University of Victoria

EXECUTIVE SUMMARY

SEPTEMBER 2021

The Economic Value of the University of Victoria to the Greater Victoria Area

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THE UNIVERSITY OF VICTORIA (UVIC) creates value in many ways. The university plays a key role in helping students increase their employability and achieve their individual potential. It facilitates new research and company developments and draws visitors and students to the region, generating new dollars and opportunities for the Greater Victoria Area.[1] UVic provides students with the education, training, and skills they need to have fulfilling and prosperous careers. Furthermore, UVic is a place for students to meet new people, increase their self-confidence, and promote their overall health and well-being.

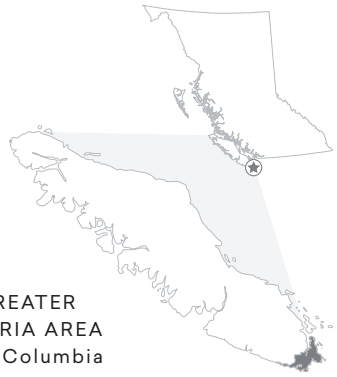
UVic influences both the lives of its students and the regional economy. The university supports a variety of industries in the Greater Victoria Area, serves regional businesses, and benefits the provincial government through increased tax revenues and public sector savings. The benefits created by UVic even extend to society as a whole in British Columbia, which benefits from an expanded economy and improved quality of life.

This study measures the economic impacts created by UVic on the business community and the benefits the university 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**

Results of the analysis reflect fiscal year (FY) 2019-20. However, most of FY 2019-20 was pre-COVID. Therefore, in addition to the pre-COVID analysis, Emsi Burning Glass measured the economic activity change from UVic and its alumni in FY 2020-21, during the COVID pandemic. All results reflect employee, student, and financial data, provided by the university, for FY 2019-20 and FY 2020-21. Impacts on the Greater Victoria 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 British Columbia are reported under the investment analysis.

1 For the purposes of this analysis, the Greater Victoria Area is defined as the Victoria Census Metropolitan Area.



THE GREATER VICTORIA AREA
British Columbia

*We acknowledge and respect the **lək̓ʷəŋən** peoples on whose traditional territory the University of Victoria stands, and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day.*

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

ECONOMIC IMPACT ANALYSIS

UVic promotes economic growth in the Greater Victoria Area through its direct expenditures and the resulting expenditures of visitors, students, and regional 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 the Greater Victoria Area, whose expenditures benefit regional vendors. In addition, UVic is a primary source of postsecondary education to the Greater Victoria Area residents and a supplier of trained workers to regional industries, enhancing overall productivity in the regional workforce.

Operations spending impact

UVic adds economic value to the Greater Victoria Area as an employer of regional 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), 95% of whom lived in the Greater Victoria Area. Total payroll at UVic was $344 million (excluding payroll from research employees), much of which was spent in the region 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 $486.8 million in income to the region during the analysis year. This figure represents the university's payroll, the multiplier effects generated by the in-region spending of the university and its employees, and a downward adjustment to account for funding that the university received from regional sources. The $486.8 million in added income is equivalent to supporting 8,636 jobs in the region. In FY 2020-21, UVic's operations spending added $548.5 million in income to the regional economy, equivalent to supporting 9,328 jobs.

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 $31.6 million in other research spending, created a net total of $106.4 million in added income for the regional economy. This added income is equivalent to supporting 1,711 jobs. In FY 2020-21, UVic's research spending added $78.4 million in income to the regional economy, equivalent to supporting 1,143 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[2] annually to British Columbia. 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. Total factor productivity is not available at the regional level.

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.

IMPACTS CREATED BY UVIC IN FY 2019-20

Operations spending impact
$486.8 million

+

Research spending impact
$106.4 million

+

Construction spending impact
$14.3 million

+

Spin-off company impact
$107.5 million

+

Visitor spending impact
$20.5 million

+

Student spending impact
$150.8 million

+

Alumni impact
$917.2 million

TOTAL ECONOMIC IMPACT
$1.8 billion

OR

Jobs supported
24,725

2 Total factor productivity was calculated by UVic.

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 regional economy. The quick infusion of income and jobs that occurred in the regional 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 regional economy in FY 2019-20, equal to $14.3 million in added income and equivalent to supporting 152 jobs. In FY 2020-21, UVic's construction spending added $36 million in income to the regional economy, equivalent to supporting 385 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 region. In FY 2019-20, UVic spin-off companies added $107.5 million in income to the Greater Victoria Area economy, which is equivalent to supporting 815 jobs. In FY 2020-21, the impact from UVic's spin-off companies remained unchanged.

Visitor spending impact

Thousands of visitors from outside the region were attracted to UVic during the analysis year to attend commencement, sports events, and other activities sponsored by the university. While in the region, visitors spent money for lodging, food, transportation, and other personal expenses. The off-campus expenditures of the university's out-of-region visitors generated a net impact of $20.5 million in added income for the regional economy in FY 2019-20. This $20.5 million in added income is equivalent to supporting 514 jobs. The visitor spending impact in FY 2020-21 was not measured due to data collection limitations and university-wide closures resulting from the pandemic.

Student spending impact

Around 76% of students attending UVic originated from outside the region in FY 2019-20, and some of these students relocated to the Greater Victoria Area to attend UVic. These students may not have come to the region if the university did not exist. In addition, some in-region students, referred to as retained students, would have left the Greater Victoria Area 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 $150.8 million in added income for the regional economy in

FY 2019-20, which supported 2,488 jobs in the Greater Victoria Area. In FY 2020-21, UVic's student spending added $158 million in income to the regional economy, equivalent to supporting 2,608 jobs.

Impact of international students

International students are an important part of the UVic community. In FY 2019-20, UVic served 3,867 international students, most of whom relocated to the Greater Victoria Area. These students brought new money to the regional economy through their spending on housing, food, and other living expenses. International student spending in FY 2019-20 generated $34.2 million in added income for the regional economy.

It is estimated that 48% of international students remain in the region after finishing their time at UVic. Today, thousands of these students are employed in the Greater Victoria Area, receiving higher earnings and increasing the productivity of the businesses that employ them. In FY 2019-20, these active alumni generated $77.1 million in added income for the economy.

Impact of co-operative education

Co-operative education (co-op) is an integrated approach that enables students to alternate academic terms with paid, relevant work experience in their chosen field. Approximately 66% of graduating co-op students received offers of employment by their date of graduation, compared to 58% for the entire UVic student population. Eighteen percent of students found their post-graduate position through an employer connection made during their co-op experience. In FY 2019-20, 5,591 students enrolled in the co-operative education program.

Today, thousands of co-operative education alumni are employed in the Greater Victoria Area, receiving higher earnings and increasing the productivity of the businesses that employ them. In FY 2019-20, these active co-operative education alumni generated $137.2 million in added income for the regional economy.

Alumni impact

The education and training UVic provides for regional residents has the greatest impact. Since its establishment, students have studied at UVic and entered the regional workforce with greater knowledge and new skills. Today, thousands of former UVic students are employed in the Greater Victoria Area. 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 $917.2 million in added income for the regional economy, which is equivalent to supporting 10,409 jobs. In FY 2020-21, UVic's alumni added $964.5 million in income to the regional economy, equivalent to supporting 10,946 jobs.

Total impact

UVic added $1.8 billion in income to the Greater Victoria Area economy during FY 2019-20, 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 $1.8 billion impact was equal to approximately 8.8% of the total gross regional product (GRP) of the Greater Victoria Area. This contribution that the university provided on its own is larger than the entire Retail Trade industry in the region.

> **One out of every nine jobs** in the Greater Victoria Area is supported by the activities of UVic and its students.

UVic's total impact can also be expressed in terms of jobs supported. The $1.8 billion impact supported 24,725 regional jobs, using the jobs-to-sales ratios specific to each industry in the region. This means that one out of every nine jobs in the Greater Victoria Area is supported by the activities of UVic and its students. In addition, the $1.8 billion, or 24,725 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 2,673 jobs in FY 2019-20. These are impacts that would not have been generated without the university's presence in the Greater Victoria Area.

In FY 2019-20 alone, UVic added $1.8 billion in income to the regional economy. This analysis year mostly represents activities pre-COVID. The FY 2020-21 analysis year will provide a look at the university's impact during the COVID pandemic. In FY 2020-21, UVic's impact increased slightly to $1.9 billion, equivalent to supporting 25,224 jobs. The impact of $1.9 billion is equivalent to 9.2% of the regional economy. For further perspective, one out of every nine jobs in the region are supported by UVic and its students.

TOP INDUSTRY IMPACTS (JOBS SUPPORTED), FY 2019-20

INVESTMENT ANALYSIS

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.

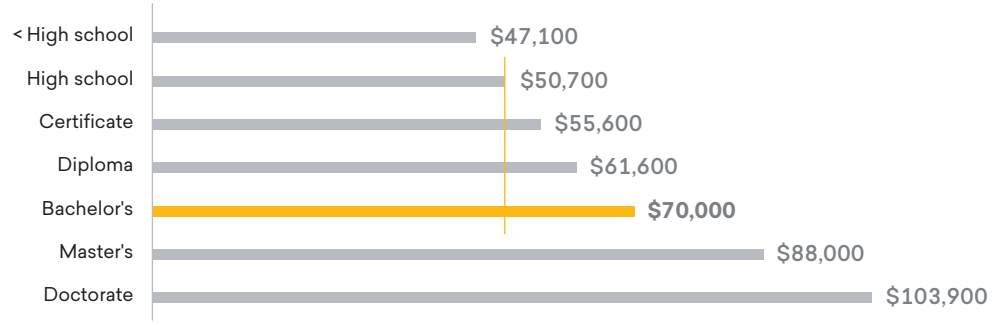
Student perspective

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%.

The average bachelor's degree graduate from UVic 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.



Source: Emsi Burning Glass employment data.

Indigenous student return on investment

UVic's Indigenous students' benefit-cost ratio is 1.2. In other words, for every dollar Indigenous students invest in UVic, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of $1.20 in higher future earnings. Annually, the Indigenous students' investment in UVic has an average annual internal rate of return of 8.2%.

Indigenous students have a slightly lower benefit-cost ratio when compared to the entire student body using this methodology. It cannot capture the specificities of the Indigenous student experiences, the experience after graduation, or their contributions to the region. First, a higher percentage of the Indigenous students in FY 2019-20 graduated with a diploma, which resulted in lower earnings than students who received a bachelor's degree. Second, a higher percentage of Indigenous students were continuing their studies, rather than completing, meaning these students will enter the workforce later, and therefore, their completion cannot be captured in the FY 2019-20 data. Finally, there is a higher percentage of female Indigenous students as compared to the entire student population. Overall, earnings for female students are lower when compared to male students, which means less of an increase in earnings.

Co-operative student return on investment

The co-op students' benefit-cost ratio is 1.7. In other words, for every dollar co-op students invest in UVic, in the form of out-of-pocket expenses and forgone time and money, they will receive a cumulative value of $1.70 in higher future earnings. Annually, the co-op students' investment in UVic has an average annual internal rate of return of 11%.

The FY 2020-21 student body attending UVic during the COVID pandemic will see a benefit-cost ratio of 1.4. This means that for every dollar they invested in their education at UVic in FY 2020-21, these students will receive $1.40 in higher future earnings over their working lifetime. This represents an internal rate of return of 9.4%.

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.

> 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.

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.

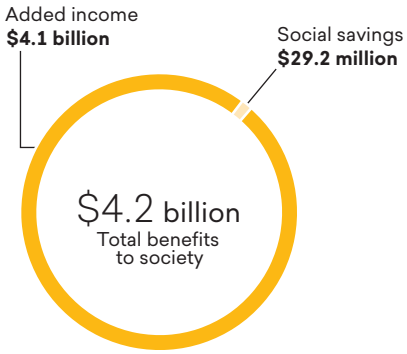
UVic contributes to the arts and culture community

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 quantitively measured, they should still be recognized.

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.

The taxpayer support for UVic in FY 2020-21, during the COVID pandemic, will return $2.70 for every dollar invested. Taxpayers fully recover the cost of the original investment and receive a return of $1.70 in addition to every dollar they paid. This represents an internal rate of return of 15.4%.

SOCIAL BENEFITS IN BRITISH COLUMBIA FROM UVIC IN FY 2019-20



Source: Emsi Burning Glass impact model.

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. Savings related to crime include reduced criminal judicial 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.

In FY 2020-21, during the COVID pandemic, society will again see a return of $4.40 for every dollar invested. Society fully recovers the cost of the original investment and receives a return of $3.40 in addition to every dollar they paid.

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.

STUDENT PERSPECTIVE		TAXPAYER PERSPECTIVE		SOCIAL PERSPECTIVE	
Present value benefits		Present value benefits		Present value benefits	
$872.9 million		$661.3 million		$4.2 billion	
Present value costs		Present value costs		Present value costs	
$613.9 million		$243.7 million		$993.6 million	
Net present value		Net present value		Net present value	
$259 million		$417.6 million		$3.2 billion	
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.

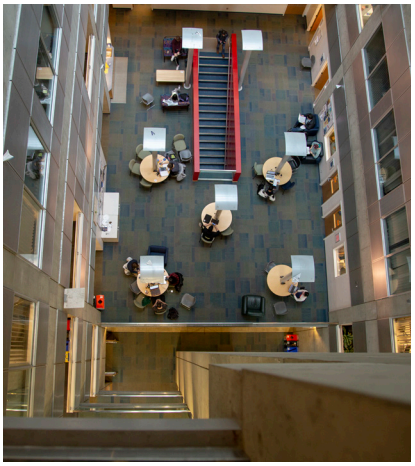
CONCLUSION

The results of this study demonstrate that UVic creates value from multiple perspectives. The university benefits regional businesses by increasing consumer spending in the region 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.

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

About the study

Data and assumptions used in the study are based on several sources, including the FY 2019-20 and FY 2020-21 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.



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