



## The Economic Value of Piedmont Community College



**P**IEDMONT COMMUNITY COLLEGE (PCC) creates value in many ways. The college plays a key role in helping students increase their employability and achieve their individual potential. The college retains students in the region, generating new dollars and opportunities for the PCC Service Area.\* PCC provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, PCC is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

PCC influences both the lives of its students and the regional economy. The college supports a variety of industries in the PCC Service Area, serves regional businesses, and benefits society as a whole in North Carolina from an expanded economy and improved quality of life. Additionally, the benefits created by PCC extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by PCC 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:

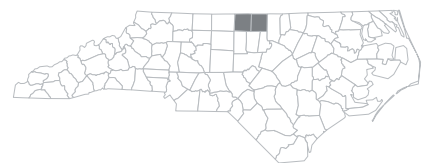


### Economic impact analysis



### Investment analysis

All results reflect employee, student, and financial data, provided by the college, for fiscal year (FY) 2019-20. Impacts on the PCC Service Area 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 North Carolina are reported under the investment analysis.



THE PCC SERVICE AREA, NC

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

\* For the purposes of this analysis, the PCC Service Area is comprised of Caswell and Person Counties.



PCC promotes economic growth in the PCC Service Area 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 retain students in the PCC Service Area, whose expenditures benefit regional vendors. In addition, PCC is a primary source of higher education to the PCC Service Area residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

## Operations spending impact



PCC adds economic value to the PCC Service Area as an employer of regional residents and a large-scale buyer of goods and services. In FY 2019-20, the college employed 227 full-time and part-time faculty and staff, 69% of whom lived in the PCC Service Area. Total payroll at PCC was \$11.3 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 \$4.9 million on day-to-day expenses related to facilities, supplies, and professional services.

PCC's day-to-day operations spending added \$12.9 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 \$12.9 million in added income is equivalent to supporting 248 jobs in the region.

## Student spending impact



Some in-region students, referred to as retained students, would have left the PCC Service Area if not for the existence of PCC. While attending the college, these retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$901.4 thousand in added income for the regional economy in FY 2019-20, which supported 22 jobs in the PCC Service Area.

### IMPACTS CREATED BY PCC IN FY 2019-20



Operations spending impact

**\$12.9 million**



Student spending impact

**\$0.9 million**



Alumni impact

**\$80.9 million**



TOTAL ECONOMIC IMPACT

**\$94.8 million**

OR

Jobs supported

**2,042**

## Alumni impact



The education and training PCC provides for regional residents has the greatest impact. Since its establishment, students have studied at PCC and entered the regional workforce with greater knowledge and new skills. Today, thousands of former PCC students are employed in the PCC Service Area. As a result of their education from PCC, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2019-20, PCC alumni generated \$80.9 million in added income for the regional economy, which is equivalent to supporting 1,772 jobs.

## Total impact

PCC added \$94.8 million in income to the PCC Service Area economy during the analysis year, equal to the sum of the operations spending impact, the student spending impact, and the alumni impact. For context, the \$94.8 million impact was equal to approximately 6.3% of the total gross regional product (GRP) of the PCC Service Area. This contribution that the college provided on its own was nearly as large as the entire Health Care & Social Assistance industry in the region.

PCC's total impact can also be expressed in terms of jobs supported. The \$94.8 million impact supported 2,042 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every 10 jobs in the PCC Service Area is supported by the activities of PCC and its students. In addition, the \$94.8 million, or 2,042 supported jobs, stemmed from different industry sectors. Among non-education industry sectors, PCC's spending and alumni in the Healthcare & Social Assistance industry sector supported 334 jobs in FY 2019-20. If the college did not exist, these impacts would not have been generated in the PCC Service Area.

### PCC IMPACTS BY INDUSTRY (JOBS SUPPORTED)



**One out of every 10 jobs** in the PCC Service Area is supported by the activities of PCC and its students.



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 PCC as an investment from the perspectives of students, taxpayers, and society in North Carolina.

## Student perspective



In FY 2019-20, PCC served 1,678 credit and 3,414 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 PCC's students in FY 2019-20 amounted to a present value of \$15.7 million, equal to \$3.3 million in out-of-pocket expenses and \$12.4 million in forgone time and money.

In return for their investment, PCC's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average PCC associate degree graduate from FY 2019-20 will see annual earnings that are \$6,400 higher than a person with a high school diploma or equivalent working in North Carolina. Over a working lifetime, the benefits of the associate degree over a high school diploma will amount to an undiscounted value of \$204.8 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that PCC's FY 2019-20 students will receive over their working careers is \$68.1 million.

The students' benefit-cost ratio is 4.3. In other words, for every dollar students invest in PCC in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$4.30 in higher future earnings. Annually,

### STUDENTS SEE A HIGH RATE OF RETURN FOR THEIR INVESTMENT IN PCC



Average annual return for PCC students

**24.2%**



Stock market 30-year average annual return

10.6%

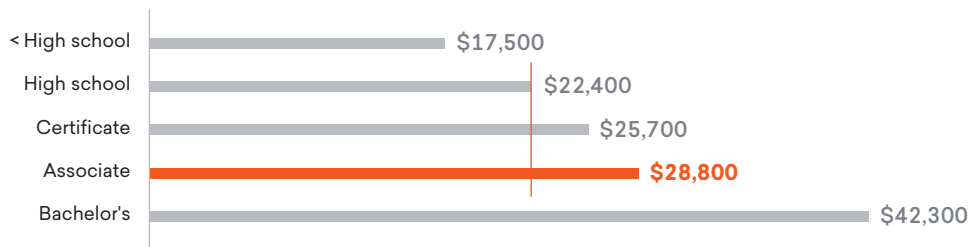


Interest earned on savings account (National Rate Cap)

0.8%

Source: Forbes' S&P 500, 1991-2020. FDIC.gov, 6-2021.

The average associate degree graduate from PCC will see an increase in earnings of **\$6,400** each year compared to a person with a high school diploma or equivalent working in North Carolina.



Source: Emsi Burning Glass employment data.

the students' investment in PCC has an average annual internal rate of return of 24.2%, which is impressive compared to the U.S. stock market's 30-year average rate of return of 10.6%.

## Taxpayer perspective



PCC 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 PCC 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 2019-20 students' working lives, the state and local government will have collected a present value of \$14.9 million in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of PCC students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The educations that PCC students receive will generate savings in three main categories: 1) healthcare, 2) justice system, and 3) income assistance. Improved health will lower students' demand for national health care services. In addition, costs related to the justice system will decrease. PCC 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. Altogether, the present value of the benefits associated with a PCC education will generate \$1.5 million in savings to state and local taxpayers.

Total taxpayer benefits amount to \$16.4 million, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$12.7 million, equal to the amount of state and local government funding PCC received in FY 2019-20. These benefits and costs yield a benefit-cost ratio of 1.3. This means that for every dollar of public money invested in PCC in FY 2019-20, taxpayers will receive a cumulative present value of \$1.30 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 2.4%, which compares favorably to other long-term investments in the public and private sectors.

For every dollar of public money invested in PCC, taxpayers will receive a cumulative value of **\$1.30** over the course of the students' working lives.

## Social perspective



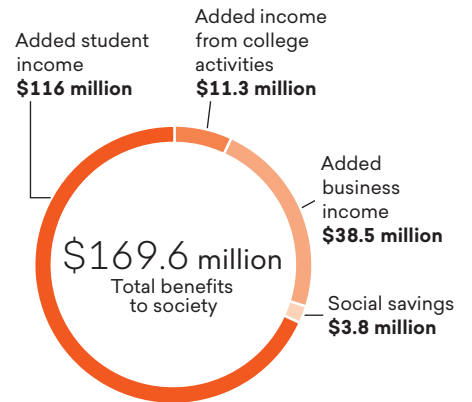
Society as a whole in North Carolina benefits from the presence of PCC in two major ways. Primarily, society benefits from an increased economic base in the state. This is attributed to the added income from students' increased lifetime earnings (added student income) and increased business output (added business income), which raise economic prosperity in North Carolina.

Benefits to society also consist of the savings generated by the improved lifestyles of PCC 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. Justice system savings include avoided costs to the government and society due to less judicial activity. 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 PCC equal a present value of \$169.6 million. These benefits include \$116.0 million in added student income, \$38.5 million in added business income, \$11.3 million in added income from college activities, as well as \$3.8 million in social savings related to health, crime, and income assistance in North Carolina. People in North Carolina invested a present value total of \$30.9 million in PCC in FY 2019-20. The cost includes all the college and student costs.

The benefit-cost ratio for society is 5.5, equal to the \$169.6 million in benefits divided by the \$30.9 million in costs. In other words, for every dollar invested in PCC, people in North Carolina will receive a cumulative value of \$5.50 in benefits. The benefits of this investment will occur for as long as PCC's FY 2019-20 students remain employed in the state workforce.

SOCIAL BENEFITS IN NORTH CAROLINA FROM PCC



Source: Emsi Burning Glass impact model.

### Summary of investment analysis results

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

STUDENT PERSPECTIVE		TAXPAYER PERSPECTIVE		SOCIAL PERSPECTIVE	
Present value benefits	<b>\$68.1 million</b>	Present value benefits	<b>\$16.4 million</b>	Present value benefits	<b>\$169.6 million</b>
Present value costs	<b>\$15.7 million</b>	Present value costs	<b>\$12.7 million</b>	Present value costs	<b>\$30.9 million</b>
Net present value	<b>\$52.5 million</b>	Net present value	<b>\$3.7 million</b>	Net present value	<b>\$138.7 million</b>
Benefit-cost ratio	<b>4.3</b>	Benefit-cost ratio	<b>1.3</b>	Benefit-cost ratio	<b>5.5</b>
Rate of return	<b>24.2%</b>	Rate of return	<b>2.4%</b>	Rate of return	<b>n/a*</b>

\* 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 PCC 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. PCC 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, PCC benefits society as a whole in North Carolina 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 2019-20 academic and financial reports from PCC, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Emsi Burning Glass'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 PCC creates value from **multiple perspectives**.



Emsi Burning Glass provides colleges and universities with labor market data that helps create better outcomes for students, businesses, and communities. Our data, which cover more than 99% of the U.S. workforce, are compiled from a wide variety of government sources, job postings, and online profiles and résumés. Hundreds of institutions use Emsi Burning Glass to align programs with regional needs, drive enrollment, connect students with in-demand careers, track their alumni's employment outcomes, and demonstrate their institution's economic impact on their region. Visit [economicmodeling.com/higher-education](http://economicmodeling.com/higher-education) to learn more or connect with us.