

Performance Measures Report for the Montana Airports 2016 Economic Impact Study

The Montana Department of Transportation (MDT) research project “Montana Airports 2016 Economic Impact Study” conducted data collection, economic modeling, and analysis to determine the qualitative and quantitative benefits of Montana’s airports. The study analyzed the contributions of 77 airports within the Montana system, including aviation- and non-aviation-related businesses, visitor spending, capital expenditures on construction, and additional spin-off (or “multiplier”) effects or benefits. This study also examined specific activities and uses at each airport to identify how these facilities support Montana’s residents and visitors.

Primary data were gathered via an extensive surveying effort with airport managers, airport tenants, and visitors using commercial service and general aviation facilities. Missing or incomplete data were supplemented by secondary sources. Calculations for direct payroll and output (economic impacts) for on-airport business were based on the specific accounting of direct jobs and business sectors. Direct impacts for jobs and payroll from construction were based on the capital expenditure data. Visitor spending was based on the number of visitors, spending per visitor based on a survey conducted by the consulting team, and data compiled from the University of Montana’s Institute for Tourism and Recreation Research. Jobs and payroll for direct impacts were calculated based on visitor spending.

Direct on-airport economic impacts (i.e., aviation- and non-aviation-related businesses, jobs at those businesses, capital expenditures on construction, and numbers of commercial and general aviation visitors) were validated with airport managers prior to calculating spin-off effects. Spin-off effects are caused when a portion of direct business revenues are used to purchase goods and services in Montana (i.e., indirect effects) and when the portion of revenues paid as wages to workers are spent within the state (i.e., induced effects). Combined, direct impacts and spin-off effects compose the contribution of an individual airport and determine the total statewide impact of Montana’s airport system.

The study found that Montana’s airports support nearly 24,000 jobs, generate approximately \$840 million in payroll, and generate \$2.78 billion in total economic impacts. **Table 1** summarizes these findings.

Table 1. Total Economic Contribution of Montana's Aviation System

Impact Type	Jobs	Payroll (\$)	Economic Impacts (\$)
On-airport	5,260	\$271,531,000	\$911,144,000
Off-airport visitor spending	9,360	\$198,309,000	\$717,784,000
Capital expenditures on construction	413	\$18,365,000	\$61,147,000
Sub-total direct impacts	15,033	\$488,205,000	\$1,690,075,000
Spin-off effects	8,816	\$350,305,000	\$1,089,040,000
Total Contribution	23,849	\$838,510,000	\$2,779,115,000

The surveys indicated that agricultural spraying, medical flights, corporate and business activity, wildland firefighting, military exercises and training, and law enforcement are the most common activities that occur

at aviation facilities. The study shows that nearly 90 percent of hospitals and many businesses in the state depend on airports. The agricultural sector is also heavily reliant on aviation activity: airports contribute more than \$671 million of total business revenues and more than 3,300 jobs to Montana resulting from aviation-related employment and business revenues generated by crop-dusting services, in addition to the value of agriculture preserved from trampling that would occur during ground application.

Assumptions:

1. This study included a sub-set of 77 airports within Montana's system with specific measurable economic outputs. Excluded airports do not significantly impact the total statewide impact resulting from this study.
2. The study defined jobs on the basis of actual headcount. This approach was used in conformance with the methodology employed by the U.S. Bureau of Economic Analysis, County Business Patterns of the U.S. Census Bureau, and the U.S. Bureau of Labor Statistics, as well as the structure of the IMPLAN modeling package and its underlying database (IMPLAN aggregates data from all three federal agencies). Results indicate an actual count of employment at airport, instead of generating a fractional figure for airport jobs.
3. Statewide spin-off effects were calculated using the IMPLAN model. Direct values of labor income (i.e., payroll) or output (i.e., economic impacts) of payroll not assembled from primary or second data sources were calculated based on industry-specific averages by MDT region based on data from the U.S. Departments of Commerce, Labor and Agriculture, and assembled by IMPLAN for each Montana county.
4. Survey participants provided accurate and reasonable responses to survey questions, including airport managers, airport tenants, commercial aviation passengers, and general aviation passengers.
5. Dollars were rounded to the nearest thousand to address concerns about "false precision" in applying survey answers or regional/state averages.

Calculations:

Research was initiated in 2015 and completed in 2016¹ at a cost of \$376,000. While the results of the study provide valuable data to MDT, its partners, and other stakeholders, including airports and communities that are airport sponsors, that can be used in multiple decision-making contexts, this study does not result in any direct cost savings to MDT.

To determine the full range of direct economic impacts and the indirect and induced (i.e., spin-off) economic effects, this study utilized the IMPLAN model system of IMPLAN, LLC. IMPLAN utilizes the U.S. Commerce Department's National Income and Product Accounts data on inter-industry relationships (also known as input-output structural matrices), countywide employment and income data from the Bureau of Economic Analysis (BEA) and Bureau of Labor Statistics (BLS), and its own industry- and county-specific estimates of local purchasing rates (i.e., regional purchase coefficients).

¹ The response to comment and final presentation was conducted in early 2017.