ECONOMIC IMPACT ANALYSIS

St. Petersburg-Clearwater International Airport

12

12.1 EXECUTIVE SUMMARY

Infrastructure Management Group ("IMG"), Inc., has carried out this Economic Impact Analysis of the St. Petersburg-Clearwater International Airport ("PIE" or the "Airport") in conjunction with the ongoing PIE master plan update, in association with the PBS&J master planning team. The aviation activities at the Airport create jobs and economic activity benefiting the County and the Airport provides an important transportation hub that brings visitors to the County's recreational and tourist sites. This Economic Impact Analysis outlines the economic contribution of the Airport to the Pinellas County economy.

12.1.1 Background

PIE has embarked on updating its master plan for the first time in over 20 years. The updated master plan will outline a consistent set of development and operational objectives and identify capital improvements necessary to reach those objectives. The improvements contemplated by the updated master plan are necessary to make more effective use of existing Airport resources and to keep up with changes in the aviation marketplace and, most importantly, to better serve Airport customer needs. The Airport's customers include a broad variety of commercial airlines and their passengers, corporate and general aviation, and military operations.

The planned capital improvements will also make possible expanded international flights and enable the Airport to provide for rapidly growing corporate aviation needs. The proposed extension of runway 17L/35R to 10,000 feet will enable PIE to accommodate non-stop service to Europe and Latin America. In April 2003, the Federal Aviation Administration approved the benefit-cost analysis addressing PIE's proposed runway extension, indicating the substantial expected air travel benefits related to this particular improvement.

12.1.2 Types of Activities at the Airport

The Airport is fortunate to have attracted a broad mix of private and public sector activities that contribute to the vitality of the Pinellas County economy. The existence of a competitive and low-cost airport in Pinellas County contributes to the private and public investment in the tourism sector and provides a competitive edge to attract and sustain the new growth in technology industries, which need to move cargo and personnel around the domestic and global marketplace.

The most important activity sectors at the Airport are:

- Commercial airlines, their passengers, and related services
- General and corporate aviation services; flight and maintenance training
- Military facilities, including the Coast Guard air station
- Freight carriers, such as UPS and Airborne Express
- Other aviation support services

12.1.3 Methodology for the Impact Analysis

IMG's analysis of economic contribution involved an on-site examination of virtually all activities at the Airport, combined with application of a sophisticated regional economic model to project the remaining indirect and secondary effects that result throughout the County economy. IMG identified three major components of economic activity at the Airport; tenant contributions, visitor spending, and capital expenditures at the Airport.

IMG obtained and augmented Airport tenant lists and conducted in-person and telephone interviews with virtually all airline operators and Airport tenants servicing or using PIE, including military users such as the Coast Guard, federal, state and local government employees, and private sector tenants. Based on this research, a relatively complete tally of tenant employment, payroll, revenue, and expenditures was possible, providing the basis for the compilation of the direct economic impact.

Spending by travelers who arrive at PIE via air carrier or general aviation is a key component of the Airport's economic impact. Pinellas County has excellent data on visitor spending that was used to project the economic contribution of visitors

Capital spending for construction and other durable improvements on the Airport will enhance the effectiveness of Airport operations and support continued traffic growth in all segments of those operations. Capital spending includes both the intermittent Airport improvements and special tenant projects, and the ongoing capital expenditures of the various tenants. This capital spending provides additional contributions to the local economy as construction companies assemble labor and material to carry out the improvements.

All of these initial, direct economic impacts related to Airport activities have secondary effects that flow through the economy, called multiplier effects. The multiplier effects have been measured by the Regional Economic Models, Inc. (REMI) Policy Insight Model, a nationally recognized regional model that is used by a variety of public and private entities to estimate the impacts of policy changes and key employment centers.

12.1.4 Findings

Infrastructure Management Group identified 57 private and public organizations that are operating at PIE. PIE-based organizations showed a combined employment level of 1,648 jobs. Each job directly-related to PIE activity generates income and another round of aviation and visitor spending that produces additional jobs and additional spending in the regional economy.

12.1.5 Direct Impacts

The direct economic impacts and contributions of the Airport were identified as follows:

- A total of at least 1,648 jobs were identified as directly associated with Airport tenants
- Visitor spending directly associated with the aviation passengers, mostly arriving by commercial airlines, was estimated to be $128 million
- Additional spending directly associated with the new international visitors would not begin until 2005, upon completion of the runway extension, and was estimated to begin at $42 million in that year.

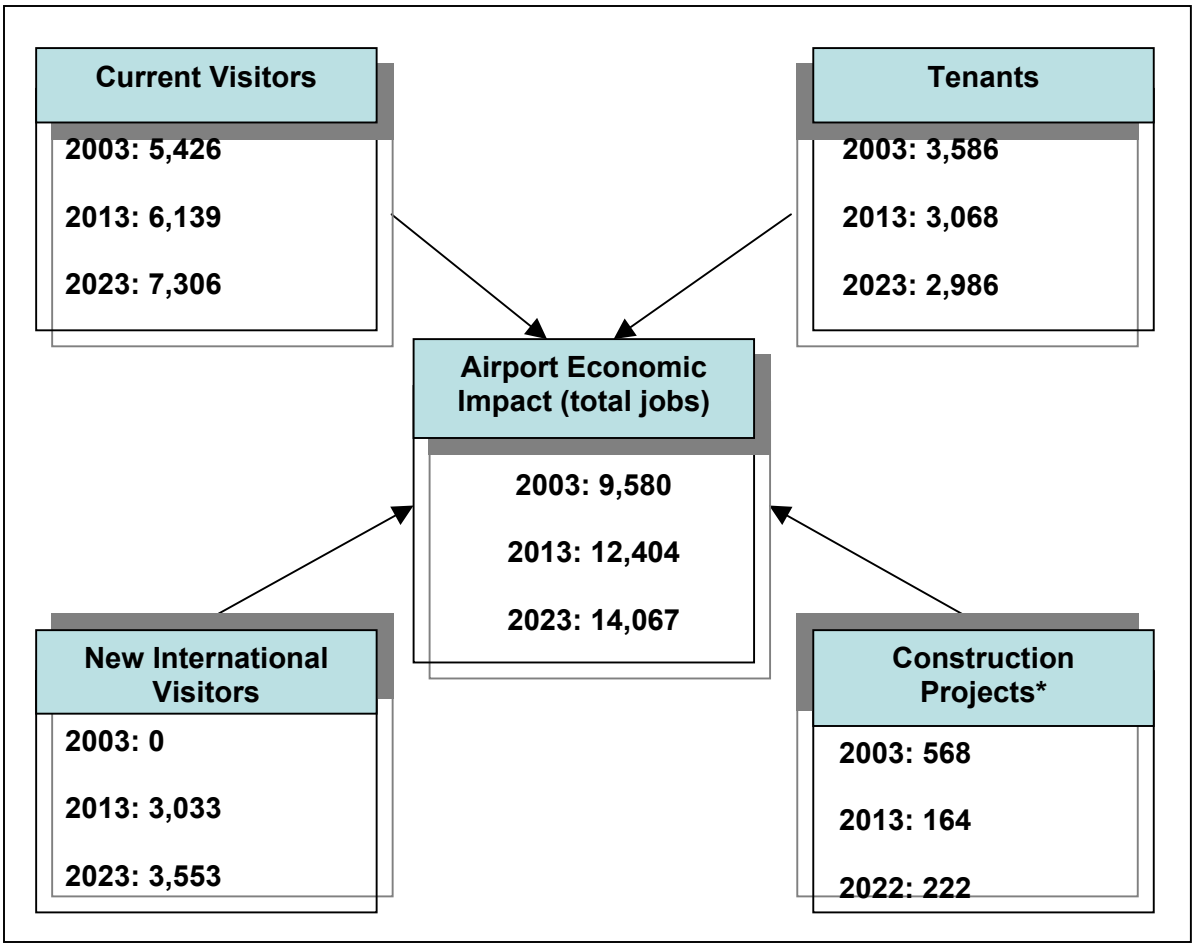
12.1.6 Total Employment Impact

The air carrier, tenant, and visitor activities generated at the Airport are responsible for a combined total of 9,580 jobs in Pinellas County (for 2003). These 9,580 jobs reflect the overall employment impact generated by the Airport related to specific components shown in **Figure 12-1**:

- There are at least 3,586 jobs at or near the Airport that are directly related to PIE's aviation facilities, their tenants, and the passengers that arrive and depart PIE
- Current air passengers who are visitors arriving for tourism inject additional spending into the County's tourist service businesses and create an additional 5,426 jobs (for 2003)
- In addition, new international visitors associated with Airport improvements will generate an additional 1,728 jobs in 2005, rising to 2,889 in 2008; non-stop international service is not available for 2003
- Capital spending at the Airport, including ongoing tenant investments and the improvements incorporated in the PIE master plan, will generate another 568 jobs per year on average (for 2003-2007).

As passenger traffic follows projected growth patterns, the total employment impact will grow to 12,404 in 2013 and to 14,067 by 2023.

Figure 12-1. Total Jobs Generated by PIE Airport: Current Visitors, Tenants, New International Visitors and Construction Projects



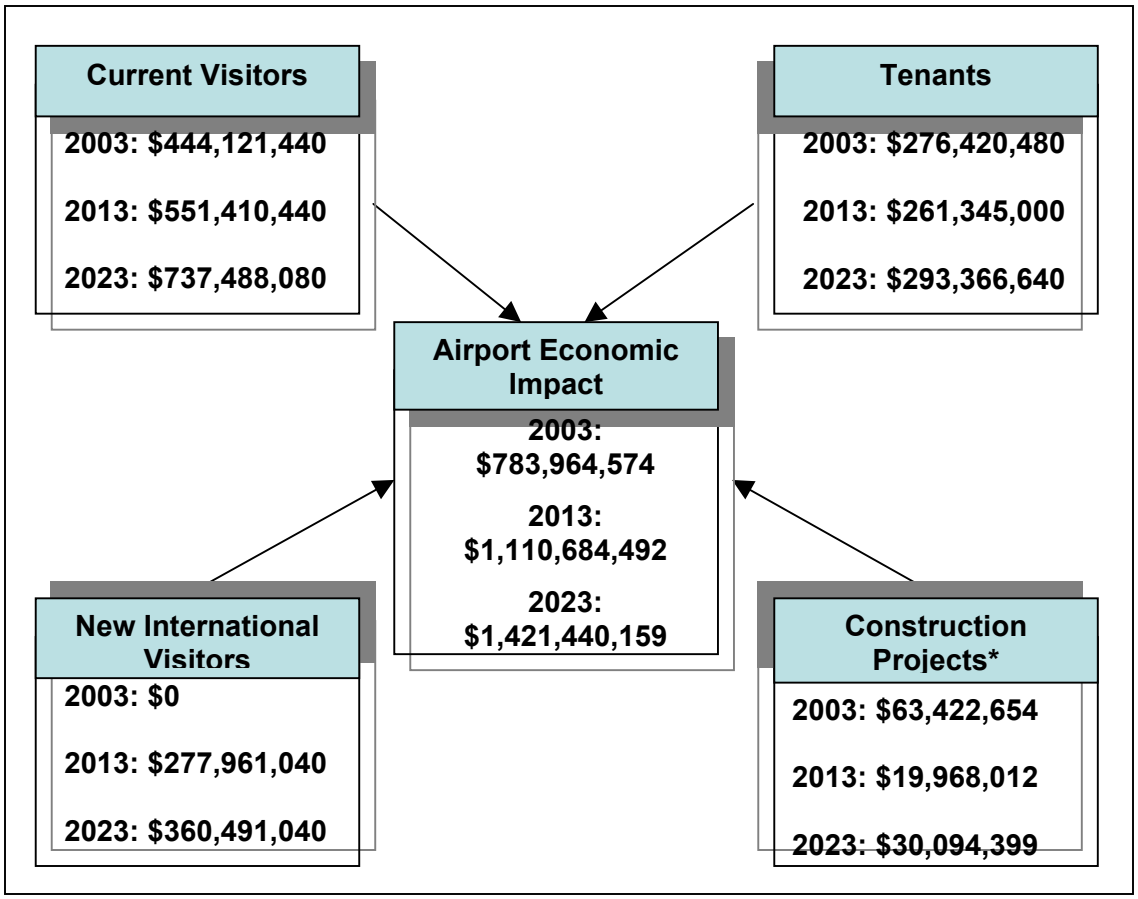
12.1.7 Total Output Impact

The Airport contributes a combined total of at least $784 million in overall output and expenditures to the regional economy of Pinellas County. This economic contribution includes the direct and indirect expenditures stemming from the Airport-related tenant businesses, visitor spending, and capital construction activities. As illustrated in the following **Figure 12-2** this total consists of:

- $276 million in expenditures related to tenants on the airport
- Expenditures of $444 million from the impact of tourism expenditures from current visitors arriving through the Airport (for 2003)
- No 2003 output from new international visitors, but an additional $256 million by 2008
- An estimated $63 million of output (average per year) related to capital expenditures at the Airport.

As passenger traffic follows projected growth pattern, the total Airport economic impact will grow to $1.1 billion in 2013 and to $1.4 billion by 2023.

Figure 12-2. Total Output Generated by PIE Airport: Current Visitors, Tenants, New International Visitors and Construction Activity



** Please note that due to data fluctuations, the numbers used for construction projects are not actual yearly figures, but are five-year averages, i.e., data for 2003 is an average of data for 2003-2007, etc.*

12.1.8 Tax Revenue

Economic activity generates tax revenues. These Airport-related activities will result in additional tax revenues to the County. Three specific taxes that would be directly associated with visitors using PIE were calculated: the County lodging tax; the County portion of the sales tax, and the County motor fuel tax. The total revenues for these three taxes related to Airport-related spending are estimated to be $3.4 million in 2003, growing to $7 million in 2013, and $9.4 million in 2023.

12.2 INTRODUCTION

Infrastructure Management Group ("IMG"), Inc., has carried out this Economic Impact Analysis of the St. Petersburg-Clearwater International Airport ("PIE" or the "Airport") in conjunction with the PIE master plan update, acting in association the PBS&J master planning team.

An Economic Impact Analysis identifies and quantifies the economic contribution of the Airport to the Pinellas County economy. The provision of aviation services and the airport facility itself create a direct economic impact in terms of jobs at the Airport and visitors arriving to Pinellas County. These aviation-related direct impacts then create

regional economic activity beyond the Airport as visitors purchase services in the economy and the incomes generated in turn flow through the economy.

It is important for Pinellas County policymakers and the public to appreciate the significance of the Airport to the Pinellas County economy. As PIE completes an update of its master plan, and considers the capital improvements necessary to reach its operational objectives, this Economic Impact Study seeks to contribute to that understanding.

12.2.1 History and Brief Description of the Airport

The Airport is centrally located in Pinellas County on the west shoreline of Tampa Bay north of St. Petersburg. Initial construction of the Airport took place in 1941 on a 939-acre tract of County land. After Pearl Harbor, the Airport was used as an Army Air Force military base and served as a military flight-training base for the duration of the Second World War. During that period, the federal government acquired additional land surrounding the Airport and constructed various improvements including buildings, airfield lighting, and drainage.

Subsequent to the end of the war, an expanded and improved Airport reverted to Pinellas County ownership and operation. Today, the Airport is managed by an Airport Director under the jurisdiction of the Board of County Commissioners of Pinellas County. The Airport has continued to expand and improve its facilities over the years and now comprises a 2,000 acre complex completely equipped and certified to handle virtually any size airplane. An Airport Industrial Park provides high-tech business center facilities and office space for a broad range of tenants, and has been designated as a Foreign Trade Zone to encourage local participation in international trade.

12.2.2 Activities at the Airport

The Airport is home to many private businesses and public organizations that play an important role in the regional economy. PIE is consistently a substantial contributor to the local County economy because it has such a diversified mix of productive activities taking place across several different sectors of the aviation community. The most important of these sectors are:

- Commercial airlines, their passengers, and related services, including Southeast Airlines, American Trans Air (“ATA”), Air Transat, CanJet Airlines, Sun Country, Conquest Vacations, and Seacoast Airlines.
  - One of these commercial carriers, Southeast Airlines, is based in Pinellas County
- General and corporate aviation services; flight and maintenance training, including the National Aviation Academy
- Military facilities, including the Coast Guard and US Army Reserve
  - The Coast Guard Air Station Clearwater is the largest in the country and provides search and rescue operations and drug interdiction for the Gulf of Mexico and the Caribbean
- Air freight carriers, such as UPS and Airborne Express
- Various aviation support services, such as the regional flight services station

The existence of this range of aviation services is especially important for Florida’s economy in general, according to a statewide assessment of aviation in Florida sponsored by the Florida Department of Transportation (“FDOT”). According to the FDOT study, the two largest drivers of Florida’s economy are (1) international trade and (2) travel and tourism. Air cargo shipments account for more than one-third of

international trade dollars and over half of Florida's visitors arrive using aviation transportation services. In fact, in its summary of the statewide report, FDOT makes a clear statement about the economic role of aviation in Florida when it states that:

"Florida does not work without airports.…Florida's system of airports must continue to expand at a rapid pace if it is to meet the future transportation and business needs of the State[1]."

PIE plays an important role in providing all of these aviation services, while delivering large numbers of recreational and commercial visitors to Pinellas County. While PIE is not counted among the largest commercial service airports in Florida, such as Orlando International or Miami International, it is home to substantial commercial aviation activity. In the statewide FDOT study, PIE is placed with 13 small and medium-sized Florida airports in the category of "other commercial service airports." Within that category, however, PIE is larger than eight of the airports in that subgroup.

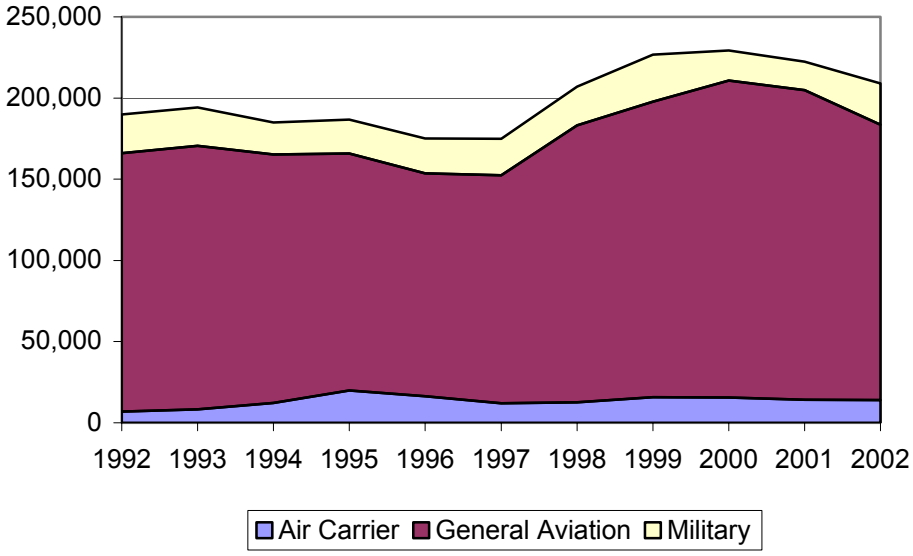
For all 13 airports in this category, visitors comprise over half of the enplaning passengers, and those visitors stayed in Florida an average of just over one week (7.6 days per commercial passenger visitor) and spend over $900 during that stay. This economic boost derived from visitors compares favorably with the typical passenger at the larger commercial airports. For PIE, visitors make up 53% of deplaning passengers and spend somewhat less, according to survey data in the FDOT study[2].

Although PIE activities were hard hit by the aftermath of September 11, the local economy and the region's ability to attract visitors remains strong. In fact, Airport passenger traffic has rebounded in 2003, with the initiation of new or expanded service by Southeast Airlines, ATA, and Sun Country.

PIE has a strong mix of general aviation, corporate, and military operations using the airfield, so that commercial passengers are only one part of the aviation activities. The recent history of operations at the Airport is shown in **Figure 12-3**.

[1] Florida Airports Economic Impact Study, August 2000, FDOT Aviation Office Summary
[2] FDOT Aviation Office, Technical Summary for the Florida Airports Economic Impact Study, August 2000, Exhibit 3-2, page 8

Figure 12-3. PIE Operations 1992-2002



Source: URS, 2002 and PIE Airport

12.3 METHODOLOGY: IMG'S APPROACH TO MEASURING ECONOMIC IMPACT

The purpose of this report is to measure the overall or total economic impact of the aviation activities at the Airport on Pinellas County. IMG's approach focused on gaining an understanding of and then quantifying the constituent components of this overall economic impact. These economic impact components are normally expressed as:

- Direct impacts, related to the aviation activities at the Airport
- Indirect impacts, related to the suppliers who provide services related to and benefit from the aviation activities taking place at the Airport, and
- Induced impacts that come about due to the multiplier effect of the direct and indirect spending cycling through the regional economy.

12.3.1 Quantifying Economic Impacts

The methodology used to develop and quantify the economic impacts was to examine all Airport activities, to categorize the relation of these activities to the Airport facility, and to determine by survey and personal interviews the direct levels of associated employment and spending. The approach was developed to be consistent with that put forward by the Federal Aviation Administration in its guidance on "Estimating the Regional Economic Significance of Airports" (September 1992).

12.3.1.1 Direct Economic Impacts

Direct impacts consist of employment (jobs) generated by the airport and its tenants; payrolls; and operating expenditures, including materials, equipment, utilities and fuel. In addition, capital expenditures for construction and durable machinery represent an economic activity directly related to each airport business.

Activities and employment were examined for the airline companies, businesses and governmental agencies that operate at the airport (e.g., Fixed-base operators, hangar rentals, flight training, aviation book store, Coast Guard), businesses and services that support airline passengers (e.g., Concessionaires, car rentals, taxi services), and governmental functions at the airport (e.g., FAA, US Customs, Coast Guard).

These direct economic impacts as measured in terms of jobs and expenditures were quantified by:

- Airport visits and discussions with Airport staff
- Airline operator interviews and surveys
- Airport tenant interviews and surveys
- Telephone inquiries and follow-ups.

Wherever possible, data were collected directly from the tenants and operators, such as airlines, fixed base operators, cargo service, concessions, and other aviation-related business and airport tenants. When tenants were unable to provide information, gaps were filled using information from Airport staff and other data sources.

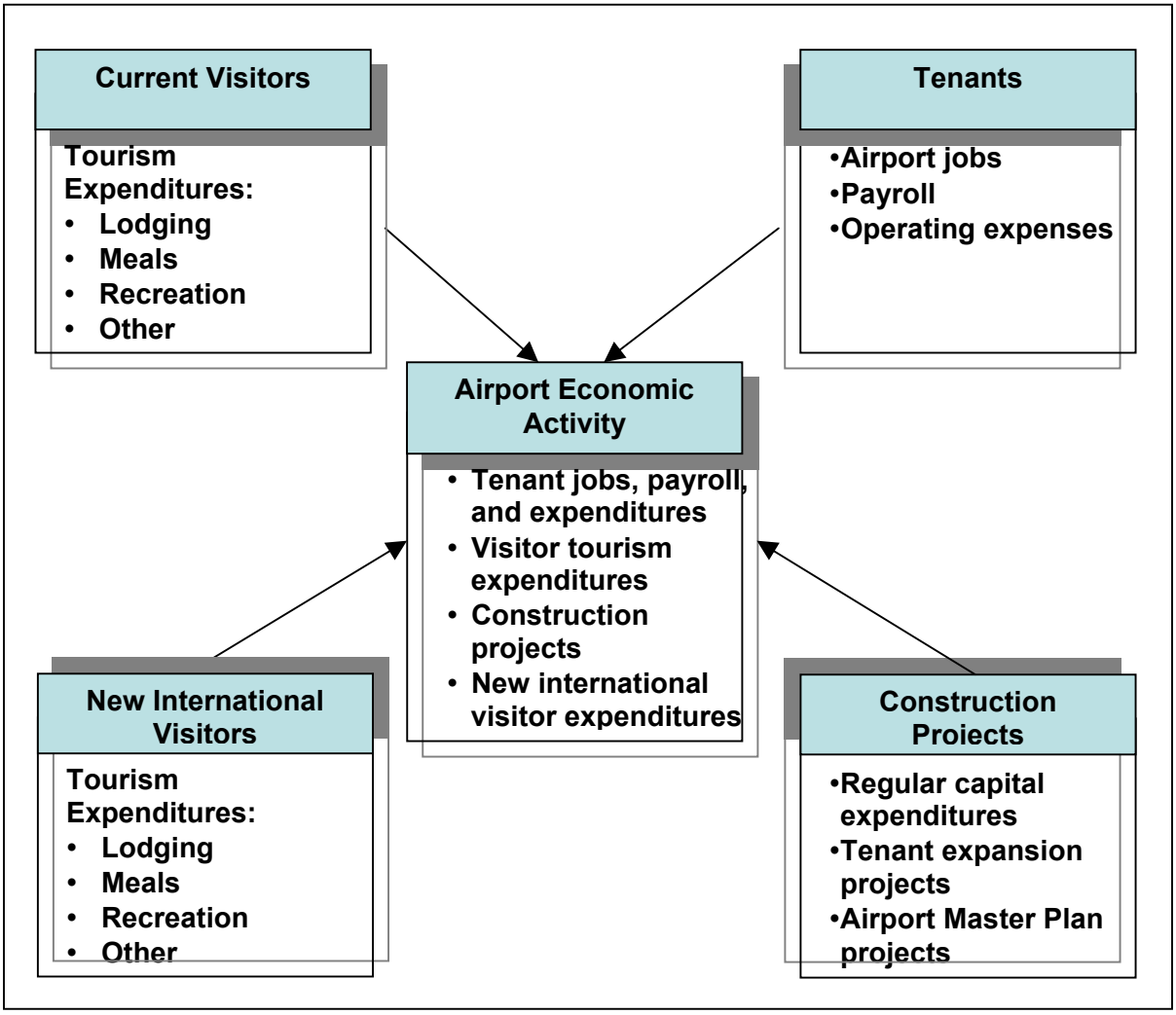
Airport activities that bore limited or no relationship to aviation were not included in quantifying the economic impact of the Airport. Activities at the Airport Business Center, and the Airco Golf Course were therefore excluded from this analysis. These are beneficial economic activities that are coordinated under Airport management but not closely related to aviation. Because the Business Center does house a foreign trade zone, it could be used for cargo arriving at the Airport, so this relation could change over time.

12.3.1.2 Indirect Economic Impacts

Indirect economic impacts result from spending on goods and services that are associated with and dependent on the airport passengers and other aviation activities. Where purchases of fuel or supplies could be traced to an airport tenant, these are counted in the direct impacts related to tenants. However, visitor expenditures outside the Airport property would not be captured by tenants. Hence, visitor expenditures on lodging, food, local transportation services, and other items such as recreation by arriving air passengers are indirect contributions over and above the jobs and expenditures identified on the Airport. Data on tourist visitors (versus arriving passengers, which include local residents returning from trips) and visitor expenditures were obtained from FDOT and the St. Petersburg/Clearwater Area Convention and Visitors Bureau.

Figure 12-4 shows the structure and major sub-components used to develop the direct and indirect impacts for the economic impact analysis. Airport tenant employment and operations, current visitor tourism spending, capital expenditures on construction projects, and new international visitor tourism spending all come together to make up direct and indirect activity related to the Airport.

Figure 12-4. Major Components of Direct and Indirect Airport Activities

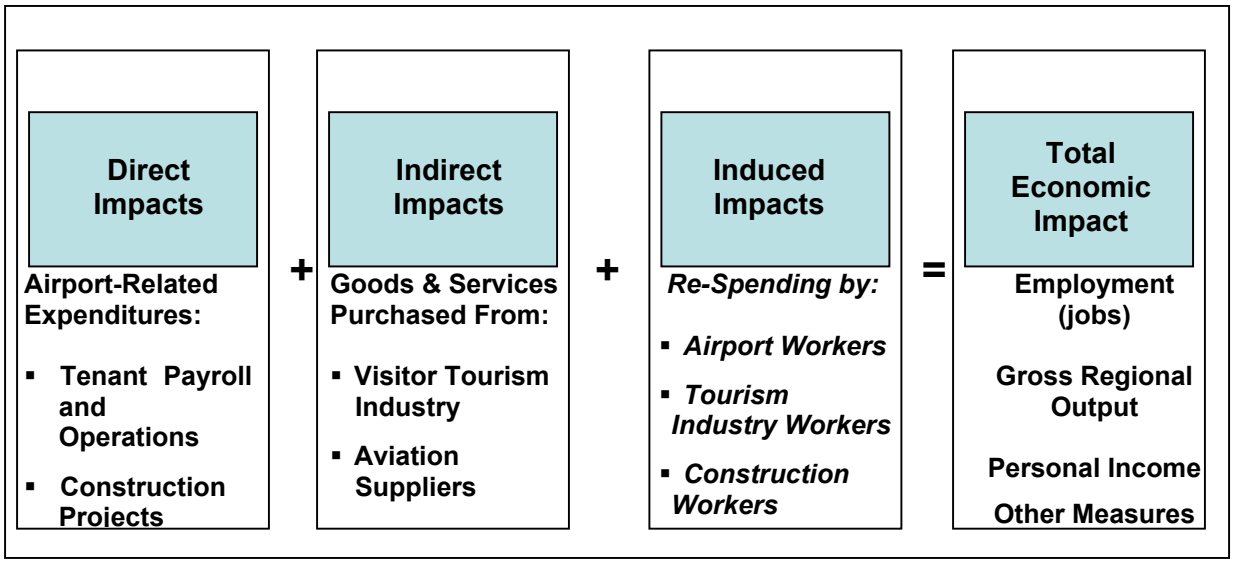


12.3.1.3 Induced or Multiplier Impacts

The induced or multiplier impacts reflect the spending of income earned by the direct airport employees and by the providers of indirect services such as the food and lodging industry and their workers serving tourist visitors. These employees have income realized from the aviation activities at PIE, and will in turn make purchases throughout the regional economy, creating the induced impacts. Eventually, money brought into the Pinellas County economy through the Airport is spent on goods and services produced outside the County, ending the chain of multiplier impacts. The magnitude of induced impacts is a measure of the benefits associated with the re-spending of money on locally produced goods and services before it is eventually spent outside the County.

Figure 12-5 shows how the direct and indirect impacts traceable to economic activity at the Airport will then stimulate another round of induced impacts based on the spending by employees and businesses earning income and re-spending it in the regional economy. The total economic impact is the sum of all these impacts, inclusive of induced impacts.

Figure 12-5. Components of Total Economic Impact



12.3.2 The REMI Model

The induced impacts were measured by the Regional Economic Models, Inc. (REMI) Policy Insight Model, a nationally recognized regional economic model that is frequently applied by state and local governments and other infrastructure providers to trace economic impacts throughout a region.

The REMI model is a combination of a standard input-output economic model combined with a dynamic time-based model that assesses impact over a specified planning period. The input-output model identifies the indirect impact (such as suppliers) as well as the induced impact (spending of wages) on a county-based regional database. The dynamic element shows how the direct impact will impact other elements of the regional economy, including wages incomes, population, and the ability to attract other firms to the region. Furthermore, unlike a standard input-output model, which provides a snapshot of the regional economy at one point in time, REMI is able to estimate changes in the regional economy over a thirty-five year period in the future. Because of this more sophisticated analysis capability, the REMI model is used extensively be economic development agencies.

The REMI model can be customized to reflect the specific geographic area, in this case Pinellas County. It has been used widely and continuously updated since its development in the early 1980s. REMI has been frequently applied to quantify the economic impact of airports, often in conjunction with master plan development; recent examples include the Chicago Airport System (O'Hare and Midway), Bradley International Airport, Los Angeles International Airport, and San Diego International Airport.

In addition to applying input-output tools to project the impacts of an economic component, REMI also portrays regional economic growth in the context of general equilibrium theory for the economy, using a behavioral model, that is, incorporating cause and effect relationships that operate over time. For example, the loss of jobs in a region can result in a decrease in wage rates, which can in turn affect area labor supply

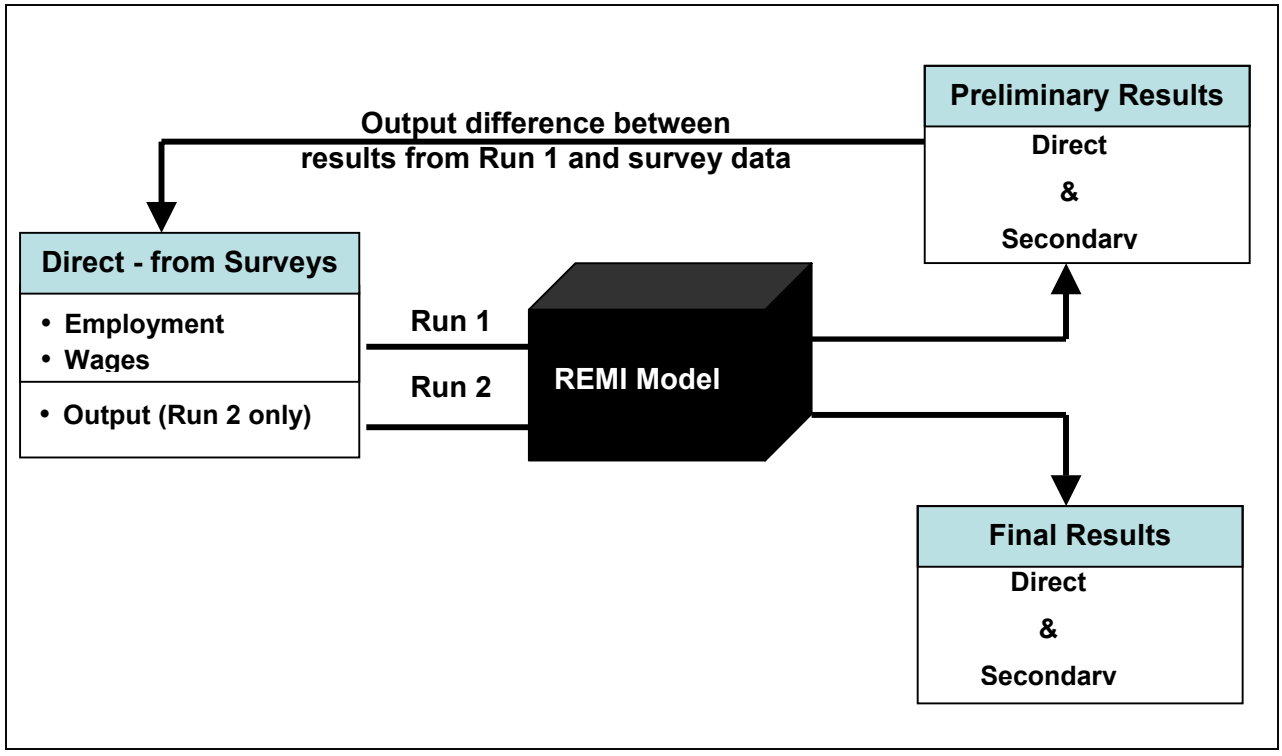
and population size. REMI uses hundreds of relationships and sub-relationships in its programs developed over the past two decades.

REMI uses national technical coefficients on employment and wage and salary data, and regional data for counties to model the impacts of particular activities or investments, so that policymakers can have a better understanding of the economic impact of their decisions.

The REMI model was obtained in a customized version that incorporates data for 53 industrial sectors the Pinellas County region. The economic geography of the airport and its input suppliers and its users, both visitors and aviators, is a key aspect influencing regional productivity. An important aspect of REMI is that it projects dynamic effects and their timing for years into the future, whereas the standard input-output model focuses on the inter-industry flows that occur as output changes.

Figure 12-6 below depicts the flow of data through the REMI model. Information from surveys of airport tenants, including jobs and wages was entered and run though the REMI model. The model estimated the effects on the County economy. If the resulting economic output estimates were less than those provided on tenant surveys, the model was run a second time, this time with the difference between the survey output and the model estimate included as an input into the model. The results of this second run more accurately estimate the total economic impact of the Airport.

Figure 12-6. Methodology for Using REMI Model



12.3.3 Key Assumptions

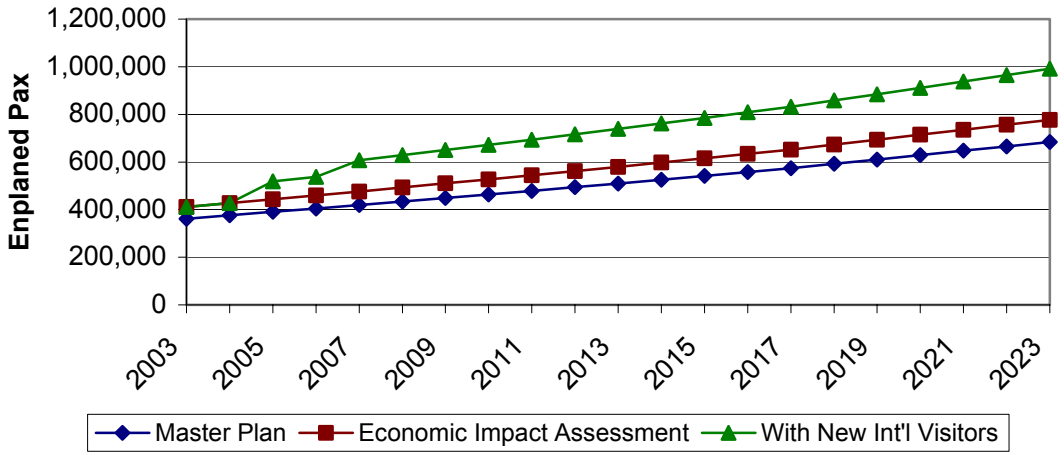
As is common to the application of regional economic models to an existing enterprise, a "counterfactual" approach was taken whereby the direct jobs and expenditures identified for PIE were removed from the economy and the resultant induced negative economic impact observed and associated with the Airport.

In addition, IMG has made several assumptions in compiling the data needed to quantify the economic impact of the Airport. Among the most important are the following:

- Gaps in the data, where survey responses were incomplete or not received, were filled using data such as the REMI averages for the County and/or sector in question to fill in missing wage data or operating expenses. Consultants' best judgment was applied conservatively in a few instances.
- Air carrier visitors
  - The quantification of visitor impact is based on a FDOT study that found 53% of passengers arriving PIE by air were non-local visitors.
  - Average visitor expenditure of $557.73 per trip was derived from the 2002 Annual Visitor Profile for Pinellas County[3]. According to the same Visitor Profile, the average visitor budget is 39% for accommodations, 34% for food and entertainment, 14% for retail goods, and 13% for rental car.
  - The level of new international visitors that will use the airport once the primary runway is extended is based on letters of intent received from tour operators and air carriers who intend to serve the airport. Since most of the new service will be European charter flights, Airport staff estimate that 80% of the passengers on these flights will be visitors to Pinellas County.
  - Enplanements at PIE rose 32% in the first two months of 2003 due to new service by Southeast Airlines, ATA, and Sun Country. The future number of air carrier visitors was generated by increasing 2002 deplanements by 32% and assuming annual growth at the rate predicted in the master plan forecast. **Figure 12-7** depicts the projected growth rate of PIE air carrier visitors.
- General aviation visitor assumptions were derived from the FDOT study. Key figures include
  - One third of itinerant general aviation arrivals carry visitors who spend money in the County
  - There are 3.5 visitors on a typical GA flight
  - 75 percent of GA visitors do not stay overnight, spending $38 per trip
  - 25 percent of GA visitors stay overnight, spending $189 per day and staying an average of 2.2 days
- A further implied assumption is that the economic contribution of all these visitors would be lost in the absence of the Airport.
- Tenant impacts were entered into the 53 industrial sectors in REMI model according their type of business activity. Sectors utilized include air transportation, hotel, eating and drinking, retail, local transportation, local government, federal government, military).

[3] Research Data Services, Inc., 2001 Annual Visitor Profile

Figure 12-7. Enplaned Passenger Projections



12.3.4 Inputs and Outputs for the PIE Analysis

IMG took the following approach to reflect four key components of interest regarding the current and future economic contribution of the Airport for Pinellas County. Direct impacts were quantified and input into the REMI model for the following:

- Airport/aviation tenant jobs; adjustments were made where IMG survey data indicated different wage rates or operating expenditures in contrast to REMI model averages
- Visitor spending was developed from data on commercial airline passengers and general aviation visitors; FDOT and County data were used to estimate expenditures based on tourist visitors
- New international visitor spending was developed from data on projected passenger use of new non-stop international flights; County data were used to estimate expenditures per arrival
- Capital spending for construction and facility improvements was developed from IMG survey results on capital spending, with the announced US Army and Sheltair development projects receiving special attention; Master Plan improvements by the Airport were incorporated by year of expected expenditure.

Output from the REMI model was used directly to quantify total economic impact. The four components of interest were run separately and the resultant impacts summed to produce total impacts. This disaggregated approach will yield results for total impacts that may vary slightly from an aggregated, single input estimation, due to the complexity and interactions characteristic of the REMI model.

12.4 RESULTS

As a result of this research process, IMG identified and contacted 57 private and public organizations operating at the terminal or on the airfield. These organizations include passenger and cargo air carriers, military facilities such as the Coast Guard Air Station, FBOs, flight schools, hangar operators, terminal concessionaires, Federal Aviation Administration tower and Automated Flight Service Station (“AFSS”) , the TSA security

group, US Customs and Immigration Services, and Airport administration. The tenants identified are shown in the following table.

Table 12-1. Airport Tenants and Operators

Air Carriers (9)	Concessionaires (8)	Government (11)
Airborne Express	Alamo/National	Airport Management
Air Transat	Avis	Army Reserves
ATA	Enterprise	Coast Guard Air Station
CanJet	Flightshops	FAA-AFSS
Conquest/Skyservice	Hertz	FAA Control Tower
Seacoast	Jerry's Caterers	Pinellas County
Southeast	Stellar Partners	Sheriff's Office
Sun Country	Yellow Cab	US Customs Service
UPS		USDA
		US Immigration
		US TSA
Other Tenants (29)		
Air Ambulance	Elite Air, Inc	Quantum Aviation
Air-1 FBO	ExecuJet Charter Services	PEMCO
American Flying Adventures	Hillsborough Distribution	PIE in the Sky
B&C	Jabil Circuit Company	Royal Flying Club
Bigelow & Son's	Jet Executive Center	Sheltair
Care Flight	The Landings Assoc.	Signal Avionics
Central Florida Jets	Marine Max	Signature Flight Support
Clearwater Aircraft Maintenance	Mid Atlantic Freight	Starfighters
Clearwater Aviation Academy	Nightingale Aviation	Tampa Bay Aircraft Sales
Eclipse Int'l (pilot training)	National Aviation Academy	

12.4.1 Tenant-Related Jobs and Wages

Based on IMG surveys and interviews, a total of 1,648 direct on-airport jobs (full time equivalents) were identified and compiled according to the sector of the economy they are associated with. Tenants jobs and associated wage rates by type of organization are shown in the following **Table 12-2**. As seen in the table, the largest single employers are military organizations (658 jobs), followed closely by air transportation businesses (535 jobs). The public sector employs a significant portion of tenant impact, with 324 full-time equivalent government employees at the local and federal level.

Airport tenants support high-quality jobs; the overall average wage rate found for Airport jobs is just over $43 thousand annually, substantially higher than the average wage in Pinellas County of approximately $31 thousand[4].

Table 12-2. Tenant Economic Impact

Direct (*same for all years)*					
Sector	***Employment***	***Wage Rates***			
Air Transportation	535	$31,432			
Concessions	101	$18,567			
Government	324	$54,216			
Military	658	$46,519			
Other	31	$37,878			
Total	1,648	$43,472			
Impact (with secondary)	**2003**	**2008**	**2013**	**2018**	**2023**
Jobs	3,586	3,202	3,068	3,019	2,986
Output	$276,420,480	$257,603,640	$261,345,000	$275,870,280	$293,366,640
Disposable Personal Income	$106,947,876	$110,260,080	$121,264,080	$133,368,480	$144,042,360
Population	1,151	2,121	2,583	2,841	2,947

Note: Concessions includes food, retail and rental car

Note: Monetary figures are constant 2002 dollars

12.4.1.1 Economic Output Associated with Tenant Activities

These direct on-airport jobs and the organizations' expenditures for operations and capital improvements served as the key inputs to determine the overall economic impact associated with airport tenants. **Table 12-2** above indicates the overall economic impact related to tenant activities at the airport. As shown, the agglomeration of jobs at the airport results over $276 million of economic activity in the region that support the vitality of Pinellas County. For 2003, Airport tenant activities are responsible for 3,586 jobs overall (inclusive of airport jobs and induced impacts) and total output of $276 million (in 2002 $).

The table also indicates personal income and population impacts associated with Airport tenant activities and projects all impact levels out until 2023. Economic activity at the Airport is responsible for 1,100 residents in population of Pinellas county in 2003, with this impact expected to rise over time to nearly 3,000 by 2023. After-tax income received by Pinellas residents due to Airport tenants will be $119 million in 2003, rising to $258 million in 2023 (figures in constant 2002 dollars). If tenant jobs grow during this period, the impacts could be substantially greater.

Output and job impacts related to Airport tenants are lower in 2008 than in 2003 due to the dynamic effects of the REMI model. If the 1,648 jobs at the Airport were eliminated, there would be an immediate drop in economic output of some $276 million. Some

[4] Bureau of Economic Analysis, U.S. Department of Commerce, 2003

workers would react to the scarcity of jobs and declining wage rates by leaving the area in the County. This would provide County employers a temporary competitive advantage, creating the brief recovery seen in 2008. In the long run, however, migration out of the County would cause wage rates to rise again, resulting in declining economic output after 2008.

12.4.2 Current Visitors Impact

Passengers using PIE include a high proportion of visitors who are spending funds in the tourism sector. As outlined above, this visitor spending is an additional indirect impact that is not registered at the Airport, but rather across the County economy as tourists purchase lodging, meals, recreation, and other goods and services. **Table 12-3** depicts Current Visitors Impact shows the economic impact related to current visitors, defined as passengers currently using the Airport for arrival/departure. As shown in the table, tourists arriving via PIE will spend over one hundred million dollars and boost economic activity accordingly. For 2003, current visitor spending is projected to be $128 million, which would be responsible for 5,426 jobs overall (inclusive of visitor spending and induced impacts) and total output of $444 million (in 2002 $).

Since Airport traffic is projected to increase over time (see **Table 12-2**), visitor spending and its impacts will grow over time as well. As shown in the table, for 2013 current visitor spending would be responsible 6,139 jobs and $551 million in total output. These economic impacts will continue to grow over the forecast period, reaching 7,306 jobs and $737 million in total output in 2023.

Table 12-3. Current Visitor Economic Impact

Direct	**2003**	**2008**	**2013**	**2018**	**2023**
Eating & Drinking	$33,206,315	$39,794,249	$46,762,453	$54,313,095	$62,733,340
Hotel	$49,558,794	$59,390,961	$69,790,662	$81,059,624	$93,626,427
Retail	$17,791,959	$21,321,777	$25,055,344	$29,100,981	$33,612,553
Rental Car	$16,914,724	$20,270,504	$23,819,987	$27,666,154	$31,955,282
Recreation	$11,068,772	$13,264,750	$15,587,484	$18,104,365	$20,911,113
TOTAL	$128,540,565	$154,042,241	$181,015,929	$210,244,219	$242,838,715
Impact (with secondary)					
Jobs	5,426	5,642	6,139	6,720	7,306
Output	$444,121,440	$482,745,480	$551,410,440	$639,882,600	$737,488,080
Disposable Personal Income	$106,265,628	$143,382,120	$191,909,760	$244,178,760	$295,457,400
Population	925	4,039	6,133	7,798	9,095

Note: Monetary figures are constant 2002 dollars

12.4.3 New International Visitors Impact

PIE has incorporated plans for a runway extension into its master plan and has already had expressions of interest from several foreign carriers that want to operate non-stop international charter services to bring foreign tourists to Pinellas County. Since these services are not yet operational, and cannot be expected until after the runway extension has been completed, the impact of new international visitors was computed separately.

Passengers arriving at PIE via new international services will be predominantly visitors that will spend funds in the tourism sector. As outlined above, this new international visitor spending is an additional indirect impact that is not registered directly at the Airport, but rather across the County economy. **Table 12-4** shows the economic impact related to new international visitors. As shown in the table, there is no impact until 2005, at which point new international tourists arriving via PIE will spend about $42 million dollars and boost economic activity accordingly. For 2005, new international visitor spending would be responsible for 1,728 jobs overall (inclusive of new visitor spending and induced impacts) and total output of $149 million (in 2002 $).

New international traffic is projected to increase over time, and new international visitor spending and its impacts will also grow over time. As shown in the table, for 2013 new international visitor spending would be responsible 3,033 jobs and $278 million in total output. These economic impacts will continue to grow over the forecast period, reaching 3,553 jobs and $360 million in total output in year 2023.

Table 12-4. New International Visitor Economic Impact

Direct	2003	2005	2008	2013	2018	2023
Eating & Drinking	$0	$10,653,937	$19,345,789	$22,733,348	$26,404,058	$30,497,521
Hotel	$0	$16,254,185	$29,514,915	$34,683,148	$40,283,368	$46,528,563
Retail	$0	$5,689,523	$10,331,233	$12,140,292	$14,100,562	$16,286,594
Rental Car	$0	$5,523,347	$10,029,486	$11,785,707	$13,688,722	$15,810,906
Recreation	$0	$3,551,312	$6,448,596	$7,577,783	$8,801,353	$10,165,840
TOTAL	$0	$41,672,304	$75,670,019	$88,920,278	$103,278,062	$119,289,424
Impact (with secondary)						
Jobs	0	1,728	2,889	3,033	3,273	3,553
Output	$0	$148,554,000	$256,503,240	$277,961,040	$314,604,360	$360,491,040
Disposable Personal Income	$0	$34,959,708	$66,299,100	$89,033,364	$114,661,680	$141,071,280
Population	0	293	1,295	2,616	3,575	4,318

Note: Monetary figures are constant 2002 dollars

12.4.4 Construction Projects

Construction projects reflect the capital expenditures taking place on the airport. These expenditures, which are expected to total over $330 million over the next twenty years, are made up of three different categories of projects: PIE master plan improvements; standard, recurring airfield tenant capital expenditures, and current expansion projects announced by the US Army and Sheltair. Expected build-out schedules were obtained for these capital expenditures, but those schedules are subject to uncertainty. Instead of attempting to pinpoint exact year for each improvement, IMG used average annual capital expenditures over the five-year periods. That is, the capital expenditures for the 2003-2007 period were assumed to take place at a level average figure for each year of that period, and likewise for the further periods. Year 2023 capital expenditures were assumed to be equal to the average for the last five-year period, 2018-2022. These periods coincide with the four major Airport development phases proposed in the updated master plan.

As shown in **Table 12-5**, construction projects for 2003-2007 are projected to average over $26 million annually, and boost economic activity accordingly. For 2003-2007, construction projects would be responsible for 568 jobs overall (inclusive of capital spending and induced impacts) and total output of $63 million (in 2002 $).

For the period 2008-2012, master plan projects continue at a slightly reduced level, but the current expansion projects will have been completed and no additional ones are assumed for this analysis. As a result, 2008-2012 construction projects would be responsible for 330 jobs overall (inclusive of capital spending and induced impacts) and total output of $40 million (in 2002 $). For the entire 20-year period covering 2003-2022, construction projects would be responsible for 321 jobs annually on average (inclusive of capital spending and induced impacts) and total output of $38 million on average (in 2002 $).

Table 12-5. Construction Impacts

Direct	2003-2007	2008-2012	2013-2017	2018-2022	TOTAL 2003-2022
Average Annual Capital Expenditures					
Master Plan	$17,895,453	$14,354,316	$6,474,016	$9,558,720	$241,412,527
Standard Airfield	$3,105,000	$3,105,000	$3,105,000	$3,105,000	$62,100,000
Current Projects	$5,563,648	$0	$0	$0	$27,818,240
Average Annual Total	$26,564,101	$17,459,316	$9,579,016	$12,663,720	$331,330,767

Impact (with secondary)	2003-2007	2008-2012	2013-2017	2018-2022	Average Year 2003-2022
Jobs	568	330	164	222	321
Output	$63,422,654	$40,164,600	$19,968,012	$30,094,399	38,412,417
Disposable Personal Income	$15,436,411	$12,027,812	$8,939,650	$11,467,929	11,967,950
Population	231	314	356	324	306

Note: Monetary figures are constant 2002 dollars

12.5 OVERALL ECONOMIC IMPACT

The overall economic impact of PIE Airport has been estimated by summing the four major components discussed above, namely tenant activity, current passengers, new international passengers, and construction projects. The results are shown graphically in **Figures 12-8 and 12-9**, one for Total Jobs and one for Total Output (or overall economic impact) generated by PIE Airport. These figures illustrate the four major economic activity centers associated with the Airport, their individual impacts and then the overall Airport Economic Impact.

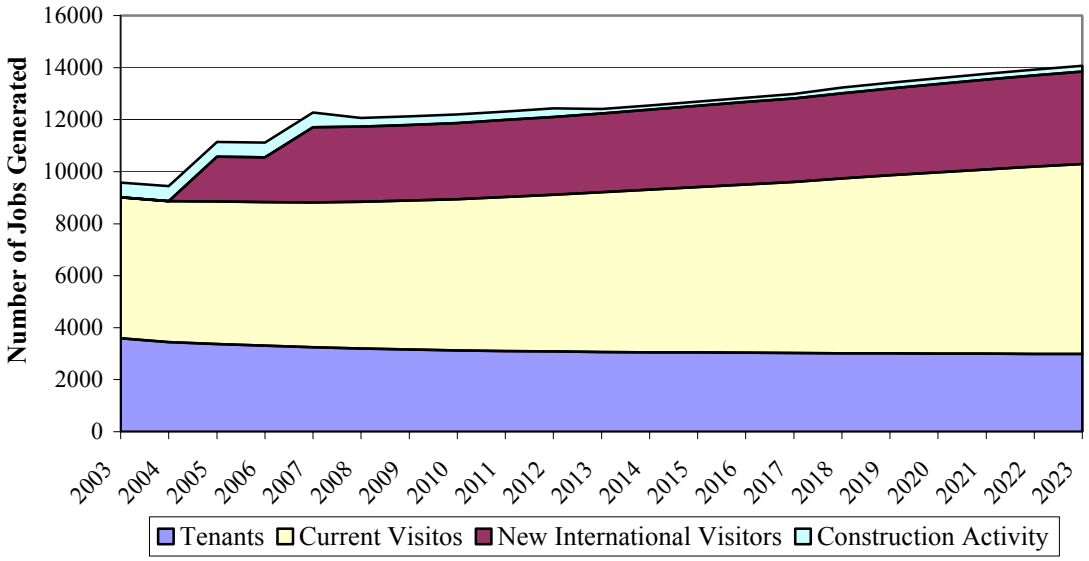
12.5.1 Total Employment Impact

The air carrier, tenant, and visitor activities generated at the Airport are responsible for a combined total of 9,580 jobs in Pinellas County (for 2003). These 9,580 jobs reflect the overall employment impact generated by the Airport related to specific components.

- There are at least 3,586 jobs at or near the Airport that are directly related to PIE's aviation facilities, their tenants, and the passengers that arrive and depart PIE
- Current air passengers who are visitors arriving for tourism inject additional spending into the County's tourist service businesses and create an additional 5,426 jobs (for 2003)
- In addition, new international visitors associated with Airport improvements will generate an additional 3,033 jobs (in 2013); non-stop international service is not available for 2003
- Capital spending at the Airport, including ongoing tenant investments and the improvements incorporated in the PIE master plan, will generate another 568 jobs per year on average (for 2003-2007).

As passenger traffic follows projected growth patterns, the total employment impact will grow to 13,234 in 2013 and to 14,067 by 2023.

Figure 12-8. Total Jobs Generated by PIE: Tenants, Current Visitors, New International Visitors and Construction Activity



12.5.2 Total Output Impact

The Airport contributes a combined total of at least $783 billion in overall output and expenditures to the regional economy of Pinellas County. This economic contribution includes the direct and indirect expenditures stemming from the Airport-related tenant businesses, visitor spending, and capital construction activities. The total consists of:

- $276 million in wages and expenditures related to tenants on the airport
- Expenditures of $444 million from the impact of tourism expenditures from current visitors arriving through the Airport (for 2003)
- No 2003 output from new international visitors, but an additional $278 million by 2013
- An estimated $63 million of output (average per year) related to capital expenditures at the Airport.

As passenger traffic follows projected growth pattern, the total Airport Economic impact will grow to $1.1 billion in 2013 and to $1.4 billion by 2023.

Figure 12-9. Total Output Generated by PIE: Tenants, Current Visitors, New International Visitors and Construction Activity

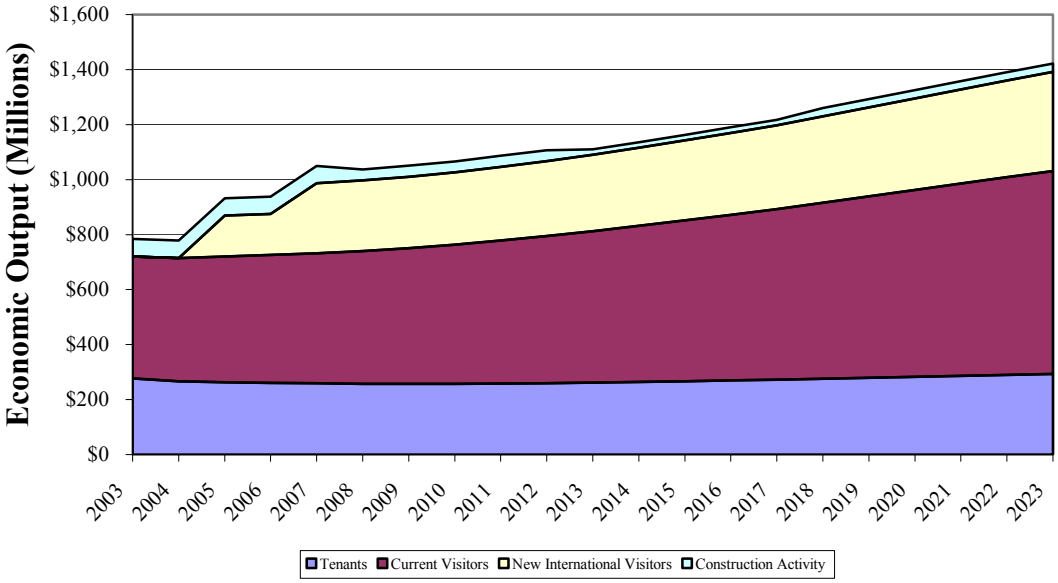


Table 12-6 provides the detailed data on total economic impact including jobs and output, but adding personal income, disposable income, and population impacts related to Airport activities.

Table 12-6. Total Economic Impacts

Impact (with secondary)	2003	2008	2013	2018	2023
Jobs	9,580	12,063	12,404	13,234	14,067
Output (2002 $)	$783,964,574	$1,037,016,960	$1,110,684,492	$1,260,451,639	$1,421,440,159
Real Disposable Personal Income	$228,649,915	$331,969,112	$411,146,854	$503,676,849	$592,538,990
Population	2,307	7,769	11,688	14,538	16,666

Note: Monetary figures are constant 2002 dollars

12.5.3 Tax Revenues

Economic activity generates tax revenues. This economic impact analysis shows the annual contributions of the Airport and its constituent business and governmental activities in Pinellas County. These economic activities in turn are important generators of tax revenues to the County and its constituent governments. Although these associated tax revenues were not generated by the REMI collections, IMG has projected three key taxes based on Airport activity, as follows:

- Lodging Tax—The County collects a 4% tax on visitor lodging expenditures. Based on our estimate of airport-related visitor spending for tourists arriving by air at PIE, 2003 revenues would be $2.0 million, growing to $4.2 million by 2013.
- Sales Tax—The County participates in the Florida Sales Tax, receiving one percent of local sales. Based on our estimate of total airport-related spending in the County, 2003 revenues would be $1.3 million, growing to $2.7 million in 2013.
- Motor Fuel—The County receives a portion of the overall tax levied on motor fuel, amounting to 11.6 cents per gallon. Based on our estimate of airport-related visitor rental car usage, 2003 revenues would be $91,000, growing to $128,000 in 2013.
- Three Tax Total—The total tax collections for these three taxes related to Airport-related spending are estimated to be $3.4 million in 2003, growing to $7.0 million in 2013.

12.6 OTHER BENEFITS

12.6.1 Transportation Benefits

Transportation benefits of the airport are the primary reason for its existence and high rate of use. Transportation benefits are related to the economic impacts identified above, but are not measured directly in the impact analysis. In assessing transportation benefits for the proposed runway extension, the Benefit-Cost Analysis (“BCA”) prepared in 2002 gave one indication of the transportation benefits associated with Airport improvements.

The BCA quantified the travel time and cost savings related to the proposed Airport improvement, consistent with Federal Aviation Administration requirements. Relative to the investment costs associated with the runway improvement, project benefits exceeded costs by a factor of at least 5:1, and likely scenarios indicated significantly

higher benefit-cost ratios up to 10:1. That is, for each dollar invested in improvements, aviation transportation benefits of $5-to-$10 were projected[5].

12.6.2 Community Benefits

Community benefits related to this aviation infrastructure are not directly measured. These include:

- Fostering local businesses—the Airport nurtures and supports many unique local businesses, from PIE- based Southeast Airlines to the Flightshops flight supplies and aviation bookstore, one of the largest in the world.
- Facilitates recreational aviation—the airport provides excellent facilities for general aviation recreational pilots to base aircraft, adding many possibilities to recreation, entertainment, and sightseeing, and contributing the Pinellas County life-style.
- Provides aviation training—general aviation facilities provided a significant training ground for future commercial and recreational pilots and maintenance personnel.
- Attracts family relocation—the military installations attract numerous families to visit and often relocate into Pinellas County; in particular, numerous families are reported to accompany Coast Guard Air Station postings.

12.6.3 Business Location Decisions

Transportation benefits of airport facilities indisputably linked to location and growth decisions of businesses. A research report by the Federal Reserve Bank of Chicago on business location decisions found that the existence of an airport was an important factor in locating corporate headquarters, divisional offices, and selected finance and insurance, R&D facility, and computer and data processing[6]. Biotechnology and biomedical products industries are among the most highly airport dependent business identified in a study of the San Diego Regional Economy[7]. Also medical instruments, printing and publishing, greeting cards and other industries that ship high value, time sensitive orders have been identified as reliant on airport facilities.

No attempt was made to link specific County-wide business location decisions with the PIE aviation facilities, but these linkages are believed to be significant.

12.6.4 Commercial Real Estate Development

PIE has developed an Airport Business Center that serves as home to many Pinellas County businesses. The study team concluded that most of these businesses were not aviation-related, and none of the jobs and economic activity at the business park were incorporated. However, the Airport provides a business-like entity that can and does facilitate adjacent County-controlled development sites for local businesses and offers free trade zone status as well.

[5] IMG in association with PBS&J, Benefit-Cost Analysis for Proposed Extension of Runway 17L/35R, August 1, 2002

[6] Federal Reserve Bank of Chicago, "The Economic Impact of Airports on Chicago and Other Metro Areas."

[7] Hamilton, Rabinowitz & Alschuler, Inc., "The Impacts of Constrained Air Transportation Capacity on the San Diego Regional Economy."