



University
of Victoria

EXECUTIVE SUMMARY

SEPTEMBER 2021



The Economic Value of the University of Victoria to British Columbia



UVic promotes economic growth in British Columbia through its direct expenditures and the resulting expenditures of visitors, students, and provincial businesses. The university serves as an employer and buyer of goods and services for its day-to-day, research, and construction operations. Numerous spin-off companies have formed as a result of programs and knowledge at UVic. The university's reputation and activities attract visitors and students from outside British Columbia, whose expenditures benefit provincial vendors. In addition, UVic is a primary source of postsecondary education to the British Columbia residents and a supplier of trained workers to provincial industries, enhancing overall productivity in the provincial workforce.

Operations spending impact



UVic adds economic value to British Columbia as an employer of provincial residents and a large-scale buyer of goods and services. In FY 2019-20, the university employed faculty and staff equivalent to 7,635 full-time employees (excluding research employees), all of whom lived in British Columbia. Total payroll at UVic was \$344 million (excluding payroll from research employees), much of which was spent in the province for groceries, mortgage and rent payments, dining out, and other household expenses. In addition, the university spent \$94.1 million on day-to-day expenses related to facilities, supplies, and professional services (excluding research expenditures).

UVic's day-to-day operations spending added \$396.4 million in income to the province during the analysis year. This figure represents the university's payroll, the multiplier effects generated by the in-province spending of the university and its employees, and a downward adjustment to account for funding that the university received from provincial sources. The \$396.4 million in added income is equivalent to supporting 7,178 jobs in the province.

Research spending impact



Research activities impact the economy by employing people and requiring the purchase of equipment and other supplies and services. Over the last five years, UVic received 344 invention disclosures, filed 92 new patent applications, and produced 57 licenses.

In FY 2019-20, UVic spent \$49.6 million on payroll to support research activities. This, along with \$54.5 million in other research spending, created a net total of



\$129.8 million in added income for the provincial economy. This added income is equivalent to supporting 1,889 jobs.

UVic's research activities create a provincial economic impact beyond spending. UVic's "total factor productivity"—which estimates the fraction of the total research and development in British Columbia done by UVic, and then applies that fraction to the portion of total output growth in the economy, which cannot be explained by increases in capital or labour—is estimated to have a total economic impact of \$24 million* annually. From 1971, 49 years, UVic's cumulative economic impact on British Columbia from research activities using total factor productivity calculations summed to \$1.2 billion.

UVIC RESEARCH DEVELOPMENTS

Fiscal year	Inventions	Patents	Licenses
2016-17	99	27	14
2017-18	81	19	7
2018-19	39	14	12
2019-20	64	15	12
2020-21	61	17	12
Total	344	92	57

Source: UVic

Monitoring the ocean for informed decision making

UVic's Ocean Networks Canada (ONC) monitors the west and east coasts of Canada and the Arctic to continuously deliver data in real-time for scientific research that helps communities, governments, and industry make informed decisions about the future. Using cabled observatories, remote control systems and interactive sensors, and big data management, ONC enables evidence-based decision-making on ocean management, disaster mitigation, and environmental protection. The observatories provide unique scientific and technical capabilities that permit researchers to operate instruments remotely and receive data at their home laboratories anywhere on the globe in real time. Data is collected on physical, chemical, biological, and geological aspects of the ocean over long time periods, supporting research on complex Earth processes in ways not previously possible. These facilities extend and complement other research platforms and programs, whether currently operating or planned for future deployment.

Construction spending impact



UVic spends millions on construction each year to maintain its facilities, create additional capacities, and meet its growing educational demands. While the amount varies from year to year, this spending generates a short-term infusion of spending and jobs in the provincial economy.

* Total factor productivity was calculated by UVic.

IMPACTS CREATED BY UVIC IN FY 2019-20



Operations spending impact

\$396.4 million



Research spending impact

\$129.8 million



Construction spending impact

\$19.1 million



Spin-off company impact

\$151.5 million



Visitor spending impact

\$36.4 million



Student spending impact

\$145.8 million



Alumni impact

\$2.4 billion



TOTAL ECONOMIC IMPACT

\$3.3 billion

OR

Jobs supported

40,595

The quick infusion of income and jobs that occurred in the provincial economy as a result of this construction spending is considered short-term due to the one-time nature of such projects. It is heavily dependent on the on-going capital projects at UVic, and FY 2019-20 was a slower year for capital projects. Nonetheless, the university's construction spending had a substantial impact on the provincial economy in FY 2019-20, equal to \$19.1 million in added income and equivalent to supporting 132 jobs.

Spin-off company impact



UVic creates an exceptional environment that fosters innovation and entrepreneurship, evidenced by the number of UVic spin-off companies created in the province. In FY 2019-20, UVic spin-off companies added \$151.5 million in income to the British Columbia economy, which is equivalent to supporting 1,201 jobs.

Visitor spending impact



Thousands of visitors from outside the province were attracted to UVic during the analysis year to attend commencement, sports events, and other activities sponsored by the university. While in the province, visitors spent money for lodging, food, transportation, and other personal expenses. The off-campus expenditures of the university's out-of-province visitors generated a net impact of \$36.4 million in added income for the provincial economy in FY 2019-20. This \$36.4 million in added income is equivalent to supporting 886 jobs.

Student spending impact



Around 36% of students attending UVic originated from outside the province in FY 2019-20, and some of these students relocated to British Columbia to attend UVic. These students may not have come to the province if the university did not exist. In addition, some in-province students, referred to as retained students, would have left British Columbia if not for the existence of UVic. While attending the university, these relocated and retained students spent money on groceries, accommodation, transportation, and other household expenses. This spending generated \$145.8 million in added income for the provincial economy in FY 2019-20, which supported 2,233 jobs in British Columbia.

Alumni impact



The education and training UVic provides for provincial residents has the greatest impact. Since its establishment, students have studied at UVic and entered the provincial workforce with greater knowledge and new skills. Today, thousands of former UVic students are employed in British Columbia. As a result of their UVic educations, the students receive higher

earnings and increase the productivity of the businesses that employ them. In FY 2019-20, UVic alumni generated \$2.4 billion in added income for the provincial economy, which is equivalent to supporting 27,076 jobs.

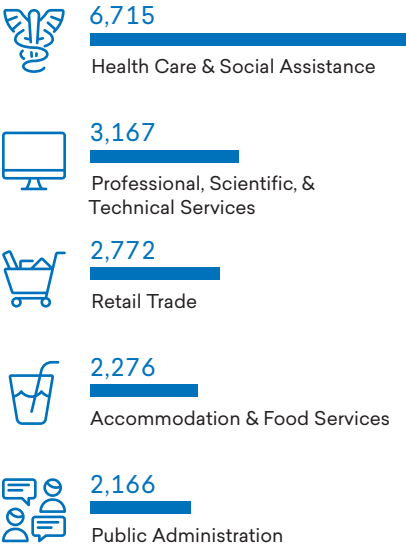
Total impact

UVic added \$3.3 billion in income to the British Columbia economy during the analysis year, equal to the sum of the operations, research, and construction spending impacts, the spin-off company impact, the visitor and student spending impacts, and the alumni impact. For context, the \$3.3 billion impact was equal to approximately 1.2% of the total gross provincial product (GPP) of British Columbia.

One out of every 69 jobs in British Columbia is supported by the activities of UVic and its students.

UVic’s total impact can also be expressed in terms of jobs supported. The \$3.3 billion impact supported 40,595 provincial jobs, using the jobs-to-sales ratios specific to each industry in the province. This means that one out of every 69 jobs in British Columbia is supported by the activities of UVic and its students. In addition, the \$3.3 billion, or 40,595 supported jobs, stemmed from different industry sectors. Among non-education industry sectors, UVic’s activity and alumni in the Health Care & Social Assistance industry sector supported 6,715 jobs in FY 2019-20. These are impacts that would not have been generated without the university’s presence in British Columbia.

TOP INDUSTRY IMPACTS (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 UVic as an investment from the perspectives of students, taxpayers, and society in British Columbia.

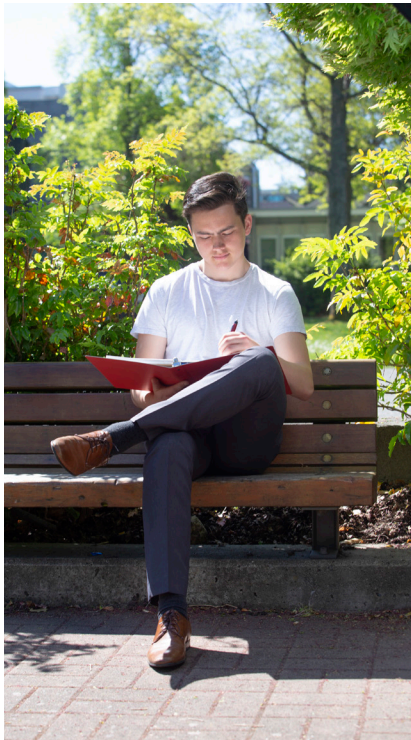
Student perspective



In FY 2019-20, UVic served 22,020 students. In order to attend the university, the students paid for tuition, fees, books, and supplies. Additionally, students gave up money they would have otherwise earned had they been working instead of attending university. The total investment made by UVic's students in FY 2019-20 amounted to a present value of \$613.9 million, equal to \$214.4 million in out-of-pocket expenses and \$399.5 million in forgone time and money.

In return for their investment, UVic's students will receive a stream of higher future earnings that will continue to grow throughout their working lives. For example, the average UVic bachelor's degree graduate from FY 2019-20 will see an increase in earnings of \$19,300 each year compared to a person with a high school diploma or equivalent working in British Columbia. Over a working lifetime, the benefits of the bachelor's degree over a high school diploma will amount to an undiscounted value of \$2.9 million in higher earnings per graduate. Altogether, UVic's FY 2019-20 students will receive \$872.9 million in higher future earnings over their working lives, as a result of their education and training at UVic.

The students' benefit-cost ratio is 1.4. In other words, for every dollar students invest in UVic, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of \$1.40 in higher future earnings. Annually, the students' investment in UVic has an average annual internal rate of return of 9.3%.



Source: Emsi Burning Glass employment data.

Taxpayer perspective



UVic generates more in tax revenue than it takes. These benefits to taxpayers consist primarily of taxes that the provincial government will collect from the added revenue created in the province. As UVic 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 2019-20 students' working lives, the provincial government will have collected a present value of \$649.6 million in added tax revenue.

Benefits to taxpayers also consist of savings generated by the improved lifestyles of UVic students and the corresponding reduced government services. Education is statistically correlated with a variety of lifestyle changes.

Students' UVic educations will generate savings in three main categories: 1) healthcare, 2) crime, and 3) income assistance. Improved health will lower students' demand for 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 reduced victim costs. UVic 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 university for a copy of the main report. Altogether, the present value of the benefits associated with a UVic education will generate \$11.7 million in savings to provincial taxpayers.

Total taxpayer benefits amount to \$661.3 million, the present value sum of the added taxes and public sector savings. Taxpayer costs are \$243.7 million, equal to the amount of provincial government funding UVic received in FY 2019-20. These benefits and costs yield a benefit-cost ratio of 2.7. This means that for every dollar of public money invested in UVic in FY 2019-20, taxpayers will receive a cumulative value of \$2.70 over the course of the students' working lives. The average annual internal rate of return for taxpayers is 15.6%, which compares favorably to other long-term investments in the public and private sectors.

For every dollar of public money invested in UVic, taxpayers will receive a cumulative value of **\$2.70** over the course of the students' working lives.

Social perspective



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

Benefits to society also consist of the savings generated by the improved lifestyles of UVic 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, and mental health issues. Crime savings include reduced criminal justice system expenditures, lower victim costs, and increased productivity of individuals who are working rather than spending time in custody. Income assistance savings include the reduced demand for employment insurance benefits and employment-related social assistance. For a list of study references, contact the university for a copy of the main report.

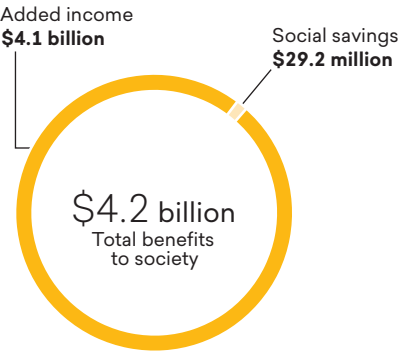
Altogether, the social benefits of UVic equal a present value of \$4.2 billion. These benefits include \$4.2 billion in added income through students’ increased lifetime earnings and increased business output, as well as \$29.2 million in social savings related to health, crime, and income assistance in British Columbia. People in British Columbia invested a present value total of \$993.6 million in UVic in FY 2019-20. These costs include all university and student costs.

The benefit-cost ratio for society is 4.2, equal to the \$4.2 billion in benefits divided by the \$993.6 million in costs. In other words, for every dollar invested in UVic, people in British Columbia will receive a cumulative value of \$4.20 in benefits. The benefits of this investment will occur for as long as UVic’s FY 2019-20 students remain employed in the provincial workforce.

Summary of investment analysis results

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

SOCIAL BENEFITS IN BRITISH COLUMBIA FROM UVIC



Source: Emsi Burning Glass impact model.

UVic contributes to the arts and culture community

UVic makes an effort to not only maintain but grow the arts and culture community. Victoria has long been known as one of Canada’s leading creative communities and, for more than 50 years, UVic’s Faculty of Fine Arts has played an integral role in the city’s rise as a cultural destination. Although these benefits are not quantitatively measured, they should still be recognized.

STUDENT PERSPECTIVE		TAXPAYER PERSPECTIVE		SOCIAL PERSPECTIVE	
<div>Present value benefits</div> <div>\$872.9 million</div> <div>Present value costs</div> <div>\$613.9 million</div> <div>Net present value</div> <div>\$259 million</div>		<div>Present value benefits</div> <div>\$661.3 million</div> <div>Present value costs</div> <div>\$243.7 million</div> <div>Net present value</div> <div>\$417.6 million</div>		<div>Present value benefits</div> <div>\$4.2 billion</div> <div>Present value costs</div> <div>\$993.6 million</div> <div>Net present value</div> <div>\$3.2 billion</div>	
Benefit-cost ratio	Rate of return	Benefit-cost ratio	Rate of return	Benefit-cost ratio	Rate of return
1.4	9.3%	2.7	15.6%	4.2	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 UVic creates value from multiple perspectives. The university benefits provincial businesses by increasing consumer spending in the province and supplying a steady flow of qualified, trained workers to the workforce. UVic enriches the lives of students by raising their lifetime earnings and helping them achieve their individual potential. The university benefits provincial taxpayers through increased tax receipts and a reduced demand for government-supported social services. Finally, UVic benefits society as a whole in British Columbia 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 UVic, industry and employment data from Statistics Canada, outputs of Emsi Burning Glass's Canadian Regional Input-Output model, and a variety of studies and surveys relating education to social behaviour. 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 UVic for a copy of the main report.

The results of this study demonstrate that UVic 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 to learn more or connect with us.