 workers and created output of $48.9 million. There were three public aviation agencies with 54 employees, including the Ventura County Department of Airports, the Ventura County Sheriff's aviation unit, and the FAA tower. Combined private and public aviation jobs on the airport summed to 394 workers. Eighty six percent of aviation workers were employed by private businesses.

There were 23 private non-aviation employers and 7 public non-aviation employers on Camarillo Airport in 2018. Private non-aviation businesses ranged from data processing to security and landscaping firms, general business services, to ground transport, health care and fitness centers, among others. Private non-aviation firms provided employment for 289 workers, while public agencies employed 278 workers. The Ventura County Fire Department was the largest public employer. Other larger public agencies represented included the animal shelter, the Ventura County Agricultural Commission, and probation offices. Combined private and public sector non-aviation payroll generated on Camarillo Airport was $45.8 million. Private businesses and public agencies created non-aviation output of $53.6 million in 2018.

CAPITAL IMPROVEMENT PROJECTS

Capital improvement projects are included as a source of airport economic benefits since construction activity generates spending and employment both on and off the airport. Runway improvements, fencing, drainage projects, and building construction are all examples of capital improvements that enhance safety and provide for growth.

Large capital improvement projects that begin at a point in time can extend over more than one year and annual outlays can vary from year to year when larger projects are underway. To smooth out the annual variation in capital improvement spending, economic benefit studies average outlays over a multi-year period.

For this study, figures on capital improvements were obtained from Department of Airports records and averaged over the four-year period from 2015 through 2018. Activities at Camarillo Airport included a major hangar development project, roadway and parking lot maintenance, and repairs to roofing and fencing. The average annual outlay was $6.8 million **(Table 6)**. This value was used to obtain the employment estimate of 41 full time equivalent construction employment worker-years and $2.6 million worker compensation as a representative annual figure for capital improvement activity at the airport.

TABLE 6 | Capital Projects

Year	Projects
FY 2015	$4,528,000
FY 2016	$5,075,000
FY 2017	$5,104,000
FY 2018	$15,101,000
Total	$29,810,000
Average	$6,816,000

DIRECT, SECONDARY, AND TOTAL ON-AIRPORT BENEFITS

The capital improvement projects undertaken on the airport by private contract firms were incorporated into the computation of direct benefits of on-airport activity to provide a final sum of 1,002 jobs on the airport, with payroll of $76.0 million and direct output of $123.5 million.

Secondary benefits as estimated by the IMPLAN model added employment of 709 more jobs and additional output of $100.6 million as the initial direct spending recirculated within the regional economy. As noted earlier, secondary effects come from two sources. On-airport private firms and public agencies make purchases from suppliers and vendors, who in turn purchase inputs and hire employees to support production of goods and services for airport customers. This effect is known as the indirect benefit. Simultaneously, employees of airport firms and agencies and employees of their suppliers are also consumers who spend incomes in their home communities. This spending stimulates additional jobs and output in the sectors serving consumers, creating induced benefits across the area economy.

Of the 709 secondary jobs associated with the presence of the airport, 1977 were indirect jobs in supplier industries to on-airport activity, such as finance and insurance, business services, providers of parts, supplies and materials, transportation and warehousing, information and communication systems. There also were 512 additional jobs induced by household spending by airport and supplier employees across a broad spectrum of consumer industries including health care, food service, retail trade, and personal services.

The total benefits of on-airport operations are the sum of the combined direct and secondary benefits. The total benefits were 1,711 jobs supported, with payroll of $113.2 million, and output of $224.1 million contributed to the Ventura County economy. Direct on-airport employment benefits of 1,002 jobs accounted for 58 percent of total employment benefits, while the secondary (or multiplier) component of 709 jobs accounted for 42 percent.

Average compensation for workers on Camarillo Airport is somewhat greater than the general economy. The average compensation across all 1,002 Camarillo Airport workers was $75,832. The U.S. Bureau of Economic Analysis reports the average compensation for Ventura County was $72,471 (adjusted to 2018 by the CPI). On-airport compensation was 5% greater than the average job in the area.

GENERAL AVIATION VISITOR ECONOMIC BENEFITS

Visitors travel on general aviation aircraft to Camarillo Airport for business, as vacationers, to reunite with friends and relatives, to attend conferences, or for various personal or professional reasons. Although general aviation travel is sometimes viewed as a luxury mode of transport, the efficiencies and flexibility of general aviation are highly desirable, especially to corporate travelers. Studies of companies that use business aviation find that these firms outperform others on key financial measures such as earnings and share price growth. While these visitors are in the Ventura County area, they contribute to the regional economy with expenditures on lodging, food and drink, and other goods and services.

Based on reports from the FAA Air Traffic Activity Data System (ATADS), there were 33,657 itinerant general aviation arrivals at Camarillo Airport in 2018 **(Table 7**). In brief, an itinerant arrival is defined as a flight that has originated at an airport other than Camarillo Airport. This definition includes returning based aircraft as well as arriving non-based aircraft. To determine the number of transient arrivals, a sample of 2,000 arrivals from the FlightAware Flight Tracker database for CMA was analyzed. This source includes arrival and departure times for aircraft identified by N numbers, on an hourly basis. Based aircraft arrivals were removed by matching arriving N numbers with known N numbers of CMA based aircraft. Arrivals with minimal length of stay at CMA and many training flights from other airports were also removed. By this process, an estimate of 12,250 "true transient" aircraft (36 percent of FAA reported itinerant arrivals) was obtained for Camarillo Airport for 2018.

TABLE 7 | General Aviation Itinerant Aircraft

Category	Value
Itinerant GA Arrivals	33,657
Transient Aircraft	12,150
Overnight Stay Aircraft	2,187
One Day Stay Aircraft	9,963

Source: Derived from FAA Air Traffic Activity Data System (ATADS) and hourly arrival and departure number records for Camarillo Airport as compiled by the FlightAware Flight Tracker system, 2018

Of these, an estimated 2,187 remained overnight while the GA travel party conducted business or visited in the area for personal reasons. The remaining 9,963 aircraft stayed for a portion of one day, long enough to conduct business on the airport or leave the airport but did not stay overnight.

GENERAL AVIATION VISITOR SPENDING

Overall visitor spending depends on the number of visitors, their length of stay, and the types of expenditures made. The number of visitors is a function of the number of arriving aircraft and average passengers per aircraft. While appealing in concept, attempts to survey pilots and passengers of arriving or departing general aviation aircraft often result in response rates that fall well below acceptable levels of statistical significance. Studies by the National Business Aviation Association and Harris Interactive found average travel party size across business aviation flights of 3.0 persons. This estimate may be influenced by larger corporate jets, as the Aircraft Owners and Pilots Association has reported an average of 2.5 passengers in the past.

For this study, an average of these two estimates, 2.7 passengers per aircraft, was used. This estimate also aligns with recent national studies, such as the *Texas Aviation Economic Impact Study* (2018), which determined average GA passengers per aircraft of 2.7 at Texas airports with greater than 10,000 operations.

Estimates for visitor spending per person per day are set out in **Table 8**. Data on spending by category were obtained from the Ventura Visitors and Convention Bureau and updated to 2018 values though adjustment by the Consumer Price Index.

Table 8 | General Aviation Visitor Spending per Person per Day

Category	Overnight GA Visitors	One Day GA Visitors
Lodging	$157	N/A
Food & Drink	$59	$24
Retail Goods & Services	$24	$10
Entertainment	$4	$2
Ground Transportation	$20	$8
Spending per Day	**$264**	**$44**
Visitor Days	11,219	26,900
Direct Visitor Spending	**$2,964,000**	**$1,184,00,000**
***Direct Visitor Benefits* = $4,148,000**		

Source: Spending from Ventura Visitors and Convention Bureau, adjusted to 2018 values by Consumer Price Index, U. S. Bureau of Labor statistics. Day visitor spending for each category is 40% of one full day spending. Some figures are rounded and may not compute exactly.

Visitor spending per person per day for overnight visitors was $264. The largest component was lodging at $157, which accounted for 60 percent of the total. The next largest category for overnight visitors was food and drink, at $59 per person per day and 22 percent of the total.

Visitors who were only in the area for a day had no expenses for lodging and therefore total spending per person was lower than for overnight visitors, at $44. Since one-day visitors were often in the area for only a portion of a full day, each spending category was adjusted to 40 percent of the full day/overnight values.

From analysis of Camarillo Airport overnight parking fee records, it was determined that the average length of stay of overnight general aviation aircraft was 1.9 days. Multiplication yielded a result of 11,219 visitor days for general aviation visitors that remained overnight. The number of visitor days by those who only stayed in the area one day or a portion of one day was 26,900 visitor days. The sum of general aviation visitor days for 2018 was 49,338. Multiplication of spending per person per day by the total number of visitor days results in estimates of annual overnight visitor spending of $2,964,000 and annual one-day visitor spending of $1,184,000 for a direct economic benefit of GA visitors of $4,148,000 in 2018.

DIRECT, SECONDARY, AND TOTAL VISITOR BENEFITS

Annual direct, secondary, and total air visitor benefits are shown in **Table 9**. Benefits are shown for overnight, one day, and combined general aviation visitors. The largest spending category by aviation visitors was overnight expenditures for hotel or other accommodation, with outlays of $1.8 million. The level of lodging employment associated with this spending level was 16 jobs and payroll of $587,000. The second greatest spending category was food and drink, with combined overnight and one day visitor outlays of $1.3 million, creating 14 jobs with payroll of $321,000. Direct visitor benefits included output of $4.2 million, 35 annual-equivalent jobs supported, and payroll of $1.1 million.

The indirect benefits created by purchase of intermediate goods and services from suppliers to the hospitality industry were output of $897,000 and 6 additional jobs across the regional economy. The induced spending by workers as consumers created benefits of $1.7 million revenues and 12 jobs. Both the indirect and induced spending recirculated within the area economy to increase revenues to business, create jobs for workers, and provide payroll for further expenditures.

The secondary benefits due to multiplier effects summed to $2.6 million of output, 18 jobs, and $992,000 of payroll. The total economic benefits from air visitor spending were $6.7 million in output and 53 jobs supported throughout the economy, with payroll income to workers of $2.1 million.

TABLE 9 | Economic Benefits from General Aviation Visitors

Category	Overnight GA Visitor Expenditures	One Day GA Visitor Expenditures	Output (Expenditures)	Payroll	Employment
Direct Economic Benefits					
Lodging	$1,761,000	N/A	$1,761,000	$587,000	16
Food/Drink	$663,000	$646,000	$1,309,000	$321,000	14
Retail Sales	$269,000	$269,000	$538,000	$54,000	2
Entertainment	$46,000	$54,000	$100,000	$44,000	2
Ground Transport	$225,000	$215,000	$440,000	$103,000	1
Direct Benefits	**$2,964,000**	**$1,184,000**	**$4,148,000**	**$1,109,000**	**35**
Secondary Economic Benefits					
Indirect Benefits	$677,000	$220,000	$897,000	$342,000	6
Induced Benefits	$1,274,000	$421,000	$1,695,000	$650,000	12
Secondary Benefits	**$1,951,000**	**$641,000**	**$2,592,000**	**$992,000**	**18**
Total Benefits	**$4,915,000**	**$1,629,000**	**$6,740,000**	**$2,101,000**	**53**

Source: Spending estimates based on figures from Ventura Visitors and Convention and Bureau. Employment and payroll estimated by the IMPLAN input-output model. Overnight and one day visiting general aviation aircraft from *FAA Air Traffic Activity Data System (ATADS) and hourly arrival and departure N number records for Camarillo Airport as compiled by the FlightAware Flight Tracker System, 2018.*

COMPARISON OF ECONOMIC BENEFITS: 2018 AND 2008

Table 10 presents activity and economic benefit indicators as reported in the 2008 *Camarillo Airport Economic Benefit Analysis* compared to the current study based on data for 2018. The comparison emphasizes direct benefits to neutralize the effects of secondary benefits due to annual revisions in the multipliers and coefficients imbedded in the IMPLAN model over the past 10 years. Further, capital improvement projects were not included, as spending in a given year is affected by grant programs and depreciation cycles, among other factors. Only aviation benefits are compared in the table, as the 2008 study did not include specific figures on non-aviation employment, payroll, or output. Dollar values from the 2008 analysis were adjusted to 2018 by the Consumer Price Index (CPI). The CPI as of mid-year 2018 was 15.2 percent greater than in mid-year 2008, as compiled by the U. S. Bureau of Labor Statistics.

TABLE 10 | Comparison of Economic Benefits: 2018 and 2008

Category	2018	2008	Percent Change
Based Aircraft	400	533	-24.9%
Total Operations	140,598	158,245	-11.1%
Itinerant GA Operations	67,314	77,974	-13.7%
Airport Aviation Employment	394	332	+18.7%
Aviation Direct Benefits	$63,089,000	$53,774,000	+17.7%
GA Visitor Spending	$4,148,000	$3,846,000	+6.1%
GA Visitor Employment	35	48	-14.6%
Direct Aviation + Visitor Benefits	$67,237,000	$57,620,000	+16.7%
Direct Aviation + Visitor Employment	429	380	+12.9%

All values in 2018 dollars. 2008 figures derived from economic benefit analysis for 2008 adjusted to 2018 value by application of the Consumer Price Index from the U. S. Bureau of Labor Statistics. Capital improvement projects have been removed from 2008 and 2018 direct benefits. The FBO component of 2008 direct benefits reported in 2008 has been adjusted to 2018 IMPLAN output per worker for air transportation support category for consistency.

Activity indicators in 2018 were down compared to 2008. There were 533 based aircraft at CMA in 2008 and 400 in 2018, a decrease of nearly 25 percent. Total operations were down over the period by 11.1 percent and itinerant GA operations were down by 13.7 percent in 2018 compared to 2008. Although based aircraft and total operations have declined since 2008, on-airport aviation employment increased by 18.7 percent, rising from 332 on-site aviation workers in 2008 to 394 in 2018. Aviation-related benefits (output) rose from $53.8 million in 2018 dollars to $63.1 million, a gain of 17.7 percent.

Similarly, itinerant GA operations declined by 13.7 percent from 2008 to 2018, but general aviation visitor spending rose from $3.8 million (in 2018 dollars) to $4.1 million, an increase of 6.1 percent. Despite increased visitor spending, employment related to visitor expenditures decreased by 14.6 percent, from 48 in 2008 to 35 in 2018. This decline is employment is associated with an increase in output per worker across the hospitality industry, related at least in part to increases in technology and efficiency in the service sector.

Combined on-airport aviation output and general aviation visitor spending make up direct benefits for Camarillo Airport. Direct benefits for 2018 of $67.2 million were up by 16.7 percent compared to figures calculated with the same definitions and methodology for 2008. Combined aviation and visitor-related employment rose from 380 in 2008 to 429 in 2018, an increase of 12.9 percent. During this same period, employment in Ventura County rose by 5.2 percent, according to the U. S. Bureau of Labor Statistics.

GOVERNMENTAL REVENUE BENEFITS

Because of the output, jobs, and income created by the presence of Camarillo Airport, the facility is an important source of public revenues. Estimated tax revenues are shown in **Table 11**. Revenues were derived from the IMPLAN model, using average tax rates for Ventura County and California for profits, personal income, property, and sales taxes. Federal taxes are calculated using current federal rates for Social Security taxes, income, profits, and other federal taxes and fees.

The largest federal component was the social security tax, with contributions from employers and workers of $13.0 million in 2018. The second largest federal tax category was the personal income tax paid by workers and proprietors of $10.0 million. Overall, federal tax revenues estimated due to economic activity associated with Camarillo Airport were calculated to be $25.0 million for 2018.

TABLE 11 | Government Revenue Benefits

Federal Taxes	
Corporate Profits Tax	$1,249,000
Personal Income Tax	$10,039,000
Social Security Tax	$12,995,000
All Other Federal Taxes	$737,000
Total Federal Taxes	**$25,020,000**
State & Local Taxes	
Corporate Profits Tax	$326,000
Property Tax	$2,873,000
Sales Tax	$2,561,000
Personal Income Tax	$3,433,000
All Other State & Local	$1,672,614
Total State & Local Taxes	**$10,866,000**
Total All Taxes	**$35,886,000**

Source: Calculations from the IMPLAN input-output model based on tax rates for Ventura County and California and current federal rates. All figures are in 2018 dollars.

State and local tax revenues, shown in the lower portion of the table, summed to $10.9 million for 2018. The largest component was the personal income tax of $3.4 million. Property taxes due to the presence of the airport were estimated to be $2.9 million. Combined federal, state, and local government tax revenues created by Camarillo Airport were $35.9 million at the 2018 level of airport activity and visitor spending.

DATA SOURCES

Aircraft Owners and Pilots Association

County of Ventura, Department of Airports

FAA, Air Traffic Activity Data System (ATADS)

FAA, Terminal Area Forecast (TAF)

FlightAware Airport Flight Tracker System (flightaware.com)

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National Business Aviation Association

Camarillo Airport Economic Benefit Analysis, 2008

Survey, Camarillo Airport tenants, 2018

Texas Aviation Economic Impact Study, 2018, Texas Department of Transportation

U. S. Bureau of Economic Analysis

U. S. Bureau of Labor Statistics

Ventura Visitors and Convention Bureau