



The Economic Value of Roxbury Community College



ROXBURY COMMUNITY COLLEGE (RCC) 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 Boston Standard Metropolitan Statistical Area (SMSA).^{*} RCC provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, RCC is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

RCC influences both the lives of its students and the regional economy. The college supports a variety of industries in the Boston SMSA, serves regional businesses, and benefits society as a whole in Massachusetts from an expanded economy and improved quality of life. The benefits created by RCC even extend to the state government through increased tax revenues and public sector savings.

This study measures the economic impacts created by RCC 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:



RCC influences both the **lives of its students** and the **regional economy**.



Economic impact analysis



Investment analysis

All results reflect employee, student, and financial data, provided by the college, for fiscal year (FY) 2018-19. Impacts on the Boston SMSA 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 Massachusetts are reported under the investment analysis.

^{*} For the purposes of this analysis, the Boston SMSA is comprised of Bristol, Essex, Middlesex, Norfolk, Plymouth, and Suffolk Counties.



RCC promotes economic growth in the Boston SMSA 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 and construction operations. The college’s activities attract students from outside the Boston SMSA, whose expenditures benefit regional vendors. In addition, RCC is a primary source of higher education to the Boston SMSA residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations spending impact



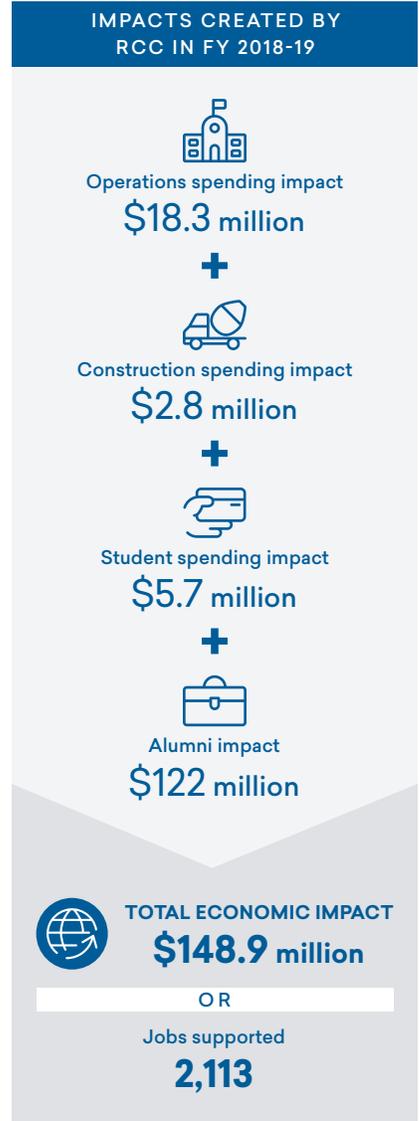
RCC adds economic value to the Boston SMSA as an employer of regional residents and a large-scale buyer of goods and services. In FY 2018-19, the college employed 482 full-time and part-time faculty and staff. Total payroll at RCC was \$16.9 million, much of which was spent in the region for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the college spent \$9.1 million on day-to-day expenses related to facilities, supplies, and professional services.

RCC’s day-to-day operations spending added \$18.3 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 \$18.3 million in added income is equivalent to supporting 475 jobs in the region.

Construction spending impact



RCC invests in construction each year to maintain its facilities, create additional capacities, and meet its growing educational demands. While the amount varies from year to year, these quick infusions of income and jobs have a substantial impact on the regional economy. In FY 2018-19, RCC’s construction spending generated \$2.8 million in added income, which is equivalent to supporting 30 jobs.



Student spending impact



Around 7% of students attending RCC originated from outside the region in FY 2018-19, and some of these students relocated to the Boston SMSA to attend RCC. 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 Boston SMSA if not for the existence of RCC. While attending the college, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$5.7 million in added income for the regional economy in FY 2018-19, which supported 101 jobs in the Boston SMSA.

Alumni impact



The education and training RCC provides for regional residents has the greatest impact. Since its establishment, students have studied at RCC and entered the regional workforce with greater knowledge and new skills. Today, thousands of former RCC students are employed in the Boston SMSA. As a result of their RCC educations, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2018-19, RCC alumni generated \$122 million in added income for the regional economy, which is equivalent to supporting 1,507 jobs.

Total impact

RCC added \$148.9 million in income to the Boston SMSA economy during the analysis year, equal to the sum of the operations and construction spending impacts, the student spending impact, and the alumni impact. RCC's total impact can also be expressed in terms of jobs supported. The \$148.9 million impact supported 2,113 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. In addition, the \$148.9 million, or 2,113 supported jobs, stemmed from different industry sectors. Among non-education industry sectors, RCC's spending and alumni in the Health Care & Social Assistance industry sector supported 702 jobs in FY 2018-19. These are impacts that would not have been generated without the college's presence in the Boston SMSA.

RCC IMPACTS BY INDUSTRY (JOBS SUPPORTED)





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 RCC as an investment from the perspectives of students, taxpayers, and society in Massachusetts.

Student perspective



In FY 2018-19, RCC served 2,811 credit and 1,054 non-credit students. In order to attend the college, the students paid for tuition, fees, books, and supplies. They also gave up money they would have otherwise earned had they been working instead of attending college. The total investment made by RCC's students in FY 2018-19 amounted to a present value of \$8.3 million, equal to \$5.2 million in out-of-pocket expenses and \$3.1 million in forgone time and money.

In return for their investment, RCC's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average RCC associate degree graduate from FY 2018-19 will see annual earnings that are \$12,000 higher than a person with a high school diploma or equivalent working in Massachusetts. Over a working lifetime, the benefits of the associate degree over a high school diploma will amount to an undiscounted value of \$444 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that RCC's FY 2018-19 students will receive over their working careers is \$69.5 million.

STUDENTS SEE A HIGH RATE OF RETURN FOR THEIR INVESTMENT IN RCC



Average annual return for RCC students
31.9%



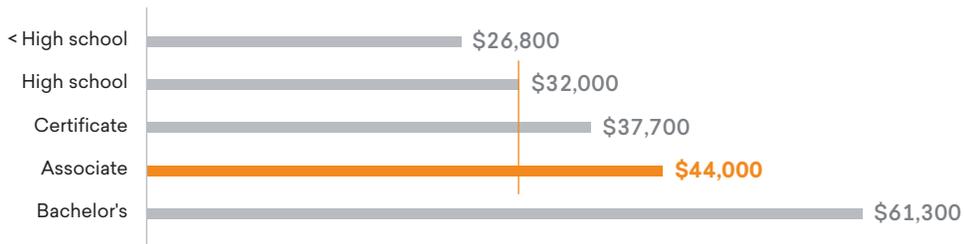
Stock market 30-year average annual return
9.9%



Interest earned on savings account (National Rate Cap)
0.8%

Source: Forbes' S&P 500, 1989-2018. FDIC.gov, 6-2019.

The average associate degree graduate from RCC will see an increase in earnings of **\$12,000** each year compared to a person with a high school diploma or equivalent working in Massachusetts.



Source: Emsi employment data.

The students' benefit-cost ratio is 8.4. In other words, for every dollar students invest in RCC, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$8.40 in higher future earnings. Annually, the students' investment in RCC has an average annual internal rate of return of 31.9%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 9.9%.

Taxpayer perspective



RCC generates substantial benefits for taxpayers in Massachusetts. These benefits to taxpayers consist primarily of taxes that the state government will collect from the added revenue created in the state.

As RCC students 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 2018-19 students' working lives, the state government will have collected a present value of \$19.1 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of RCC students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. Students' RCC 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. RCC students will be more employable, so their reduced demand for income assistance such as welfare and unemployment benefits will benefit taxpayers. For a list of study references, contact the college for a copy of the main report. Total government savings sum to \$2.2 million. Altogether, taxpayer benefits amount to \$21.3 million, the present value sum of the added taxes and public sector savings.

Social perspective

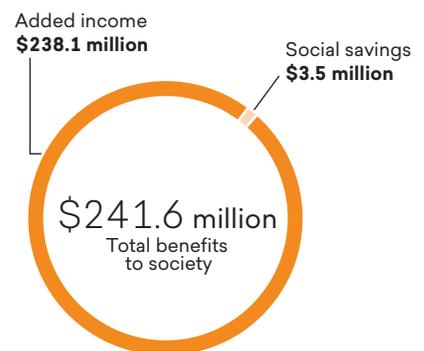


Society as a whole in Massachusetts benefits from the presence of RCC in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to higher student earnings and increased business output, which raise economic prosperity in Massachusetts.

Benefits to society also consist of the savings generated by the improved lifestyles of RCC students. As discussed in the previous section, education is statistically correlated with a variety of lifestyle changes that generate social savings. Note that these costs are avoided by the consumers but are distinct from the costs avoided by the taxpayers outlined above. Healthcare savings include avoided medical costs associated with smoking, alcohol dependence, obesity, drug abuse, and depression. Savings related to crime include reduced security expenditures

Throughout students' working lives, taxpayers in Massachusetts will receive a total of **\$21.3 million** in benefits.

SOCIAL BENEFITS IN MASSACHUSETTS FROM RCC



Source: Emsi impact model.

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 RCC equal a present value of \$241.6 million. These benefits include \$238.1 million in added income through students' increased lifetime earnings and increased business output, as well as \$3.5 million in social savings related to health, crime, and income assistance in Massachusetts. People in Massachusetts invested a present value total of \$35.8 million in RCC in FY 2018-19. The cost includes all the college and student costs.

The benefit-cost ratio for society is 6.7, equal to the \$241.6 million in benefits divided by the \$35.8 million in costs. In other words, for every dollar invested in RCC, people in Massachusetts will receive a cumulative value of \$6.70 in benefits. The benefits of this investment will occur for as long as RCC's FY 2018-19 students remain employed in the state workforce.

Summary of investment analysis results

The results of the analysis demonstrate that RCC 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 an RCC education. At the same time, taxpayers' investment in RCC returns more to government budgets than it costs and creates a wide range of social benefits throughout Massachusetts.



STUDENT PERSPECTIVE

Present value benefits

\$69.5 million

Present value costs

\$8.3 million

Net present value

\$61.2 million

Benefit-cost ratio

8.4

Rate of return

31.9%



TAXPAYER PERSPECTIVE

Present value benefits

\$21.3 million



SOCIAL PERSPECTIVE

Present value benefits

\$241.6 million

Present value costs

\$35.8 million

Net present value

\$205.8 million

Benefit-cost ratio

6.7

Rate of return

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.

CONCLUSION

The results of this study demonstrate that RCC 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. RCC enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The college benefits state taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, RCC benefits society as a whole in Massachusetts 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 2018-19 academic and financial reports from RCC, 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.

The results of this study demonstrate that RCC creates value from **multiple perspectives**.



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