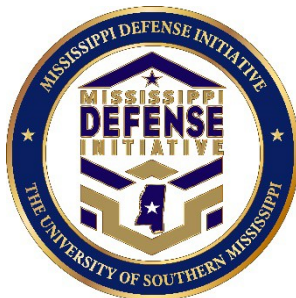


# Naval Air Systems Command Economic Impact Analysis

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## **Executive Summary**

The Naval Air Systems Command (NAVAIR) International Programs Office (IPO) has been leveraging the existing logistics infrastructure of Gulfport's Naval Supply Systems Command (NAVSUP) facilities and services located aboard the Naval Construction Battalion Center (NCBC), as well as other existing facilities and resources in the local area to conduct various Foreign Military Sales (FMS) support activities. As of 2021, NAVAIR's ongoing initiative(s) to reduce transportation, logistics, and sustainment costs inherent to FMS case execution has resulted in substantial and positive economic and fiscal impacts to the Gulf Coast:

- \$42M in sales activity has been generated,
- \$12M in earnings has been collected,
- 175 jobs have been supported, and
- \$1.2M has been contributed to state and local taxes.

Compared with other similar industries such as Boeing and Lockheed Martin, NAVAIR is a prime employer in the area of FMS aircraft and aircraft systems maintenance, repair, and overhaul (MRO) services.

Additionally, NAVAIR has hosted ten events where 800+ attendees have had the opportunity to observe Mississippi's robust infrastructure and workforce assets. As a result, business activity has increased throughout the Mississippi Gulf Coast. We are now experiencing more foreign defense sales activity flowing through the state, thereby growing and diversifying the regional economy.

Part of the Mississippi Strategic Plan (Goal 3D) is to be an entrepôt for FMS. By doing so, Mississippi is expanding the defense industry's presence and ensuring that military assets align with the National Defense Strategy. NAVAIR's partnership with Mississippi simultaneously realizes these objectives, provides strategic benefits that enhance regional economic development and strengthens international relationships with International Partners and FMS customers.

## **Introduction**

### **Purpose**

This analysis examines the economic impact of NAVAIR on Mississippi's coastal region. By tracking the sales activity, earnings, employment, and tax revenue of NAVAIR's operations, this analysis provides valuable information about the type and scale of impact NAVAIR makes in the local economy.

### **Background**

The U.S. Department of Defense (DoD) established Naval Air Systems Command (NAVAIR) in 1966 as the successor to the Navy's Bureau of Naval Weapons.

Headquartered at Naval Air Station Patuxent River, Maryland, NAVAIR works to provide full life-cycle support of naval aviation aircraft, weapons, and systems used by the U.S. military. NAVAIR is the principal provider for the Naval Aviation Enterprise (NAE) and contributes to every warfighting function to bolster national security.

The NAVAIR International Programs Office (IPO) is heavily involved with Foreign Military Sales (FMS). The work done by the NAVAIR IPO provides advantages to the U.S. military, such as strengthening international alliances and reinforcing economic power across borders.

The NAVAIR International Programs Sustainment Review (NIPSR) outlines three main objectives when fulfilling FMS orders:

- reduce the infrastructure burden,
- drive down cost, and
- increase speed to the international and domestic fleet.

In the interest of accomplishing these goals, NAVAIR's International Sustainment Department created the NAVAIR International Sustainment Center (ISC) in Gulfport, Mississippi, in 2012. The dual military and civilian infrastructure in Gulfport provides NAVAIR with staging and storing logistics.

Gulfport-Biloxi International Airport is also home to the Combat Readiness Training Center (CRTC) and the Army National Guard 1108th Theater Aviation Sustainment Maintenance Group (TASMG), providing aircraft maintenance facilities. NAVAIR's presence in Gulfport creates a substantial economic impact on the coastal region.

### **Method of Investigation**

This analysis utilizes IMPLAN, a software platform widely used for economic impact studies. NAVAIR provided data inputs such as sales, number of employees, employee compensation, capital expenditures, and taxes to measure the direct economic effects of NAVAIR's activity and any additional economic effect. The University of Southern Mississippi's Trent Lott National Center is impartial in conducting economic impact studies such as this one.

### **Scope**

This analysis investigates the economic impact of NAVAIR's presence in the Mississippi's Gulf Coast. Direct (sales/earnings, expenditures, direct employment), indirect (supply chain, equipment sales, attorneys, accountants), and induced (local support jobs) were investigated. This analysis provides a snapshot of the impact that occurred in 2021.

## Economic Impact Analysis

An economic impact study assesses the change in an economy through the lens of sales, expenditures, and/or employment numbers. There are three effects of economic activity that occur when a business operates in an area: direct, indirect, induced effects (see Figure 1).

- **Direct** → primary business activity (sales/earnings, expenditures, direct employment).<sup>1</sup>
- **Indirect** → employment opportunities that support the primary business activities (supply chain, equipment sales, attorneys, accountants).
- **Induced** → local support jobs result from secondary spending of wages from direct and indirect jobs (restaurants, hotels, automobile sales).

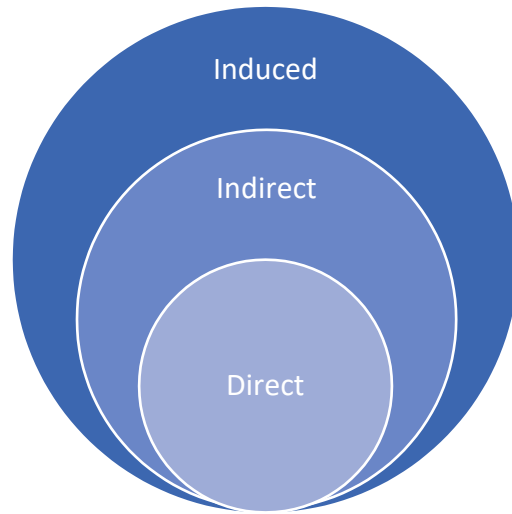
IMPLAN is a software platform widely used in economic impact studies by inputting variables of employment numbers, employee earnings, revenues, operational spending, and capital investments to estimate the overall effects on the economy. It combines a set of extensive databases, economic factors, multipliers, and demographic statistics to estimate effects on a region when change occurs.

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<sup>1</sup> IMPLAN defines direct effect relate to jobs added to the economy as outflows from the initial impact. The *indirect* effect is a secondary supply chain effect — companies' supply chains support these jobs. The *induced* effect is much broader, as evidenced by the number of jobs supported through individual earnings spent in the local economy. This change is due to inter-industry effects. Source: EMSI's model, incorporating data from the Bureau of Economic Analysis (BEA).

Figure 1.

*The Three Effects of Economic Activities*



Direct, indirect, and induced jobs are interconnected in the region and contribute to the economy in complementary ways.

### **Data Assumptions**

#### Data Assumptions for the Economic Model

- Region – The region of study is Hancock County and Harrison County, Mississippi. A Multi-Regional Input-Output model is used to discover the inter-regional linkages between the two counties, thereby tracking the general activity of NAVAIR’s operations in the Gulf Coast.
- Date – The model was run using the data defined in 2021 dollars with the most recently available dataset for both counties of 2018.



- Industries – 420 – *Support Activities for Transportation*, 462 – *Management consulting services*, 528 – *Other Federal Government Agencies*, 60 – *Maintenance and repair construction of nonresidential structures*.

## **Data Inputs**

NAVAIR utilizes the Port of Gulfport (Harrison County) and Stennis Airport (Hancock County) to employ the region’s logistics infrastructure and low cost of doing business. By partnering with Tyonek Native Corporation (NAICS 488190), a certified 8(a) small business that provides Aviation Maintenance, Information Technology, and Cyberspace Training services, NAVAIR conducts highly-technical maintenance, repair, and overhaul (MRO) operations to strengthen international relations, generating a significant economic impact on the Gulf Coast region.

NAVAIR supports 64 MRO jobs: 42 employees from Tyonek and 22 employees from Boeing are located at Stennis Airport (see Table 1). Additionally, four agents from the Defense Contract Management Agency (DCMA) are present, along with a U.S. Navy NH-3 Billet valued at \$119K. NAVAIR also supports five Zenetex (NAICS 541611) employees at the Naval Construction Battalion Center (NCBC) at Gulfport who oversee defense logistics operations such as warehousing and exporting.

NAVAIR reported \$7.8 million in pay and benefits, in which \$425K is allocated to Zenetex in Gulfport, \$119K to the NH-3 Billet, and the remaining \$7.2 million to MRO employees at Stennis. In addition to employee compensation, Tyonek improved its facility at Stennis

Airport with a capital expenditure of \$503K to enhance operations in meeting increasing business.

Support activities for transportation (i.e., MRO operations), management consulting services, and the presence of federal non-military agents each have a significant multiplier effect along the Gulf Coast. In Hancock County, support activities for transportation and federal non-military agents yield an output multiplier of 1.46 and 1.12, respectively, and an employment multiplier of 1.54 and 1.19, respectively. In Harrison County, management consulting services and federal non-military agents yield an output multiplier of 1.6 and 1.26, respectively, and an employment multiplier of 1.55 and 1.28, respectively.

NAVAIR is a noteworthy economic driver in the Gulf Coast region regarding sales, earnings, employment, and taxes. These multipliers signify that for every dollar in sales NAVAIR generates, more than \$1 of activity will be generated in the Gulf Coast region. Similarly, every job NAVAIR supports nearly an additional job will be supported.

Table 1.

*NAVAIR Inputs of Economic Impact Model*

Title	Type	Specification	Sales	Employment	Compensation
MRO Activities (Hancock County)	Employee Compensation	420 – Support activities for transportation		64	\$7,208,615
DCMA Agents (Hancock County)	Industry Employment	546 – Employment and payroll of govt, non- military		4	
NH-3 Billet Stennis (Hancock County)	Employee Compensation	546 – Employment and payroll of govt, non- military		1	\$119,787
Tyonek Capex (Hancock County)	Industry Output	60 – Maintenance and repair construction of nonresidential structures	\$503,000		
DLA NCB Warehouse (Harrison County)	Employee Compensation	462 – Management consulting services		5	\$425,000
NH-3 Billet Gulfport (Harrison County)	Employee Compensation	546 – Employment and payroll of govt, non- military		1	\$77,488

Source: IMPLAN

## **Model Results**

Given the direct figures in employment, employee compensation, final demand, intermediary purchases, and taxes (non-income), the direct and total values must be adjusted to reflect accurate results.

### *Sales Impact*

Total Sales amount to \$41,986,767 when summing together a direct result of \$28,301,745, an indirect result of \$9,990,461, and an induced result of \$3,694,561 (see Table 2).

The direct result of more than \$28 million reflects the value of the production of NAVAIR's goods and services. While NAVAIR reports sales of \$5.6 million, that value is added to a direct outlay of \$22.7 million as calculated by IMPLAN. Direct outlay equals the total of intermediate purchases, institutional purchases, imports, and employee compensation, all of which stem from NAVAIR's primary operations.

The nearly \$10 million indirect results indicate the notable impact NAVAIR generates on the Gulf Coast through its supply chain activities. MRO activities are highly technical and involve advanced equipment and components that are expensive and carefully manufactured.

The induced result of \$3.69 million indicates a considerable influence NAVAIR has on local spending. NAVAIR employees are likely to spend their wages on the Gulf Coast. This activity thereby supports the retail and service sector in the region and indicates a good quality of life in the Gulf Coast.

Table 2.

*Sales Impact for NAVAIR*

<b>Direct*</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
\$28,301,745	\$9,990,461	\$3,694,561	\$41,986,767

Source: IMPLAN

\*Note: A direct outlay of \$22,732,416 (total primary industry payments according to IMPLAN) is added to the Final Demand of \$5,569,328 provided by NAVAIR.

*Earnings Impact*

Total Earnings from NAVAIR's operations amount to \$11,976,135 when adding a direct employee compensation of \$7,830,890 from NAVAIR's payroll to the additional earnings generated in industries around the Gulf Coast (see Table 3). An additional \$3,198,790 in indirect earnings is generated from NAVAIR's supply chain purchases, as well as an additional \$946,455 in induced earnings that local spending generates in shopping, dining, and touring in the Gulf Coast.

Table 3.

*Earnings Impact of NAVAIR*

<b>Direct*</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
\$7,830,890	\$3,198,790	\$946,455	\$11,976,135

Source: IMPLAN

\*Note: A Direct Employee Compensation of \$7,830,890 is provided by NAVAIR.

### *Jobs Impact*

Total jobs supported 175 jobs, with 75 direct jobs from NAVAIR operations, 72 in NAVAIR’s supply chain, and 28 induced jobs supported by NAVAIR’s influence on regional retail spending (see Table 4).

NAVAIR reported 75 personnel supporting primary operations. From these 75 jobs, 72 jobs are supported in NAVAIR’s business-to-business interactions with ancillary industries, and 28 jobs are supported in the retail and service sector from employees spending in the local area.

The presence of federal agents in the area influences a higher induced effect because government employees do not generate any indirect effect: the reason is that the intermediate purchases made by any Government Services Agency are not tracked through IMPLAN; however, their spending in the retail/tourism sector in an area is tracked. Therefore, federal agents bring a considerable impact to the local area by their presence.

Table 4.

### *Jobs Supported from NAVAIR’s activities*

<b>Direct*</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
75	72	28	175

Source: IMPLAN

\*Note: NAVAIR provided a direct employment figure of 75 personnel: 42 from Tyonek, 22 from Boeing, four from DCMA, five from Zenetex, and two NH-3 Billets.

*Tax Impact*

Local and state taxes with the direct tax impact yields \$483,404. The indirect tax impact is \$289,006, and the induced tax impact is \$197,240, totaling \$969,650. However, when adding the reported non-income tax of \$220,400 provided by NAVAIR, the total tax impact amounts to \$1,190,050 (see Table 5).

Regional tax amounted to \$203,173, and state tax amounted to \$766,476. Federal tax amounted to \$2,291,502.

Table 5.

*Local and State Tax Impact of NAVAIR*

<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total*</b>
\$483,404	\$289,006	\$197,240	\$1,190,050

Source: IMPLAN

\*Note: Total taxes equal the summation of County and State Totals plus NAVAIR’s reported non-income taxes amounting to \$220,400.

## Events Hosted by NAVAIR

From 2013 to May 2021, NAVAIR hosted ten events with 800+ attendees representing defense contractors, economic developers, and military personnel (see Table 6). While these numbers are not measured in the economic impact model, these events stimulate considerable business activity on the Mississippi Gulf Coast. As mentioned in the model results, more than \$3.5 million in sales and nearly \$1 million in earnings are generated in the retail and tourism sector, with 28 jobs being supported in the region. As NAVAIR continues to host events that bring federal and international attendees, more business is brought into the region for local economic development.

Table 6.

*Events Hosted By NAVAIR and number of Attendees*

Date	Event	Venue	# of Attendees
July 30 – Aug 1, 2013	Transportation Compliance Meeting	Keesler AFB	147
May 12 – 14, 2015	Transportation Meeting	USM Gulfport	144
Aug 4, 2016	Southern Mississippi Military Corridor Meeting	USM Gulfport	27
Nov 15 – 17, 2016	Aerospace Industries Association (AIA) Meeting	Courtyard Marriott	27
Feb 22 – 23, 2017	Transportation Compliance Meeting	Island View Resort	153
Nov 8, 2017	Small Business Forum	Great Southern Club	110
July 23 – 25, 2018	Stennis and Warehouse Visits and Tours	Stennis, CRTC	8
September 9 – 11, 2019	Facility Innovation and Industry Workshop; Tours	Great Southern Club; TASMG, Stennis	188
Feb 3 – 6, 2020	Training Meeting	USM Gulfport, CRTC	29
		<b>Total Attendees</b>	<b>833</b>



## **Conclusion**

NAVAIR generates a substantial and positive economic impact on the Mississippi Gulf Coast region regarding sales, earnings, employment, and taxes. The MRO activities involve powerful supply chain linkages that NAVAIR has established and developed in the region. The highly technical trade of MRO activities provides opportunities for higher incomes for employees who spend their wages locally, thereby supporting the retail and service sector of the Gulf Coast. Further, FMS business will expand this network across the Gulf Coast, which means more sales, earnings, and jobs throughout the region.

Expanding customer service sectors such as business support centers, technical assistance, parts manufacturing, IT support, and trade show organization (NAICS 561990) will diversify the local area's industries. It will benefit from the high multiplier effect in sales and employment of NAVAIR.

Furthermore, an aerospace cluster could develop by extending NAVAIR's operations across regional airports and the southeastern counties of Mississippi. Leveraging regional airport infrastructure for MRO activities and/or aircraft experimentation will develop highly technical trades among a county's workforce. Foreign military sales can bring high amounts of income that will spur local spending, generating more small businesses and recruitment in supporting industries such as manufacturing and/or logistics. Hancock and Harrison County possess a strong industrial relationship that can reach out into neighboring counties, generating an even higher multiplier effect in the regional economy.

NAVAIR is a valuable asset for and partner to the Gulf Coast and the state of Mississippi. As the region builds upon its port infrastructure to remain competitive in international trade and its professional and technical services in the aerospace industry, further commerce will push the technological capabilities of American-made aircraft and enhance the coastal and statewide economy.