The Economic Impact of Alabama's Six Major Commercial Service Airports on the State's Economy

Prepared for: The Aviation Council of Alabama

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This report attempts to estimate the economic impact of Alabama's six major commercial service airports on the State's economy.

The variables of interest to be analyzed are employment, payroll, and final demand. The figures reported in this document are estimates based on a sound theoretical foundation of the State's economy and the most updated socioeconomic, demographic, and general business climate information. Every attempt has been made to use the most recent information. The author, however, does not assume responsibility for any changes or revisions that may be made to the source data.

The premise of this analysis is that there will be no major events to change the short- or long-term economic foundation of the region. In other words, we assume everything else will remain constant as we run this exercise.

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Table of Contents

Executive Summary

Purpose

- Currently there are 76 airports in Alabama.
- Six (6) of the Alabama airports are commercial service facilities, and seventy (70) are general aviation facilities.
- The purpose of this report is to provide an estimate of the economic impact for Alabama's six commercial aviation facilities (airports).
- More specifically, this report looks at the economic impacts of Birmingham-Shuttleworth International, Huntsville International- Carl T Jones Field, Mobile Regional, Montgomery Regional (Dannelly Field), Dothan Regional, and Northwest Alabama Regional airports.
- The economic impact estimates are expressed in terms of the number of jobs, the dollar amount of payroll, and the demand for services (output) directly and indirectly attributable to their presence and operation.
- We used 2018 and 2019 financials and passenger (enplanement) data.
- All primary information used in this study are provided by the respective airport personnel.

Passenger Enplanement Data, Calendar Year 2019

Airport	Passenger Enplanement
Birmingham	1,545,308
Huntsville	725,484
Mobile	350,290
Montgomery	170,544
Dothan	60,000
Muscle Shoals	6,123
Total	**2,857,749**

Direct Data

- Direct total employment of the airports (aviation and aviation related entities) is estimated to amount to 16,200 jobs (on a full-time equivalent basis in 2019).
- The payroll of the entire on-site business operation is estimated to be $705.5 million.
- Alabama commercial service airports and their auxiliary businesses collectively add a total of $948.1 million to the State's economy in the form of non-payroll business transactions.
- In summary, the Airports are directly (not counting tourist spending and the induced and indirect impacts at any level) responsible for a total employment of 16,200 individuals and a total direct addition of $1.6 billion to the State's economy.

	Employees	Payroll	Non-Payroll
Huntsville	6,114[1]	$272,177,956	$390,624,913
Birmingham	3,500	$178,017,054	$203,840,853
Mobile	5,820	$220,590,320	$341,537,416
Montgomery	300	$12,000,000	$5,000,000
Dothan	428	$20,895,000	$875,000
Muscle Shoals	38	$1,883,125	$6,243,463

Economic Impact Estimates

Methodology

1. We started with the direct aviation employment and payroll attributable to airport operation.
2. We then estimated the direct employment and payroll for aviation-related businesses at the airports.
3. The total non-payroll expenditures (operation and management expenditures) were compiled.
4. The indirect spending (tourist expenditures) was estimated using the enplanement data.
5. Items above were applied to the multiplier analysis, and their induced (secondary) impacts were estimated.
6. Direct data from items 2 and 3 were also applied to the multiplier analysis, and their indirect and induced effects were computed.
7. The sum of items 1 through 6 provided the total output economic impact of the airports.
8. Finally, the economic impact estimates were used to compute the employment and payroll impact of the aviation and aviation related activities of the airports.

Estimates

- We estimate that the **total spending (output) impact of the Alabama Airports on the State's economy amounted to approximately $5.0 billion in 2019**.
- It is also estimated that approximately $1.7 billion of this total economic impact is solely due to the aviation and aviation related activities.
- The total employment and payroll impact attributable to Alabama Airports is approximately **69,200 direct and indirect jobs** and over **$2.6 billion of additional payroll** to the economy of the State.
- Estimates of total economic impact for each of the six Alabama airports are as follows:

  - Port of Huntsville

    - Economic Impact: $1.8 Billion
    - Payroll Impact: $1 billion
    - Employment Impact: 28,600 Jobs

[1] Includes data for industrial parks and cargo operations, were applicable.

- Birmingham International Airport
  - Economic Impact: $1.6 billion
  - Payroll Impact: $706 million
  - Employment Impact: 18,700 Jobs

- Mobile Regional Airport and Downtown Airport at Brookley
  - Economic Impact: $1.4 billion
  - Payroll Impact: $778 billion
  - Employment Impact: 18,600 jobs

- Montgomery Regional Airport
  - Economic Impact: $125 million
  - Payroll Impact: $47 million
  - Employment Impact: 1,500 Jobs

- Dothan Regional Airport
  - Economic Impact: $74 million
  - Payroll Impact: $50 million
  - Employment Impact: 1,400 Jobs

- Northwest Alabama Regional Airport
  - Economic Impact: $10 million
  - Payroll Impact: $8 million
  - Employment Impact: 202 jobs

Return on Investment (ROI)

- ROI is a financial metric that is widely used to measure the probability of gaining a return from an investment. It is a ratio that compares the gain or loss from an investment relative to its cost.
- To calculate the ROIs first we added up all aviation-only direct spending for all commercial service airports in Alabama for 2019.
- More specifically, we removed spending that was not directly connected to movement of passengers from our data base.
- Next, we re-estimated the total economic impact of the aviation-only activities for all Alabama airports.
- Finally, we divided our estimates of adjusted total economic impact of the airports into the adjusted direct spending.
- We found that ROI for Airports to vary from mid-4 to low-15. The overall average ROI is estimated to be 6. This suggests infrastructure spending which is directed towards accommodating additional passenger traffic will result in a return that is six-fold higher (i.e. a $1 investment in airport core business, from any funding source, can generate $5 of additional income for the community.)

Purpose

Airports are more than runways and terminal - they are powerful engines of economic growth. They are one of the most fundamental components of business infrastructures, because they facilitate continuous economic growth for contiguous economic regions. Airports also provide both economic benefits and economic impacts for their respective regions.

Economic impacts are typically measured in terms of the additional employment and earnings for the community that are directly attributable to the airport's business and aviation operations. The economic benefits, on the other hand, are measured in terms of transportation efficiency, or more specifically, the dollar value of time and resources saved. The transportation benefits of airports can include safety, convenience, access, and time savings. This is typically measured in terms of total passenger trip time saved multiplied by the value of the passenger time.

Quantifying the value of enhancement to a region's well-being (enhancement in quality of life) is extremely subjective, and transportation efficiency savings are hard to measure in a consistent and comparable manner. On the contrary, the economic impact analyses of airports can be streamlined if the published guidelines developed by the U.S. Department of Transportation and the Federal Aviation Administration are used as general guidelines. These guidelines are provided in a document entitled "Estimating the Regional Economic Significance of Airports," report number DOT/FAA/PP-92-6 (US DOT/ FAA September 1992) (hereinafter referred to as the *DOT/FAA Report*).

According to the Airports Council International (ACI) of North America, the economic impact of U.S. airports in 2017 amounted to $1.4 trillion in value of goods and services produced (output), $428 billion in earnings, and an impressive 11.5 million jobs. According to this report, "airports are not just the gateways for their communities but are vital contributors to the health of the American economy."

The economic impact of the Hartsfield Atlanta International Airport (52 million enplanements in 2018) totaled 63,000 direct jobs and $4.5 billion of direct payroll in 2017. It is important to note that these figures are direct impact only, they do not include secondary impacts. The total annual regional economic impact of Hartsfield airport was estimated at $82 billion in 2017. Likewise, the Baltimore/Washington International Airport, which served 27 million passengers in 2018, supported approximately 24,000 direct jobs and 82,000 total jobs with a total earnings impact of $4.1 billion. Finally, Minneapolis-St. Paul International Airport (with total passenger enplanements of 18 million in 2018) reported a total direct employment of 48,000 employees and $2.8 billion in wages.

Currently there are 76 airports in Alabama. Six (6) of the airport are commercial, and seventy (70) are general aviation facilities. The purpose of this report is to provide an estimate of the economic impact for the Alabama's six commercial service aviation facilities. More specifically, this report looks at the economic impacts of Birmingham-Shuttleworth International, Huntsville International- Carl T Jones Field, Mobile Regional, Montgomery Regional (Dannelly Field), Dothan Regional, and Northwest Alabama Regional airports.

This report does not attempt to provide any estimate of the economic efficiency of the above six airports. Instead, we solely provide an estimate of the economic impact of Alabama's commercial service airports expressed in terms of the number of jobs, the dollar amount of payroll, and the demand for services (output) directly and indirectly attributable to their presence and operation. This report concentrates on 2018 and 2019 financials and passenger (enplanement) data. All primary information used in this study are provided by the respective airport personnel.

Introduction

Birmingham

The Birmingham Airport began operating on May 31, 1931. Over time, a series of renovations and expansions have led to an impressive surge in the quality of the facility, the volume of passengers, and the number of airlines operating at the airport. In 1986, the Birmingham Airport Authority (BAA) was created by the Birmingham City Council. The airport was renamed Birmingham International Airport (BIA) in 1993 when it started offering direct service to cities in Mexico and Canada. Today, BIA is Alabama's largest commercial airport.[2] The country's major airlines offer direct service from BIA to almost 40 cities in the United States. Today, the airport's two concourses and 19 gates host approximately 160 daily flights. The airport also provides air cargo facilities, servicing the U.S., Canada, and South America.

Huntsville

The Huntsville-Madison County Airport Authority (HMCAA), a public corporation, overseas all aspects of the Port of Huntsville. Entities operating under the HMCAA umbrella include Huntsville International Airport (HSV), International Intermodal Center (Air Cargo and Rail Cargo), Jetplex Industrial Park, Signature Flight Support, Four Points by Sheraton Hotel, Sunset Landing Golf Course, and Foreign Trade Zone #83. Jetplex Industrial Park is one of the fastest growing high technology communities in the U.S. The 4,000-acre Jetplex Industrial Park offers a combination of air, rail, and truck transportation.[3] The National Plan of Integrated Airport Systems for 2011–2015 called Huntsville International Airport a primary commercial service airport. Federal Aviation Administration records indicate that the airport had 580,932 passenger enplanements in calendar year 2018.[4]

Mobile

Mobile Regional Airport is a public/military airport. The airport is owned and operated by the Mobile Airport Authority, a self-funded entity. It has two runways and three helipads. The Mobile Regional Airport is home to the U.S. Coast Guard Aviation Training Center, the Alabama Army National Guard's 1st Battalion, 131st Aviation Regiment's "B" Company and the National Weather Service Forecast Office for Southern Alabama. In 2017, the airport had 74,727 aircraft operations, an average of 205 per day. Similar to the Huntsville International

[2] www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/media/cy18-commercial-service-enplanements.pdf

[3] http://www.flyhuntsville.com/portal/#.Xtes4zpKiUk

4 https://en.wikipedia.org/wiki/Huntsville_International_Airport#cite_note-tn660324-3

Airport, The National Plan of Integrated Airport Systems for 2011–2015 categorized Mobile Regional Airport as a primary commercial service airport.[5]

The Mobile Downtown Airport (BFM) is conveniently located off Interstate-10 and three miles south of the Downtown Central Business District of Mobile, Alabama. The airport consists of two primary paved runway (Runway 14/32 9,618ft) and (Runway 18/36; 7,800ft). In 2019, the Mobile Downtown Airport began commercial air service operations through its two-gate, temporary passenger facility, Terminal One. The Airport Master Plan will be completed in August 2020, and plans are underway to transfer all commercial air service to the Mobile Downtown Airport (BFM). The location of the Mobile Downtown Airport and proximity to other markets is in a better geographical position to attract additional air service and increase passenger enplanements. Mobile Downtown Airport is a principal component of the Mobile Aeroplex at Brookley Field, a 1,650-acre mixed-use industrial complex.

Montgomery

Montgomery Regional Airport (Dannelly Field) is a public/military facility owned by the Montgomery Airport Authority. A $40 million capital program that finished in November 2006 doubled the size of the terminal, transformed its appearance, and modernized it with 2nd-floor boarding, jetway loading bridges, and a rotunda. The airport's main runway and taxiways can accommodate aircraft as large as the Boeing 747 and Antonov 124. There are numerous corporate aviation hangars and support facilities. Federal Aviation Administration records show that the airport had 170,544 enplanements in calendar year 2018. In May 2018, 125 aircraft were based at this airport: 46 military, 52 single-engine, 16 multi-engine, 9 jet, and 2 helicopter. The Federal Aviation Administration (FAA) National Plan of Integrated Airport Systems for 2017–2021 categorized Montgomery Regional Airport as a non-hub primary commercial service facility.[6]

Dothan

Dothan Regional Airport is owned and operated by the Dothan-Houston County Airport Authority, Inc, a self-supporting corporation. It includes 1,200 acres of land, 8500 feet all weather runway, a 5000 feet secondary runway, and a 27,000 square foot terminal building. There are additional buildings on the airfield occupied by Commercial Jet (MRO), CAE Inc., and one Fixed-Base Operators – Aero One Aviation. Today, Dothan Regional Airport is a busy airport in terms of takeoffs and landings with 90,000 aircraft operations annually. 55% of these operations involve soldiers training in military aircraft. General aviation activities comprise 41% of aircraft activity, while commercial air service is 4% of activity.[7]

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[5] https://en.wikipedia.org/wiki/Mobile_Regional_Airport

[6] https://en.wikipedia.org/wiki/Montgomery_Regional_Airport

[7] https://www.flydothan.com/

Muscle Shoals

Northwest Alabama Regional Airport is located on the eastern part of Muscle Shoals, in Colbert County. It is owned by the counties of Colbert and Lauderdale. The airport opened as Muscle Shoals Auxiliary Field in February 1940, but in 1942 it was taken over by the United States Army Air Forces as a World War II pilot training military airfield. The airport today is serviced by Boutique Air, subsidized by the Essential Air Service program. Currently, Boutique Air provides four round trips to Atlanta every day utilizing a 8 seat Pilatus PC-12.[8]

The data for passenger enplanement for calendar year 2019 for each of the six Alabama airports covered in this study is highlighted in Table 1.

Table 1: Airport Employment data, 2019

Airport	Passenger Enplanement
Birmingham	1,545,308
Huntsville	725,484
Mobile	350,290
Montgomery	170,544
Dothan	60,000
Muscle Shoals	6,123
Total	**2,857,749**

Notes about Impact (Analysis) Model

Economic impact models are the best tools available for estimating the economic effects of one or more specific economic activities on a local, regional, or other geographically defined economy. The most challenging task in conducting an impact analysis is determining the appropriate expenditures to include in the analysis. This is particularly important because the quality of an economic impact analysis is only as good as the data used. The following observations should be noted about the process that has been used for conducting the analysis in this study.

- The model and analysis used for this study deal with readily available, quantifiable impacts such as dollars of spending or employment. The model developed does not consider social or environmental costs or benefits of economic activities.

- The model used is a static process that does not consider changes over time in a dynamic economy. This suggests that the relationships between economic sectors are fixed as of the date of the model's underlying database and do not account for adjustments that may take place over time.

[8] https://en.wikipedia.org/wiki/Northwest_Alabama_Regional_Airport

- The model assumes that the relationship between changes in demand for products and services and the resulting changes in income and employment are linear. In other words, it does not take into account the changes in productivity over time.

- The model assumes that a response to any incremental changes in demand for goods and services is at the average rather than at the marginal rate.

- The model does not take into consideration the additional capital expenditures required to support indirect and induced effects on the local economy.

Economic Impact Methodology

The methodology employed to estimate the impact of the Alabama airports on the State's economy is derived from regional economic models. The basic premise is that the airports stimulate various sectors in the State's economy, as the transaction activities of the airport increases the demand for goods and services throughout the State. There are three categories of economic impact:

***Direct*:** The direct impact of the airports is the additional demand and expenditures in the region's economy that are directly attributable to airport activities. Direct impacts are consequences of economic activities carried out at the airport by airlines, airport management, fixed-base operators, and other tenants with direct involvement in aviation. The distinguishing factor of a direct impact is that it is an immediate consequence of the airports or, in other words, economic impact that would *not* have occurred if the airport did not exist.

***Indirect*:** Indirect impacts derive primarily from off-site economic activities that are attributable to the airport (more specifically, expenditures associated with airport users or itinerant passengers). These activities include services provided by travel agencies, hotels, restaurants, attractions, and retail establishments. These enterprises are similar to airport businesses in that they generate economic impact that would not have occurred in the absence of the airports. The distinguishing factor of indirect impacts is that they occur entirely off-site.

***Induced*:** Induced impacts are the multiplier effects of the direct and indirect impacts. These are the increases in employment and incomes created by successive (multiple) rounds of spending that are beyond the combined direct and indirect impacts. The appropriate multiplier factor depends on the degree of economic self-sufficiency of the region and not on the level of airport activity. An induced impact, for example, results when a business needs additional resources to service the increased demand from the airport's retail enterprises. The suppliers of these items find their sales increasing and, in turn, need more input to meet the new demand. This process continues, yielding a multiplied effect on the output of the region's economy.

It is important to note that whenever the extra demands are met by industries outside the local economy there are **leakages** from the flow of products and income from the region's economy. **The greater the number of leakages, the lower the indirect impacts, and the lower the multiplier**. On the other hand, the more diversified the local economy, the higher the value of multipliers.

The central factor in conducting an economic impact analysis is to determine the appropriate multipliers for the project under consideration. The term *multiplier* refers to the ratio of all direct, indirect, and induced effects to the direct effects.

Research Methodology and Data

The data used to conduct the economic impact study of the Airports were collected from primary and secondary sources.

The survey results provided the following information:

- Type of business located at the Airports (e.g., airline, rental car agency, restaurant, gift shop, fixed-base operator, airfreight operator, industrial parks, etc.)
- Number of employees working (on a full-time equivalent basis) at the airport or providing support in the businesses identified above
- Total annual payroll of these employees
- Number of employees, payroll and non-payroll expenditures for all aviation related industries operating in the properties adjacent and owned by the airports.
- Local expenditures during 2018 and 2019 on services, material, and equipment by the on-site businesses at the airports

The primary data collected from the Airports are illustrated in Table 2.

Table 2: Direct Economic Impact, 2019

	Employees	Payroll	Non-Payroll
Huntsville	6,114[9]	$272,177,956	$390,624,913
Birmingham	3,500	$178,017,054	$203,840,853
Mobile	5,820	$220,590,320	$341,537,416
Montgomery	300	$12,000,000	$5,000,000
Dothan	428	$20,895,000	$875,000
Muscle Shoals	38	$1,883,125	$6,243,463
Total	**16,200**	**$705,563,455**	**$948,121,645**

Collectively, direct total employment of the airports is estimated to amount to 16,200 jobs (on a full-time equivalent basis) in 2019. The payroll of the entire on-site business operation is estimated to be $705.5 million. These business entities collectively add a total of $948.1 million to the State's economy on non-payroll business transactions. In summary, airports are directly (not counting tourist spending and the induced and indirect impacts at any level) responsible for a total employment of 16,200 individuals and a total direct addition of $1.6 billion to the State's economy.

[9] Includes data for Jetplex industrial parks and cargo operation.

Next, in order to collect the primary information necessary for estimating passenger spending (or what the *DOT/FAA Report* identifies as the indirect economic expenditures) we used our records of on-site intercept surveys of passengers at the airports. The purpose of this survey was to collect insight information on the economic activities that are *indirectly* attributable to the airport (more specifically, expenditures associated with airport users or itinerant passengers). These activities include services provided by hotels, restaurants, attractions, and retail establishments. These enterprises are similar to airport businesses in that they generate economic impact that would not have occurred in the absence of the airports. The distinguishing factor of indirect impacts is that they occur entirely off-site.

Economic Impact Results

The economic impact of the airports was estimated in a systematic order and, to the best extent possible, along the same lines outlined in the *DOT/FAA Report*. The steps were as follows:

1. We started with the direct aviation employment and payroll attributable to airport operation.
2. We then estimated the direct employment and payroll for aviation-related businesses at the airports.
3. The total non-payroll expenditures (operation and management expenditures) were compiled.
4. The indirect spending (tourist expenditures) was estimated.
5. Items 1 and 4 were applied to the multiplier analysis, and their induced (secondary) impacts were estimated.
6. Direct data from items 2 and 3 were also applied to the multiplier analysis, and their indirect and induced effects were computed.
7. The sum of items 1 through 6 provided the total output economic impact of the airports.
8. Finally, the economic impact estimates were used to compute the employment and payroll impact of the aviation and aviation related-activities of the airports.

Steps 1, 2, & 3 – Airport-direct and aviation-related direct employment, payroll, and non-payroll expenditures

The information necessary to carry out the economic impact analysis — namely, the direct employment, payroll, and other expenditures, for airports and their adjacent aviation- and nonaviation related industries — is provided in Table 3. Such a division was necessary because for each activity (of the two), different sets of multiplier analysis and impact computation mechanisms were applied.

Table 3: Direct Employment, Payroll and Non-payroll expenditure of Alabama Airports, 2019

Employment	Huntsville	Birmingham	Mobile	Montgomery	Dothan	Muscle Shoals
Aviation	744	1750	114	100	28	35
Aviation - Related	5370	1749	5706	200	400	3
Payroll	Huntsville	Birmingham	Mobile	Montgomery	Dothan	Muscle Shoals
Aviation	$29,825,331	$68,491,451	$6,615,320	$4,000,000	$1,155,000	$1,788,125
Aviation - Related	$242,352,626	$109,525,603	$213,975,000	$8,000,000	$19,740,000	$95,000
Non-Payroll	Huntsville	Birmingham	Mobile	Montgomery	Dothan	Muscle Shoals
Aviation	$49,431,162	$88,660,631	$6,689,908	$1,666,667	$875,000	$5,996,563
Aviation - Related	$341,193,751	$115,180,221	$334,847,508	$3,333,333		$246,900

As reported in Table 3, the total direct employment and spending impact of the airports is 16,200 full time equivalent (FTE) jobs and $1.6 billion on the State's economy. Furthermore, the latter figure is further divided into sub-category expenditures of $705 million on payroll and $948 million on operation and management (non-payroll).

Step 4 – The indirect spending (tourism expenditures)

The indirect spending information in Table 4 was then computed. First, we computed an average non-local passenger spending on a per day basis while staying in the area. Next, we estimated average length of a passenger stay in the area. Lastly, we estimated that the total spending per visitor for the duration of his or her stay.

Finally, we multiplied the number of non-local arriving passengers by our estimate of overall spending by visitor. The results were used as Indirect Spending (tourist expenditures).

Step 5 – The direct, indirect, and induced impact of aviation activities

Following the procedure outlined in the *DOT/FAA Report*, we used a multiplier of 0.75 to estimate the induced impact of the direct and indirect spending attributable to the aviation activities of the airports. The induced spending impact is estimated by applying the multiplier factor to the direct and indirect spending estimates.

Step 6 – The economic impact analysis of the aviation-related expenditures

The economic impact of the aviation-related expenditures is estimated by multiplying the direct spending by the supporting aviation related industries data by the appropriate multipliers. In our calculation of the figures presented in Table 4, we used a regional impact leakage coefficient of 0.55 (per the *DOT/FAA Report*) for out-of-region spending leakages.

Step 7 – Total economic impact of Alabama Airports

The overall spending (output) impact of the Airports is presented in Table 4 below. We estimate that the **total spending (output) impact of the Alabama airports amounted to almost $5.0 billion in 2019**. It is also our estimate that approximately $1.7 billion of this total economic impact is solely due to the core operation and presence of the major airports in the State.

Table 4: Total Economic Impact, 2019

	Huntsville	Birmingham	Mobile	Montgomery	Dothan	Muscle Shoals
Direct	$39,572,956	$68,491,451	$6,615,320	$4,000,000	$1,155,000	$1,788,125
Indirect (Tourist Spending)	$203,726,323	$436,147,730	$105,087,000	$44,767,800	$2,642,750	$60,210
Induced	$182,474,459	$378,479,386	$83,776,740	$36,575,850	$2,848,313	$1,386,251
Related Industries	$1,015,725,578	$478,269,839	$934,373,210	$34,933,921	$86,199,449	$414,840
General Expenditures	$379,779,213	$198,181,211	$271,681,061	$4,861,175	$850,706	$6,070,113
Total	**$1,821,278,529**	**$1,559,569,618**	**$1,401,533,331**	**$125,138,746**	**$93,696,217**	**$9,719,539**

Step 8 – The employment and payroll impact of the aviation and aviation- related activities of Alabama Commercial Service Airports

Finally, in order to estimate the total employment and payroll impacts of the airports, the direct employment and payroll, when available, were applied to the direct multiplier analysis. In those cases where direct information was not available, we used the output impacts as presented in previous tables to estimate the payroll and employment figures. The results are presented in Tables 5 and 6.

Table 5: Total Economic Impact – Employment, 2019

	Huntsville	Birmingham	Mobile	Montgomery	Dothan	Muscle Shoals
Employment-direct	945	1,751	114	100	28	35
Tourism	1,793	3,838	925	394	23	1
Employment-indirect & induced	1,791	3,554	539	283	39	36
Related Industries	16,486	5,579	12,193	638	1,276	10
General Expenditures	7,573	3,952	4,876	97	17	121
Total Employment	**28,588**	**18,674**	**18,646**	**1,511**	**1,383**	**202**

Table 6: Total Employment Impact – Payroll, 2019

	Huntsville	Birmingham	Mobile	Montgomery	Dothan	Muscle Shoals
Direct	$39,572,956	$68,491,451	$6,615,320	$4,000,000	$1,155,000	$1,788,125
Indirect	$44,819,791	$95,952,501	$23,119,140	$9,848,916	$581,405	$13,246
Induced	$63,294,560	$123,332,964	$22,300,845	$10,386,687	$1,302,304	$1,351,028
Related Industries	$553,367,295	$260,561,408	$509,046,525	$19,032,000	$46,961,460	$226,005
General Expenditures	$303,253,701	$158,247,697	$216,937,327	$3,881,648	$679,288	$4,846,985
Total	**$1,004,308,304**	**$706,586,021**	**$778,019,157**	**$47,149,251**	**$50,679,457**	**$8,225,390**

Table 5 and 6 show that the total employment and payroll impact attributable to the major Alabama airports is approximately **69,200 direct and indirect jobs** and over **$2.6 billion of additional payroll** to the economy of the State.

Return on Investment (ROI) for Alabama Airports

In this section, we attempt to estimate the return on investment (ROI) for the major Alabama airports. (ROI) is a financial metric that is widely used to measure the probability of gaining a return from an investment. It is a ratio that compares the gain or loss from an investment relative to its cost.

To calculate the ROIs, we first added up all aviation-only direct spending for all commercial service airports in Alabama for 2019. More specifically, we removed spending for industrial parks and other similar auxiliary spending that are not directly connected to movement of passengers form our database. Next, we re-estimated the total economic impact of the aviation-only activities for the major Alabama airports. Finally, we divided our estimates of adjusted total economic impact of the airports into the adjusted direct spending. Our estimates of the airports' ROI are presented in Table 7.

Table 7: Return on Investment, Aviation – Only Spending, 2019

	Total
Direct Spending	$315,258,911
Total Impact	$1,759,610,681
ROI	6.0

We found that the ROI for the airports vary from mid-4 to low-15. The overall average ROI is estimated to be 6. This suggests infrastructure spending which is directed towards expanding the airports' ability to accommodate additional passengers could result in return that is six-fold higher. Alternatively stated, a $1 investment in airport core business, from any funding source, can generate $5 of additional income for the community.

Airports receive federal funding in forms of Airport Improvement Programs (AIP), Passenger Facility Charges (PFC), and DHS-TSA sources. They augment federal funding with local, discretionary (bond financing) and self- generated revenue sources to make expansion through infrastructure investments or undertake facility renovation and overall enhancement projects. Our calculated ROI suggest that infrastructure spending by the major Alabama airports generate proportionately larger returns on the investment, therefore making these investments good public policy and an efficient use of funds.