The Economic Value of John Tyler Community College

EXECUTIVE SUMMARY
John Tyler Community College (Tyler) creates value in many ways. The college plays a key role in helping students increase their employability and achieve their individual potential. The college draws students to the region, generating new dollars and opportunities for the Tyler Service Region. Tyler provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, Tyler is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

Tyler influences both the lives of its students and the regional economy. The college supports a variety of industries in the Tyler service region, supports student success, and benefits society, as a whole, through an expanded economy and improved quality of life. The benefits created by Tyler even extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by Tyler on the business community and the benefits the college generates in return for the investments made by its key stakeholder groups—students, taxpayers, and society. The following two analyses are presented:

**Economic Impact Analysis**

**Investment Analysis**

All results reflect employee, student, and financial data, provided by the college, for fiscal year (FY) 2017-18. Impacts on the Tyler Service Region economy are reported under the economic impact analysis and are measured in terms of added income. The returns on investment to students, taxpayers, and society in Virginia are reported under the investment analysis.

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1 For the purpose of this analysis, the Tyler Service Region, which is entirely in the Commonwealth of Virginia, is comprised of the cities of Colonial Heights, Hopewell, and Petersburg and the counties of Amelia, Charles City, Chesterfield, Dinwiddie, Prince George, Surry, and Sussex.
Tyler promotes economic growth in the Tyler Service Region through its direct expenditures and the resulting expenditures of students and regional businesses. The college serves as an employer and buyer of goods and services for its day-to-day operations. The college’s activities attract students from outside the Tyler Service Region, whose expenditures benefit regional vendors. In addition, Tyler is a primary source of higher education to the Tyler Service Region residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations Spending Impact

Tyler adds economic value to the Tyler Service Region as an employer of regional residents and a large-scale buyer of goods and services. In FY 2017-18, the college employed 1,050 full-time and part-time faculty and staff, 58% of whom lived in the Tyler Service Region. Total payroll at Tyler was $30.4 million, much of which was spent in the region for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the college spent $16.6 million on expenses related to facilities, construction, supplies, and professional services.

Tyler’s operations spending, including general and construction expenditures, added $38.9 million in income to the region during the analysis year. This figure represents the college’s payroll, the multiplier effects generated by the in-region spending of the college and its employees, and a downward adjustment to account for funding that the college received from regional sources. The $38.9 million in added income is equivalent to supporting 1,161 jobs in the region.

Student Spending Impact

Around 24% of credit students attending Tyler originated from outside the region in FY 2017-18, and some of these students relocated to the Tyler Service Region to attend Tyler. These students may not have come to the region if the college did not exist. In addition, some in-region students, referred to as retained students, would have left the Tyler Service Region if not for the existence of Tyler. While attending the college, these relocated and retained students spent money on groceries, accommodations, transportation, and other household expenses. This spending generated $11.3 million in added income for the regional economy in FY 2017-18, which supported 279 jobs in the Tyler Service Region.
Alumni Impact

The education and training Tyler provides for regional residents has the greatest impact. Since its establishment, students have studied at Tyler and entered the regional workforce with greater knowledge and new skills. Today, thousands of former Tyler students are employed in the Tyler Service Region. As a result of their Tyler educations, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2017-18, Tyler alumni generated $261.4 million in added income for the regional economy, which is equivalent to supporting 3,715 jobs.

Total Impact

Tyler added $311.6 million in income to the Tyler Service Region economy during the analysis year, equal to the sum of the operations and construction spending impacts, the student spending impact, and the alumni impact. For context, the $311.6 million impact was equal to approximately 1.2% of the total gross regional product (GRP) of the Tyler Service Region. This contribution that the college provided on its own was more than twice the entire Arts, Entertainment, & Recreation industry in the region.

Tyler’s total impact can also be expressed in terms of jobs supported. The $311.6 million impact supported 5,155 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 55 jobs in the Tyler Service Region is supported by the activities of Tyler, its students, and alumni. In addition, the $311.6 million, or 5,155 supported jobs, impacted regional industries in different ways. Among non-education industry sectors, Tyler supported the most jobs in the Health Care & Social Assistance industry sector – supporting 706 jobs in FY 2017-18. These are impacts that would not have been generated without the college’s presence in the Tyler Service Region.

One out of every 55 jobs in the Tyler Service Region is supported by the activities of Tyler, its students, and alumni.

- **Health Care & Social Assistance**: 706 jobs
- **Retail Trade**: 653 jobs
- **Other Services (except Public Administration)**: 503 jobs
- **Professional & Technical Services**: 475 jobs
- **Government, Non-Education**: 465 jobs

The most represented occupations in Health Care & Social Assistance are registered nurses, personal care aides, and nursing assistants. Retail salespersons and cashiers are the most represented occupations in Retail Trade. Other Services (except Public Administration) includes jobs for cosmetologists, childcare workers, and automotive mechanics. The most represented occupations in Professional & Technical Services are software developers, accountants, and management analysts. Finally, jobs in Government, Non-Education include police officers, janitors, registered nurses, and firefighters.
An investment analysis evaluates the costs associated with a proposed venture against its expected benefits. If the benefits outweigh the costs, then the investment is financially worthwhile. The analysis presented here considers Tyler as an investment from the perspectives of students, taxpayers, and society in Virginia.

### Student Perspective

In FY 2017-18, Tyler served 14,329 credit and 1,834 non-credit students. In order to attend the college, the students paid for tuition, fees, books, and supplies. They also took out loans and will incur interest on those loans. Additionally, students gave up money they would have otherwise earned had they been working instead of attending college. The total investment made by Tyler’s students in FY 2017-18 amounted to a present value of $58.1 million, equal to $21.3 million in out-of-pocket expenses (including future principal and interest on student loans) and $36.8 million in forgone time and money.

In return for their investment, Tyler’s students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average Tyler associate degree graduate from FY 2017-18 will see an increase in earnings of $8,700 each year compared to a person with a high school diploma or equivalent working in Virginia. Over a working lifetime, the benefits of the associate degree over a high school diploma will amount to an undiscounted value of $391.5 thousand in higher earnings per graduate. Altogether, Tyler’s FY 2017-18 students will receive $371.3 million in higher future earnings over their working lives, as a result of their education and training at Tyler.

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**STUDENTS SEE A HIGH RATE OF RETURN FOR THEIR INVESTMENT IN TYLER**

| Average annual return for Tyler students | 20.3% |
| Stock market 30-year average annual return | 10.1% |
| Interest earned on savings account (National Rate Cap) | 0.8% |


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The average associate degree graduate from Tyler will see an increase in earnings of **$8,700** each year compared to a person with a high school diploma or equivalent working in Virginia.

| < HS | $23,600 |
| HS | $30,500 |
| Certificate | $34,300 |
| Associate | $39,200 |
| Bachelor’s | $58,200 |

Source: Emsi complete employment data.
The students’ benefit-cost ratio is 6.4. In other words, for every dollar students invest in Tyler, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of $6.40 in higher future earnings. Annually, the students’ investment in Tyler has an average annual internal rate of return of 20.3%, which is impressive compared to the U.S. stock market’s 30-year average annual rate of return of 10.1%.

**Taxpayer Perspective**

Tyler 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 Tyler students will earn more, they will make higher tax payments throughout their working lives. Students’ employers will also make higher tax payments as they increase their output and purchases of goods and services. By the end of the FY 2017-18 students’ working lives, the state and local government will have collected a present value of $174.6 million in added taxes.

Savings generated by the improved lifestyles of Tyler students and the reduced demand for government services benefits all taxpayers. Education is statistically correlated with a variety of lifestyle changes. Students’ Tyler educations will generate savings in three main categories: 1) healthcare, 2) crime, and 3) income assistance. Improved health will lower students’ demand for national health care services. In addition, students will be less likely to interact with the criminal justice system, resulting in a reduced demand for law enforcement and victim costs. For a list of study references, contact the college for a copy of the main report. Altogether, the present value of the benefits associated with a Tyler education will generate $6.5 million in savings to state and local taxpayers.

Total taxpayer benefits amount to $181.1 million, the present value sum of the added taxes and public sector savings. Taxpayer costs are $20.9 million, equal to the amount of state and local government funding Tyler received in FY 2017-18. These benefits and costs yield a benefit-cost ratio of 8.7. This means that for every dollar of public money invested in Tyler in FY 2017-18, taxpayers will receive a cumulative value of $8.70 over the course of the students’ working lives. The present value benefits are $181.1 million and the present value costs are $20.9 million, yielding a net present value of $160.2 million.

**Benefit-cost Ratio**

- **Student Perspective**: 6.4
- **Taxpayer Perspective**: 8.7
- **Social Perspective**: 22.4

**Rate of Return**

- **Student Perspective**: 20.3%
- **Taxpayer Perspective**: 18.9%
- **Social Perspective**: n/a*

* The rate of return is not reported for the social perspective because the beneficiaries of the investment are not necessarily the same as the original investors.
average annual internal rate of return for taxpayers is 18.9%, which compares favorably to other long-term investments in the public and private sectors.

**Social Perspective**

Society as a whole in Virginia benefits from the presence of Tyler in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to higher student earnings and increased business output, which raise economic prosperity in Virginia.

Benefits to society also consist of the savings generated by the improved lifestyle of Tyler students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Healthcare savings include avoided medical costs associated with smoking, alcohol dependence, obesity, drug abuse, and depression. Savings related to crime include reduced security expenditures and insurance administration, lower victim costs, and reduced expenditures by the criminal justice system. Income assistance savings include reduced welfare and unemployment claims. For a list of study references, contact the college for a copy of the main report.

Altogether, the social benefits of Tyler equal a present value of $2.1 billion. These benefits include $2.1 billion in added income through students’ increased lifetime earnings and increased business output, as well as $16 million in social savings related to health, crime, and income assistance in Virginia. As for the social costs, people in Virginia invested $94.2 million in Tyler in FY 2017-18. The $94.2 million is the sum of all college expenditures and student costs, including interest on loans.

The benefit-cost ratio for society is 22.4, equal to the $2.1 billion in benefits divided by the $94.2 million in costs. In other words, for every dollar invested in Tyler, people in Virginia will receive a cumulative value of $22.40 in benefits. The benefits of this investment will occur for as long as Tyler’s FY 2017-18 students remain employed in the state workforce.

**Summary of Investment Analysis Results**

The results of the analysis demonstrate that Tyler is a strong investment for all three major stakeholder groups—students, taxpayers, and society. As shown, students receive a great return for their investments in a Tyler education. At the same time, taxpayers’ investment in Tyler returns more to government budgets than it costs and creates a wide range of social benefits throughout Virginia.
Conclusion

The results of this study demonstrate that Tyler creates value from multiple perspectives. The college benefits regional businesses by increasing consumer spending in the region and supplying a steady flow of qualified, trained workers to the workforce. Tyler enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The college benefits state and local taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, Tyler benefits society as a whole in Virginia 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 2017-18 academic and financial reports from Tyler, 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 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 economic impact and investment effectiveness. For a full description of the data and approach used in the study, please contact the college for a copy of the main report.

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