



THE UNIVERSITY OF
SOUTHERN MISSISSIPPI®

THE ECONOMIC AND SOCIAL IMPACTS OF THE UNIVERSITY OF SOUTHERN MISSISSIPPI

2016-19



JUNE 2021

TABLE OF CONTENTS

| | |
|-----------|---|
| 02 | Executive Summary |
| 04 | The University of Southern Mississippi Background |
| 05 | Economic Impact Study Background |
| 06 | The University of Southern Mississippi Key Impact Findings |
| 09 | Conducting Transformative Research |
| 10 | Supporting Research Commercialization and Business Development |
| 11 | Connecting to the Business Community |
| 12 | Workforce and Alumni (Institutional Research) |
| 12 | Educating the Current and Future Workforce |
| 13 | Alumni Continue to Generate Impact for the State |
| 14 | Making an Impact on the Community |
| 18 | Military and Service Ties |
| 20 | USM Intercollegiate Athletics |
| 21 | The University of Southern Mississippi Coastal Impacts |
| 23 | Appendix A: The Accelerator |
| 26 | Appendix B: Technology Tech Transfer |
| 27 | Appendix C: Definition of Terms |
| 28 | Appendix D: Methodology |
| 29 | Appendix E: FAQs Regarding Economic Impact |

EXECUTIVE SUMMARY

The University of Southern Mississippi is a powerhouse for economic and social activity in Mississippi. In the fiscal year (FY) 2018/2019, Southern Miss contributed more than **\$663 million*** in economic output to the state of Mississippi. It is a dual-campus university with campuses in Hattiesburg and Long Beach, at teaching and research sites across the Mississippi Gulf Coast, as well as online. USM offers more than **180** programs of study in four degree-granting colleges. USM welcomes a diverse student body of more than **14,000**, representing **71 countries**, all 50 states, and every county in Mississippi.

A research university benefits the economy and a region's quality of life in numerous ways. Still, one of the most direct economic impacts is annual spending by employees and students in the local economy. This spending in the local economy has a multiplier effect on the economy. In the fiscal year (FY) 2018/2019, student and employee spending added **\$565 million*** in output to the state economy.

Construction spending by the University also has a ripple effect on the economy. For example, the Century Park South Residential Complex was a **\$55.6 million** (USM) new project that added a significant economic impact to the community's construction industry. The building of projects, such as the development of Century Park South, added a one-time economic impact of **\$98 million*** in output to the state. Adding the construction impact to the \$565 million in output for the operating impact, The University of Southern Mississippi contributed **\$663 million* in output** to the state of Mississippi in 2019.

THE UNIVERSITY OF SOUTHERN MISSISSIPPI DIRECTLY AND INDIRECTLY GENERATES

\$663 MILLION*
IN OUTPUT PER YEAR IN MISSISSIPPI.

THE UNIVERSITY OF SOUTHERN MISSISSIPPI CREATES AND SUPPORTS MORE THAN

7,437 JOBS*.

THE UNIVERSITY OF SOUTHERN MISSISSIPPI GENERATES MORE THAN

\$34 MILLION*
PER YEAR IN TAX REVENUE.

“A POWERHOUSE FOR ECONOMIC AND SOCIAL ACTIVITY IN MISSISSIPPI”



USM EMPLOYS
6,597
FACULTY,
STAFF AND
STUDENTS.

Southern Miss is not only a dollar generator, it also employs **6,597 faculty, staff, and students** across its two campuses, multiple teaching and research sites, and across the southeast. The employment impact felt by the state of Mississippi in having a large, research-intensive university in the Hattiesburg and Gulf Coast regions supported **7,437 jobs*** throughout the state.

USM’s job and income generation create tax revenue as its impact ripples through the economy. In FY18/19, Southern Miss indirectly produced **\$34 million*** in **state** and **local** tax revenue impacts through spending in the area by the institution, its faculty, staff, students, and visitors to the state and region.

The impacts of The University of Southern Mississippi extend past the economic, employment, and tax revenue impacts into community benefits and community engagement impacts. Southern Miss is an active player in the community through community drivers, such as United Way, American

Heart Association (Heart Walk), Blair E. Batson Children’s Hospital (EagleThon), and provides high-quality art programs to the public. The impacts of volunteer time and donations made by the community of USM faculty, staff, and students were estimated to reach **73,744 hours** in the FY19. The economic value per hour for these volunteer hours is estimated to be \$19.70, with a total value of **\$1.5 million**.

The impacts generated by The University of Southern Mississippi occur annually; every year, USM contributes to strengthening the economics of Hattiesburg, the Gulf Coast, and the state of Mississippi as a whole. Without the presence of The University of Southern Mississippi, the state of Mississippi and the regions in which it serves would notice a significant loss in of high-quality jobs, a decline in local spending by such considerable members in the community, and a shortage of cultural opportunities provided to the community by the University.



73,744
VOLUNTEER
HOURS WORTH
\$1.5
MILLION

THE UNIVERSITY OF SOUTHERN MISSISSIPPI BACKGROUND

The University of Southern Mississippi is a comprehensive public research institution delivering transformative programs on campuses in Hattiesburg and Long Beach, at teaching and research sites across the Mississippi Gulf Coast, as well as online. Founded in 1910, USM is one of only 131 universities in the nation to earn the Carnegie Classification of Institutions of Higher Education’s “R1: Doctoral Universities – Very high research activity” designation, and its robust research enterprise includes experts in ocean science and engineering, polymer science and engineering, and large event venue safety and security, among others. USM is also one of only 37 institutions in the nation accredited in theatre, art and design, dance and music. USM welcomes a diverse student body of more than 14,000, representing 71 countries, all 50 states, and every county in Mississippi. USM students have collected four Truman Scholarships and 37 National Science Foundation Graduate Research Fellowships, while also leading Mississippi with 27 Goldwater Scholarships, an honor that recognizes the next generation of great research scientists. Home to the Golden Eagles, USM competes in 17 Division I sports sponsored by the National Collegiate Athletic Association (NCAA).



HATTIESBURG CAMPUS

Characterized by history and tradition, the Hattiesburg campus sits on 300 acres in the heart of the city. More than 180 buildings rest on a pedestrian-friendly landscape for students, employees, and visitors.



GULF PARK CAMPUS

Surrounded by live oak trees and sitting along the waters of the Gulf of Mexico sound, the 52-acre Gulf Park campus in Long Beach provides a beautiful setting for both learning and research. It is the only beachfront campus in the state offering educational opportunities ranging from freshman coursework to doctoral degree programs.

ECONOMIC IMPACT STUDY BACKGROUND

The overall economic and fiscal impact that The University of Southern Mississippi has on the vitality of the region and state includes the following elements:

- Business volume impacts (capital expenditures, operational expenditures, salary data, and state and regional business volumes)
- The direct and indirect employment impacts of the University
- The government revenue impact of USM at the local and state levels
- The impact of University alumni on the economy (wage premiums, job creation, etc.)
- The economic impact of out-of-state research funding, including research commercialization, patents and licensing, and business spinoffs

METHODOLOGY

This economic impact analysis measures the effect of direct and indirect/induced business volume and government revenue impacts of all USM's operations throughout Mississippi. The methodology software employed in the calculations of these impacts is IMPLAN. While key assumptions were made and approved by The University of Southern Mississippi, IMPLAN provided economic language and other supporting services. Data included four-year average capital expenditures, operational expenditures, employment headcounts, payroll and benefits, and taxes. The approach taken in this study was decidedly conservative.

Economic impact occurs when an organization spends money. Researchers capture the economic impact from the direct financial effects of an organization's spending, plus the indirect and induced spending in the economy that resulted from direct spending.

Total economic impact measures the dollars generated within Mississippi due to the presence of The University of Southern Mississippi. The effect includes spending on goods and services between various vendors throughout the state, accounting for their faculty, staff, students, and visitors. Not all dollars spent by a university remain in its home state, and dollars that "leak" out of the state in the form of purchases from out-of-state vendors are not included in the University's economic impact. The multipliers utilized in this study are derived from the IMPLAN software.

This study's key economic impact findings include the total FY19 impact of USM's operations on the economy and employment in Mississippi and the tax revenue impact on state and local governments. The analysis looked at the effects of USM on the Hattiesburg MSA, the Gulfport-Biloxi-Pascagoula CSA, and the state of Mississippi.

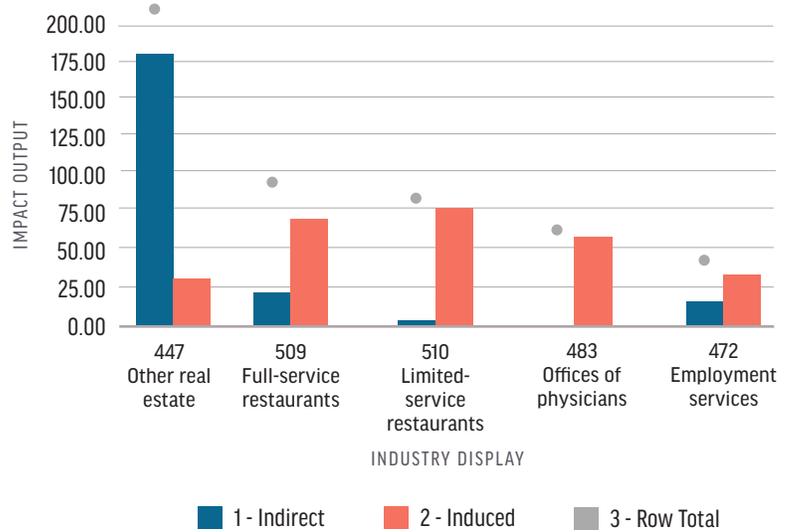
THE UNIVERSITY OF SOUTHERN MISSISSIPPI KEY IMPACT FINDINGS

The University of Southern Mississippi is a hub of activity in Hattiesburg and on the Gulf Coast. The University prides itself on developing close ties to the community to provide as much value to the community as possible. USM continues to be vigilant in the community through multiple cultural events, workforce development initiatives, innovative research and development, and service to the community through community fundraising and donations.

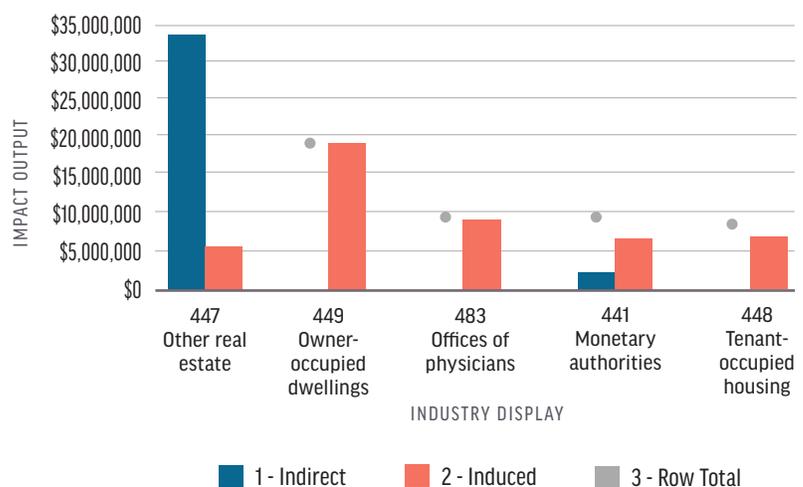
ECONOMIC IMPACT

USM provides a multitude of impacts to the state of Mississippi at its locations in Hattiesburg and on the Gulf Coast. The University of Southern Mississippi impacts residents throughout the state by employing organizational spending, employment opportunities, government revenue generated from spending, research activities, and visitor spending in the region (i.e., retail, food services, cultural events, etc.). In 2019, the overall operating impact of The University of Southern Mississippi on the state of Mississippi amounted to **\$565 million* in output**.

TOP 5 INDUSTRIES (EMPLOYMENT)



TOP 5 INDUSTRIES (OUTPUT)



THE UNIVERSITY OF SOUTHERN MISSISSIPPI AFFECTS BUSINESS VOLUME IN MISSISSIPPI IN THREE WAYS:

1. Direct expenditures for goods and services by the University, faculty, staff, students, and visitors.
2. Indirect spending within the state of Mississippi. This spending supports local businesses, employing local individuals to sell the goods and providing the services that University constituencies need. The businesses that receive direct payments re-spend this money within the state, thus creating even more jobs.
3. Induced spending by households either directly employed by the University or its suppliers creates a third tier of impact.

As a result of expenditures on goods and services by USM, its faculty, staff, students, and visitors, the overall economic impact of The University of Southern Mississippi operations on the state of Mississippi in FY19 was \$342 million direct output impact and \$76 million* indirect impacts and \$147 million* in induced output impact, for a total of \$565 million* in operational, economic output impact provided to the state.*



Two examples of how events and activities of The University of Southern Mississippi translate into fresh dollars spent in the region and state (the concept of dollars that would not otherwise be spent in the area if not for the presence of the University) including the following:

THE FAY B. KAIGLER CHILDREN'S BOOK FESTIVAL

Every year, The University of Southern Mississippi hosts the Fay B. Kaigler Children's Book Festival. From the modest beginning of 100 participants, the Children's Book Festival has grown to hundreds of participants representing 46 states. Completing its 53rd year in 2020, more than 500 teachers from across the country gather in Hattiesburg to discuss and listen to leaders in the children's literature field through educational seminars and discussion sessions.

THE MINORITY WOMEN ENTREPRENEURS FORUM

The College of Business and Economic Development and the Magnolia Business Alliance provide aspiring businesswomen opportunities to learn more about expanding their businesses during a unique forum held on the Hattiesburg campus. The Empowering Women: Minority Women Entrepreneurs Forum offers everything from social media strategies to small business resources. The event draws individuals from throughout the region and state to come to the Hattiesburg campus to learn new and innovative business strategies for aspiring

entrepreneurs. Events such as this bring people to Hattiesburg that may not otherwise come if not for the University being the host.

EMPLOYMENT IMPACT

The University of Southern Mississippi employs individuals in various fields, from research faculty in the School of Polymer Science and Engineering to staff in the School of Performing and Visual Arts and students at the Gulf Coast Research Laboratory. The total employment impact that The University of Southern Mississippi has on the state is **7,437 jobs***. These jobs (both full- and part-time) include not only direct employment but also indirect and induced jobs created by supply and equipment vendors, contractors, and laborers for construction and renovation of University facilities, and jobs created in the community at hotels, restaurants, and retail stores in support of the University's workforce and its visitors. USM employs 2,893 students throughout the Southeast, with the University employing 5,138 persons within the state.

STATE AND LOCAL REVENUE IMPACT

It is a common misperception that public universities do not generate tax revenue. The University of Southern Mississippi's **state** and **local** government revenues attributed to more than **\$34 million*** in FY19. Through local spending and direct, indirect, and induced support of jobs, the University's presence stabilized and strengthened the regional and statewide tax base. The University is an integral part of the state's economy-generating revenue, jobs, and spending.

CONDUCTING TRANSFORMATIVE RESEARCH

As the premier research university of the Gulf South, Southern Miss takes pride in having earned the “R1: Doctoral Universities – Very high research activity” designation by the Carnegie Foundation to advance teaching among doctorate-granting universities. The Center for Undergraduate Research affords students meaningful research opportunities, and as a proven leader in innovation, Southern Miss is generating real-world solutions through transformative research.

1. The Center for Gulf Studies, administered through the Southern Miss Division of Marine Science at Stennis Space Center, serves Mississippi's people, the northern Gulf region, and the nation with a scientifically based understanding of ecosystem status and trends emphasizes improved forecasting abilities to ensure sustainable coastal and ocean ecosystems of the Gulf of Mexico.
2. The National Center for Spectator Sports Safety and Security (NCS4) offers solutions for the security of sports stadiums and arenas that have been identified as potential targets of terrorism.
3. The School of Polymer Science and Engineering creates new polymer materials used in everyday products such as cosmetics, shipbuilding, and sports equipment. For example, they partner with GE Aviation to focus on composites development processing for the GEnx aircraft engine.

The University expends **\$112 million** (USM) in external funding for research purposes. The University's research operations make tangible and quantifiable economic contributions to the state. Besides creating jobs for research staff and support personnel, USM scientists contribute to new product development and technology commercialization. Knowledge and technology transfers have helped start commercial ventures that promote entrepreneurship, economic development, and job creation.

As a result of research activity and spending by The University of Southern Mississippi, there are economic, employment, and government revenue impacts generated in the region and state that would otherwise not be present if not for its significant research activity. In FY19, the economic impact of research conducted by USM faculty, staff, and students reached **\$188 million***. The employment impact of the innovative research at USM supported 1,216 indirect and induced jobs throughout the state. The university's research component alone generated an additional **\$7 million*** in **state** and **local** government taxes.

SUPPORTING RESEARCH COMMERCIALIZATION AND BUSINESS DEVELOPMENT

The University of Southern Mississippi's **Innovation and Commercialization Park** encompasses 500 acres and is located five miles from the Hattiesburg campus. Three hundred acres of this park can be developed, particularly for the growth of advanced STEM-oriented companies. The park's cornerstone feature is the 60,000-square-foot business incubator, known as **The Accelerator**, which provides fully fitted leasable space for innovation, incubation, and commercialization. In FY19, The Accelerator had 14 startup companies, three established companies, and three USM application-oriented entities. The Accelerator supported **35+ full-time jobs** and had an annual economic impact of **\$14 million (USM)**. Leasable laboratory and manufacturing capabilities enable businesses to develop and commercialize their technology with ready access to advisors and collaborators.

Located in The Accelerator and a foundational service to inventors, entrepreneurs, startups, and multinational companies alike are the **Mississippi Polymer Institute (MPI)**. MPI serves as USM's industrial outreach arm specializing in materials, products, associated processes, and specialized workforce training. MPI is a non-profit technical services organization created in 1982 out of the School of Polymer Science and Engineering to support business growth. MPI's technical services include Product and Process Development to assist with material selection, polymer synthesis, extrusion/compounding, injection mold filling simulation to bolster design needs. Testing Services

with ISO 17025 accredited analytical and physical testing enable creditable troubleshooting, test-method development, third-party QC investigations, and custom applied testing. When solutions require research or an academic expert, they can quickly team with the USM School of Polymer Science and Engineering. Workforce Training enables employees with advanced material basics, statistical and lean techniques, and tailored customer-specific training. As a standards course of activity, MPI offers Economic Development Assistance by serving as a technical resource for local, regional, and statewide efforts. The Center often engages in High School and Community Outreach activities to promote science. In FY19, MPI's economic impact on Mississippi business includes over 250 jobs (retained or created) and over **\$43 million (USM)** in direct customer benefit. MPI has played a crucial role in growing the state's multi-billion dollar-per-year high-tech polymer industry and has directly helped create thousands of jobs and, in some cases, saved jobs of entire plant sites. Currently, MPI has **598 Mississippi clients** and **858 total clients**. There are 4,162 workforce trainees, and the institute has helped retain or add 914 jobs.

USM utilizes its multi-facility presence and spearheading the **Blue Economy** initiative, which leverages coastal resources and expertise within a maritime cluster spanning approximately 120 miles across the Gulf Coast. The cluster's heart is an emerging **Blue Economy Innovation District** serving as the nexus for business expansion and a business-friendly environment.

The initiative harnesses federal, industry, and educational agencies' innovation power in a physical presence to develop dual-purpose technologies and operating concepts. It provides access to classrooms, technology laboratories, prototypes, and testing related to the marine economy. It facilitates aquaculture's economic and job growth by providing a stable supply of safe, healthy, and local seafood. Lastly, it expands the Gulf Coast Geospatial Center operation to ensure sustainability and continue growing the maritime technical workforce.

The Blue Tech Accelerator Program is launching in 2021 and will provide mentoring, program management, seed funding, and critical maritime infrastructure. The Blue Tech Accelerator Program will support uncrewed marine system development with prototyping and open water testing in the Gulf of Mexico. The program will help aquaculture technology developments at the USM Thad Cochran Marine Aquaculture Center in Ocean Springs, using site state-of-the-art facilities and resources, including finfish, shellfish, live feed, and algae testing.

CONNECTING TO THE BUSINESS COMMUNITY

In addition to the business development and commercialization activities, The University of Southern Mississippi plays an active role in the business community through connections with local chambers, businesses, and economic development agencies to encourage and support the region's business community and across the state. For example, USM works closely with the **Area Development Partnership** (ADP) in Hattiesburg and the **Mississippi Development Authority** (MDA). It is important to foster these relationships to identify workforce needs from current and prospective employers across the state. Through USM's relationships with ADP and MDA, numerous businesses have decided to establish a presence in Hattiesburg and the extended area, bringing with them hundreds of jobs, millions of dollars in spending, and thousands of visitors to the region. While these impacts are more difficult to quantify, this attraction power helps diversify the local and statewide economies and increase the quality of life for all.

WORKFORCE AND ALUMNI (INSTITUTIONAL RESEARCH)

The impacts generated by The University of Southern Mississippi also do not occur in a vacuum. Students educated at the University can apply their knowledge throughout the state and country in various ways to bring economic value to the regions in which they work. Through its diverse academic programs, USM helps elevate the state of Mississippi at both the undergraduate and graduate levels. They are doing so by educating a highly skilled workforce needed to compete in a global economy, providing the next generation of innovators with a firm foundation upon which to grow their ideas and build the next generation of scholars. Moreover, USM provides the larger community with access to faculty experts, adds richness and diversity to the region's cultural offerings, and explores innovative technologies through its polymer and marine research initiatives. It is challenging to assign a dollar amount to the outreach and community activities of a large public research university such as USM. However, the lives of those in the surrounding communities are significantly enhanced daily by its presence in many ways.

EDUCATING THE CURRENT AND FUTURE WORKFORCE

On average, the University graduates 3,359 students across undergraduate and graduate programs every year. Approximately 60% of these graduates stay in Mississippi to apply their learned skills to the real world and fulfill workforce demands.

By educating students, USM adds to the talent pool of human capital in Mississippi. A USM degree increases a graduate's value, productivity, and earning potential in the job market. Based on national median annual earnings data, individuals obtaining a doctoral degree earn a yearly salary of \$98,020; a master's degree median annual earnings of \$80,340; and a bachelor's degree of \$67,860 (2020, U.S. Department of Commerce, Bureau of Economic Analysis). Individuals with these degrees have the lowest national unemployment rates of 2.5, 3.1, and 4.1%, respectfully.

ALUMNI CONTINUE TO GENERATE IMPACT FOR THE STATE

The contributions of USM graduates are critically crucial to the economic vitality of the state. The University alumni number more than **147,000** and reside in all 50 states, the District of Columbia, and numerous foreign countries. The USM Foundation provided **\$7.9 million** in support to the University in FY19.

The collective impact of donors to USM in 2019 was outstanding, with **\$15.8 million** contributed through the Foundation, including **\$7 million** in outright gifts. These contributions empowered scholars on USM campuses and research sites, solidifying USM's ranking as one of the nation's leading research universities.



147,000

USM ALUMNI ACROSS THE
COUNTRY AND GLOBE



USM FOUNDATION PROVIDED

\$7.9 MILLION

TO THE UNIVERSITY.



DONORS CONTRIBUTED **\$15.8 MILLION,**
INCLUDING **\$7 MILLION** IN OUTRIGHT GIFTS.

MAKING AN IMPACT ON THE COMMUNITY

Faculty, staff, and students of Southern Miss choose to go beyond the boundaries of the campuses and make a difference in the community. In addition, the University has been honored with the prestigious Carnegie Community Engagement Classification for the many ways in which students, faculty, staff, and programs engage and enhance the people and places of South Mississippi and beyond.

Looking across volunteer hours and donations made to the community, USM is a top provider of community outreach and support, impacting the state. The University's presence is felt through donations made to community organizations, such as United Way, American Heart Association (Heart Walk), and Blair E. Batson Children's Hospital (EagleThon), as well as time donated for volunteer activities, such as Habitat for Humanity or tutoring services for adolescents. USM faculty, staff, and students partake in a myriad of activities, some of which are outlined below.

ONGOING COMMUNITY OUTREACH PROGRAM

The Center for Community Engagement (CCE) coordinates meaningful and mutually beneficial community engagement experiences to address University and community needs, affect positive social change, and cultivate active citizen leaders.

The Conville Fund provides students and faculty with experiences to enhance their ability to learn and teach through community service. In 2015 USM professor (1978-2013) emeritus of communication studies and service-learning, Dr. Richard L. Conville, and his wife established the Richard L. and Mozella P. Conville Endowment support through the Center for Community Engagement.

Reinvesting Eagles Around the Community of Hattiesburg (REACH)

Coordinated via the Office of Inclusion and Multicultural Engagement, USM students eligible for federal financial aid are placed at community sites, and schools are part of their "on-campus" job. Students who participate in REACH will test community experiences against knowledge gained through academic work and apply course content to community issues to solve civic dilemmas. Participants will identify and apply strategies that promote effective teamwork and collaboration through meaningful relationships. Students will demonstrate critical thinking and reflective reasoning skills necessary to engage in innovative problem-solving and decision-making and develop intercultural competence and demonstrate a commitment to humanitarian values by increasing their awareness and concern about the community's diverse needs. Furthermore, students will develop the leadership skills necessary to impact their communities positively.

In 2018-19 REACH tutors worked with eight Hattiesburg community agencies: Aldersgate Mission, Canopy CARES School, Compassus Hospice & Care, Habitat for Humanity, Hawkins Elementary School, Osceola McCarty Youth Development Center, Salvation Army Boys and Girls Club, and USM Eagle's Nest Food Pantry. REACH members also serve on the Gulf Coast, working with six community agencies: Community Care Network, Lynn Meadows Discovery Center, Make-A-Wish Foundation, STEPS Coalition, United Way, and the Youth Health Coalition.

LUCKYDAY PROGRAM

The Luckyday Program at The University of Southern Mississippi is an exceptional opportunity for aspiring USM students. The Luckyday Foundation's gifts, founded by the late Frank R. Day of Jackson, Mississippi, fund scholarships for Mississippi high school seniors. These seniors are exemplary students involved in their communities, demonstrate leadership skills, and need financial assistance to pursue higher education at The University of Southern Mississippi.

Luckyday Scholars are provided extra support and encouragement to help assure their academic success through a required Luckyday Citizenship seminar their freshman year, a freshman year mentoring program, learning strategies, and job-seeking training, designated housing assignments to encourage a living/learning community, community service-learning requirements, and many other opportunities.

The Luckyday Foundation currently funds 315 program scholarships annually and supports 10 study-abroad scholarships annually of \$4,000, giving more than \$1,850,000 in scholarships to Southern Miss annually. The scholarship is renewable for three years after the student's freshman year, provided they continue to meet eligibility. First-year students and sophomores are required to maintain a cumulative GPA of 2.5 or greater; for juniors and seniors, a 2.75 is required.



**THE LUCKYDAY
FOUNDATION GIVES
MORE THAN
\$1,850,000
IN SCHOLARSHIPS
ANNUALLY.**

**“A SOLID
CONNECTION TO
THE HATTIESBURG
COMMUNITY IS
BENEFICIAL FOR
OUR EVENTS
AND FULFILLS A
COMMUNITY’S
CULTURAL NEEDS.”**

THE ARTS

The arts play an important, and perhaps understated, role in the local economy through public-facing events, including theatrical productions, dance performances, annual multi-arts Revelry, exhibitions at the USM Gallery of Art and Design, and Southern Arena Theatre. There are high, unseen costs behind mounting production or displays. The arts rely on funding from the state, donors, and earned income to effectuate the production seasons. Southern Miss is accredited in all four art disciplines: theatre, dance, art, and music, and the students are acknowledged for the high-quality work in regional and national adjudications. The faculty are all professional, practicing artists with reputations in the region and nation.

The Theatre program regularly works with local businesses, including Lamplight Shoe Repair,

Economy Supply, The Barber Studio, Town & Country Cleaners, and Cash and Carry Cleaners. The Dance program partners with Dance Fantasy for commercial sales. The Art and Design program works with Laurel Machine and Foundry. Most are service-oriented businesses. Some businesses provide the school services and, in turn, are listed in the programs. All of these relationships are important because they allow engagement with the local economy regularly. This engagement leads to more visibility for the School of Performing and Visual Arts (SPVA) and USM and an expanded sense of ownership in creative work.

The community supports the arts by attending performances, exhibitions, and events. Faculty, staff, and students reciprocate and give back to the community through various means: 1) Some faculty intentionally include service-learning in their courses, partnering with agencies such as Habitat for Humanity, the Hattiesburg Library, and various after school programs. 2) The School of Performing and Visual Arts faculty and staff participate in various local arts organizations (as patrons or board members), including the Hattiesburg Arts Council, Hattiesburg Alliance for Public Arts, Partners for the Arts. 3) USM regularly donates free tickets to local charities and agencies for their door prizes and auctions. The largest annual community-oriented event SPVA hosts is the annual Revelry, with dozens of free USM and Hattiesburg communities and families providing programming, instruction, materials, and space. The longest-running artistic community partnership is the Southern Arena Theatre. Such activities are essential because they increase the visibility of the arts while developing audiences. A solid connection to the Hattiesburg community is beneficial for our events and fulfills a community's cultural needs.

OSHER LIFELONG LEARNING INSTITUTE

The Osher Lifelong Learning Institute (OLLI) at The University of Southern Mississippi provides innovative programs to adults over age 50. OLLI offers classes that meet the needs and schedule of active adults. OLLI members are busy adults who share love of learning. Members enjoy innovative and enriching programs in an inclusive environment with others who share their interests. OLLI is for all educational backgrounds; members come from a wide range of backgrounds, vocations, and connections to the local community. OLLI is one of 124 such institutions across the country and is the only lifelong learning institute supported by the Bernard Osher Foundation in Mississippi.

In the 2018-19 academic year, OLLI offered more courses than any other year: 144 courses in the fall of 2018, 188 for spring 2019, and 95 during summer 2019. OLLI offered a total of 427 courses and had 700 members in 2019.



THE FRANCES A. KARNES CENTER FOR GIFTED STUDIES

The Frances A. Karnes Center for Gifted Studies was established in 1979 to educate further gifted students and those with leadership abilities through teaching, research, and services. Emphasis is also placed on those interested in the talented: teachers, parents, administrators, psychologists, counselors, and other concerned citizens.

The Center offers instructional programs provided for intellectually gifted students in grades pre-kindergarten through 12. There is an additional program to develop leadership concepts and skills for students enrolled in grades six through eleven. A three-week, intensive program is offered to students who have earned qualifying SAT or ACT scores as seventh graders. Teacher training and staff development are provided for regular education personnel and teachers who specialize in gifted education. A conference for parents of talented youth and other concerned adults is provided on an annual basis. Also, research is conducted in rural and urban schools in response to issues in gifted education.

Young students from the community and across the nation come to USM to experience classes and camps to provide them with exciting adventures in which they may not have otherwise participated. Some of the course titles offered by the Center include the following:

Animals of the Sea; Creative Crafts; Computer Coding; Wikis; Blogs and the Digital World; Simple Machines; Science; LEGO Engineering; Greek Mythology; Psychology, Inside Yourself; Seven Wonders of the Modern World; French; Spanish; Sign Language; Dance; Botany; Sociology; Debate; Polymer Science; Disease Medicine and Our Bodies

The Dale Center for the Study of War & Society (DCSW&S) at The University of Southern Mississippi serves as a local, national, and international resource for studying the history of warfare and its influence on both soldiers and civilians. The goal is to be the leading national institution in the study of war and society; to attract the top, most productive faculty in the field; to draw the most promising graduate students to the best program in the nation; and to serve the community by providing outreach and educational programming about the study of warfare in all of its facets.

DCSW&S houses a distinguished academic community with expertise in how conflict affects communities, soldiers, and noncombatants. The Dale Center expands on the field of military history, with its traditional focus on leaders, strategies, and operations, and seeks to identify and understand the social and cultural consequences of war. The center has earned a reputation as a center of excellence, with its faculty members recognized among the best scholars in the field and its students as noteworthy future scholars.

MILITARY AND SERVICE TIES

USM is nationally recognized as the top Military Caring University across Mississippi and has earned designation as a Purple Heart Institution. The University of Southern Mississippi acknowledges that less than 1% of our nation's population has ever served in the Armed Forces, allowing 99% of us to enjoy freedoms too often taken for granted. Nearly two million service members have deployed to Iraq and Afghanistan since 2001. Many of these men and women are returning in search of homes, jobs, and an education, compelling USM to meet their post-secondary education needs. In addition, Military Times has rated USM as a number 9 "Best for Vets" institution across the nation. Such recognition and designation recognize USM's continued extraordinary commitment to caring for and providing engaged assistance to support military veterans, service members, and their families. The vision, mission, and goals all center around being military-friendly.

Reserve Officers Training Corps (ROTC)

USM offers both Army and Air Force ROTC opportunities for students. Not only do ROTC students at USM complete their military training along with their educational commitment, but they also engage in community activities, such as the annual 24-hour Veterans Vigil in Downtown Hattiesburg, honoring Hattiesburg area veterans, and donating Easter eggs to the Dubard School for Language Disorders. ROTC students are active participants in their educational experience as members of the Hattiesburg community and serving our country.

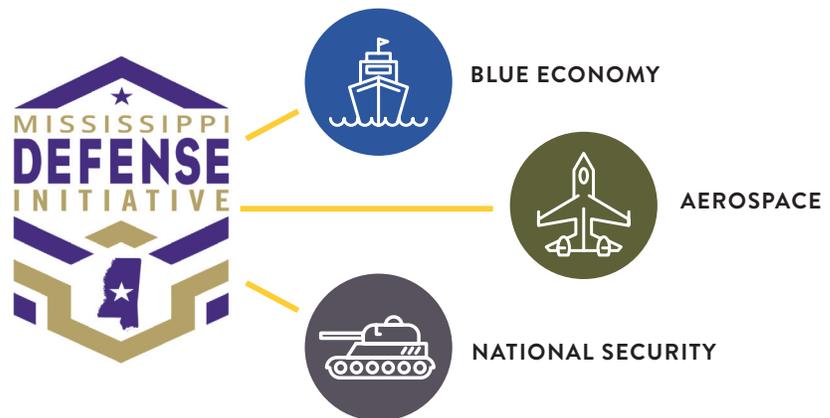
Mississippi Defense Initiative

(MDI) was derived from a United States Department of Defense's (DoD) Office of Economic Adjustment Industry Resilience grant. MDI works to make Mississippi's defense sector more resilient, competitive, and diversified by improving job opportunities, local tax base, wealth creation, and quality of life. MDI's mission is to strengthen Mississippi's defense and national security assets as an economic driver for the state.

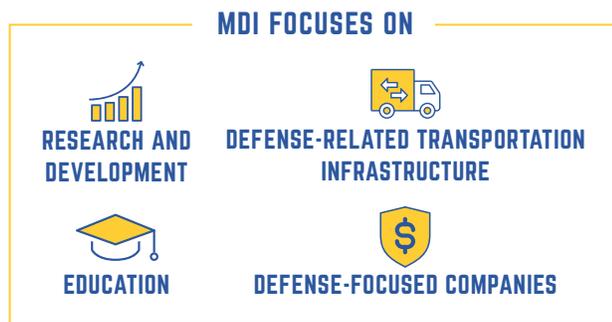


The critical competitive defense industry sectors are the following:

1. Blue Economy
2. Aerospace
3. National Security



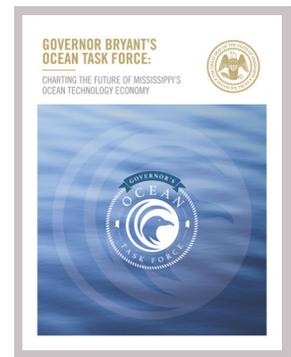
From 2016 through 2019, MDI secured \$5.2 million of federal funding in two grants (Phase I & Phase II) and \$250,000 in state of Mississippi funding. This additional state funding from the Mississippi Development Authority enabled MDI to move from just a temporary federally funded project to a state/federal partnership that can and has continued to assist in building out the defense and national security economy of Mississippi. As of 2019, defense spending accounted for 5.3% of Mississippi's economy, with \$6.3 billion spent in Mississippi on contracts and salaries, and ranked 10th in Defense Spending as Percentage of State GDP. That was \$2,108 per resident for a total of \$6.3 billion (contract and salary), with \$4.5 billion in contracts and \$1.8 billion in payroll.



MDI focuses on research and development, defense-related transportation infrastructure, education, and defense-focused companies. MDI network includes 150+ Mississippi companies and assistance providers consisting of defense-focused companies, nonprofit and business assistance organizations, local military communities, military units and facilities, Mississippi universities and colleges, Mississippi state government entities, local and regional economic development organizations. In Phase I, MDI provided \$187,500 indirect assistance to 15 companies through the MDI Gap Fund Program in the form of Innovation Vouchers. In Phase II, MDI budgeted for an additional \$20,000 to aid companies to rapidly upscale or prototype their technologies that came out of the Gap Fund Program.

MDI facilitated a strategic planning effort, authorized by an executive order from the governor of MS,

that terminated in the Mississippi Defense Initiative Strategic Plan 2019-23. The implementation of this strategic plan was the purpose of the additional funding from MDA. MDI researched and wrote 54 reports consisting of industry sector analysis, highest and best use cases study, and economic research that assisted network partners in showcasing Mississippi's ever-growing and expanding defense economy. These reports were published on the MDI website, as well as several national-level websites.



MDI provided support for the governor's Ocean Task Force, culminating in the Charting the Future of Mississippi's Ocean Technology Economy being published. During Phase II, MDI partnered with MSU's Center for Cyber Innovation (CCI) and Center for Advanced Vehicular Systems Extension (CAVSE) to build a free Cyber Security Tool, NIST Controls Awareness Training (NCAT) for defense companies. MDI piloted the tool with five Mississippi companies and introduced the instrument to over 50 Mississippi companies.

MDI works closely with the Mississippi Installation Commands Council and the Mississippi Military Communities Council (MMCC) to strengthen Mississippi's competitiveness. MDI assisted and funded the development of three new courses at USM:

- 1. Economic Development for Military Communities**
- 2. Developing Solutions for Defense (DS4D) (this was named Hacking for Defense, H4D)**
- 3. U.S. Navy Unmanned Maritime Systems Certification Course**

MDI and its network partners have hosted 122 events to support the efforts to strengthen collaboration in the Mississippi defense economy.

USM INTERCOLLEGIATE ATHLETICS

The Athletics Department at The University of Southern Mississippi enjoyed a 2018-19 athletic season that involved campaigns from football, men's and women's basketball, softball, soccer, volleyball, men's and women's tennis, baseball, men's and women's track and field, men's and women's golf, beach volleyball, and cross country programs. The 2018-19 athletic season marked the first time the Golden Eagles posted winning records in the five significant sports of football, men's and women's basketball, baseball, and softball since the 1999-2000 academic year.

The Athletics Department offers 17 sports programs at the Division I level sponsored by the National Collegiate Athletic Association. USM's newest sport of women's beach volleyball was added during the 2018-19 school year and competed in the Coastal Collegiate Sports Association. On the field, Southern Miss has won five Conference USA football championships, three Conference USA baseball championships, including a trip to the 2009 College World Series. During the 2018-19 season, the Golden Eagles recorded their fourth straight winning season and 22nd over the past 25 years. The team ranked No. 3 in FBS in total defense, marking the third consecutive year they have finished in the top 20. Additionally, the team had two sophomores earn first-team All-Conference USA Honors. Off the field, the University is continually recognized for its high state graduation rate percentage among all Athletics programs, with USM winning the Halbrook award in 2019 for the public university's women's division.

The athletics department of any large university generates a substantial amount of economic activity on its own; The University of Southern Mississippi is no different. In FY19, USM Athletics saw nearly \$2 million in capital spending on facilities and supplies to elevate the University's Athletics Department. The economic output of athletic capital expenditures was **\$4 million**. The operational expenses for the department in FY19 were **\$14 million**. USM had a 2019 athletic roster of 319 scholarship athletes.

Student-athletes also generate impacts through spending in the region and community involvement. In FY19, the Athletics Department generated a total economic impact of **\$41 million* in output**. Through spending by the Athletics Department, students, families, faculty, staff, and visitors generated **\$3 million*** in FY19 in federal, state, and county tax revenue impact due to the operations of USM athletics alone.

\$3 MILLION*
**IN FEDERAL, STATE, AND
COUNTY TAX REVENUE**

\$41 MILLION*
TOTAL ECONOMIC IMPACT

THE UNIVERSITY OF SOUTHERN MISSISSIPPI COASTAL IMPACTS

USM COASTAL OPERATIONS

As the leading research university on the Mississippi Gulf Coast, USM provides students with pathways to careers in uncrewed systems, maritime industry, offshore exploration, environmental monitoring, port operations, and federal and state agencies.

The University of Southern Mississippi's Coastal Operations is leveraging its proximity to the Gulf of Mexico and developing partnerships that produce new jobs in advanced research, engineering, and technical careers. Through strengthening workforce development opportunities in high-end engineering and advanced technology development, USM has received federal, state, and local support to invest in infrastructure to keep Mississippians in Mississippi while attracting new talent to the state.

Over the last five years, USM's Coastal Operations has cut the ribbon on the **\$15 million Marine Research Center** at the Port of Gulfport, the **\$16.1 million Marine Education Center** at the Gulf Coast Research Laboratory (GCRL), and the **\$5 million Toxicology Building** also at GCRL. The University is looking forward to opening the **\$34 million Roger F. Wicker Center for Ocean Enterprise** and the arrival of the National Science Foundation's \$100 million R/V *Gilbert R. Mason*. Both will be located at the Port of Gulfport. A **\$14 million Oyster Hatchery and Research Center** will be built at USM's Gulf Coast Research Laboratory in Ocean Springs.

\$15 MILLION MARINE RESEARCH CENTER

Port of Gulfport



\$16.1 MILLION MARINE EDUCATION CENTER

Gulf Coast Research Laboratory (GCRL)

\$5 MILLION TOXICOLOGY BUILDING

Gulf Coast Research Laboratory (GCRL)

FUTURE OPENINGS

\$34 MILLION ROGER F. WICKER CENTER FOR OCEAN ENTERPRISE

Port of Gulfport

NATIONAL SCIENCE FOUNDATION'S \$100 MILLION R/V GILBERT R. MASON

Port of Gulfport

\$14 MILLION OYSTER HATCHERY AND RESEARCH CENTER

Gulf Coast Research Laboratory (GCRL)



COASTAL OPERATION LOCATIONS

Long Beach, Miss.—USM’s Gulf Park Campus in Long Beach, Miss. is the central location for academic undergraduate and graduate programs on the Mississippi Gulf Coast. The Gulf Park campus is home to the state’s only Bachelor of Science degree in ocean engineering and one of only 10 programs in the nation.

Gulfport, Miss.—The University’s Marine Research Center (MRC) at the Port of Gulfport is homeport to the 135-foot R/V *Point Sur* and future home to the 199-foot R/V *Gilbert R. Mason* and the Roger F. Wicker Center for Ocean Enterprise (both under construction). The School of Ocean Science and Engineering (SOSE) offers the nation’s first and only uncrewed maritime systems certificate program at the MRC.

Hancock County—USM has a research site located at the John C. Stennis Space Center (SSC) in Hancock County, Mississippi, where it is home to the SOSE Division of Marine Science, the Hydrographic

Science Research Center, and the Center for Higher Learning. The University’s internationally recognized Hydrographic Science graduate program, based at the SSC, boasts a 100 percent job placement rate for graduates. USM has a longstanding history of working with the Navy operations at SSC in both education and research.

Jackson County—USM’s Gulf Coast Research Laboratory (GCRL) is located in Ocean Springs, Miss., and is the state’s designated marine laboratory. GCRL is home to the Marine Education Center, Center for Fisheries Research and Development, Thad Cochran Marine Aquaculture Center, and the SOSE’s Division of Coastal Sciences. It is also the homeport to the 65-foot R/V *Jim Franks* and the *Miss Peetsy B*, a vessel that was donated to GCRL by USM alumnus Jimmy Buffett.

Biloxi, Miss.—Point Cadet in Biloxi, Miss., serves as a teaching and research vessel staging site, coordinated through the University’s GCRL, and is the homeport of the R/V *Tommy Munro*.

APPENDIX A: THE ACCELERATOR

ACCELERATOR TENANT OVERVIEW

- Thirty-four (34) companies and six University entities have been tenants at The Accelerator in the last 10 years.
- Currently, 14 companies and four University entities are present.
- Of the 20 companies that have exited, nine did so for growth purposes. Of those nine, two are no longer in operation.

ACCELERATOR HIGHLIGHTS

- **Emergent BioSolutions:** Ramped production and shipping; approximately 4FTE's and 12 shift workers; on a growth projection to double capacity, preferably on-site
- **Oxiteno:** Initially looking to establish an R&D facility in the U.S.; have grown from 5 FTE's to 10, and on schedule for expanding to 20 FTE's on-site
- **Chromis:** New Jersey-based company initially worked with MPI and expanded work with the on-site tenant, expanding all operations to Hattiesburg
- **Scigenesis:** Progressed with cost-effective flame-retardant military uniform offerings; relocated to Maryland to advance qualifications
- **KDL Solutions, LLC:** Has since expanded their product line from their patented technology for Fingerprint Kits to include Active Shooter Training Kits and First Responder Kits at their Mississippi store; their offering provides the only commercial Active Shooter Training Kit used for ALERRT, the national standard in active shooter response training

CURRENT ACCELERATOR CLIENT COMPANIES

- **AITC Polymers**
A contract coating and composite development and manufacturing company formed by two USM polymer science & engineering faculty.
- **Large Aviation Company**
A multinational corporation requiring a local project office as a university partner in developing advanced composite materials
- **Chromis Technologies**
A startup specializing in fiber optics and specialty polymers
- **Corn Board Manufacturing**
A bio-based composite materials and advanced equipment manufacturing leader focused on a green alternative to pressed wood products
- **Essential Knowledge Systems**
A startup focused on the development and commercialization of a software, applications, and related services
- **Emergent BioSolutions**
A multinational corporation uses advanced manufacturing to package and ship RSDL® Reactive Skin Decontamination Lotion Kits, intended to remove or neutralize chemical warfare agents and T-2 Toxin from the skin
- **Medsitis, LLC**
A growing startup business in e-commerce for medical products
- **Kathmann Solutions, LLC**
A contract chemical synthesis startup

- **Oxiteno USA, LLC**
U.S. R&D location for the multinational company focused on alkoxylation process and applications research in home and personal care, agricultural adjuvants, oil and gas, and coatings applications
- **Reactive Surfaces, Ltd., LLP**
R&D startup centered around bio-based functional additives for coatings; develops and licenses IP
- **SquelchFire, Inc.**
A faculty-led R&D and consultancy startup specializing in cosmetics, fire retardants, green solutions, and advanced polymers
- **Texon Distributing, L.P.**
A local branch service providing butane blending expertise to the energy market via Blend Tech™ and niche energy marketing
- **Yellowhammer Intellectual Property Group PLLC**
Startup providing technology-related intellectual property services

UNIVERSITY TENANTS LOCATED AT THE ACCELERATOR

- **Mississippi Polymer Institute (MPI)**
Industrial outreach arm providing technical services associated with the production and application of materials; MPI annually assists over 15 inventors/startups and 69 associated projects as part of their mission to support technically oriented business growth in Mississippi
- **Wiggins Research Group**
Conducts rapid-cycle next-generation aerospace composites for corporate customers
- **Gould-Piland Research Group**
Conducts leading-edge R&D activities by evaluating impact testing for new and improved headgear

- **Mississippi INBRE**
Mississippi IDeA Network of Biomedical Research Excellence (INBRE) is a network of colleges and universities designed to build biomedical research infrastructure in Mississippi.

The Accelerator tenants have included 33 companies and six University application-oriented entities in the last 10 years. Historically, 20 companies left The Accelerator, with nine doing so for growth purposes. Seven out of nine of the companies today are still in operation.

GAP FUND INITIATIVE THROUGH THE ACCELERATOR

- **EnergyID** – Field testing of a Beta version prototype of their novel patent-pending five-stage heat exchanger, MAXXX, has been shown to improve fuel economy by up to 30% in diesel.
- **Speed Box** – Further development of their patented 300 lb. rugged, lightweight DoD transport container and improved market insertion
- **HiRO Telemedicine Systems** – William Carey University - The Healthcare Integrated Rescue Operations (HiRO) system was created to provide rapid access to life-saving medical supplies and specialized expertise to critically injured personnel in remote, dangerous, or hostile environments that allow a remote physician to triage a disaster in real-time.
- **SciGenisis** – Fabric testing on U.S. military uniforms that have been screen printed with their drop-in ready ink to provide flame retardancy to uniforms made from the standard nylon/cotton blends (50/50 NYCO)
- **Y&C Products** – Scale-up production of their novel hand cleaner is already in reordering by the military, which was developed to overcome deficiencies of existing commercial cleaners, including odor removal.

- **Innovative Imaging & Research (I2R)** – Addresses unmet NOAA need to calibrate extremely sensitive nighttime imaging. This AALS effort will allow the calibration of satellite and aircraft-mounted visible spectrum cameras that acquire imagery at night under very low light levels.
- **Gateway America** – *Harrison County, Miss.* - Uses a method known as gamma irradiation (or cold pasteurization) to virtually eliminate bacteria, pests, and pathogens like *E. coli*, salmonella, and listeria from food. This irradiation process has been approved by the USDA since 1963 and is used in 37 countries.
- **Ferson Technology** – *Jackson County, Miss.* – Manufactures high-precision optics and custom thin-film coatings providing fully integrated components into defense, medical and industrial assemblies. Approximately 30% of production is ITAR restricted.
- **PM Green Energy** – *Jackson County, Miss.* – A startup that owns a patented solar generator system. Systems are designed to provide primary power, both day and night, through a solar/battery combination. The company is working to provide self-contained power solutions for disaster-relief cottages, utility trailers, and cell towers.
- **Nu-Tech Metals** – *Harrison County, Miss.* – A startup with improved ballistic body armor with lower weight utilizing enhanced integrated aluminum with Aramid fibers; patent pending
- **Spill Tackle** – *Hancock County, Miss.* – Manufactures a patented blend of reclaimed agriculture and forestry byproducts for extremely sustainable, high-performing absorbent material. Spill Tackle is USDA bio-preferred, up to six times more absorbent than clay, biodegrades simple hydrocarbon fluids like motor oil, and is USEPA leachate tested.
- **Kopis Mobile** – A portable pump for containment berms already developed for DoD applications to other dual-use applications, such as disaster recovery, emergency management, and commercial site cleanup
- **Azuled** – Manufacture of an Organic Light Emitting Diode prototype device using patented technology to provide thinner, brighter displays while lowering energy and production costs
- **Cephalopod Optics** – A prototype fluorescence sensor to continuously detect and monitor oil pollution in the ocean with crucial spatial coverage and resolution

APPENDIX B:

TECHNOLOGY TECH TRANSFER

TECHNOLOGY DEVELOPMENT

- **Ai Controls Technology – Pilot Company as part of the Blue Tech Accelerator Program**
Gulf Coast, Pre-Revenue
 - » Started in Melbourne, Fla., AiCT moved to the Mississippi Gulf Coast in 2019 to work collaboratively with The University of Southern Mississippi’s ocean engineers and aquaculture researchers on adapting and refining AiCT’s novel technologies that have incredible potential to change how oyster farmers and other aquaculture farmers can adopt automation processes. AiCT has begun participating in the new USM Blue Tech Entrepreneurship Program (BTEP) and is interested in being part of BTEP’s pilot Blue Tech Accelerator program cohort.
- **Elasri Consulting, LLC – Mohamed Elasri**
Hattiesburg
 - » The lab would provide training opportunities to students who may benefit from exposure to molecular clinical testing.
 - » MURA Company
- **Polymergent, LLC – Jason Azoulay**
Hattiesburg
 - » Dr. Azoulay will develop and scale up materials based on the technology developed in this research lab and provide the technical design and algorithm for deriving the newly developed conjugated polymer matters. Polymergent will develop a production strategy to bring the product to the market.
 - » This research has received federal funding.
 - » MURA Company
- **Neonatal Developmental Care, LLC – Terri Daniels**
Hattiesburg
 - » NDC sells two products.
 - » NDC offers a CD training series for the nursing staff.
 - » NDC produces written guides, titled, “Parenting Based on the Developmental Progression of Preterm Infants.”
 - » MURA Company
- **TR Solutions, LLC – James Rawlins**
 - » This company was set up to commercialize formaldehyde-free adhesives made from soybeans, novel vegetable oil macromonomer (VOMM) technology, and offering formulating technologies.
- **SquelchFire, LLC – Sergei Nazarenko**
 - » The purpose of this company is the development and commercialization of novel, safe, and effective fire retardants that perform better than current products.
- **OSD Technologies, LLC – Nina McLain**
 - » A medical device company actively working with USMRF to advance the technology to bring novel medical inventions, “Oral Suction Device,” to market

APPENDIX C:

DEFINITION OF TERMS

Study Year: Fiscal Year 2019-20

Total Economic Impact – The total impact of an organization is a compilation of the direct effects, the indirect influence, and the induced effects generated in the economy as a result of the organization.

Direct Economic Impact – Direct impact includes all direct effects the organization has on the regional area due to the organizational operations. These items include direct employees, corporate spending, employee spending, and spending by patients and visitors to the organization.

Indirect Economic Impact – The indirect impact includes the impact of local industries buying goods and services from other local initiatives. The cycle of spending works its way backward through the supply chain until all money leaks from the local economy, either through imports or by payments to value-added. The impacts are calculated by applying direct effects to the Type I multipliers.

Induced Economic Impact – The response by an economy to an initial change (direct effect) occurs through re-spending of income received by a component of value-added. IMPLAN's default multiplier recognizes that labor income (employee compensation and proprietor income components of value-added) is no leakage to the regional economy. This money is recirculated through the household spending patterns causing further local economic activity.

Multiplier Effect – The multiplier effect is the additional economic impact created due to the organization's direct economic impact. Local companies that provide goods and services to an organization increase their purchasing by creating a multiplier.

Direct Tax Payment – Direct tax payments made by an organization to a unit of government

Indirect Tax Payment – Government revenue collected by governmental units in addition to those paid directly by an organization, including taxes paid directly by employees of the organization, visitors to the organization, and vendors who sell products to the organization

Direct Employment – Total number of employees at the organization based on total jobs

Indirect Employment – Indirect employment is the additional jobs created due to the organization's economic impact. Local companies that provide goods and services to an organization increase their employees as purchasing increases, making an employment multiplier.

APPENDIX D: METHODOLOGY

IMPACT ON STATE BUSINESS VOLUME AND GOVERNMENT REVENUE

USM is a significant employer in the state and a significant generator of personal income for Mississippi residents. Businesses operating within Mississippi in the wholesale, retail, service, and manufacturing sectors benefit from the direct expenditures of the institution and their faculty, staff, students, and visitors on goods and services. Additionally, many of these “direct” expenditures are re-circulated in the economy as recipients of the first round of income re-spend a portion of this income with other businesses and individuals within Mississippi.

METHODOLOGY AND DATA UTILIZED FOR THE ESTIMATION OF USM’S ECONOMIC IMPACT

Researchers used IMPLAN’s regional economic accounts and the social accounting metrics to construct state-level multipliers, which describe the response of the state economy to a change in demand or production as a result of the activities and expenditures of USM. Each industry that provides goods and services generates demand for other goods and services. This demand is multiplied through a particular economy until it dissipates through leakage to economies outside the specified area. IMPLAN models discern and calculate leaks from local regional and state economic regions based on workforce configuration, the inputs required by specific types of businesses, and the availability of both inputs in the financial area.

APPENDIX E: FAQ'S REGARDING ECONOMIC IMPACT

WHAT IS AN ECONOMIC IMPACT?

Economic impact begins when an organization spends money. Economic impact studies measure the direct economic effects of an organization's spending, plus additional indirect expenditures in the economy due to direct spending. Direct economic impact measures the dollars generated within Mississippi due to the presence of USM. This includes spending on goods and services with various vendors within the state and the expenditure of its employees and visitors, and the business volume generated by businesses within Mississippi that benefit from spending by USM. Not all dollars spent by USM stay in Mississippi. Dollars that leak out of the state in the form of purchases from out-of-state vendors are not included in the economic impact that USM has on the state of Mississippi.

The total economic impact includes the “multiplier” of spending from companies that do business with USM. Support businesses may consist of lodging establishments, restaurants, construction firms, vendors, temporary agencies, etc. Spending multipliers attempt to estimate the ripple effect in the state economy where the spending occurs. For example, spending by USM with local vendors provides these vendors with additional dollars that they re-spend in the local economy, causing a “multiplier effect.”

WHAT IS THE MULTIPLIER EFFECT?

Multipliers are a numeric way of describing the secondary impacts stemming from the operations of an organization. For example, an employment multiplier of 1.8 would create eight additional jobs in other industries for every 10 employees fired in the given industry, such that 18 total jobs would be added to the shared economic region. The multipliers used in the study ranged from 1.8 to 2.0.

The multiplier model is derived mathematically using the input-output model and social accounting formats. The Social Accounting System provides the framework for the predicative Multiplier Model used in economic impact studies. Purchases for final use drive the model. Industries that produce goods and services for consumer consumption must purchase products, raw materials, and services from other companies to create their products. These vendors must also have goods and services. This cycle continues until all the money is leaked from the region's economy. Their types of effects are measured with a multiplier: the direct, indirect, and induced impacts. The immediate impact is the known or predicted change in the local economy that is to be studied. The indirect impact is the business- to business- transactions required to satisfy the direct impact. The induced product is derived from local spending on goods and services by people working to meet the direct and indirect effects.

WHAT WAS THIS STUDY METHODOLOGY?

Using classic input-output analysis in combination with regional-specific social accounting matrices and multiplier models, IMPLAN provides a highly accurate and adaptable model for its users. The IMPLAN database contains county, state, zip code, and federal economic statistics, which are specialized by region, not estimated from national averages, and can be used to measure the effect on a regional or local economy of a given change or event in the economy's activity.

WHAT IS EMPLOYMENT IMPACT?

Employment impact measures the direct employment (employees, staff, faculty, administration) plus additional employment created in the economy as a result of the operations of USM.

Indirect and induced employment impact refers to other employees throughout the region that exist because of the University's economic impact. These are jobs related to the population-city services, employees at local hotels and restaurants, clerks at local retail establishments, or residents employed by vendors used by USM.

WHAT IS THE DIFFERENCE BETWEEN DIRECT AND INDIRECT TAXES?

Direct tax dollars include sales taxes and net corporate income taxes paid directly by the institution to the state. In contrast, indirect taxes include taxes paid to the state by vendors that do business with USM and individuals.

IS THIS A ONE-TIME IMPACT, OR DOES THE IMPACT REPEAT EACH YEAR?

The results presented in the economic study are generated on an annual basis. The economic impact in future years can either be higher or lower based on the number of employees, students, capital expansion, increases in external research, and state appropriations.



THE UNIVERSITY OF
SOUTHERN MISSISSIPPI

TRENT LOTT
NATIONAL CENTER

STUDY CONTRIBUTORS

Shannon Campbell, PhD

Director, Trent Lott Center

Heather N. Brown, MSED

Research Analyst, Trent Lott Center

Colby Bennett

Graduate Research Assistant, Trent Lott Center

Joseph Cambonga

Graduate Research Assistant, Trent Lott Center

Chad R. Miller, PhD

Program Director, Master of Science in Economic Development

Tasha May, MBA

Operations Manager, Trent Lott Center

***FINANCIAL DATA INDEPENDENTLY VERIFIED BY IMPLAN**