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# THE ECONOMIC IMPACT OF JACKSON MUNICIPAL AIRPORT AUTHORITY (JMAA)

Prepared by College of Business Jackson State University

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### **Executive Summary**

This report provides an estimate of the *Total Economic Impact* of the Jackson Municipal Airport Authority (JMAA/Authority) on the three counties surrounding the JMAA (Hinds County, Madison County, and Rankin County), the five-county area which adds Copiah and Simpson Counties to the earlier mix, and the State of Mississippi.

The first set of estimates considers only variables resulting from the operations of the Jackson International Airport, JAN, and Hawkins Field, HWK (Tables 5, 9, and 13), while the second set of estimates add the activities of *on-site auxiliary business* which operate only as a result of the presence and operations of the JMAA (Tables 17, 21, and 25).

The impact study literature reports total economic impact in two common ways: (1) Output Impact--*the annual production estimates for the year of the data set*, or (2) the Total Monetary Impact which adds payroll, value added and taxes to the output. We report both measures, though we believe that the sum of all monetary values is a more accurate and comprehensive estimate of the total economic impact of an entity, and hence we will emphasize this measure in the report

The reported estimates include the Direct, Indirect and Induced effects of the JMAA's operations, sum of which forms the total economic impact of the Authority for the 6-year period ending in 2016.

The *Direct Effects* of JMAA on the economy of the areas under consideration results from the day-to-day operations of JAN and HWK. Moreover, this direct effect impact is the result of expenditures at the primary level of operation. This study estimates the direct effect for Payroll, Value Added, Output and Taxes in sum and parts.

The *Indirect Effects* estimates are provided as a result of the JMAA suppliers and other participants spending in the local and state economy. Our estimate in this report indicates the secondary level of benefit by JMAA.

The *Induced Effects* are estimates of JMAA employees and suppliers spending in the local and state's economy.

The *Total Effects*, which we designate as the *Economic Impact* of JMAA on the region and State of Mississippi provided sums the Direct, Indirect and Induced effects.

It is estimated that the JMAA's operations in 2016 plus the activities of on-site auxiliary businesses—those that operate as a result of the presence and operation of JMAA, support 4,508 jobs regionally in the five-county area, and 4,921 jobs at the State level.

The 2016 total monetary economic impact of JMAA's operations (without the on-site auxiliary business effects) in the five-county area is \$1.19 billion, including \$685 million of output impact. When the activities of auxiliary businesses are considered, the five-county total monetary economic impact of the JMAA is estimated at \$1.34 billion, which includes an output impact of \$722 million.

At the state level the estimated total monetary impact of the Jackson Municipal Airport Authority is \$1.5 billion, and the estimated total output of JMAA is \$781 million.

We notice a relatively small difference between the Tri-County, Five-County and State level economic impacts, suggesting that the JMAA economic impact is more concentrated locally than on a statewide basis.

Finally, the study reports, based on a passenger survey conducted at the Jackson International Airport, the estimated impact of passengers' spending on the local economy through their self-reported expenditures on hotels, restaurants and car rentals. We estimate that the benefit of JAN to the local economy has been supporting 1,721 Jobs and an estimated output of \$175 million.

### **HISTORY OF JMAA**

### History of JMAA

Aviation in Jackson began in 1928 with the purchase of 151 acres of pastureland in the City of Jackson known then as Davis Stock Farm, for the sum of \$53,500. Davis Field, Jackson's first airport was dedicated November 9, 1928. Delta Airlines made its first commercial flight that year beginning in Dallas landing in Jackson and several other cities on their way to Atlanta.

In 1936 the Works Progress Administration's (WPA), Civil Conservation Corps (CCC) invested



\$62,150 to improve the airport with the construction of a terminal building and paving of an apron for aircraft parking. In 1941 the airfield was officially named Hawkins Field after A.F. Hawkins, a city commissioner with an interest in aviation. In that same year, the field became the "Jackson Air Base" initially used by the Royal Netherlands Military Flying School, where Dutch military flyers in exile during the occupation of the Netherlands were trained for the war effort.

With the introduction of jet service to Jackson in 1963, the City began work to annex land in Rankin County, Mississippi to build a new commercial and military service airport. Construction on Allen C. Thompson Field, Jackson Municipal Airport was begun that year. Jackson Municipal Airport was one of the first airports to be constructed with parallel runways versus cross wind intersecting runways utilized by the smaller aircraft operations.

The Jackson City Council created the JMAA Board of Commissioners in 1960. Commissioners are appointed by the Mayor with consent of the City Council for five-year terms to govern and direct the development and approve policy for the airports. In 1989 the United States Customs Service designated Jackson Municipal Airport an International Port of Entry, and the airport's name was officially changed to Jackson International Airport. Then to honor slain civil rights advocate Medgar Wiley Evers, the name was changed again to the Jackson-Medgar Wiley Evers International Airport.

### **MISSION OF JMAA**

As the operator of the Jackson-Medgar Wiley Evers International Airport and Hawkins Field, the mission of the Jackson Municipal Airport Authority is to Connect Jackson to the world, and the world to Jackson.

### VISION

The vision of the Jackson Municipal Airport Authority is to be the Airports of Choice.

### VALUES

- Customer Focus: Provide best in-class customer experience.
- Continuous Improvements: Set high goals, measure performance, and advance.
- Communication: Encourage productive dialogue and generate information.
- Collaboration: Work together to build the strength of the team including strategic partners.
- Commitment: Exhibit a sense of ownership and pride in the Authority.

### **STRATEGIC LOCATION**

The geography of the Jackson metropolitan area makes its location very advantageous to the logistical community. Metropolitan Jackson is strategically located in the center of the Southeastern United States and within 500 miles (805 kilometers) of approximately seventy-six major metropolitan areas that comprise over one-third of the United States population.

Jackson is also centrally located between the North and South American continents and is an ideal jumping off point for cargo service to Mexico, the Caribbean and Central and Latin America.

### SUMMARY OF JMAA OPERATIONS

### Summary of JMAA Operations

Jackso	n-Medga	r Wiley E	vers Interna	ational Airport	(JAN)	
		January		c	alendar Year	
TINERANT OPERATIONS:	2017	2016	% CHANGE	2017	2016	% CHANGE
Air Carrier	687	682	1%	687	682	1%
Air Taxi	855	925	-8%	855	925	-8%
Gen Aviation	623	691	-10%	623	691	-10%
Military	885	630	40%	885	630	40%
Total	3,050	2,928	4%	3,050	2,928	4%
OCAL OPERATIONS:						
Civil	66	102	-35%	66	102	-35%
Military	1,988	1,520	31%	1,988	1,520	31%
Total	2,054	1,622	27%	2,054	1,622	27%
TOTAL OPERATIONS:	5,104	4,550	12%	5,104	4,550	12%

### THE JACKSON-MEDGAR WILEY EVERS INTERNATIONAL AIRPORT 2017

The Jackson-Medgar Wiley Evers International Airport reports the following information for 2016 and 2017 operations. It can be seen that there was a positive change this year in itinerant operation of 4%. Also, the Airport saw an increase of 12% of the local operation during this year. Information was provided to show that the military operation had the largest increased by 40% for iterant operation and 30% for the local operation.

## SUMMARY OF JMAA OPERATIONS

### **THE HAWKINS FIELD AIRPORT 2017**

		Hawkins	s Field (Hl	KS)		
		January			Calendar Yea	
	2017	2016	% CHANGE	2017	2016	% CHANGE
ITINERANT OPERATIONS:						
Air Taxi	123	157	-22%	123	157	-22%
General Aviation	670	686	-2%	670	686	-2%
Military	197	144	37%	197	144	37%
Total	990	987	0%	990	987	0%
LOCAL OPERATIONS:						
Civil	516	514	0%	516	514	0%
Military	406	314	29%	406	314	29%
Total	922	828	11%	922	828	11%
TOTAL OPERATIONS:	1,912	1,815	5%	1,912	1,815	5%

The Hawkins Field Airport operation suggests an unchanged growth observed last year for the itinerant operations.

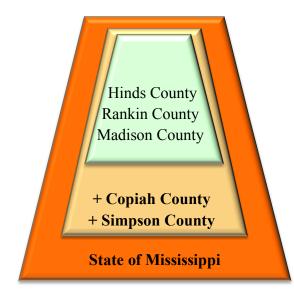
### The Economic Impact Analysis

Economic impact analysis provides a quantitative method to estimate the economic benefits that a particular project or industry brings to the economies and surrounding communities where the specific project or industry is located. Typically, economic impact studies use financial and economic data to generate estimates of output, GDP, employment and tax revenues associated with changes in the level of economic activity resulting from the project or industry being analyzed (Plumstead, 2012).

Economic impact of an event, project, industry or entity may be defined as the net change in an economy resulting from the event or entity. The change is caused by activity involving the acquisition, operation, development, and use of facilities and services (Lieber & Alton, 1983). These in turn generate visitors' spending, public spending, employment opportunities, and tax revenue (Lee, 2001).

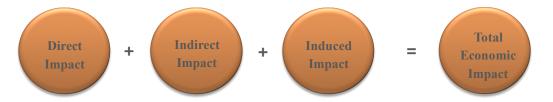
Airports certainly generate significant economic benefits for communities that surround them. The nature and extent of such benefits may not be fully realized nor well understood and quantified by key stakeholders. It is the goal of this study to estimate the total contributions of Jackson airport operations on its concentric service area (see the discussion of direct, indirect, and induced impacts later in this proposal).

We will begin by analyzing the economic impact of JMAA on Tri-County Hinds, Madison and Rankin counties. The focus of the study may later shift further away, upon the request of the client, to other neighboring counties.



Economic debates often center on the appropriateness of the size and type of multipliers used for Economic Impact Studies (EIS). The multiplier effect accounts for the overall economic impact of an event or entity. The multiplier effect demonstrates the process through which initial spending in a region generates further rounds of re-spending within the region. The rippling process of subsequent re-spending is the multiplier effect. The basic principle of the multiplier effect begins with an initial spending as an increased income into an economy. A portion of the increased income is spent and further re-spent within the region (Archer, 1984; Crompton, 1995; Wang, 1997).

There are three elements that contribute to the total economic impact of the entity: Direct impact (the first-round effect of visitor spending), Indirect impact (the ripple effect of additional rounds of re-circulating the initial visitors' dollars), and Induced impact, which is further ripple effects caused by employees of impacted business spending some of their salaries and wages in other business in the host community (Howard & Crompton, 1995).

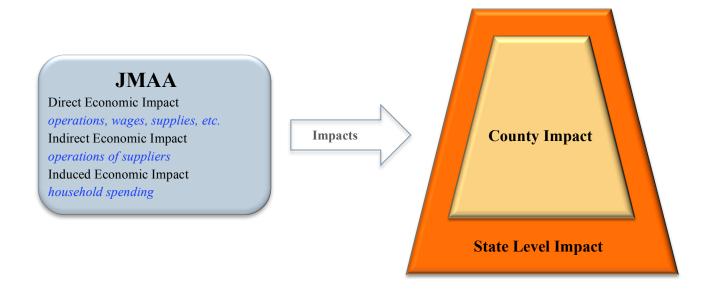


Direct impacts result from expenditures associated with routine operations of JMAA-acquisition, operations, development, staff, grounds crew and other labor, materials, supplies, capital, etc.

Indirect impacts result from the suppliers of goods and services to the JMAA hiring workers and spending on material to meet demand – these "2nd round" impacts would've not occurred but for JMAA operations.

Induced impacts results from the employees of JMAA and its suppliers purchasing goods and services at a household level, renting accommodations, and further fueling housing construction.

## THE ECONOMIC IMPACT ANALYSIS



### DEFINITION OF TERMS

**Employment Contribution (Jobs)**— the annual average numbers of jobs in the organization. A Job can be full time or part time.

Payroll - Total salaries or expenditures estimated employment compensation in the industry.

**Value Added** - The difference between an industry's or an establishment's total output and the cost of its intermediate inputs. It equals gross output (sales or receipts and other operating income, plus inventory change) minus intermediate inputs (consumption of goods and services purchased from other industries or imported).

**Output** – The annual production estimates for the year of the data set and are in producer prices.

**Taxes** - includes sales and excise taxes, customs duties, property taxes, motor vehicle licenses, severance taxes, other taxes, and special assessments.

Monetary Impact – Sum of Payroll, Value Added, Output and Taxes.

## The Tri-County Economic Impact of JAN and HKS (without Auxiliary)

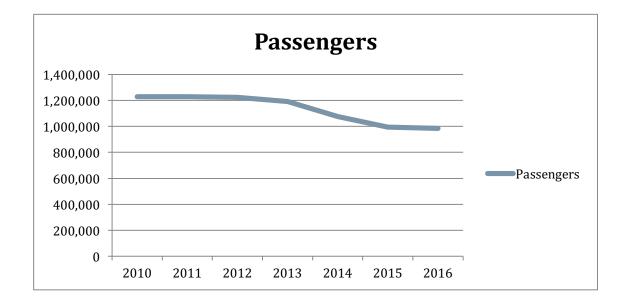
As previously discussed, our report presents the economic impact measured by Jackson-Medgar Wiley Evers International Airport (JAN) and Hawkins Field (HKS) in the sections below. The impact below is developed based on the passenger information and sale information that was provided. Table 1 provides a number of passengers by year for JAN<sup>1</sup>. All estimates in this section are calculated without considering operations and business located on the JMAA property. We define these on-site operations as auxiliary operations (Auxiliary).

Year	Passengers	Estimated Output*
2010	1,229,340	\$397,728,370.20
2011	1,227,228	\$408,952,880.00
2012	1,222,608	\$419,638,000.00
2013	1,191,378	\$421,187,864.30
2014	1,075,608	\$391,664,052.70
2015	994,460	\$372,978,874.20
2016	985,450	\$380,687,601.80

#### Table 1 - Year Difference in Passengers and Estimated Sales

<sup>&</sup>lt;sup>1</sup> Estimates are based on the passenger information which we extrapolated from an earlier report, and estimated fare:

## THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITHOUT AUXILIARY)



#### DIRECT EFFECT

Table 2 – Provides the estimates based on the Direct Economic Impact measurement via IMPLAN software for the tri-county area without the on-site operation (Auxiliary).

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	2,188.15	\$93,296,361.83	\$165,311,120.35	\$397,728,370.23	\$27,487,957.65	\$683,823,810.06
2011	2,935.00	\$89,295,248.74	\$153,138,704.66	\$408,952,880.00	\$25,039,068.36	\$676,425,901.76
2012	2,996.00	\$117,827,546.79	\$192,952,103.91	\$419,638,000.00	\$37,797,725.71	\$768,215,376.41
2013	2,800.00	\$88,779,873.30	\$165,024,927.68	\$421,187,864.35	\$34,533,920.79	\$709,526,586.12
2014	2,147.75	\$81,613,252.10	\$127,438,750.89	\$391,664,052.71	\$28,890,480.06	\$629,606,535.76
2015	1,580.00	\$76,805,217.14	\$130,769,537.38	\$372,978,874.23	\$36,369,188.49	\$616,922,817.24
2016	1,550.00	\$90,041,951.51	\$145,456,038.87	\$384,688,263.47	\$37,628,501.61	\$657,814,755.46

Table 2 provides the measures of the economic impact that are categorized as direct impact factors. The variable "Jobs" has continued a trend of decline but recently the direct job creation stands at 1,550 jobs. When examining payroll direct contribution, it is shown that there has been an increasing trend in the last few years. In 2016 the amount of estimated direct impact by

## THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITHOUT AUXILIARY)

payroll was \$90 million. Although this shows some growth in the last couple of years, it is not to the amount in 2012. The amount of value added directly connected to JMAA can be seen to have increase to approximately \$145.4 million which is close to the amount calculated for 2011. Since following a decreasing trend it has increased in the last few years. Total amount of output generated by overall operations was estimated to be approximately \$384.6 million. The amount of taxes that was contributed to the area was \$37.6 million.

### **INDIRECT EFFECT**

Table 3 provides the Indirect Economic Impact for the Tri-County area. These estimates are based on the passenger information provided for 2010 through 2016 in Table 1.

III DE U						
Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	906.07	\$38,169,746.47	\$64,120,297.89	\$168,130,562.04	\$5,755,158.81	\$276,175,765.21
2011	869.52	\$38,107,938.89	\$62,537,066.76	\$177,610,868.97	\$7,203,790.51	\$285,459,665.13
2012	898.75	\$41,929,594.26	\$68,053,898.12	\$194,889,456.06	\$5,999,442.27	\$310,872,390.71
2013	782.61	\$33,808,702.84	\$59,405,547.48	\$164,917,316.10	\$5,709,478.69	\$263,841,045.11
2014	1,017.35	\$46,105,407.65	\$71,240,603.38	\$144,642,504.21	\$6,252,072.57	\$268,240,587.81
2015	1,052.04	\$50,626,934.10	\$84,869,111.79	\$190,504,581.21	\$7,548,110.83	\$333,548,737.93
2016	1,073.78	\$51,996,794.57	\$87,165,495.02	\$196,632,656.31	\$7,752,347.21	\$343,547,293.11
2016	1,073.78	\$51,996,794.57	\$87,165,495.02	\$196,632,656.31	\$7,752,347.21	\$343,547,293.

TABLE 3 - THE INDIRECT EFFECT ESTIMATE FOR THE TRI-COUNTY AREA (WITHOUT AUXILARY)

Above it is shown that the 2016 indirect jobs created by JMAA are about 1,073 with payroll expenditures that equates to \$52 million. This amount is more than the previous years of payroll contribution. The amount of value added indirectly to the tri-county area was the most in 6 years in 2016 with approximately \$87 million. The total indirect output was at the maximum level in 2016 with approximately \$196.6 million. The Total Monetary Impact was \$343 million and was the highest in 2016.

## THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITHOUT AUXILIARY)

### **INDUCED EFFECT**

TABLE 4	TABLE 4 - THE INDUCED EFFECT ESTIMATE FOR THE TRI-COUNTY AREA (WITHOUT AUXILARY)					
Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	793.24	\$25,792,435.65	\$49,757,357.44	\$88,593,475.33	\$6,243,069.21	\$170,386,337.63
2011	763.23	\$24,797,089.48	\$47,793,102.78	\$86,712,827.19	\$6,570,896.30	\$165,873,915.75
2012	902.92	\$30,904,821.99	\$58,622,186.75	\$106,571,704.01	\$7,221,560.89	\$203,320,273.64
2013	657.33	\$23,268,316.96	\$42,671,845.80	\$76,709,751.46	\$5,234,218.28	\$147,884,132.50
2014	701.75	\$24,132,636.36	\$45,179,284.23	\$104,354,667.15	\$5,456,239.23	\$179,122,826.97
2015	711.39	\$24,497,833.86	\$47,748,773.24	\$87,987,825.24	\$5,872,902.32	\$166,107,334.66
2016	790.79	\$27,404,784.91	\$53,411,394.36	\$98,340,736.00	\$6,569,028.00	\$185,725,943.27

The Induced Effect considered in Table 4 suggests the number of jobs induced because of the airport was largest in 2012 with 903. After decreasing for many years, in 2016 have increased back to the 2010 level at approximately 790 jobs. Furthermore, these jobs equate to an increase in payroll of \$27.4 million in 2016. Early on, one can see the payroll decreased until 2013. Since then, there has been a steady increase estimated in payroll. The value added increased to its highest point similar to 2013 with \$53.4 million in 2016. The major value of consideration is the output and taxes. It can be seen that the induced level of output is estimated at approximately \$98 million in 2016. It is also estimated that the induced impact on taxes collected at the county level is approximately \$6.5 million. It is shown also that the Total Monetary Impact from the Induced Effect was highest in 2012 with \$203 million. Now it is \$185 million in 2016.

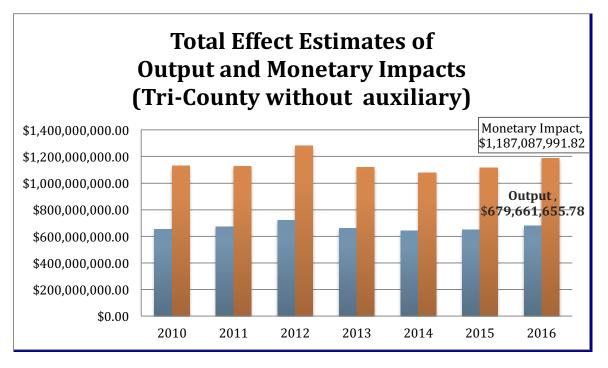
### **TOTAL EFFECT – TRI-COUNTY**

The Total Effect in Table 5 suggests the sum total of all direct, indirect and induced estimation for the JAN and HKS. It can be seen that the number of jobs created for 2016 using the information provided is calculated to have increased to 3,414 jobs with an estimated payroll of \$169.4 million. The estimated output was greatest in 2012 but in 2016 the impact estimated was at \$679 million. The tax estimates collected have fluctuated and currently are estimated at \$51 million.

# THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITHOUT AUXILIARY)

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	3,887.45	\$157,258,543.94	\$279,188,775.67	\$654,452,407.59	\$39,486,185.67	\$1,130,385,912.87
2011	4,567.75	\$152,200,277.11	\$263,468,874.20	\$673,276,576.16	\$38,813,755.16	\$1,127,759,482.63
2012	4,797.67	\$190,661,963.04	\$319,628,188.78	\$721,099,160.07	\$51,018,728.87	\$1,282,408,040.76
2013	4,239.94	\$145,856,893.10	\$267,102,320.95	\$662,814,931.91	\$45,477,617.76	\$1,121,251,763.72
2014	3,866.85	\$151,851,296.11	\$243,858,638.50	\$640,661,224.06	\$40,598,791.86	\$1,076,969,950.53
2015	3,343.43	\$151,929,985.09	\$263,387,422.41	\$651,471,280.68	\$49,790,201.63	\$1,116,578,889.81
2016	3,414.57	\$169,443,530.98	\$286,032,928.24	\$679,661,655.78	\$51,949,876.82	\$1,187,087,991.82

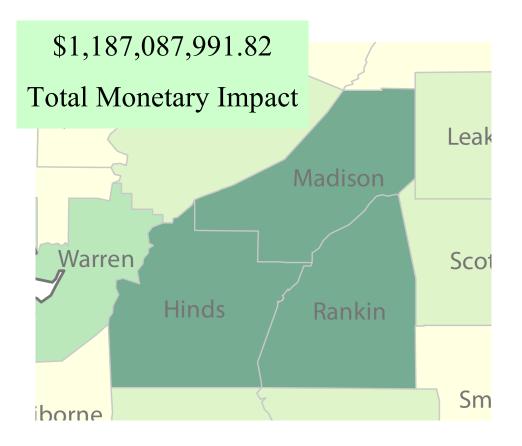
#### TABLE 5 – THE TOTAL EFFECT ESTIMATE FOR THE TRI-COUNTY AREA (WITHOUT AUXILARY)



### TOTAL MONETARY IMPACT FOR THE TRI-COUNTY AREA

Adding the Payroll, Value added, Tax and Output, we are able to estimate the Total Monetary Impact that the Tri-County Area. The total estimate impact on this area is *\$1.18 billion*.

# THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITHOUT AUXILIARY)



## The Five County Regional Economic Impact of JAN and HKS (without On-Site Auxiliary)

As previously discussed our report presents the economic impact measured by Jackson-Medgar Wiley Evers International Airport (JAN) and Hawkins Field (HKS) in the sections below for the Five County Area. This area includes the Tri-County area along with Copiah and Simpson County

### **DIRECT EFFECT**

Table 6 – Provides the estimates based on the Direct Economic Impact measurement without the on-site operation (Auxiliary).

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	2,188.15	\$94,226,590.11	\$177,932,368.77	\$397,728,370.23	\$25,193,346.53	\$695,080,675.64
2011	2,935.00	\$90,499,131.31	\$166,724,213.44	\$408,952,880.00	\$27,664,058.64	\$693,840,283.39
2012	2,996.00	\$118,258,239.90	\$192,933,637.11	\$419,638,000.00	\$37,822,985.43	\$768,652,862.44
2013	2,800.00	\$85,932,622.24	\$161,174,671.90	\$421,187,864.35	\$33,789,596.63	\$702,084,755.12
2014	2,147.75	\$81,892,799.27	\$134,149,795.85	\$391,664,052.71	\$27,280,155.56	\$634,986,803.39
2015	1,580.00	\$76,420,047.75	\$129,214,524.63	\$372,978,874.23	\$38,954,111.12	\$617,567,557.73
2016	1,550.00	\$90,225,144.48	\$144,448,131.07	\$384,688,263.47	\$40,302,229.05	\$659,663,768.07

TABLE 6 - THE DIRECT EFFECT ESTIMATE FOR THE FIVE-COUNTY AREA	(WITHOUT AUXILARY)	
INDEE 0 - THE DIRECT EFFECT ESTIMATE FOR THE FIVE-COULT TAKEN	(WIIIIOUI MUMILINI)	

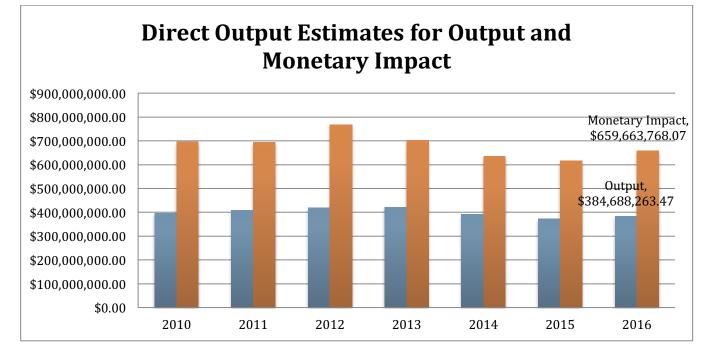


Table 6 provides the measures of the economic impact that are categorized as direct impact factors. The variable "Jobs" has continued a trend of decline to 1,550. When examining payroll direct contribution, it is shown that we have a sporadic trend in the last few years. In 2016 the amount of estimated direct impact by payroll was \$90.2 million. Although this shows some growth in the last couple of years, it is not to the amount 2012. The amount of value added directly connected to JMAA can be seen to have increase to approximately \$144.4 million. Since 2012, it has been decreasing but it has increased in the last years. Total amount of output generated by overall operations in 2016 was estimated to be approximately \$384.6 million. The amount of taxes that was contributed to the area was \$40.3 million. The Total Monetary Impact was highest in 2012 with \$768 million. It is now estimated to \$659 million for 2016.

### **INDIRECT EFFECT**

Table 7 provides the Indirect Economic Impact for the Five County area. These estimates are based on the information provided for 2010 through 2016.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	Monetary Impact
2010	924.56	\$38,948,720.88	\$65,428,875.39	\$171,561,798.00	\$5,872,611.03	\$281,812,005.30
2011	887.26	\$38,885,651.92	\$63,813,333.42	\$181,235,580.58	\$7,350,806.64	\$291,285,372.56
2012	917.09	\$42,785,300.27	\$69,442,753.19	\$198,866,791.90	\$6,121,879.87	\$317,216,725.23
2013	798.58	\$34,498,676.37	\$60,617,905.59	\$168,282,975.62	\$5,825,998.66	\$269,225,556.24
2014	1,038.11	\$47,046,334.33	\$72,694,493.24	\$147,594,392.05	\$6,379,665.89	\$273,714,885.51
2015	1,073.51	\$51,660,136.83	\$86,601,134.48	\$194,392,429.80	\$7,702,153.91	\$340,355,855.02
2016	1,095.69	\$53,057,953.65	\$88,944,382.67	\$200,645,567.66	\$7,910,558.38	\$350,558,462.36

#### TABLE 7 - THE INDIRECT EFFECT ESTIMATE FOR THE FIVE-COUNTY AREA (WITHOUT AUXILARY)

Above it can be seen that the 2016 indirect jobs created by JMAA was near 1,095 with payroll expenditures that equates to \$53 million. This amount is more than previous years of payroll contribution. The amount of value added indirectly to the five-county area was the most in 5 years in 2016 with approximately \$88.9 million. The total indirect output was at the maximum level in 2016 with approximately \$200 million. The Total Monetary Impact was \$350.5 million and was the highest in 2016.

### **INDUCED EFFECT**

The Induced Effect considered in Table 8 suggests the number of jobs induced because of the airport was largest in 2012 with 921, but now have increased nearing the original level at approximately 806 jobs. Furthermore, these jobs equate to an increase in payroll of \$27.9 million. Early on, one can see the payroll decreased until 2013. Since then, there has been a steady increase estimated in payroll. The value added increased to its highest point similar to 2012 with \$59.8 million. The major value of consideration is the output and taxes. It can be seen that the induced level of output is estimated at approximately \$100.3 million in 2016. It is also estimated that the induced impact on taxes collected at the county level is approximately \$6.7 million. It is shown also that the Total Monetary Impact from the Induced Effect was highest in 2012 with \$207 million. Now it is \$189.5 million in 2016.

#### TABLE 8 - THE INDUCED EFFECT ESTIMATE FOR THE FIVE-COUNTY AREA (WITHOUT AUXILARY)

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	809.42	\$26,318,811.89	\$50,772,813.71	\$90,401,505.44	\$6,370,478.78	\$173,863,609.82
2011	778.81	\$25,303,152.53	\$48,768,472.23	\$88,482,476.73	\$6,704,996.22	\$169,259,097.71
2012	921.35	\$31,535,532.64	\$59,818,557.91	\$108,746,636.75	\$7,368,939.69	\$207,469,666.99
2013	670.75	\$23,743,180.58	\$43,542,699.79	\$78,275,256.59	\$5,341,039.07	\$150,902,176.03
2014	716.07	\$24,625,139.14	\$46,101,310.44	\$106,484,354.23	\$5,567,591.05	\$182,778,394.86
2015	725.91	\$24,997,789.65	\$48,723,238.00	\$89,783,495.14	\$5,992,757.46	\$169,497,280.25
2016	806.93	\$27,964,066.23	\$54,501,422.81	\$100,347,689.79	\$6,703,089.79	\$189,516,268.62

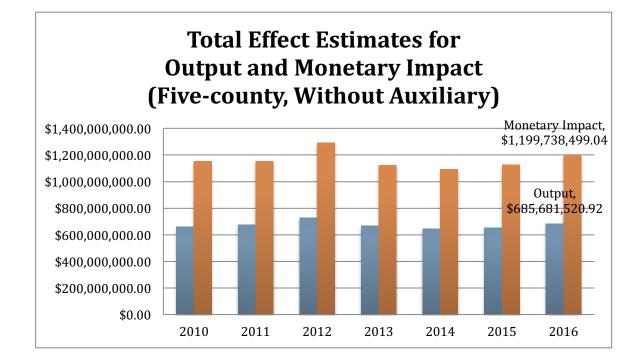


### TOTAL EFFECT

The Total Effect in Table 9 suggests the sum total of all direct, indirect and induced estimation for the JAN and HKS. It can be seen that the number of jobs created for 2016 using the information provided of passenger and employee, the impact is calculated to have increased to 3,452 Jobs with an estimated payroll of \$171.24 million. The highest payroll was seen in 2012. It is evident that the major impact of the consideration is output. One can see that the estimated output was greatest in 2012 with the

impact estimated at \$727.2 million but as of 2016 are \$685.6 million. The tax estimates collected have fluctuated and currently are estimated at \$54.9 million.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	3,922.13	\$159,494,122.88	\$294,134,057.87	\$659,691,673.66	\$37,436,436.34	\$1,150,756,290.75
2011	4,601.07	\$154,687,935.76	\$279,306,019.10	\$678,670,937.31	\$41,719,861.51	\$1,154,384,753.68
2012	4,834.44	\$192,579,072.81	\$322,194,948.21	\$727,251,428.64	\$51,313,804.98	\$1,293,339,254.64
2013	4,269.33	\$144,174,479.19	\$265,335,277.28	\$667,746,096.56	\$44,956,634.36	\$1,122,212,487.39
2014	3,901.93	\$153,564,272.75	\$252,945,599.53	\$645,742,798.99	\$39,227,412.50	\$1,091,480,083.77
2015	3,379.41	\$153,077,974.24	\$264,538,897.11	\$657,154,799.18	\$52,649,022.49	\$1,127,420,693.02
2016	3,452.62	\$171,247,164.35	\$287,893,936.55	\$685,681,520.92	\$54,915,877.22	\$1,199,738,499.04



### TOTAL MONETARY IMPACT FOR FIVE COUNTY AREA

Adding the Payroll, Value added, Tax and Output, this report is able to estimate the Total Monetary Impact of JMAA on the Five-County Area. The total estimate impact on this area is *\$1.19 billion*.

### Total Monetary Impact at the Five-County Area (JMAA Operations only)

### \$1,199,738,499.04

### State Level Economic Impact of JAN and HKS (without Auxiliary)

### **DIRECT EFFECT**

Table 10 – Provides the estimates based on the Direct Economic Impact measurement via IMPLAN software for the State of MS. These estimates are only for JMAA without consideration of on-onsite (Auxiliary) operations.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	Monetary Impact
2010	2,188.15	\$95,070,927.31	\$191,325,712.76	\$397,728,370.23	\$23,067,192.28	\$707,192,202.58
2011	2,935.00	\$91,627,525.43	\$181,333,428.71	\$408,952,880.00	\$30,533,677.59	\$712,447,511.73
2012	2,996.00	\$118,571,816.81	\$192,722,256.91	\$419,638,000.00	\$37,810,413.77	\$768,742,487.49
2013	2,800.00	\$83,093,508.43	\$157,256,833.57	\$421,187,864.35	\$33,028,253.88	\$694,566,460.23
2014	2,147.75	\$82,091,130.65	\$141,073,036.51	\$391,664,052.71	\$25,733,829.23	\$640,562,049.10
2015	1,580.00	\$75,960,773.14	\$127,550,324.92	\$372,978,874.23	\$41,681,033.12	\$618,171,005.41
2016	1,550.00	\$90,318,301.45	\$143,303,760.15	\$384,688,263.47	\$43,122,774.68	\$661,433,099.75

#### TABLE 10 - THE DIRECT EFFECT ESTIMATE FOR THE STATE LEVEL (WITHOUT AUXILIARY)



Table 10 provides the measures of the economic impact that are categorized as direct impact factors. The variable "Jobs" has continued to fluctuate but is now estimated to have contributed to approximately 1,550 jobs. When examining payroll direct contribution, it is shown that it had the largest impact on the state was seen in 2012. Although, this shows some growth in the last couple of years, it is not to the largest amount seen in the last 5 years. The amount of value added directly connected to JMAA can be seen to have decrease to approximately \$143 million (2016) from \$192 million in 2012. Total amount of output generated by overall operations in JMAA was estimated to be approximately \$384 million. The amount of taxes that was contributed to the area was \$43 million. This was the highest amount contributed in the last 5 years. The Total Monetary Impact was highest in 2012 with \$768 million. It is now estimated to \$661.4 million for 2016.

### **INDIRECT EFFECT**

Table 11 provides the Indirect Economic Impact for the State of MS. These estimates are based on the information provided for 2010 through 2016.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	959.10	\$47,641,495.19	\$78,737,765.17	\$200,011,712.74	\$7,597,117.56	\$333,988,090.66
2011	909.46	\$48,216,889.73	\$77,535,291.84	\$206,444,173.13	\$5,660,725.16	\$337,857,079.86
2012	1.059.15	\$60,151,924.26	\$94,650,592.01	\$247,548,651.79	\$9,213,575.37	\$411,564,743.43
2013	743.21	\$45,637,474.79	\$73,190,313.44	\$137,859,116.82	\$6,972,761.09	\$263,659,666.14
2014	986.28	\$50,181,334.36	\$78,075,334.33	\$188,461,790.96	\$7,252,703.11	\$323,971,162.76
2015	1,217.44	\$72,662,778.73	\$114,231,489.75	\$210,564,947.27	\$10,051,064.13	\$407,510,279.88
2016	1,242.61	\$74,628,883.74	\$117,322,358.39	\$216,988,184.02	\$10,323,025.47	\$419,262,451.62

TABLE 11- THE INDIRECT EFFECT ESTIMATE FOR THE STATE LEVEL (WITHOUT AUXILIARY)

Above you will see that the 2016 indirect jobs created approximately 1,242 with payroll expenditures that equate to \$74.6 million. This amount is more than previous years of payroll contribution. The amount of value added indirectly to the state was the most in 5 years in 2016 with approximately \$117 million. The total indirect output was maxed in 2016 with approximately \$216 million. This amount is complemented with the contribution of taxes approximately \$10 million. The Total Monetary Impact for Indirect Effect was highest in 2016 with a value of \$419 million

### **INDUCED EFFECT**

		UCED EFFECTER	JIMATE FOR THE	SIMIE EE (	ппостися	
Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	1,030.02	\$38,630,910.40	\$72,144,411.14	\$123,049,990.77	\$8,259,069.12	\$242,084,381.43
2011	858.51	\$32,388,647.56	\$59,629,966.35	\$104,040,642.54	\$6,066,678.09	\$202,125,934.54
2012	1,037.5	\$41,435,048.27	\$75,357,963.90	\$131,054,984.43	\$8,401,230.15	\$256,249,226.75
2013	817.38	\$33,385,627.34	\$56,883,968.06	\$98,584,750.57	\$6,619,773.20	\$195,474,119.17
2014	844.05	\$33,461,278.67	\$60,239,232.35	\$86,079,928.74	\$6,696,391.65	\$186,476,831.41
2015	943.25	\$37,658,321.65	\$71,132,531.49	\$124,022,060.98	\$7,974,365.18	\$240,787,279.30
2016	1,040.61	\$41,808,317.19	\$78,969,161.36	\$137,568,729.74	\$8,852,466.89	\$267,198,675.18

TABLE 12 - THE INDUCED EFFECT ESTIMATE FOR THE STATE LEVEL (WITHOUT AUXILIARY)

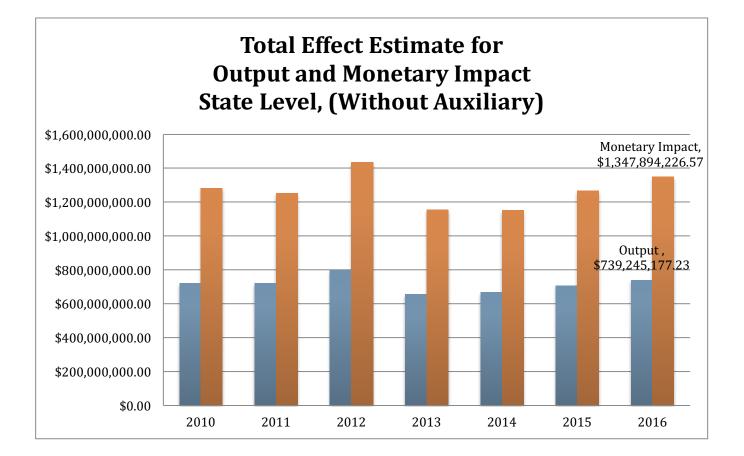
The Induced Effect considered in Table 12 suggests the number of jobs induced because of the airport was largest in 2016 with 1,040. Furthermore, these jobs equate to an increase in payroll of \$41 million. Payroll contribution shows a decrease until 2013. Since then, there has been a steady increase estimated in payroll. The value added increased to \$78.9 million in 2016. The major value of consideration is output and taxes. It can be seen that the induced level of output is estimated at approximately \$137.5 million. It is also estimated that the induced impact on taxes collected at the state level is approximately \$8.85 million. The Total Monetary Impact for the Induced Effect is estimated to be the largest in 2016 at the level of \$267 million.

### TOTAL EFFECT

The Total Effect in Table 13 provides the sum of all direct, indirect and induced estimation for the JAN and HKS. It can be seen that the number of jobs created for 2016 have increased to 3,833 jobs with an estimated payroll of \$206 million. It is evident that the major impact of the consideration is output. One can see that the estimated output was greatest in 2016 with the impact estimated at \$739.2 million. The tax estimates collected have fluctuated and currently are estimated at \$62.2 million.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	<b>Tax (\$)</b>	<b>Monetary Impact</b>
2010	4,177.27	\$181,343,332.89	\$342,207,889.06	\$720,790,073.74	\$38,923,378.96	\$1,283,264,674.65
2011	4,702.96	\$172,233,062.71	\$318,498,686.90	\$719,437,695.67	\$42,261,080.85	\$1,252,430,526.13
2012	5,092.65	\$220,158,789.33	\$362,730,812.83	\$798,241,636.22	\$55,425,219.29	\$1,436,556,457.67
2013	4,360.59	\$162,116,610.57	\$287,331,115.08	\$657,631,731.74	\$46,620,788.17	\$1,153,700,245.56
2014	3,978.08	\$165,733,743.68	\$279,387,603.20	\$666,205,772.41	\$39,682,923.98	\$1,151,010,043.27
2015	3,740.69	\$186,281,873.52	\$312,914,346.16	\$707,565,882.48	\$59,706,462.43	\$1,266,468,564.59
2016	3,833.21	\$206,755,502.38	\$339,595,279.91	\$739,245,177.23	\$62,298,267.05	\$1,347,894,226.57

#### TABLE 13 – THE TOTAL EFFECT ESTIMATE FOR THE STATE LEVEL (WITHOUT AUXILIARY)



### TOTAL MONETARY IMPACT AT THE STATE

Adding the Payroll, Value added, Tax and Output this report estimates the Total Monetary Impact for the State of MS. The total estimate impact on this area is *\$1.34 billion*. It can be seen that the Total Monetary impact at the state level declined sharply after 2012 but has risen in the last couple of years to the amount estimated in this year.

Total Monetary Impact at the State Level (JMAA Operations only)

\$1,347,894,226.57

## THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITH AUXILIARY)

## The Tri-County Economic Impact of JAN and HKS (with Auxiliary)

The following tables provide the estimates for JAN and HKS including the onsite operations by other auxiliary business<sup>2</sup>.

### **DIRECT EFFECT**

Table 14– Provides the estimates based on the Direct Economic Impact measurement via IMPLAN software for the tri county area.

TABLE 14 – THE DIRECT EFFECT ESTIMATE FOR THE TRI-COUNTY AREA (WITH AUXILIARY)

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	2,188.15	\$93,378,550.80	\$176,330,977.45	\$397,728,370.23	\$24,966,606.41	\$692,404,504.89
2011	3,481.00	\$116,874,131.35	\$192,413,187.74	\$411,141,224.50	\$28,106,294.42	\$748,534,838.01
2012	3,593.00	\$147,505,410.41	\$221,508,729.05	\$422,331,287.10	\$38,246,214.77	\$829,591,641.33
2013	3,450.00	\$114,436,104.06	\$176,907,580.99	\$424,170,691.75	\$28,950,904.69	\$744,465,281.49
2014	2,863.75	\$114,634,258.59	\$166,420,942.20	\$397,306,488.91	\$27,867,682.26	\$706,229,371.96
2015	2,346.00	\$111,467,667.33	\$162,137,772.00	\$378,681,830.43	\$39,498,937.29	\$691,786,207.05
2016	2,370.00	\$127,016,246.90	\$179,617,155.04	\$391,002,005.41	\$40,881,721.40	\$738,517,128.75

Table 14 provides the measures of the economic impact that are categorized as direct impact factors. The variable "Jobs" has continued a trend of decline to the level of 2,370. However, the jobs have increased in the last year suggesting an increasing trend beginning to grow. When examining payroll direct contribution, it is shown that we have an increasing trend in the last few years. In 2016, the amount of estimated direct impact by payroll was \$127 million. Although this shows some growth, it is not to the amount observed in 2012. The amount of value added directly connected to JMAA and the auxiliary facilities can be seen to have increase to approximately \$179.6 calculated for 2016. Total amount of output generated by overall operations was estimated to be approximately \$391 million. The amount of taxes that was contributed to the area was \$40.8 million.

<sup>&</sup>lt;sup>2</sup> Estimates are based on the passenger information which we extrapolated from an earlier report, and estimated fare. Also, the estimates were based on survey information provided by the organization that are one the site which includes, FAA ATCT, Trace Aviation, Inc., CB-Aviation LLC, Hawkins Jet Center, and Trace Aviation. The Total Economic Impact is assumed to be much larger because the auxiliary operation of the National Guard is not included in this report.

## THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITH AUXILIARY)

### **INDIRECT EFFECT**

Table 15 provides the Indirect Economic Impact for the Tri-County area. These estimates are based on the passenger information provided for 2010 through 2016.

## TABLE 15 - THE INDIRECT EFFECT ESTIMATES FOR THE TRI-COUNTY AREA (WITHAUXILIARY)

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Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	916.24	\$38,598,182.40	\$64,840,015.51	\$170,017,741.82	\$5,819,757.54	\$279,275,697.27
2011	883.98	\$38,741,889.03	\$63,577,411.21	\$180,565,540.35	\$5,639,797.05	\$288,524,637.64
2012	914.67	\$42,672,362.35	\$69,259,449.11	\$198,341,854.57	\$6,105,720.18	\$316,379,386.21
2013	797.00	\$34,430,307.00	\$60,497,773.21	\$137,585,908.04	\$5,814,452.71	\$238,328,440.96
2014	1,043.59	\$47,294,581.82	\$73,078,077.32	\$148,373,197.38	\$6,413,329.06	\$275,159,185.58
2015	1,080.11	\$51,977,985.13	\$87,133,963.57	\$195,588,464.25	\$7,749,542.82	\$342,449,955.77
2016	1,103.65	\$53,443,414.67	\$89,590,555.21	\$202,103,238.75	\$7,968,027.69	\$353,105,236.32

Above, it is shown that the 2016 indirect jobs created were approximately 1,103 with payroll expenditures that equate to \$53 million. This amount was more than the previous 5 years of payroll contribution. The amount of value added indirectly to the tri-county area was the most and estimated to \$89 million. The total indirect output was highest in 2016 with approximately \$202 million. It sharply fell in 2012 but has increased to its highest level in 5 years. The Total Monetary Impact is estimated for the indirect contribution and is shown to be \$353 million in 2016.

### **INDUCED EFFECT**

The Induced Effect considered in Table 16 suggests the number of jobs induced because of the airport and internal operations was largest in 2016 with 1,016. Furthermore, these jobs equate to an increase in payroll of \$35 million. Early on, one can see the payroll decreased until 2013. Since then, there has been a steady increase estimated in payroll. The value added increased to its highest point approximately \$69 million in 2016. The major value of consideration is the output and taxes. It can be seen that the induced level of output is estimated at approximately \$126 million in 2016. It is also estimated that the induced impact on taxes collected at the county level is approximately \$8.4 million.

## THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITH AUXILIARY)

## TABLE 16 - THE INDUCED EFFECT ESTIMATE FOR THE TRI-COUNTY AREA (WITHAUXILIARY)

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	802.14	\$26,081,942.58	\$50,315,858.39	\$89,587,891.89	\$6,313,144.48	\$172,298,837.34
2011	936.53	\$30,430,313.64	\$58,650,518.89	\$106,414,786.75	\$7,295,460.55	\$202,791,079.83
2012	1087.90	\$37,238,758.86	\$70,636,952.26	\$128,416,303.98	\$8,701,157.15	\$244,993,172.25
2013	842.44	\$29,821,580.70	\$54,690,200.96	\$98,314,852.71	\$6,708,155.78	\$189,534,790.15
2014	899.29	\$30,929,980.16	\$57,904,286.89	\$108,121,196.66	\$6,992,251.92	\$203,947,715.63
2015	926.06	\$31,897,383.08	\$62,160,978.85	\$114,562,768.02	\$7,644,452.20	\$216,265,582.15
2016	1,016.02	\$35,216,999.77	\$68,627,355.96	\$126,372,769.02	\$8,439,375.86	\$238,656,500.61

### TOTAL EFFECT

The Total Effect in Table 17 estimates the sum total of all direct, indirect and induced estimation for the JAN and HKS. It can be seen that the number of jobs is calculated to have decreased to 4,489 jobs with an estimated payroll of \$215 million by 2016. One can see that the estimated output was greatest in 2012, but has is estimated to have risen to similar levels with the impact estimated at \$719 million. The tax estimates collected have fluctuated and currently are estimated at \$57 million.

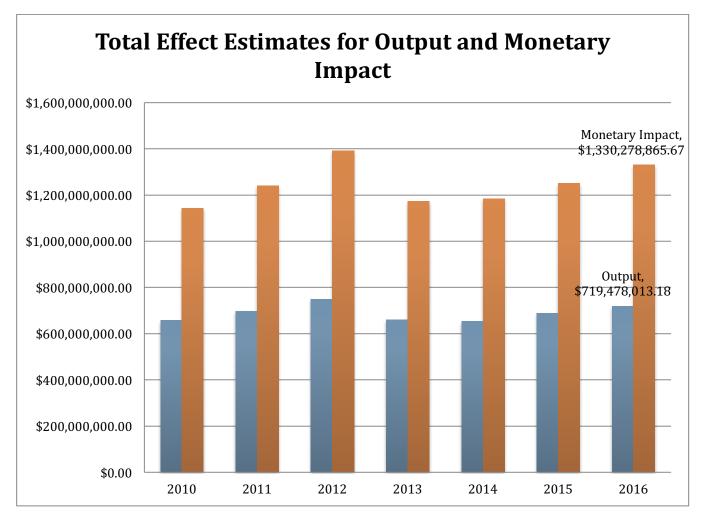
 TABLE 17 – THE TOTAL EFFECT ESTIMATE FOR THE TRI-COUNTY AREA (WITH AUXILIARY)

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	3,906.52	\$158,058,675.77	\$291,486,851.35	\$657,334,003.93	\$37,099,508.42	\$1,143,979,039.47
2011	5,301.52	\$186,046,334.02	\$314,641,117.84	\$698,121,551.60	\$41,041,552.02	\$1,239,850,555.48
2012	5,595.57	\$227,416,531.63	\$361,405,130.42	\$749,089,445.66	\$53,053,092.11	\$1,390,964,199.82
2013	5,089.43	\$178,687,991.76	\$292,095,555.17	\$660,071,452.50	\$41,473,513.19	\$1,172,328,512.62
2014	4,806.63	\$192,858,820.57	\$297,403,306.41	\$653,800,882.96	\$41,273,263.25	\$1,185,336,273.19
2015	4,352.17	\$195,343,035.54	\$311,432,714.42	\$688,833,062.70	\$54,892,932.30	\$1,250,501,744.96
2016	4,489.67	\$215,676,661.34	\$337,835,066.20	\$719,478,013.18	\$57,289,124.95	\$1,330,278,865.67

## THE TRI-COUNTY ECONOMIC IMPACT OF JAN AND HKS (WITH AUXILIARY)

### TOTAL ECONOMIC IMPACT

Adding the Payroll, Value added, Tax and Output we are able to estimate the total economic impact that the Tri-County Area. The total estimate impact on this area is *\$1.33 billion*. This amount is similar to the highest monetary impact observed in 2012.



### Total Monetary Impact at the Tri-County Area (JMAA and Auxiliary Operations)

\$1,330,278,865.67

## The Five County Regional Economic Impact of JAN and HKS (with Auxiliary)

As previously discussed this report presents the economic impact measured by Jackson-Medgar Wiley Evers International Airport (JAN) and Hawkins Field (HKS) for the Five County Area. This area includes the Tri-County area along with Copiah and Simpson County

#### **DIRECT EFFECT**

Table 18 – Provides the estimates based on the Direct Economic Impact measurement with the on-site operation (Auxiliary).

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	2,188.15	\$94,226,590.11	\$177,932,368.77	\$397,728,370.23	\$25,193,346.53	\$695,080,675.64
2011	3,481.00	\$117,935,551.31	\$194,160,633.44	\$411,141,224.50	\$28,361,548.35	\$751,598,957.60
2012	3,593.00	\$148,845,015.55	\$223,520,412.76	\$422,331,287.10	\$38,593,556.78	\$833,290,272.19
2013	3,450.00	\$115,475,382.50	\$178,514,208.87	\$424,170,691.75	\$29,213,829.16	\$747,374,112.28
2014	2,863.75	\$115,675,336.62	\$167,932,333.20	\$397,306,488.91	\$28,120,769.18	\$709,034,927.91
2015	2,346.00	\$112,479,987.21	\$163,610,264.38	\$378,681,830.43	\$39,857,656.20	\$694,629,738.22
2016	2,370.00	\$128,169,774.88	\$181,248,390.55	\$391,002,005.41	\$41,252,998.39	\$741,673,169.23

Table 18 - The Direct Effect Estimate for the five-County Area (With Auxiliary)

Table 18 provides the measures of the economic impact that are categorized as direct impact factors for the Five-County estimate. The variable "Jobs" has continued a trend of decline but recently this direct job creation has increased to 2,370. Also, this trend seems to be a decreasing trend. When examining payroll direct contribution, it is shown that we have an increasing trend in the last few years. In 2016 the amount of estimated direct impact by payroll was \$128.1 million. Although this shows some growth in the last couple of years, it is not to the amount estimated in 2012. The amount of value added directly connected to JMAA can be seen to have increase to approximately \$181.2 million which is not as high has the estimated amount in 2012. Total amount of output generated by overall operations was estimated to be approximately \$391 million. The amount of taxes that was contributed to the area was \$41.3 million. The Total Monetary Impact was highest in 2012 with \$833 million. It is now estimated to \$741 million for 2016

### **INDIRECT EFFECT**

Table 19 provides the Indirect Economic Impact for the Five County area. These estimates are based on the information provided for 2010 through 2016.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>	
2010	924.56	\$38,948,720.88	\$65,428,875.39	\$171,561,798.00	\$5,872,611.03	\$281,812,005.30	
2011	892.01	\$39,093,732.63	\$64,154,804.45	\$182,205,388.85	\$5,691,016.20	\$291,144,942.13	
2012	922.98	\$43,059,901.47	\$69,888,445.12	\$200,143,142.86	\$6,161,170.72	\$319,252,660.17	
2013	804.24	\$34,742,993.94	\$61,047,197.99	\$138,835,426.88	\$5,867,258.03	\$240,492,876.84	
2014	1,053.07	\$47,724,098.70	\$73,741,753.10	\$149,720,683.54	\$6,471,573.22	\$277,658,108.56	
2015	1,089.92	\$52,450,035.45	\$87,925,291.19	\$197,364,746.98	\$7,819,922.12	\$345,559,995.74	
2016	1,113.68	\$53,928,773.63	\$90,404,192.94	\$203,938,686.93	\$8,040,391.21	\$356,312,044.71	

TABLE 19 - THE INDIRECT EFFECT ESTIMATE FOR THE FIVE-COUNTY AREA (WITH AUXILARY)

Above it is shown that the 2016 indirect jobs created by JMAA are about 1,113 with payroll expenditures that equates to \$53 million. This amount is more than previous years of payroll contribution. The amount of value added indirectly to the five-county area was the most in 5 years in 2016 with approximately \$90.4 million. The total indirect output was at the maximum level in 2016 with approximately \$203 million. The Total Monetary Impact was \$356.3 million and was the highest in 2016.

### **INDUCED EFFECT**

TABLE 20- THE INDUCED EFFECT ESTIMATE FOR THE FIVE-COUNTY AREA (WITH AUXILARY)

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	809.42	\$26,318,811.89	\$50,772,813.71	\$90,401,505.44	\$6,370,478.78	\$173,863,609.82
2011	945.04	\$30,706,673.70	\$59,183,167.40	\$107,381,217.71	\$7,361,716.00	\$204,632,774.81
2012	1,097.78	\$37,576,951.43	\$71,278,458.39	\$129,582,546.91	\$8,780,178.76	\$247,218,135.49
2013	850.09	\$30,092,412.41	\$55,186,882.91	\$99,207,722.21	\$6,769,077.48	\$191,256,095.01
2014	907.46	\$31,210,878.06	\$58,430,158.32	\$109,103,124.79	\$7,055,753.70	\$205,799,914.87
2015	934.47	\$32,187,066.68	\$62,725,508.43	\$115,603,196.79	\$7,713,877.09	\$218,229,648.99
2016	1,025.25	\$35,536,831.25	\$69,250,611.46	\$127,520,453.10	\$8,516,020.04	\$240,823,915.85

The Induced Effect considered in Table 20 suggests the number of jobs induced because of the airport was largest in 2012 with 1,097, but now are seen to have increased nearing the original level at approximately 1,025 jobs in 2016. Furthermore, these jobs equate to an increase in

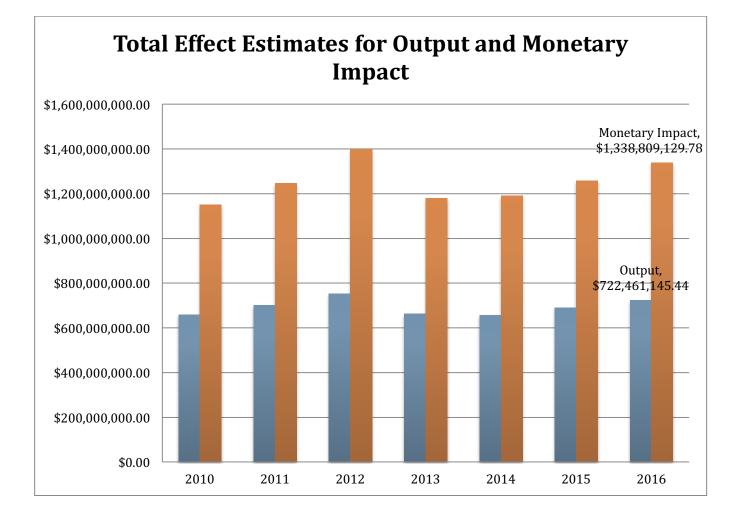
payroll of \$35.5 million. The value added increased to its highest point similar to 2012 with \$71 million to what is estimated in 2016 with \$69.2 million. The major value of consideration is the output and taxes. It can be seen that the induced level of output is estimated at approximately \$127.5 million in 2016. It is also estimated that the induced impact on taxes collected at the county level is approximately \$8.5 million. It is shown also that the Total Monetary Impact from the Induced Effect was highest in 2012 with \$247 million. Now it is \$240 million in 2016.

### TOTAL EFFECT

The Total Effect in Table 21 provides the sum total of all direct, indirect and induced estimation for JMAA. It can be seen that the number of jobs created for 2016 is calculated to have increased to 4,508 with an estimated payroll of \$217 million. The highest payroll was seen in 2012. It can be seen that the estimated output was greatest in 2012 with the impact estimated at \$752 million. In 2016 the output is \$722 million. The tax estimates collected have fluctuated and currently are estimated at \$57.8 million.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	3,922.13	\$159,494,122.88	\$294,134,057.87	\$659,691,673.66	\$37,436,436.34	\$1,150,756,290.75
2011	5,318.05	\$187,735,957.63	\$317,498,605.29	\$700,727,831.06	\$41,414,280.55	\$1,247,376,674.53
2012	5,613.76	\$229,481,868.44	\$364,687,316.27	\$752,056,976.86	\$53,534,906.27	\$1,399,761,067.84
2013	5,104.32	\$180,310,788.86	\$294,748,289.77	\$662,213,840.84	\$41,850,164.67	\$1,179,123,084.14
2014	4,824.28	\$194,610,313.39	\$300,104,244.61	\$656,130,297.23	\$41,648,096.11	\$1,192,492,951.34
2015	4,370.39	\$197,117,089.34	\$314,261,063.99	\$691,649,774.20	\$55,391,455.40	\$1,258,419,382.93
2016	4,508.93	\$217,635,379.75	\$340,903,194.95	\$722,461,145.44	\$57,809,409.64	\$1,338,809,129.78

 TABLE 21 – THE TOTAL EFFECT ESTIMATE FOR THE FIVE COUNTY AREA (WITHOUT AUXILARY)



### TOTAL MONETARY IMPACT FOR FIVE COUNTY AREA

Adding the Payroll, Value added, Tax and Output, we are able to estimate the total Monetary impact that the Tri-County Area. The total estimate impact on this area is *\$1.34 billion*.

Total Monetary Impact at the Five-County Area (JMAA and Auxiliary Operations)

\$1,338,809,129.78

### State Level Economic Impact of JAN and HKS (With Auxiliary)

### **DIRECT EFFECT**

Table 22 – Provides the estimates based on the Direct Economic Impact measurement via IMPLAN software for the State of Mississippi with consideration of the Auxiliary operations onsite of the JMAA facilities.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	Monetary Impact
2010	2,188.15	\$95,070,927.31	\$191,325,712.76	\$397,728,370.23	\$23,067,192.28	\$707,192,202.58
2011	3,481.00	\$119,063,945.42	\$208,769,848.70	\$411,141,224.50	\$31,211,908.46	\$770,186,927.08
2012	3,593.00	\$149,158,592.41	\$223,309,032.51	\$422,331,287.10	\$38,601,034.40	\$833,399,946.42
2013	3,450.00	\$117,888,629.24	\$193,130,678.90	\$424,170,691.75	\$34,579,396.88	\$769,769,396.77
2014	2,863.75	\$115,873,668.00	\$174,855,573.86	\$397,306,488.91	\$26,590,989.34	\$714,626,720.11
2015	2,346.00	\$112,020,712.60	\$165,274,464.09	\$378,681,830.43	\$42,601,247.71	\$698,578,254.83
2016	2,370.00	\$128,262,931.85	\$182,392,761.47	\$391,002,005.41	\$44,091,084.76	\$745,748,783.49

#### TABLE 22 - THE DIRECT EFFECT ESTIMATE FOR THE STATE LEVEL (WITH AUXILIARY)



Table 22 provides the measures of the economic impact that are categorized as direct impact factors. The variable "Jobs" has continued to fluctuate but is now estimated to have contributed to approximately 2,370 jobs. When examining payroll direct contribution, it is shown that it had the largest impact on the State estimated in 2012. Although, this shows some growth in the last couple of years, it is not to the amount seen in the last 5 years. The amount of value added directly connected is estimated to have increase to approximately \$182 million. Total amount of output generated by overall operations was estimated to be approximately \$391 million. The amount of taxes contributed was \$44 million. This was the highest amount contributed in the last 5 years.

### **INDIRECT EFFECT**

Table 23 provides the Indirect Economic Impact for the Tri-County area. These estimates are based on the passenger information provided for 2010 through 2016.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	959.10	\$47,641,495.19	\$78,737,765.17	\$200,011,712.74	\$7,597,117.56	\$333,988,090.66
2011	914.32	\$48,474,902.74	\$77,950,190.32	\$207,548,874.90	\$7,390,141.49	\$341,364,109.45
2012	1,065.94	\$60,537,986.54	\$95,258,070.88	\$249,137,448.78	\$9,272,708.70	\$414,206,214.90
2013	748.48	\$45,960,676.68	\$73,708,642.89	\$169,474,745.64	\$7,022,141.82	\$296,166,207.03
2014	1,000.49	\$50,904,262.53	\$79,200,112.29	\$191,176,831.12	\$7,357,187.73	\$328,638,393.67
2015	1,236.06	\$73,773,813.89	\$115,978,122.67	\$213,784,546.97	\$10,204,747.83	\$413,741,231.36
2016	1,263.00	\$75,853,739.18	\$119,247,925.57	\$220,549,528.43	\$10,492,453.18	\$426,143,646.36

 Table 23- THE INDIRECT EFFECT ESTIMATE FOR THE STATE LEVEL (WITH AUXILIARY)

Above you will see that the 2016 indirect jobs created are about 1,263 with payroll expenditures that equate to \$75 million. This amount is more than previous years of payroll contribution. The amount of value added indirectly to the state was the most in 5 years in 2016 with approximately \$119 million. The total indirect output was highest in 2012 with approximately \$249 million. This amount was complemented with taxes of nearly \$9 million. Recently in 2016, the output and taxes are \$220 million and \$10.5 million respectively.

### INDUCED EFFECT

Table 24 - THE INDUCED	<b>EFFECT ESTIMATE FOR</b>	THE STATE LEVEL	(WITH AUXILIARY)
			(

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	1,030.02	\$38,630,910.40	\$72,144,411.14	\$123,049,990.77	\$8,259,069.12	\$242,084,381.43
2011	1,028.67	\$38,812,401.58	\$71,458,787.14	\$124,680,892.44	\$8,034,250.21	\$242,986,331.37
2012	1,217.51	\$48,628,741.62	\$88,443,638.68	\$153,813,325.82	\$9,859,131.90	\$300,744,838.02
2013	1,025.42	\$41,886,283.51	\$71,369,231.77	\$123,688,079.91	\$8,304,733.71	\$245,248,328.90
2014	1,064.76	\$42,216,450.22	\$76,002,767.77	\$134,349,285.34	\$8,447,634.71	\$261,016,138.04
2015	1,179.94	\$47,116,106.44	\$88,990,852.51	\$155,170,550.49	\$9,975,168.44	\$301,252,677.88
2016	1,288.47	\$51,774,475.33	\$97,787,420.77	\$170,362,539.94	\$10,960,823.12	\$330,885,259.16

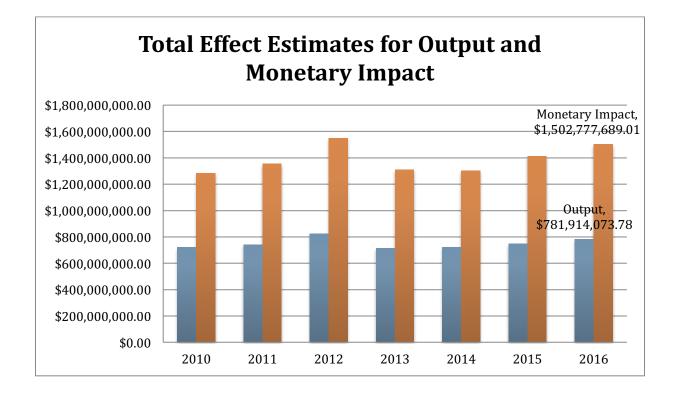
The Induced Effect considered in Table 24 suggests the number of jobs induced because of the airport was largest in 2016 with 1,288. Furthermore, these jobs equate to an increase in payroll of \$ 51 million. There has been a steady increase in payroll for the last couple of years. The value added increased to its highest point of \$97 million in 2016. It can be seen that the induced level of output is estimated at approximately \$170 million in 2016. It is also estimated that the induced impact on taxes collected at the state level is approximately \$10.9 million. The Total Monetary Impact from induced activity is \$330.8 million in 2016.

### TOTAL EFFECT

The Total Effect in Table 25 provides the sum of all direct, indirect and induced estimation for the JMAA. It can be seen that the number of jobs created for 2016 is calculated to have increased to 4,921 but still is not as high as estimated in 2012. The payroll was estimated to be the highest in 2016 with \$255 million. One can see that the estimated output was greatest in 2016 with the output estimated at \$781.9 million. The tax estimates collected have fluctuated and currently are estimated at \$65.5 million.

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	4,177.27	\$181,343,332.89	\$342,207,889.06	\$720,790,073.74	\$38,923,378.96	\$1,283,264,674.65
2011	5,423.99	\$206,351,249.74	\$358,178,826.16	\$743,370,991.84	\$46,636,300.16	\$1,354,537,367.90
2012	5,876.45	\$258,325,320.57	\$407,010,742.08	\$825,282,061.70	\$57,732,875.00	\$1,548,350,999.35
2013	5,223.90	\$205,735,589.43	\$338,208,553.56	\$717,333,517.30	\$49,906,272.40	\$1,311,183,932.69
2014	4,929.00	\$208,994,380.75	\$330,058,453.93	\$722,832,605.37	\$42,395,811.78	\$1,304,281,251.83
2015	4,762.00	\$232,910,632.94	\$370,243,439.28	\$747,636,927.89	\$62,781,163.98	\$1,413,572,164.09
2016	4,921.47	\$255,891,146.36	\$399,428,107.81	\$781,914,073.78	\$65,544,361.06	\$1,502,777,689.01

#### Table 25 – THE TOTAL EFFECT ESTIMATE FOR THE STATE LEVEL (WITH AUXILIARY)



### TOTAL MONETARY IMPACT

Adding the Payroll, Value added, Tax and Output we are able to estimate the Total Monetary Impact on the State with the auxiliary operations. The total monetary estimated impact on this area is *\$1.50 billion* 

Total Monetary Impact at the State Level (JMAA and Auxiliary Operations)

\$1,502,777,689.01

### EXTERNAL IMPACT ESTIMATES

### **External Impact Estimates**

The following Information is provided based on the survey of passengers and their estimated expenditures on hotels, car rental and restaurants. This survey was averaged across the years to provide the external impact that benefits the local or regional area due to the JAN.

This auxiliary report provides an estimate of how much of the expenditures by passengers that fly in to JAN Influence the economy within the five-county radius.<sup>3</sup>



### Hotels, Car Rental, and Restaurants

From Table 1 passenger information we estimated the Total Effect, which is the sum of the Direct, Indirect, and Induced effect are presented along with the Total Monetary Impact in Table 26.

<sup>&</sup>lt;sup>3</sup> Please note that estimates are made by percentages of passengers that had expenditures times the average amount spent on the hotel, car rental and restaurants. Also, the information provided in this section is at the county level. The state level can be provided upon request. It was estimated that expenditures by passengers flying into JMAA were 31% Car Rental, 59% Restaurants and 41% hotel.

### HOTELS, CAR RENTAL, AND RESTAURANTS

Year	Job	Payroll (\$)	Value Added (\$)	Output (\$)	Tax (\$)	<b>Monetary Impact</b>
2010	2,392.01	\$63,863,742.01	\$126,544,899.81	\$214,106,821.36	\$18,539,771.29	\$423,055,234.47
2011	2,333.37	\$63,643,095.95	\$124,366,749.65	\$214,486,229.91	\$17,473,958.69	\$419,970,034.20
2012	2,241.23	\$63,250,185.02	\$123,128,945.22	\$213,978,776.65	\$17,013,782.87	\$417,371,689.76
2013	2,133.10	\$65,358,313.29	\$122,296,778.86	\$208,657,422.56	\$17,036,141.61	\$413,348,656.32
2014	1,978.70	\$56,066,660.91	\$106,476,411.20	\$188,993,689.76	\$15,040,055.96	\$366,576,817.83
2015	1,737.08	\$50,595,818.73	\$99,195,351.91	\$175,929,727.05	\$13,882,567.15	\$339,603,464.84
2016	1,721.34	\$50,451,298.35	\$98,912,013.30	\$175,420,404.07	\$13,842,913.65	\$338,626,629.37

#### Table 26 – THE EXTERNAL TOTAL EFFECT ESTIMATE FOR THE FIVE COUNTY AREA

The following information above suggests the external business impact from the passengers flying into JAN is estimated to have created from 1,721 jobs in the restaurants, hotel and car rental industry. These jobs are consistent with the growth and expansion observed near and around the JAN. Secondly, the payroll estimates attributed approximately \$50 million dollars in 2016. The value added suggested by this research was highest in 2010, but has level out at \$98 million. It is seen that output is estimated near \$175 million. This indicates a substantial increase to the local economy near JAN. The Total Monetary Impact estimated in this report sums the Payroll, Value Added, Output, and Taxes. Our estimation suggests the total monetary benefit to the local economy in the five county areas is **\$338,626,629.37**.

### TOTAL ECONOMIC IMPACT ESTIMATES FOR JMAA

### Total Economic Impact Estimates for JMAA

This study reported the economic Impact based on the Tri County, Five County, and State levels. We estimated at each level the Direct, Indirect, Induced and Total effect without and with considering onsite operations (auxiliary). Similar to other research that has provided impact studies we have considered benefits to the local economy by individuals traveling to this region. This consideration includes expenditures by passengers on the local economy.

	Location	Job	Payroll (\$)	Output (\$)	<b>Monetary Impact</b>
Tri-County	Without on-site auxiliary operations	3,414.57	\$169,443,530.98	\$679,661,655.78	\$1,187,087,991.82
Five County	Without on-site auxiliary operations	3,452.62	\$171,247,164.35	\$685,681,520.92	\$1,199,738,499.04
State	Without on-site auxiliary operations	3,833.21	\$206,755,502.38	\$739,245,177.23	\$1,347,894,226.57
Tri-County	Including on-site Auxiliary operations	4,489.67	\$215,676,661.34	\$719,478,013.18	\$1,330,278,865.67
Five County	Including on-site Auxiliary operations	4,508.93	\$217,635,379.75	\$722,461,145.44	\$1,338,809,129.78
State	Including on-site Auxiliary operations	4,921.47	\$255,891,146.36	\$781,914,073.78	\$1,502,777,689.01
External contribution		1,721.34	\$50,451,298.35	\$175,420,404.07	\$338,626,629.37
Total Economic Impact at the State Level		6,642.81	\$306,342,444.71	\$957,334,477.85	\$1,841,404,318.38

#### Table 27 -Summary of 2016 Economic Impact

The measure of total economic output that is estimated by our report above combines the economic output at the State Level including both auxiliary on-site operations and external business contribution to the local economy. It is estimated that output is \$957 million. The total amount of jobs based on our estimates is 6,642. The total amount of payroll contribution is \$306 million.

It is the conclusion of this report that the total monetary impact is a much better indicator of the total overall impact. It allows to capture all dollar values that may not be captured by the traditional output value. Based on this premise, the research estimates the Total Monetary Economic Impact of JMAA at \$1.84 billion.

Total Monetary Impact at the State Level

JMAA and Auxiliary Operations, plus, contribution of passenger spending on the local economy

\$1,841,404,318.38