The Economic Value of the Virginia Community College System
THE VIRGINIA COMMUNITY COLLEGE SYSTEM (VCCS) creates value in many ways. The colleges play a key role in helping students increase their employability and achieve their individual potential. The colleges draw students to Virginia, generating new dollars and opportunities for the Commonwealth of Virginia. VCCS provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, VCCS is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

VCCS influences both the lives of students and the Virginia economy. The colleges support a variety of industries, serve businesses, and benefit society as a whole in the Commonwealth of Virginia from an expanded economy and improved quality of life. Additionally, the benefits created by VCCS extend to the state and local government through increased tax revenues and public sector savings.

This study measures the economic impacts created by VCCS on the business community and the benefits the colleges generate in return for the investments made by their 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 VCCS, for fiscal year (FY) 2021-22. Impacts on the Virginia 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.
Economic impact analysis

VCCS promotes economic growth through its direct expenditures and the resulting expenditures of students and businesses throughout the Commonwealth of Virginia. The System serves as an employer and buyer of goods and services for its day-to-day and construction operations. The colleges attract students from outside Virginia, whose expenditures benefit Virginia vendors. In addition, VCCS is one of the primary sources of higher education to Virginia residents and a leading supplier of trained workers to industries in Virginia, enhancing overall productivity in the Virginia workforce.

Operations spending impact

VCCS adds economic value to Virginia as an employer of residents and a large-scale buyer of goods and services. In FY 2021-22, the colleges employed 11,838 full-time and part-time faculty and staff, 93% of whom lived in Virginia. Total payroll at VCCS was $620.9 million, much of which was spent in Virginia for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the colleges spent $679.6 million (excluding construction) on day-to-day expenses related to facilities, supplies, and professional services.

VCCS’s day-to-day operations spending added $810.9 million in income to Virginia during the analysis year. This figure represents the colleges’ payroll, the multiplier effects generated by the in-state spending of the colleges and their employees, and a downward adjustment to account for funding that the colleges received from Commonwealth of Virginia sources. The $810.9 million in added income is equivalent to supporting 12,815 jobs in Virginia.
Construction spending impact

VCCS invests in construction each year to maintain facilities, create additional capacities, and meet growing educational demands throughout the Commonwealth of Virginia. While the amount varies from year to year, these quick infusions of income and jobs have a substantial impact on the Virginia economy. In FY 2021-22, the colleges’ construction spending generated $12.4 million in added income, which is equivalent to supporting 171 jobs.

VCCS alumni answer Virginia’s infrastructure needs

With federal funds expected to pump billions of dollars in the coming years into improved highways, bridges, ports, airports and utility projects in Virginia, Virginia’s Community Colleges have worked closely with industry and government leaders to prepare the needed workforce training programs. VCCS launched the Virginia Infrastructure Academy in August 2022 with the goal of building a better Virginia and putting thousands of Virginians into good-paying jobs.

“I started the program because I wanted a better life for my children, and I wanted to be proud of myself for once.” Jasmine Quinoes says she found out about skilled trades workforce training at Tidewater Community College at her local unemployment office. The single mother of three sons discovered a passion for carpentry, and even as she continues her training at TCC, she’s found good work in the region’s maritime ship repair industry.

“These are positions that from day one provide better than livable wages,” said Matt Kellam, workforce development and planning coordinator at Dominion Energy. Kellam argued that jobs in the utility industry are particularly meaningful work because of their impact on the welfare of Virginia’s communities.

More broadly, Kellam credited the partnership between Virginia employers and community colleges to produce workers with the skills employers need. “We need to work in close collaboration to help our young people, our displaced workers, our veterans, and everyone else to be able to navigate their way to good careers.”

Student spending impact

Around 7% of students attending VCCS originated from outside Virginia in FY 2021-22, and many of these students relocated to Virginia to attend VCCS. These students may not have come to Virginia if the colleges did not exist. In addition, some in-state students, referred to as retained students, would have left Virginia if not for the existence of VCCS. While attending the colleges, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated $228.9 million in added income for the Virginia economy in FY 2021-22, which supported 3,618 jobs in Virginia.
The education and training VCCS provides for Virginia residents has the greatest impact. Since the establishment of the colleges, students have studied at VCCS colleges and entered the Virginia workforce with greater knowledge and new skills. Today, hundreds of thousands of former VCCS students are employed in Virginia. As a result of their education from VCCS colleges, the students receive higher earnings and increase the productivity of the businesses that employ them. In FY 2021-22, VCCS alumni generated $10.6 billion in added income for the Virginia economy, which is equivalent to supporting 118,515 jobs.

Total impact

VCCS added $11.6 billion in income to the Virginia 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 $11.6 billion impact was equal to approximately 1.8% of the total gross state product (GSP) of Virginia. This contribution that the college provided on its own is more than half of the entire Real Estate & Rental & Leasing industry in Virginia.

VCCS's total impact can also be expressed in terms of jobs supported. The $11.6 billion impact supported 135,119 jobs in Virginia, using the jobs-to-sales ratios specific to each industry in Virginia. This means that one out of every 41 jobs in Virginia is supported by the activities of VCCS and its students. In addition, the $11.6 billion, or
135,119 supported jobs, stemmed from different industry sectors. For instance, among non-education industry sectors, the spending of VCCS and its students and the activities of its alumni in the Health Care & Social Assistance industry sector supported 19,114 jobs in FY 2021-22. If VCCS did not exist, these impacts would not have been generated in Virginia.

One out of every 41 jobs in Virginia is supported by the activities of VCCS and its students.

VCCS answer for Virginia’s future

In Richmond, Virginia, Mission Tomorrow is an annual event hosted by ChamberRVA and Junior Achievement of Central Virginia to encourage over 12,000 of the region’s eighth graders to interact with and explore a wide range of potential careers. This career event focuses on hands-on learning and exploration that can give students a firsthand look at what different careers can look like. The event spans across eight localities and gets in front of students at a critical K-12 juncture, as they prepare for their high school curriculum—and beyond.

“When we talk about workforce development, we know the talent pipeline doesn’t start when graduates are out in the world looking for a job. It starts long before that, with the skills and experiences young people gain throughout school,” said Brian Anderson, president and CEO of ChamberRVA, in a 2019 press release about the event. “When we introduce students to the true breadth of career options that RVA has to offer, we not only do a service to them by helping them explore their fullest potential, but we also do a service to our region’s future by fostering a diverse, informed talent pool right here in Greater Richmond.”

Brightpoint Community College and Reynolds Community College have historically participated in the annual event, serving as both sponsors and booth attendees. Most recently in 2022, Reynolds Community College set up a makerspace to show how drones could be used in 3D drawing, and the college also brought members of its EMS program to teach students how to set-up an IV on a prosthetic arm. Previous events have also include American Sign Language demonstrations, showing off mechatronics equipment, live welding, and more.
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 evaluates VCCS as an investment from the perspectives of students, taxpayers, and society in the Commonwealth of Virginia.

**Student perspective**

In FY 2021-22, VCCS served 196,511 degree-seeking and 26,934 non-credit students. In order to attend 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 VCCS students in FY 2021-22 amounted to a present value of $1.1 billion, equal to $433.8 million in out-of-pocket expenses (including future principal and interest on student loans) and $632.8 million in forgone time and money.

In return for their investment, VCCS students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average VCCS associate degree graduate from FY 2021-22 will see annual earnings that are $12,200 higher than 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 $500.2 thousand in higher earnings per graduate. The present value of the cumulative higher future earnings that VCCS’s FY 2021-22 students will receive over their working careers is $6.1 billion.

The students’ benefit-cost ratio is 5.7. In other words, for every dollar students invest in VCCS in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of $5.70 in higher future earnings. Annually, the students’ investment in VCCS has an average annual internal rate of return of 20.2%, which is impressive compared to the U.S. stock market’s 30-year average rate of return of 9.6%.

The average associate degree graduate from VCCS will see an increase in earnings of $12,200 each year compared to a person with a high school diploma or equivalent working in Virginia.

Students see a high rate of return for their investment in VCCS

<table>
<thead>
<tr>
<th>Students’ average annual return</th>
<th>20.2%</th>
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<tbody>
<tr>
<td>Stock market 30-year average return</td>
<td>9.6%</td>
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<tr>
<td>FDIC.gov, 2-2022.</td>
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Source: Lightcast employment data.

**Table:**

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<thead>
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<th>Level of Education</th>
<th>Average Earnings</th>
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<tbody>
<tr>
<td>&lt; High school</td>
<td>$27,500</td>
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<tr>
<td>High school</td>
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<td>Certificate</td>
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<tr>
<td>Associate</td>
<td>$49,000</td>
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<tr>
<td>Bachelor's</td>
<td>$70,900</td>
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Taxpayer perspective

VCCS generates more in tax revenue than it receives. These benefits to taxpayers consist primarily of taxes that the state and local government will collect from the added revenue created in Virginia. As VCCS 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 2021-22 students’ working lives, the state and local government will have collected a present value of $1.5 billion in added taxes.

Benefits to taxpayers will also consist of savings generated by the improved lifestyles of VCCS students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes. The education that VCCS 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. VCCS 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 System for a copy of the main report. Altogether, the present value of the benefits associated with an education from VCCS will generate $118.8 million in savings to state and local taxpayers.

Total taxpayer benefits amount to $1.6 billion, the present value sum of the added tax revenue and public sector savings. Taxpayer costs are $605.5 million, equal to the amount of state and local government funding VCCS received in FY 2021-22. These benefits and costs yield a benefit-cost ratio of 2.7. This means that for every dollar of public money invested in VCCS in FY 2021-22, taxpayers will receive a cumulative present value of $2.70 over the course of the students’ working lives. The average annual internal rate of return for taxpayers is 6.9%, which compares favorably to other long-term investments in the public sector.

Social perspective

Society as a whole in the Commonwealth of Virginia benefits from the presence of VCCS in two major ways. Primarily, society benefits from an increased economic base in the Commonwealth of Virginia. 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 Virginia.

Benefits to society also consist of the savings generated by the improved lifestyles of VCCS 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.

For every dollar of public money invested in VCCS, taxpayers will receive a cumulative value of $2.70 over the course of the students’ working lives.
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 System for a copy of the main report.

Altogether, the social benefits of VCCS equal a present value of $18.7 billion. These benefits include $12.6 billion in added student income, $4.7 billion in added business income, $1.1 billion in added income from college activities, as well as $319.7 million in social savings related to health, the justice system, and income assistance in Virginia. People in Virginia invested a present value total of $2.1 billion in VCCS in FY 2021-22. The cost includes all the colleges’ operating costs and student costs.

The benefit-cost ratio for society is 8.8, equal to the $18.7 billion in benefits divided by the $2.1 billion in costs. In other words, for every dollar invested in VCCS, people in Virginia will receive a cumulative value of $8.80 in benefits. The benefits of this investment will occur for as long as the colleges’ FY 2021-22 students remain employed in the Virginia workforce.

Summary of investment analysis results

The results of the analysis demonstrate that VCCS 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 education from VCCS. At the same time, taxpayers’ investment in VCCS returns more to government budgets than it costs and creates a wide range of social benefits throughout the Commonwealth of Virginia.

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<tr>
<th>Social benefits in Virginia from VCCS</th>
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<tr>
<td>Added student income</td>
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<tr>
<td>Added business income</td>
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<tr>
<td>Social savings</td>
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Source: Lightcast impact model.

| * The rate of return is not reported for the social perspective because the beneficiaries are not necessarily the same as the original investors. |
Conclusion

The results of this study demonstrate that VCCS creates value from multiple perspectives. The colleges benefit businesses in the Commonwealth of Virginia by increasing consumer spending and supplying a steady flow of qualified, trained workers to the workforce. VCCS enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. VCCS benefits Virginia taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, VCCS benefits society as a whole in the Commonwealth of 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 2021-22 academic and financial reports from VCCS, industry and employment data from the U.S. Bureau of Labor Statistics and U.S. Census Bureau, outputs of Lightcast’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 System for a copy of the main report.

Lightcast

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