THE ECONOMIC VALUE OF TEXAS A&M GALVESTON TO THE GALVESTON COUNTY ECONOMY IN FY 2014-15

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Emsi
Texas A&M University Galveston (Texas A&M Galveston) creates value in a variety of ways. The university improves higher education delivery throughout the county and helps students increase their employability and potential. The university facilitates new research and also draws visitors to the county, generating new dollars and opportunities for Galveston County.

The value of Texas A&M Galveston influences both the lives of students and also the county economy. The university serves a range of industries in Galveston County, supports county businesses, and benefits society as a whole in Texas from an expanded economy and improved quality of life. The benefits created by Texas A&M Galveston extend as far as the state and local government through increased tax revenues and public sector savings.

This study investigates the economic impacts created by Texas A&M Galveston on the business community in Galveston County and the benefits that the university generates in return for the investments made by their key stakeholder groups—students, society, and taxpayers. The following two analyses are presented:

- Economic impact analysis
- Investment analysis

All results reflect student and financial data for Fiscal Year (FY) 2014-15. Impacts on the county business community are reported under the economic impact analysis. Results are measured in terms of total income. The return on investment to students, taxpayers, and society are reported under the investment analysis. Both analyses are described more fully in the following sections.
ECONOMIC IMPACT ANALYSIS

Texas A&M Galveston promotes economic growth in Galveston County through its direct expenditures and resulting expenditures of students, visitors, and county businesses. The university serves as an employer and buyer of goods and services for its general and research operations. The university’s reputation and activities attract students and visitors from outside Galveston County, whose expenditures benefit county vendors. In addition, Texas A&M Galveston is a primary source of education to Galveston County residents and a supplier of trained workers to county industries, increasing overall productivity in the county workforce.
OPERATIONS SPENDING IMPACT

Texas A&M Galveston is an important employer in Galveston County. In FY 2014-15, the university employed 284 full-time and part-time faculty and staff (less research). Of these, 81% lived in Galveston County. Total payroll at Texas A&M Galveston was $24.9 million, much of which was spent in the county for groceries, dining out, clothing, and other household expenses. In addition, Texas A&M Galveston is a large-scale buyer of goods and services. In FY 2014-15 the university spent $33.9 million to cover its expenses for facilities, professional services, and supplies (less research).

Texas A&M Galveston added $32.7 million in total income to the county during the analysis year as a result of its day-to-day operations (less research). This figure represents the university’s payroll, the multiplier effects generated by the spending of the university and its employees, and a downward adjustment to account for funding that the university received from state and local sources.

RESEARCH SPENDING IMPACT

Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services. Last year Texas A&M Galveston received 2 invention disclosures. In FY 2014-15, Texas A&M Galveston spent $2.9 million on payroll to support research activities, creating a net total of $4.5 million in total income for the county economy.

STUDENT SPENDING IMPACT

Around 82% of students attending Texas A&M Galveston originated from outside the county in FY 2014-15. Some of these students relocated to Galveston County. These students would not have come to the county if the university did not exist. In addition, a number of in-county students would have left the county for other education opportunities if not for the existence of Texas A&M Galveston. While attending the university, these relocator and retained students spent $16 million to purchase groceries, rent accommodation, pay for transportation, and so on. A significant portion of these expenditures occurred in the county, generating $4.9 million in total income in the county economy during the analysis year.

VISITOR SPENDING IMPACT

Thousands of visitors from outside the county were attracted to Texas A&M Galveston during the analysis year to attend commencement, sports events, conferences, meetings, and other activities sponsored by the university. While in the county, visitors spent money for lodging, food, transportation, and other personal expenses. The off-campus expenditures of the university’s out-of-county visitors generated a net impact of $283,300 in total income for the county economy in FY 2014-15.

FORMER STUDENT IMPACT

The education and training Texas A&M Galveston provides for county residents results in the greatest impact. Since the university was established, students have studied at Texas A&M Galveston and entered the workforce with new skills. Today, hundreds of former students are employed in Galveston County (Figure 1).

FIGURE 1: Texas A&M Galveston former students working in-county today

- Retired, out-migrated since graduation
- Still employed in-region today since graduation
During the analysis year, past and present students of Texas A&M Galveston generated $24.2 million in total income for the county. This figure represents the higher wages that students earned during the year, the increased output of the businesses that employed the students, and the multiplier effects that occurred as students and their employers spent money at other businesses.

**TOTAL IMPACT**

The overall impact of Texas A&M Galveston on the county business community during the analysis year amounted to $66.6 million in total income, equal to the sum of the operations spending impact, the research spending impact, the student spending impact, the visitor spending impact, and the former student impact. The $66.6 million in total income was equal to approximately 0.4% of the GRP of Galveston County. By comparison, this contribution that the university provides on its own is nearly as large as the entire Arts, Entertainment, & Recreation industry in the county.

The total impact is also expressed in terms of the jobs supported by the total income; they are calculated by jobs-to-sales ratios specific to each industry. Overall, the $66.6 million impact supports 996 jobs.

A portion of the total $66.6 million is broken out into an industry-by-industry impact ordered by total income. Table 2 outlines the top industries impacted by Texas A&M Galveston. Because industries have different jobs-to-sales ratios, the associated jobs supported by the Texas A&M Galveston impact differ by industry. Nonetheless, these are impacts that would not have been generated without the university’s presence.

### TABLE 2: Impacts created by Texas A&M on the region in FY 2014-15

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Total Income</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPERATIONS SPENDING IMPACT</td>
<td>$32.7 MILLION</td>
<td>456</td>
</tr>
<tr>
<td>RESEARCH SPENDING IMPACT</td>
<td>$4.5 MILLION</td>
<td>64</td>
</tr>
<tr>
<td>STUDENT SPENDING IMPACT</td>
<td>$4.9 MILLION</td>
<td>176</td>
</tr>
<tr>
<td>VISITOR SPENDING IMPACT</td>
<td>$283.3 THOUSAND</td>
<td>8</td>
</tr>
<tr>
<td>FORMER STUDENT IMPACT</td>
<td>$24.2 MILLION</td>
<td>292</td>
</tr>
<tr>
<td>TOTAL IMPACT</td>
<td>$66.6 MILLION</td>
<td>996</td>
</tr>
</tbody>
</table>

### TABLE 2: Top industries impacted by Texas A&M Galveston

<table>
<thead>
<tr>
<th>Industry</th>
<th>Total income</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>$4.6 MILLION</td>
<td>16</td>
</tr>
<tr>
<td>Real Estate and Rental and Leasing</td>
<td>$4.5 MILLION</td>
<td>114</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>$4.2 MILLION</td>
<td>175</td>
</tr>
<tr>
<td>Professional and Technical Services</td>
<td>$4.1 MILLION</td>
<td>58</td>
</tr>
<tr>
<td>Other Services (except Public Administration)</td>
<td>$2.3 MILLION</td>
<td>25</td>
</tr>
<tr>
<td>All other industries</td>
<td>$47 MILLION</td>
<td>578</td>
</tr>
<tr>
<td><strong>Total income</strong></td>
<td><strong>$66.6 MILLION</strong></td>
<td><strong>996</strong></td>
</tr>
</tbody>
</table>

*Numbers may not add due to rounding.*
INVESTMENT ANALYSIS

Investment analysis is the process of evaluating total costs and measuring these against total benefits to determine whether or not a proposed venture will be profitable. If benefits outweigh costs, then the investment is worthwhile and considered profitable.

Texas A&M Galveston received a total of $61.2 million in FY 2014-15. Tuition and fees comprised 34% of total revenue, student aid from government sources comprised another 44%, and all other revenue comprised the remaining 22%. This study considers Texas A&M Galveston as an investment from the perspectives of those whom provided these revenues - students, taxpayers, and society. The backdrop for the analysis is the entire Texas economy.

STUDENT PERSPECTIVE

In FY 2014-15, Texas A&M Galveston served 2,546 credit students and 89 non-credit students. In order to attend the university, students paid for tuition, fees, books, and supplies. They also gave up money that they would have otherwise earned had they been working instead of attending the university. The total investment made by Texas A&M Galveston’s students in FY 2014-15 amounted to $66.9 million, equal to $23 million in out-of-pocket expenses plus $43.8 million in forgone time and money.

In return for their investment, Texas A&M Galveston’s students will receive a stream of higher future wages that will continue to grow through their working lives. As shown in Figure 2, earnings levels increase as people achieve higher levels of education. For example, the average bachelor’s degree completer from Texas A&M Galveston will see an increase in earnings of $33,100 each year compared to someone with a high school diploma or equivalent. Over a working lifetime, this increase in earnings amounts to an undiscounted value of approximately $1,489,500 in higher earnings.

The present value of the higher future wages that Texas A&M Galveston’s students will receive over their
THE ECONOMIC VALUE OF TEXAS A&M GALVESTON TO THE GALVESTON COUNTY ECONOMY IN FY 2014-15

The economic value of Texas A&M Galveston to the Galveston County economy in FY 2014-15 is $246 million. Dividing this value by the $66.9 million in student costs yields a benefit-cost ratio of 3.68. In other words, for every $1 students invest in Texas A&M Galveston in the form of out-of-pocket expenses and forgone time and money, they receive a cumulative of $3.68 in higher future wages. The average annual rate of return for students is 14.5%. This is an impressive return, especially when compared to the 10-year average 7.2% return to the US stock market (Figure 3).

**TAXPAYER PERSPECTIVE**

Texas A&M Galveston generates more in tax revenue than it takes. These benefits to taxpayers consist primarily of taxes that the state and local government will collect from the added revenue created in the state. As Texas A&M Galveston students earn more, they will spend more resulting in higher tax revenues. Employers will also make higher tax payments as they increase their output and purchase more supplies and services. By the end of the FY 2014-15 students’ working careers, the state and local government will have collected a present value of $65.9 million in added taxes.

Benefits to taxpayers consist of the savings generated by the improved lifestyles of students and the proportionally reduced government expenditures. Education is statistically correlated with a variety of lifestyle changes that generate taxpayer savings across three main categories: 1) health, 2) crime, and 3) unemployment. Improved health habits lower the students’ demand for national health care services. Students are also less likely to commit crimes, so the demand for law enforcement and criminal justice services is reduced (study references are available in the main report). Students are also more employable, so the demand for welfare and unemployment benefits, such as earnings assistance and welfare benefits, is reduced. For a list of study references to these statistical benefits, please contact the university for a copy of the main report. All of these benefits will generate a present value of $15.7 million in savings to state and local taxpayers.

Total benefits to taxpayers equal $81.6 million, equal to the sum of the added taxes and public sector savings. Comparing this to the taxpayer costs of $21 million—equal to the funding that Texas A&M Galveston received from the state and local government during the analysis year—yields a benefit-cost ratio of 3.88. This means that for every $1 of public money invested in Texas A&M Galveston, taxpayers receive a cumulative value of $3.88 over the course of the students’ working lives. The average annual rate of return is 12.5%, a solid investment that compares favorably with other long-term investments in both the private and public sectors (Figure 3).

**SOCIAL PERSPECTIVE**

Society as a whole within Texas benefits from the presence of Texas A&M Galveston in two major ways. The first and largest benefit that society receives is an increased state economic base. As discussed in the previous section, the higher student earnings and increased business output occurs across the state. This raises prosperity in Texas and expands the economic base for society as a whole.

Benefits to society also consist of the savings generated by the improved lifestyles of students. Similar to the taxpayer section above, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers, and are distinct from the costs avoided by taxpayers outlined above. Health
savings include avoided medical costs associated with smoking, alcoholism, obesity, drug abuse, and mental disorders. Crime savings include reduced security expenditures and insurance administration, lower victim costs, and reduced criminal justice system expenditures. Unemployment savings include the reduced employer contributions towards unemployment claims. For a list of study references to these statistical benefits, please contact the university for a copy of the main report.

Figure 4 shows the present value of the higher earnings and social savings that will occur in Texas over the working lifetime of the FY 2014-15 student population at Texas A&M Galveston. Higher earnings amounts to a present value of $952.1 million due to the increased lifetime earnings of students and associated increases in business output. Social savings amount to $94.8 million, the sum of health, crime, and unemployment savings in Texas. Altogether, total benefits to society equal $1 billion (in present value terms).

Society invested $112.6 million in educations obtained at Texas A&M Galveston during the analysis year. This includes all expenditures by Texas A&M Galveston, all student expenditures, and all student opportunity costs. For every dollar of this investment, society as a whole in Texas will receive a cumulative value of $9.30 in benefits, equal to the $1 billion in benefits divided by the $112.6 million in costs. These benefits will occur for as long as Texas A&M Galveston’s FY 2014-15 students remain employed in the state workforce.
CONCLUSION

The results of this study demonstrate that Texas A&M Galveston creates value from multiple perspectives. The university benefits county businesses by increasing consumer spending in the county and supplying a steady flow of qualified, trained workers into the workforce. It enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. It benefits state and local taxpayers through increased tax receipts across the state and a reduced demand for government-supported social services. Finally, it benefits society as a whole in Texas by creating a more prosperous economy and generating a variety of savings through the improved lifestyles of students.

ABOUT THE STUDY

Data and assumptions used in the study are based on several sources, including the FY 2014-15 academic and financial reports from Texas A&M Galveston, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Emsi’s Multi-Regional Social Accounting Matrix (MR-SAM) model, and a variety of studies and surveys relating education to social behavior. The study applies a conservative methodology and follows standard practice using only the most recognized indicators of investment effectiveness and economic impact. For a full description of the data and approach used in the study, please contact Texas A&M Galveston for a copy of the technical report.

ABOUT EMSI

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