

New tool helps Minnesota airports prove their worth

Minnesota's airport personnel must often justify to city council or county board members the need to undertake improvement projects. One way an airport can show its importance is for it to show its economic impact on the surrounding community. Doing so will illustrate how the community as a whole benefits from having an airport nearby, regardless of the airport's size.

To meet that need, William Gartner, professor of applied economics, and a team of University of Minnesota

researchers embarked on a study to determine the economic impact small and medium-sized commercial and general aviation airports have on their local communities. From that information, they developed an interactive Web-based tool that airport personnel can use to calculate a specific airport's economic impact.

This issue of *Briefings* is intended to help airports use and understand this economic impact calculator. The article will define terms, provide some background on the tool's development, and list what information a user needs to have available before sitting down to use it.

The calculator was designed for 134 airports in the state of Minnesota. The calculator was not designed for use at Duluth International, Minneapolis-St. Paul International, and Rochester International Airports.

What is economic impact?

People assess economic impact in many different ways, so defining the term can be challenging. In the context of the assessment tool, economic impact refers to the result of expenditures or sales transactions between businesses or other entities that can be directly traced to the presence of an airport. Gartner points out that rather than



measuring revenue or profitability, the tool measures the amount of money and number of jobs that have been created as a result of the economic activity taking place at the airport.

How it came about

Gartner and his study team undertook seven steps in developing the economic impact calculator. First, they looked at the type of economic activity taking place at the state's airports. Of Minnesota's 134 airports, the team visited 51. Despite their differences in size and the types of aviation services offered, the airports do perform similar activities. Based on those visits, the team came up with the following categories of economic contributors at Minnesota's airports:

- Public ownership
- Fixed-base operator
- Commercial scheduled service
- General aviation pilots and other overnight visitors
- Retail businesses
- Business use
- Government and other nonprofit use
- Other

Next, the research team collected data from a sample of the two most impor-

tant contributors to economic impact: public sponsorship and fixed-base operator (FBO) expenditures.

Every airport for which the calculator was designed has some form of public ownership, Gartner says. The team sent a survey to the 134 airports to collect financial information. From the 76 responses, it was possible to design questions to determine the economic impact of public sponsorship.

The second area of analysis focused on FBO expenditures.

An FBO is any business located at an airport that has as its primary activity some form of aviation. All 98 FBOs in Minnesota were sent a survey to determine expenditure levels. However, because only 20 FBOs responded, it was difficult to tie expenditure levels to a particular type of service. Instead, the analysis determined that the number of employees working for the FBO plus the number of aircraft maintained by it would be sufficient to estimate FBO expenditures.

The team then developed standards that could be applied to the various economic contributors, based on primary data that were collected and analyzed as well as secondary data from the University of Minnesota Tourism Center. According to Gartner, standards are not necessary if complete information is already available about a particular economic activity. This is the case with public sponsorship of airports. Since government funds used to support airport operations are part of the public record, it is possible to obtain exact figures. FBOs differ in that their expenditures are private information. However, Gartner says that even with the relatively low response rate, the team could still develop an equation that could be applied across the range of airports and FBO operations in the state.

Continued on back

Next, the team created algorithms and selected multipliers for use in calculating economic impact. The data obtained from the FBO surveys were used to develop the equation in figure 1.

Also, the team created unique descriptive impact models for each of Minnesota's 87 counties, Gartner explains. This information is part of the formula used to accurately calculate the economic impact of each airport.

Finally, the airport economic impact calculator was designed, tested, and deployed on the Web earlier this year. The tool can

be accessed from the Mn/DOT Office of Aeronautics Web page at www.mnaero.com under "Special Features."

[The information for this article was obtained from the final report, *Development of an Economic Impact Measurement Tool for Small/Medium Size Commercial and Public Use Airports in Minnesota*, written by William C. Gartner, Daniel L. Erkkila, and Jo Hyunkuk. The report will be published in spring of 2005 and available at www.cts.umn.edu/publications/reports/index.html.] ✕

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$$Y (\text{expenditures}) = 10.90853 + fa (.040085) + fs (.1069578) + pa (.2601556) + Nplane (.1114583)$$

where: fa = full-time annual
fs = full-time seasonal
pa = part-time annual
Nplane = number of planes owned or maintained by the FBO/business

Fig. 1. Equation used to calculate economic impact

Getting started with the economic impact calculator

The type of services at your airport will dictate the amount of information you'll need to complete the airport economic impact calculations. Before getting started, prepare to answer the following questions:

- Name of the airport
- County in which the airport is located
- A list of different economic activity categories occurring at the airport
- The quantity of each of these different types of economic activities

For each category selected, a separate screen with additional questions is displayed. "Public Ownership" is automatically selected on the first screen for every user. Following is a list of information needed for each screen that applies to the airport in question.

Public ownership

- Year for which the financials are being reported
- Total dollar figure provided by all government sources for yearly operation of the airport
- Amount of money spent for construction during the year for which the financials are being reported

Fixed base operator and other aviation businesses

- Number of full-time annual employees
- Number of full-time seasonal employees
- Number of part-time annual employees
- Number of planes operated by the FBO

Commercial scheduled air service

- Number of enplanements recorded at the airport during the last year
- Percentage of those enplanements that are local residents
- Number of employees maintained at the airport by the airline providing the service
- Number of employees maintained at the airport from the federal government's Transportation Security Administration

Retail businesses located at the airport

- Number of employees maintained by the businesses

Overnight use by GA pilots and other visitors

- Amount of overnight use accounted for by GA pilots
- Number of tourists that access the region through the airport but not as pilots

Businesses that ship freight

- Number of times a particular business uses the airport each week
- Distance in miles from the airport in use to an airport with similar facilities

Businesses that own hangars and maintain their own aircraft

- Number of full-time annual employees
- Number of full-time seasonal employees
- Number of part-time annual employees
- Number of planes operated by the entity

Nonprofit or government entities

- Number of full-time annual employees
- Number of full-time seasonal employees
- Number of part-time annual employees
- Number of planes operated by the entity

Other expenses

Since this category is wide open, an explanation of what should and should not be included is provided within the calculator. This category does not use county-specific multipliers, but rather uses a conservative (low) multiplier for dollars and jobs, which remain the same regardless of county location for the airport.