



Assessing the **ECONOMIC IMPACT** of Vancouver Island Regional Library on our Member Communities

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Assessing the Economic Impact of Vancouver Island Regional Library on our Member Communities

Summary

Vancouver Island Regional Library (VIRL)'s mission is to enrich lives and communities through universal access to knowledge, lifelong learning, and literacy. The Library's 2016-2020 Strategic Plan identified 4 principles:

- Community
- Collect. Connect. Collaborate. Create.
- Places & Spaces
- Life at Work

These principles focus on different areas but all involve maintaining and increasing the value that the Library produces for its member communities.

VIRL regularly measures and shares its performance results, which include output measures (such as circulation, number of visitors, number of program attendees, etc.) as well as customer feedback and stories about how VIRL makes a real difference in people's lives. However, output measures do not effectively demonstrate the impact that the library has on people's lives and do not capture the true value of the services provided by VIRL. One area that is not captured is the economic value provided by VIRL to its member communities. The Library receives funding from member communities in the form of levies, but what is the value provided by the Library in return?

In order to provide a partial answer to that question, VIRL embarked on a project to identify the economic impact of the library system on its member communities, and to calculate the return on investment (ROI) provided.

Our study shows that the Library had a total economic impact of \$94,783,558 in 2015. For every dollar invested, \$5.36 in value was received. The return on investment was 335% (mid-point in the calculated value from 149% to 521%). Clearly the Library system has a positive economic impact on the communities it serves.

Of course, the economic impact of VIRL as described here may be understated, as there are some areas in which the Library provides value that cannot be reasonably measured. For example, the impact the Library has on literacy, employment, and social and mental health cannot be measured, but these areas are vital for a healthy, vibrant, successful community.



Background

Measuring the impact of library services

VIRL has been reporting statistics about usage of the Library's services for years. These statistics, such as circulation, visitor counts, number of programs, program attendance, reference consultations, and computer and wifi use, focus on measuring how and how much our libraries are used by the communities we serve. While these statistics do a good job of identifying how much we did, they don't measure how well we did it, or whether we made a difference or put another way, whether we created value.

Items Borrowed

4,397,939

Library Visits

2,347,880

Computer Sessions

298,000

Obtaining data on the value provided by library services can be challenging, but we know from anecdotal evidence that customers do highly value the Library.

One way we can evaluate community impact, however, is in the area of economic impact and return on investment.

Economic impact studies

In order to assess economic impact, we reviewed existing studies and documents produced by other libraries who have attempted to assess their economic impact. This has been done internationally (for example, the State Library of Victoria in Australia) and in the United States (for example, in Florida, Salt Lake County, Santa Clara, and Philadelphia). However, it does not appear to have been done for a public library in Canada until 2013, when the Martin Prosperity Institute (MPI)¹ did a study attempting to measure the economic impact of the Toronto Public Library (TPL) on the city of Toronto. Since then several other Canadian studies have also been done (Halton Hills, Milton, Sault Ste. Marie, and London Public Library, for example) (see Appendix – Selected References).

Libraries produce economic benefits that are both quantifiable and those that are not easily measured, such as contributions to literacy, education, etc. Most studies concentrated on those areas that can be quantified, namely the economic value of the basic services provided, such as collection use, programs, and other services.

¹ MPI is housed at the University of Toronto's Rotman School of Management. The Institute's purpose is to deepen our understanding of economic prosperity, and to develop an understanding of and inform the broader public conversation about shared and sustainable prosperity.



There are two approaches to quantifying the value of library services:

- Contingent valuation – this approach involves identifying how much library users would be willing to pay for library services.
- Market substitution – this approach involves identifying what it would cost to purchase library services elsewhere.

Contingent valuation is a more difficult thing to measure, and many libraries have used market substitution to quantify the economic value produced by their services. VIRL has followed the same approach here.

Methodology

VIRL used similar methodology to that used by the London Public Library and by MPI for the Toronto Public Library study. MPI developed their methodology based on commonly used valuation methodologies in public sectors. Similar methodology was also used by Halton Hills Public Library, Milton Public Library, and Sault Ste. Marie Public Library.

Three components were analyzed:

- Direct tangible benefits;
- Direct spending; and
- Indirect tangible benefits.

With these three components we calculated total economic impact and return on investment.

To determine the benefits, the economic value of services provided by VIRL was measured by comparison (where available) with the market cost of those services. For the purposes of this study, we used the data available for the 2015 calendar year and calculated the economic impact of the services VIRL provided during that year, with the exception of data from the Nanaimo Harbourfront branch. This branch was closed for renovation during a significant portion of the year, and as this branch is typically a heavily used branch, this atypical closure would skew our results. Instead, we substituted the 2014 data for the Harbourfront branch, which was a much more typical year for the branch.

We chose to conduct our analysis for the VIRL system as a whole, rather than branch by branch. Due to the diverse nature of the branches in the library system (which include both small rural branches staffed by a single person to large urban branches serving very different resident bases and communities), the results would be highly variable. In addition, it would be difficult to split some operating costs down to the branch level.



Direct Tangible Benefits

Direct tangible benefits are those benefits that are provided to member communities and to individual patrons by VIRL that can be reasonably estimated. These benefits include:

- Use of VIRL collection, both the physical collection, as well as use of electronic resources such as eBooks, eMusic, and eVideo;
- Programming;
- Reference & database services;
- Access to technology; and
- The use of meeting and study space use.

Use of Collection materials

VIRL's collection includes a variety of material:

- Physical items include:
 - Books
 - Magazines
 - DVDs
 - CDs
 - Audiobooks
- Electronic items include:
 - eAudiobooks
 - eBooks
 - eMusic
 - eVideo

Over 4 million physical items were borrowed during our study period, as well as over 400,000 electronic items, with total circulation being over 4.5 million items. In addition, we estimated how many items were used in-house by surveying in all branches during a single week². In order to reflect the fact that customers do not own materials, we compared the economic benefit without discount (i.e. at the market value of the materials) as well as at an 80% and 40% discount³.

² Items removed from shelves and used in-branch were counted over the course of a week. With the assumption that this week was typical of use over the course of a year, the counts were extrapolated to a complete year in order to estimate in-house use.

³ The market value of items can vary significantly. The TPL and LPL studies both used typical market prices for items available at Indigo. We have used an average price of \$20 per item for books, DVDs, audiobooks, and eVideo and \$13 per ebook.



Economic Benefit of Use of Collection Materials

Category	Volume	Total Value 80% Discount (Low)	Total Value 40% Discount (Midpoint)	Total Value Without Discount (High)
Circulation	4,558,994	17,643,344	52,930,033	88,216,722
In-house Use	278,100	1,112,400	3,337,200	5,562,000
Total	4,837,094	18,755,744	56,267,233	93,778,722

Programs

The Library offers a wide variety of programs, including those for babies, preschoolers, school-aged children, teens, and adults. In 2015, attendance at programs was 112,187.

Economic Benefit of Program Offerings

Category	Attendance	Market Value	Economic Value
All Programs	112,187	20.00 ⁴	2,243,740
Total	112,187		2,243,740

Reference & database services

In 2015, VIRL staff answered 48,475 reference questions posed by library users. These questions can be diverse in nature, but can include requests for reference assistance, computer or technology assistance, and other queries, and the time it takes to assist library users can vary. Establishing the market value of this service is challenging, as no private reference service providers were found in VIRL's service area. As a result, we have elected to make the same assumptions as made by the London Public Library – that is, that reference questions take on average 10 minutes and the value provided is \$25 per 30 minutes.

⁴ The cost to attend a program delivered by a private entity can vary widely depending on the kind of program offered. The TPL study used market values of \$15 (for adult programs) and \$45 (for preschool, child, and teen programs) for their study, while the LPL study used rates of \$20-\$40. Children's programs made up a majority of total VIRL programs offered in 2015, but we have chosen a rate of \$20 to be conservative.



Library users also used the databases provided by VIRL to conduct their own research. The databases were accessed 200,856 times in 2015. Since VIRL's databases are similar to both the London Public Library and the Toronto Public Library, we used the same rate of \$25 per search.

Economic Benefit of Reference & Database Services

Category	Volume	Market Value	Economic Value
Reference Questions	48,475	8.33 ⁵	403,958
Database Searches	200,856	25.00 ⁶	5,021,408
Total	249,331		5,425,367

Technology access

VIRL's computers are a popular service provided to the public. There were over 125,000 logins by hour in 2015. In addition, the Library provides free wifi at all of its branches, and customers frequently use the wifi on their own devices in the Library, with nearly 22,000 GB used during 2015. It can be challenging to assess the market value of these services. We used the Toronto Public Library's estimate of \$3 per workstation use and assessed wifi available commercially via data plans and estimated the average cost as \$11.68 per GB.

Economic Benefit of Technology Access

Category	Volume	Market Value	Economic Value
Workstation Usage (Hours)	125,667	3.00 ⁷	377,001
Wifi Usage (GB)	21,891	11.68 ⁸	255,683
Total	147,558		632,684

⁵ We have used the same market value of \$8.33 per 10 minutes as used by the LPL study. This rate is conservative compared to the TPL study, which used a rate of \$25.

⁶ Both LPL and TPL studies used a rate of \$25 for a database search. We have used the same market value, as our databases are similar.

⁷ Market value for workstation usage is difficult to assess as this is not a service typically available in the market. We have used the same rate of \$3 per use as was used in the LPL and TPL studies.

⁸ In order to assess the market value of a GB of wifi usage, we investigated data plans available commercially and found an average cost of \$11.68. Note that the LPL and TPL studies assessed this differently, as both systems track wifi use by each access, whereas VIRL tracks wifi use by the number of GB used.



Meeting & study space use

VIRL has meeting rooms available for use in 4 of its 39 branches. The market value of the use of these meeting rooms varies depending on their size and the community in which each branch operates. In order to estimate the market value we used a conservative rate of \$15 per use.

Economic Benefit of Meeting & Study Space Use

Category	Volume	Market Value	Economic Value
Meeting Room Rentals	1,265	15.00 ⁹	18,975
Total	1,265		15,433

Total direct tangible benefits

The total direct tangible benefits that can be reasonably measured are between \$27 and \$102 million (with the former being a more conservative and the latter a less conservative estimate). A midpoint estimate is \$65 million.

Total Direct Tangible Benefits

Category	Low (\$)	Midpoint (\$)	High (\$)
Collection Use	18,755,744	56,267,233	93,778,722
Programs	2,243,740	2,243,740	2,243,740
Reference & Database Services	5,425,367	5,425,367	5,425,367
Technology Access	632,684	632,684	632,684
Meeting & Study Space	18,975	18,975	18,975
Total	27,076,510	64,587,999	102,099,488

⁹ Market rates for the use of meeting space can vary depending on the size, venue, and community in which they are located. We have used a conservative value of \$15.



Exclusions

Some direct tangible benefits are provided by VIRL, yet are excluded, are as follows:

- Many items were placed on hold by patrons and then delivered at VIRL expense to the branch chosen by the patron. This saved the patron both time and travel costs. However due to VIRL's large service area and the complicated nature of estimating the market value of delivery over the area, we did not attempt to measure the market value of this service and have excluded this use from our calculations.
- Open study space is provided in all VIRL branches, and patrons are free to use this space freely to read, study, and work. VIRL does not track the use of this space and so we excluded this use from our calculations.

Direct Expenses

Direct expenses are those amounts spent on operations, capital investment, employment, and collection materials. As we wished to measure the economic impact of VIRL activities on our member communities, funds spent outside those communities were not included in the economic benefit calculations. For example, most of VIRL's collection materials are not purchased in member communities.

Capital costs include spending that is for library infrastructure, including building new branches, renovating or upgrading existing branches, and upgrading computer and other equipment at branches. Since this type of spending can vary by year, we used the average over the last 6 years to establish this expense.

Employment spending includes the cost of wages and benefits provided to all VIRL employees. Since the vast majority of our employees also live in our member communities, we included 100% of this cost.

VIRL also receives revenues from other sources (other than our member communities), including fines revenue, the sale of merchandise, and grants of various types. For the purposes of this study, these revenues are used as an offset to operating expenses.

Indirect Tangible Benefits

Indirect tangible benefits result from the multiplier effects on direct costs. Funds paid out to vendors in our communities or paid as wages to staff are generally re-spent by the recipients in our member communities and contribute to the local economy.



Various multipliers have been used in other studies. Statistics Canada reported a value of 2.23 as a multiplier for arts, entertainment, and recreation, but other studies found by MPI have quoted values as low as 1.40. In the TPL study, MPI used multipliers of 1.4 and 2.0, which was felt consistent with economic impact studies for comparable services, and also with national and provincial multipliers published by Statistics Canada. We followed MPI’s use of multipliers of 1.4 and 2.0, which were applied to each indirect tangible benefit.

Indirect tangible benefits result from:

- operations expenses;
- capital investments;
- employment costs;
- work experience for pages; and
- spending on collection materials.

Total Indirect Tangible Benefits

	Category	Multiplier 0.4	Mid-Value¹⁰	Multiplier 1.0
Operations Spending	\$ Spent	694,973	1,216,203	1,737,432
Capital Spending	Average Annual	1,504,166	2,632,291	3,760,415
Employment Spending	\$ Spent (Salaries and Benefits)	4,871,858	8,525,752	12,179,645
Work Experience: Pages	\$ Value	68,728	120,273	171,819
Collection Materials Spending	\$ Spent in VIRL Service Areas	5,540	9,696	13,851
Total		7,145,265	12,504,214	17,863,163

VIRL applied a 0.4 multiplier to each direct expense, added it to the direct expense and calculated a mid-value to estimate a dollar amount attributable to the re-spending.

Operations spending includes the expenses of running the VIRL system on a daily basis including rent, utilities, technology, financial costs, purchased services, and other costs.

¹⁰ VIRL applied a 0.4 multiplier to each direct expense, added it to the direct expense and calculated a mid-value to estimate a dollar amount attributable to the re-spending.



Only spending done in VIRL member communities was included, as funds spent in other areas do not provide an economic benefit to VIRL communities.

Capital spending includes investment in buildings, computer technology, leasehold improvements, and other capital acquisitions. The amounts shown are an average over 6 years (2010 through 2015), as the spending can vary significantly from year to year.

Employment spending includes the wages and benefits of all VIRL employees. Employees live predominantly in VIRL service areas and we can assume they spend significant portions of their salaries locally, thus contributing to the economy in VIRL service areas.

VIRL also provides employment experience to young people, who are employed in many branches and in Administration as pages. Pages are responsible for shelving books and other tasks as needed. For many, this is their first work experience. MPI’s research found that two years of job experience is worth \$1,123 in Canada, and we used this value as well, assuming a value reducing gradually over 5 years, similar to the Toronto and London Public Libraries used in their studies.

The vast majority of VIRL’s collection material is purchased outside of VIRL service areas, and thus was excluded from the indirect tangible benefits, but the small amount that was purchased in our service areas is included.

Economic Impact

Total Economic Impact

The total economic impact of VIRL activities was calculated by summing the following:

- direct tangible benefits;
- direct spending; and
- indirect tangible benefits.

Total Economic Impact

	Low (\$)	Mid-Range (\$)	High (\$)
Direct tangible benefits	27,076,510	64,587,999	102,099,488
Indirect tangible benefits	7,145,265	12,504,214	17,863,163
Direct expenses (spending in VIRL service areas)	17,691,344	17,691,344	17,691,344
Total	51,913,120	94,783,558	137,653,995



Using a midpoint value, we estimate that VIRL has a conservative economic impact of \$94,783,558. This economic impact equates to \$5.36 for every dollar spent and \$229.49 per resident.

Economic Impact per Dollar Spent & Per Resident

	Low (\$)	Mid-Range (\$)	High (\$)
Impact per Dollar Spent¹¹	2.25	5.36	7.78
Impact per Resident¹²	125.69	229.49	333.29

Value an Open Hour

In 2015, VIRL was open for 66,787.5 hours. Open hours varied by branch and community. In order to calculate the value of an open hour, the value of benefits that are provided while the Library is open (and thus excluding services available at any time, such as electronic services) was divided by the number of open hours. This allowed us to calculate the value of an open hour at \$1,107.73 (using the mid-range value). Similarly, we were able to calculate the cost of an open hour at \$277.29.

	Low (\$)	Mid-Range (\$)	High (\$)
Value of all Library Hours	33,185,271	73,982,700	114,780,129
Value of an Open Hour	496.88	1,107.73	1,718.59
Cost of an Open Hour	277.29	277.29	277.29

Return on Investment

Return on Investment (ROI) is the amount of return relative to the investment cost. It's a performance measurement often used to assess an investment.

The ROI for VIRL was calculated by dividing the total economic benefit to VIRL member communities (direct and indirect tangible benefits) by the total direct spending (including spending outside of VIRL communities, as this cost is necessary to provide VIRL services).

¹¹ Total economic impact divided by direct expenses within VIRL service areas.

¹² Total economic impact divided by service population.



The ROI for VIRL's operations in 2015 was 335% (using the mid-range value).

Return on Investment at Vancouver Island Regional Library

	Low (\$)	Mid-Range (\$)	High (\$)
Direct tangible benefits	27,076,510	64,587,999	102,099,488
Indirect tangible benefits	7,145,265	12,504,214	17,863,163
Total Benefits	34,221,776	77,092,213	119,962,651
Direct expenses (spending in VIRL service areas)	17,691,344	17,691,344	17,691,344
Total Economic Impact	51,913,120	94,783,558	137,653,995
Total direct expenses (all spending)	23,024,731	23,024,731	23,024,731
Return on Investment	149%	335%	521%

Conclusions

When we compare the economic impact of VIRL activities against that of other 43 public libraries who have undertaken similar studies, we find that our results are similar.

Library System	Impact per \$ Spent	ROI
Sault Ste. Marie Public Library	\$2.36	236%
Halton Hills Public Library	\$4.04	304%
Vancouver Island Regional Library	\$5.36	335%
London Public Library	\$6.68	452%
Toronto Public Library	\$5.63	463%
Kawartha Lakes Public Library	\$7.05	605%
Stratford Public Library	\$7.48	648%



Economic Impact Report July 2016

VIRL has a measurable economic impact of nearly \$95 million and an ROI of 335% (mid-point in the calculated value from 149% to 521%). For every dollar invested, \$5.36 in value was received. Clearly the library system has a positive economic impact on the communities it serves. The true economic impact would likely be greater, as there are benefits provided which are not measurable. For example, the impact the Library has on literacy, employment, and social and mental health cannot be measured, but these areas are vital for a healthy, vibrant, successful community.



Appendix - Selected Reference Material

Berk Consulting (2013), *Santa Clara County Library District 2013 Return on Investment Report*.
<http://www.sccl.org/about/roi>

Haas Center for Business Research and Economic Development (2013). *Taxpayer Return on Investment in Florida Public Libraries 2013*.
<http://roi.info.florida.gov/Content/PDFs/Studies/Library%20ROI%202013.pdf>

Halton Hills Public Library (2014), *Economic Impact of Halton Hills Public Library, Report to the Library Board*.
<http://www.hhpl.on.ca/sites/default/files/publication%20documents/Economic%20Impact%20Report%20for%20Web%20Page.pdf>

Lal, Jarvaid M. (2013), *A Return on Investment Study of Salt Lake County Library Services*.
<http://www.slcolibrary.org/gl/glal/pdf/slclsroistudy2013.pdf>

London Public Library (November 2015), *A Perspective on the Economic Impact of London Public Library on the City of London*.
<http://www.londonpubliclibrary.ca/sites/default/files/Economic%20Impact%20of%20London%20Public%20Library%20final%20long%20version%20web%200.pdf>

Martin Prosperity Institute (December 2013), *So Much More: The Economic Impact of the Toronto Public Library on the City of Toronto*.
<http://martinprosperity.org/content/so-much-more-the-economic-impact-of-the-toronto-public-library-on-the-city-of-toronto/>

Milton Public Library (September 2014), *The Economic Impact of the Milton Public Library on the Town of Milton*.
http://www.mpl.on.ca/documents/2014_10EconomicImpact.pdf

Nordik Institute (March 2015), *Building Strong and Vibrant Communities: The Value of Sault Ste. Marie's Public Library*.
http://www.nordikinstitute.com/wp-content/uploads/2011/12/SSM-Public-Library_Value-SROI.pdf



Economic Impact Report July 2016

Penn Fels Institute of Government (2010), *The Economic Value of the Free Library in Philadelphia*.

http://www.freelibrary.org/about/Fels_Report.pdf

State Library of Victoria (2011), *Dollars, Sense and Public Libraries: Technical Reports – The landmark study of the socio-economic value of Victoria public libraries*.

http://www.plvn.net.au/sites/default/files/DSPL_TechRep_pt1_FINAL_0.pdf

Texas State Library and Archives Commission (2012), *Texas Public Libraries: Economic Benefits and Return on Investment*.

<https://www.tsl.texas.gov/roi>

Urban Libraries Council (2007), *Making Cities Stronger: Public Library Contributions to Local Economic Development*.

http://www.urban.org/research/publication/making-cities-stronger/view/full_report

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Strong Libraries ■ Strong Communities

Bella Coola Bowser Campbell River Chemainus Comox Cortes Island Courtenay Cowichan Cowichan Lake Cumberland Gabriola Island Gold River Hornby Island Ladysmith Masset Nanaimo Harbourfront Nanaimo North Nanaimo Wellington Parksville Port Alberni Port Alice Port Clements Port Hardy Port McNeill Port Renfrew Quadra Island Qualicum Beach Queen Charlotte Sandspit Sayward Sidney/North Saanich Sointula Sooke South Cowichan Tahsis Tofino Ucluelet Union Bay Woss