

## Appendix F

### AIRPORT ECONOMIC IMPACT

#### Introduction

Airports are economic generators in the communities they serve. They offer business opportunities to entities engaged in servicing aircraft and providing flight services to local and visiting pilots and passengers. Airport businesses also serve other users in their community by providing a convenient location to receive and send shipments of goods. In sum, airports serve as gateways for economic activity, providing a stimulus for business enterprises, and generating employment opportunities for area residents.

The economic contribution of an airport should be publicly recognized so that actions to protect its continued operation can gain community support. For some, an airport is viewed as a recreational facility that is used by relatively few persons. However, a broader vision is more appropriate, as airports provide services that affect all citizens. For example, an airport enables such activities as:

1. Access to the national air transportation system.
2. Transshipment of equipment, supplies, and personnel.
3. Emergency ingress and egress transportation, including medical response.
4. Shipment of time-sensitive items.
5. Pilot training.
6. Aircraft maintenance and storage.

The importance of air transportation, particularly in the corporate aviation sector, is growing. The ability to make just-in-time deliveries and to transport sales and customer service staff to quickly forming events is a critical business advantage.

The Waterbury-Oxford Airport (OXC) is actively used for all of the above purposes, and generates positive economic impacts in terms of employment and purchases of goods and services from local businesses. In general, the local communities served by OXC include those within the Central Naugatuck Valley and beyond, as reflected by the geographic distribution of the based aircraft owners.

Airport economic impacts are generally expressed as direct, indirect, and induced. Direct economic impacts are defined as the jobs and sales generated by businesses located at an airport (i.e., those which are dependent on access to the facility). The expenditures by these businesses for local goods, services, and capital improvements are also classified as direct impacts.

Indirect economic impacts are the jobs and revenues generated by businesses located elsewhere in the community, but are due to their use of the airport. This would include any sector of the local economy that serves users of the facility, or that uses an airport to transport goods, supplies,

or personnel in order to enhance business opportunities and activities. Like on-airport businesses, these enterprises employ staff, purchase locally produced goods and services, and invest in capital projects. Businesses in this category can include hotels, restaurants, manufacturers, shippers, and retail stores whose existence is tied to the airport or to aviation. When assessing economic impact values, distinction is made between those generated as a result of the airport (direct) and those serving other segments of the local economy (indirect).

Induced economic impacts are those generated in a community caused by the recycling of spending from both the direct and indirect economic impacts. Airport businesses, users, employees, and the airport itself are, in essence, consumers whose expenditures support other businesses and employment in the community. Studies have indicated that a dollar spent in a region will create at least another dollar of income in that region. This reaction is commonly referred to as the "multiplier effect." Thus, the induced economic impact of any activity is at least equal to the sum of the direct and indirect impacts, in terms of dollars.

Finally, the total economic impact is defined as the sum of the direct, indirect and induced impacts. For example, if an airport generates \$60 in direct impact, \$40 in indirect impact, and has a 2.0 multiplier for the induced impact, then the total economic impact would be \$200 (i.e.,  $(\$60 + \$40) * 2.0 = \$200$ ).

As an airport's activity level changes over time, the total economic impact will similarly change. Continued improvement of an airport may serve to attract more activity and result in an increased economic impact value to the communities served.

### **OXC Airport Tenant Survey**

A detailed economic survey of 23 tenants at Waterbury-Oxford Airport (OXC) was conducted. The survey requested information concerning tenant expenditures for salaries, wages, purchases of goods and services, and capital investments to support their operations in calendar year 2004. The survey results are confidential, and only aggregate totals are identified.

Responses were obtained from only 8 of the 23 tenants. Furthermore, not all respondents provided information for each question, and despite significant efforts to increase the response rate, the data obtained was limited. As such, in lieu of a comprehensive evaluation of airport economic activity at OXC, the survey data was subjected to a weighted extrapolation to account for the non-responding tenants. The weighted extrapolation was used to derive generalized estimates of direct, indirect, and induced economic impacts, and employment levels.

### **Direct Impacts**

Direct impacts are the sum of salaries and wages paid to full-time and part-time employees by the Airport tenants, and their expenditures for local goods and services and capital investments. The computed direct economic impacts totaled \$26.6 million in 2004. The total estimated direct employment at OXC is 166. Of these, 96 are full-time employees and 70 are part-time positions.

### Indirect Impacts

Indirect impacts were estimated from the number of itinerant aircraft arrivals made by visiting (i.e., transient) aircraft. Due to the unique characteristics of OXC, it was assumed that visiting pilots and passengers, and their associated expenditures were limited, and resulted in only \$400,000 annual indirect impact in 2004. This conservative estimate was derived from the following assumptions:

- 40% of all itinerant aircraft landings were conducted by visiting aircraft
- Propeller-driven aircraft carried an average of 2 passengers including the pilot
- Business jets carried an average of 3 passengers, plus a crew of two
- Each visitor, including the pilot, spends \$25 daily while in the local area

The Airport also generates additional indirect economic impacts from off-airport businesses that use OXC for the shipment of goods and transportation of personnel. However, this portion of the indirect benefit was not quantified.

### Induced Impacts

The multiplier effect or the induced economic impact for OXC was assumed to equal the sum of the direct and indirect impacts. Thus, the induced economic impact is \$27 million in 2004.

### Total Economic Impact

The total estimated economic impact of OXC based on the survey responses was therefore \$54 million in 2004, as listed below.

- Direct: \$26.6 million
- Indirect: \$ 0.4 million
- Induced: \$27.0 million
- Total: \$54.0 million

Additionally, OXC provided direct employment for 166 persons, or approximately 320 total jobs throughout the local economy. These levels should increase as more activity occurs at the OXC.

### Comparison with Other Airports

Due to the limited survey response rate for OXC, a second approach for estimating the economic impact of OXC was developed. The second assessment used a comparative evaluation of general aviation airports with similar characteristic to OXC.

Several states have conducted economic impact analyses for the general aviation airports in their system. Relatively recent studies published by the state aviation agencies of Arizona, Florida, New Jersey, New York, Pennsylvania and Texas were reviewed, and used as a second means to estimate OXC's economic output.

A sample of airports from all six states was selected for comparison. These included airports with a runway length of at least 5,000 feet, based corporate jet aircraft, but no airline, air cargo, or military facilities. The sample airports are listed in Table E-1 (in increasing order of general aviation itinerant operations). An average of 39,200 itinerant aircraft operations was determined for the listed airports, which is similar to the 35,839 itinerant operations at OXC in 2003.

<b>TABLE E-1 – AIRPORT ECONOMIC IMPACT SUMMARY</b>					
<b>Airport Name</b>	<b>Location</b>	<b>Year</b>	<b>Aviation Related Jobs</b>	<b>Itinerant Operations</b>	<b>Annual Economic Impact (\$)</b>
Monmouth Executive	Belmar/Farmingdale, NJ	2004	391	7,653	\$7,183,400
Robert J. Miller Airpark	Toms River, NJ	2004	115	11,200	\$9,486,700
Mid-Valley	Weslaco, TX	2003	72	16,000	\$5,277,000
Sedona	Sedona, AZ	2002	327	20,000	\$21,178,718
Fort Worth Spinks	Fort Worth, TX	2003	213	20,000	\$18,208,200
Mesquite Metro	Mesquite, TX	2003	116	20,500	\$8,334,100
Sullivan County	Monticello,, NY	2002	57	20,535	\$4,697,000
Hernando County	Brooksville, FL	2000	121	22,000	\$9,373,700
Odessa-Schlemeyer Field	Odessa, TX	2003	105	23,750	\$8,398,200
Winter Haven's Gilbert	Winter Haven, FL	2000	50	25,000	\$4,548,500
McGregor Executive	Waco, TX	2003	152	26,750	\$13,575,200
Show Low Regional	Show Low, AZ	2002	140	28,000	\$9,730,978
Bob Sikes	Crestview, FL	2000	499	29,000	\$47,235,100
Ocala International	Ocala, FL	2000	157	35,171	\$14,475,900
Denton Municipal	Denton, TX	2003	472	45,000	\$30,578,700
Allegheny County	Pittsburgh, PA	1999	1,279	47,329	\$123,472,300
Dutchess County	Wappingers Falls, NY	2002	847	49,323	\$55,379,000
Vandenburg	Tampa, FL	2000	110	44,000	\$9,686,800
Ryan Field	Tuxson, AZ	2002	497	50,116	\$35,769,729
Republic Airport	Farmingdale, NY	2003	1,374	91,263	\$139,649,100
Northeast Philadelphia	Philadelphia, PA	1999	830	99,450	\$255,648,600
Morristown Municipal	Morristown, NJ	2004	3,180	130,440	\$271,089,500
<b>Total:</b>			<b>11,104</b>	<b>862,480</b>	<b>\$1,102,976,425</b>
<b>Average:</b>			<b>505</b>	<b>39,204</b>	<b>\$50,135,292</b>
<b>Average Annual Economic Impact per Itinerant Operation:</b>					<b>\$1,279</b>

The values indicated in Table E-1 vary widely, which is due in part to the individually unique airport-community relationships. The lowest illustrated economic impact value is approximately \$5 million, and is for an airport with little business jet activity. The highest, over \$271 million, is for an airport with over four times the itinerant traffic as OXC. However, in general the results for each airport are impressive, with output substantially more than the cost of operating, maintaining, and improving each facility on an annual basis.

Using the average value of total economic impact per general aviation itinerant operation of \$1,279, it is estimated that OXC generated a total economic return to the community of nearly \$46 million in 2003.

### **Conclusion**

The weighted extrapolated survey data developed from tenants at OXC (\$54 million) compares favorably with that estimated for similar airports from the statewide studies (\$46 million). As such, based on these two methods, it is reasonable to estimate the total annual economic impact value of OXC to be approximately \$50 million.

Additionally, OXC provides full-time and part-time employment opportunities for some 166 individuals within the local communities of the Central Naugatuck Valley, and generate over 330 total jobs considering the multiplier effect.

A 1994 study by the American Associates of Airport Executives (AAAE) estimated OXC's total economic impact to be \$16 million (in 1993 dollars). Even adjusting for inflation, the substantial facility development at OXC over the past 10 years, and the additional based and visiting aircraft, has generated a substantial increase in the economic contribution of the Airport to the local economy.