CARL Libraries – a Canadian resource-sharing experience

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Abstract

Purpose – This study aims to map the current resource-sharing environment in Canada through the lens of its research libraries in general and the University of Alberta in particular. The findings present an interesting view of changing resource sharing patterns and trends.

Design/methodology/approach – Interlibrary loan (ILL) transaction data were compiled from annual data reported to the Canadian Association of Research Libraries (CARL) and a case study of the University of Alberta is presented.

Findings – The current trend shows declines in both borrowing and lending transactions.

Research limitations/implications – Validity of the CARL ILL transactional data is subject to consistency in institutional reporting and accuracy of the data. The trends portrayed in the data are deemed realistic of the Canadian experience.

Originality/value – This is an original study of CARL ILL transactional data, providing an aggregated view of 13 years of annual data, and an analysis of this data. It updates previous research and benchmarks current ILL patterns at CARL institutions.

Keywords Academic libraries, Statistics, Interlending, Interlibrary loan, Consortia, Resource sharing

Paper type General review

Introduction

In Canada, as elsewhere, libraries of all types and sizes engage in a wide range of resource sharing activities. Within this landscape, interlibrary borrowing and lending – a key indicator of resource sharing amongst institutions (Jackson, 2007) – has changed dramatically within the past two decades. New telecommunication standards and technologies, the development and growth of consortia partnerships, improved discovery tools and delivery mechanisms, increased access to electronic, digitized and streaming content, along with budgetary crises, confusing copyright legislation and changing user behaviour and expectations have all had a significant impact on libraries and the core services they provide.

Research libraries around the world have often been at the centre of this changing environment. Beginning in the mid-1990s, increased scholarly publication, skyrocketing acquisition and subscription prices coupled with stagnant or declining budgets forced research libraries to move from the traditional model of resource ownership to one in which providing access became a more viable means for "fulfilling the information needs of patrons." (Kane, 1997, p. 59). With its large collections and strong tradition for sharing resources, Canadian Association of Research Libraries (CARL) institutions were no exception to this trend. For its 29 affiliated university libraries, increased access and growing reliance on sharing materials to support research activities resulted in increased interlibrary loan (ILL) activity throughout the decade. By 2002/2003, more than 1.3 million borrowing and lending transactions per year were recorded (Canadian Association of Research Libraries, 2006).

This study aims to map the current resource sharing environment in Canada through the lens of its research libraries in general and the University of Alberta (UA) in particular. Prompted by Mak's (2011) study of resource sharing patterns and trends in Association of Research Libraries (ARL) in the USA during the past 35 years (Mak, 2011), along with more recent benchmarking data from the Association of Southeastern Research Libraries (Atkins *et al.*, 2014), the authors were interested in looking at transactional ILL data from Canada. Connected by more than just a border, did Canadian academic libraries see the same exponential growth in ILL as its neighbour to the south? Or has the Canadian experience of managing the "complex and voluntary interaction between libraries" (Turner, 1990, p. 57) been a significantly different one? Further, in looking at a single institution's transactional ILL data, can we observe a truly Canadian experience? Finally, is it possible from an examination of the available data to make any general conclusions about the near future of resource sharing in Canada, and perhaps even beyond Canadian borders, based on these findings?

The intent of this paper is to provide a context for the current ILL landscape in Canada, to analyze transactional ILL data from CARL institutions, and to present a case study of

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Interlending & Document Supply
43/1 (2015) 22–33
 [ISSN 0264-1615]
[DOI 10.1108/ILDS-06-2014-0029]

Received 25 June 2014
Revised 19 August 2014
Accepted 30 October 2014

ILL activity at UA. The findings offer an interesting view of changing resource sharing patterns and trends.

The Canadian context

Despite – or perhaps because of – immense geographical distances, Canadian libraries have a strong tradition of resource sharing at national, provincial, regional and local levels. Several early studies provide ample evidence of well-developed interlibrary borrowing and lending systems that support information access for all Canadian citizens. For example, the first comprehensive review in 1975 of national ILL activity, estimated that within five years "a million or more items will be loaned by Canadian libraries to other libraries, principally in Canada" (Stuart-Stubbs and Friesen, 1975, p. 6). England (1983) reported that ILL traffic steadily increased alongside developing library service throughout the nation. Likewise, Clement (1984) described rapidly developing network planning and ILL implementation trends across Canada. Lunau's (1993) survey of information resource sharing practices also detailed cooperation and equitable access while pointing out the significant roles of individual libraries, provincial groups and government agencies (Lunau, 1993). More recently, Evans and Savard (2008) described major trends affecting all Canadian libraries, including increased availability and access to electronic materials and services and the growth of consortial partnerships.

In addition to these reports, a review of the literature over the past decade presented various processes, procedures, policies and practices that are unique to the Canadian ILL experience. For example, the implementation of an ILL protocol promised an interlending support infrastructure that would serve "as a backbone for the development of resource sharing strategies at the local, regional, and national levels" (Turner, 1990, p. 80). Related to national ILL activity, several case studies and essays associated with national products and services such as the Canada Institute for Scientific and Technical Information (CISTI) and the National Library and Archives Canada (Kelsall and Onyszko, 2010), as well as those that discuss the effects of copyright legislation on libraries (Horava, 2009; Tiessen, 2010; Tooth, 2014) can be found. It should be noted that copyright and licensing remain significant issues for resource sharing units throughout Canada and in 2012, Tiessen (2012) again addressed the impact of copyright law, copyright collectives and licensing on current ILL practices.

For Canadian academic and research libraries, the Downs (1967) Report is a foundational document, written as universities and colleges were expanding across the country. Groen (2005) summarized the development and condition of academic libraries in Canada, while Lamothe (2013) looked specifically at those in CARL. At the same time, various case studies specific to institutions or consortia appeared with some frequency. McGillivray *et al.* (2009), for example, described the Ontario Council of University Libraries use of VDX software in a consortial setting. Likewise, Warner (2007) looked at the effectiveness of Relais document delivery software at Memorial University of Newfoundland. Finally, Dalton (2007) examined the effect of restrictive copyright law on electronic reserves in Canada.

Internationally, a growing body of literature comparing academic libraries' ILL transaction patterns over time has emerged, beginning with Jackson's 2004 seminal study (Jackson, 2004), followed by Echeverria and Jimenez (2011), Koyama *et al.*(2011) Missingham and Moreno (2005), Porat and Shoham (2004), Reid (2005) and Yao and Zeng (2012). Significantly, two recent studies by Canadian librarians provide detailed statistical analyses of ILL practices at academic libraries in Quebec (Duy and Larivière, 2013), as well as the relationship between ILL and research activity at Canadian universities (Duy and Larivière, 2014).

In reviewing the recent literature, the authors saw an opportunity to update current information along with a need to benchmark transactional ILL services and programmes at comparator institutions during a time of significant change. Investigation at a more granular level was required to realize a fuller understanding of the effects and complexity of the current environment for resource sharing amongst academic libraries in Canada.

Methodology

Academic institutions in Canada are publicly funded and generally fall under provincial jurisdiction. Policies, practices and budgets related to higher education vary widely among the ten provinces and three territories. Most of the nation's 346 academic libraries (American Library Association, 2012), developed in conjunction with parent institutions, have increasingly organized themselves into strong national and regional associations and consortia, such as:

- The Association of Canadian Community Colleges.
- The Association of Universities and Colleges of Canada.
- The Council of Prairie and Pacific University Libraries.
- The Ontario Council of University Libraries.
- La Conférence des recteurs et des principaux des universités du Québec.
- The Council of Atlantic University Libraries.

The CARL, established in 1976, currently consists of 29 major university research libraries and two federal government libraries. With total print holdings exceeding 90 million volumes, CARL libraries collectively house the largest number of library resources in the country (Canadian Association of Research Libraries, 2014). CARL institutions range widely in size from the multi-campus University of Toronto with > 21 million holdings, more than 83,000 students and nearly 43,000 ILL transactions per year (University of Toronto, 2014) to the University of Regina with > 12,600 students and 7,700+ ILL transactions per year (University of Regina, 2014). Given the diversity amongst institutions, each library has a unique experience when it comes to the changing landscape of the information world. However, it is possible to look at aggregated data on transactions from CARL and see some patterns across Canada.

Transactional analysis is an accepted quantitative measure of activity, and provides information about trends and patterns. CARL libraries use either Relais or VDX ILL management systems to process ILLs and compile statistical data on ILL transactions. Borrowing and lending activity is reported annually, and it is these data that form the basis of

the current study. Several limitations to the study should be noted at the outset:

- Questions and definitions have changed over time.
- Variations in local loan policies make comparisons subject to some level of error:

> When making year-over-year comparisons, the reader must be aware that some contributing libraries do not consistently report certain data elements in some years, leaving gaps in the data that can skew overall totals and means (Canadian Association of Research Libraries, 2013, p. 2).

Annual ILL borrowing and lending statistics, as gathered by CARL, form the basis of this study. Annual statistics were compiled (see Appendix 1 and Appendix 2) and year-over-year per cent change was calculated for each institution. Considering the large number of data points, it was decided to portray trends in the form of average year over year per cent change, as well as the total number of institutions experiencing increases and decreases in their transactions.

It should also be noted that the data gathered have been supplemented, where possible, by ARL data to obtain a fuller dataset. Further, ARL data was used for verification, which resulted in corrections for 2001 and 2007, when some activity appeared under incorrect column headings in the CARL data. A number of data points appear to be inconsistent based on individual institutional patterns and may be related to local changes or errors in the reporting of the data. Despite limitations of reporting, the researchers deemed that there was sufficient reliable data to present a realistic picture of the changing landscape of ILL in Canada.

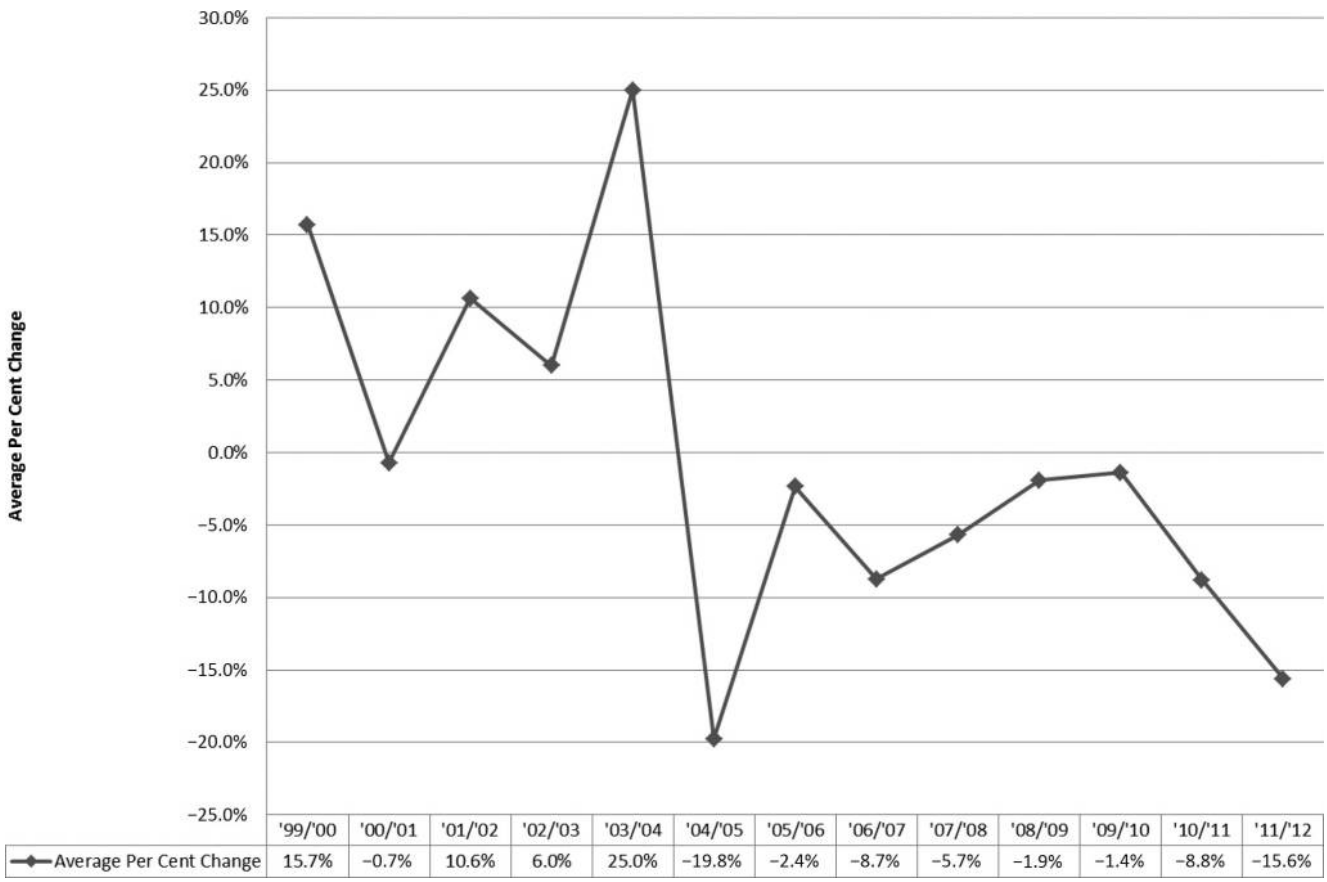
Findings

The data collected for the period between 1999 and 2012 shows a period of growth followed by a period of decline for both borrowing and lending transactions among CARL institutions (see Figures 1-4). The turning point from growth to decrease for borrowing transactions appears to have been in 2005. The year-over-year per cent change for borrowing decreases from a positive 25 per cent between 2003 and 2004 to a negative 19.8 per cent between 2004 and 2005, a substantial difference of 44.8 per cent. Figure 2 shows that only a small number of institutions experienced positive per cent change for 2004/2005.

Lending transactions show a turning point in 2006, when lending year-over-year per cent no longer indicates growth (see Figure 3). The change is markedly less substantial when compared to the borrowing transactional data. The lending transactional data shows a more gradual decline in growth that eventually reaches a negative growth rate for 2005/2006. This is echoed by the data shown in Figure 4, where the number of institutions experiencing a yearly increase in lending transactions continued to decline for most years between 1999 and 2006.

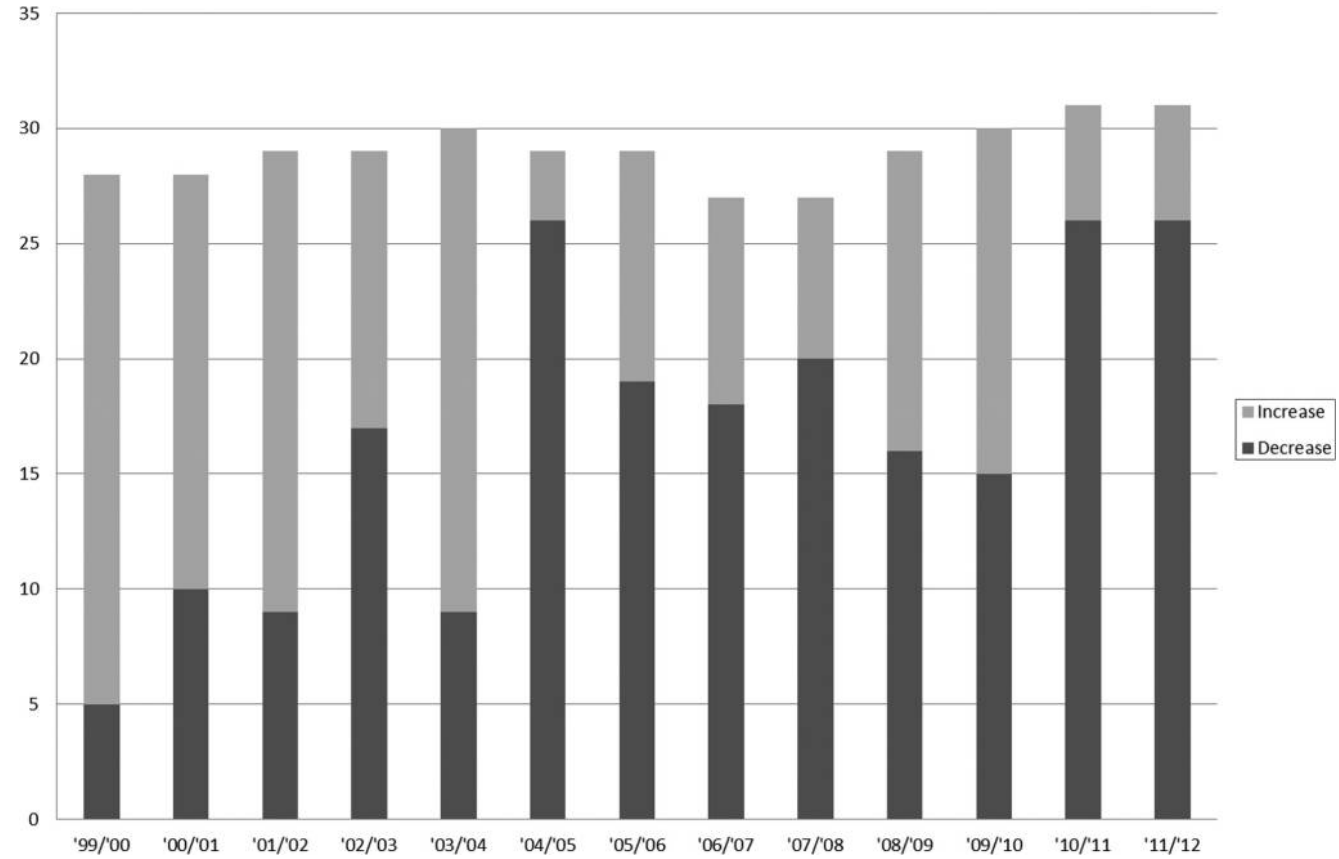
The transactional data shows that in the past seven to eight years, both lending and borrowing transactions have declined. While some institutions saw positive growth numbers, overall that was outweighed by the number of institutions that experienced negative growth.

Figure 1 CARL institutions' average per cent change in filled requests received (borrowing) between 1999 and 2012



	'99/'00	'00/'01	'01/'02	'02/'03	'03/'04	'04/'05	'05/'06	'06/'07	'07/'08	'08/'09	'09/'10	'10/'11	'11/'12
Average Per Cent Change	15.7%	-0.7%	10.6%	6.0%	25.0%	-19.8%	-2.4%	-8.7%	-5.7%	-1.9%	-1.4%	-8.8%	-15.6%

Figure 2 Number of CARL institutions experiencing a decrease versus increase in filled requests received (borrowing) between 1999 and 2012



Case study – ILL at UA

In ILL, numbers alone never tell the complete story. A closer look at UA's total number of transactions provides a richer story than a table of numbers can represent. UA, located in Edmonton, Alberta, the most Northern provincial capital of Canada, is a large research institution. It currently has over 38,000 students attending approximately 400 different programmes. Almost 20 per cent of its student population is graduate students. Additionally, there are over 14,500 faculty and staff. It is perhaps no surprise *then* that the ILL department at UA(UA) received over 18,000 borrowing requests (see Table I) from its patrons during 2013. It is surprising, however, that this number represented an increase after three years of decreasing numbers.

For example, in 2009, there was a change that impacted many faculty members who made use of ILL. The CISTI Source service, which allowed faculty to directly request items available through the CISTI catalogue, was discontinued in August 2009.

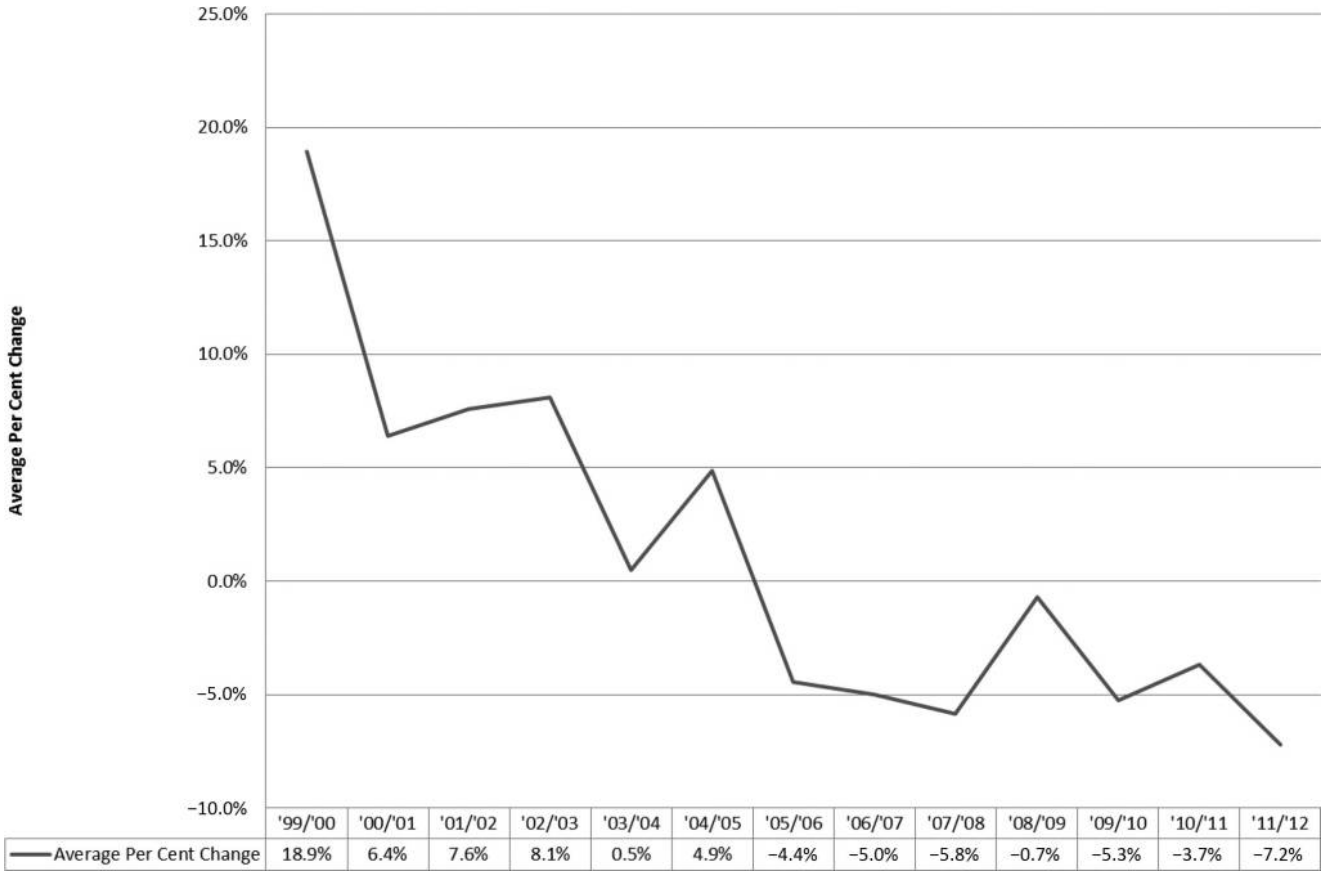
In 2010, the UA Libraries implemented WorldCat Local as the main search tool on the Libraries' website. Moving from a catalogue that only provided access to locally held material to a catalogue that held records to materials of libraries all over the world naturally increased borrowing requests, as has been noted elsewhere (Deardorff and Nance, 2009). The impact of WorldCat Local, while significant, was limited by its relegation to a secondary search and discovery tool, eventually completely overtaken by the EBSCO Discovery System in 2013.

Other factors also impacted ILL transactions during this period. UA, affected each year by budget cuts since 2010, was required to deal with an unanticipated reversal in funding promises by the Government of Alberta in 2013. It is unclear at this time whether cuts in collections budgets as a result of the worldwide economic crisis put more pressure on ILL service. It is possible that continued cuts in collections may lead to increased borrowing requests in the future.

Systematic reviews, research that looks at all the literature on a specific topic or research question, especially popular in the health sciences at UA, seem to be on the rise. A single systematic review can quickly lead to 100-200 borrowing requests. ILL staff has made observations that requests received from a systematic review often contain a significant number of requests for locally held items. Nevertheless, if this trend, as observed here, further develops, it may also result in substantial future increases in borrowing requests.

UA is a net lender and receives about three times the number of lending requests compared to borrowing. It has a strong reputation for sharing its resources with other institutions, evident by its participation in the local NEOS Consortium, as well as numerous resource sharing contracts with various institutions in Canada and the USA. Similar to the trend in borrowing where numbers have declined, resource sharing contracts have also decreased in number, as other institutions make fewer requests to UA.

Figure 3 CARL institutions' average per cent change in filled requests provided (lending) between 1999 and 2012



	'99/'00	'00/'01	'01/'02	'02/'03	'03/'04	'04/'05	'05/'06	'06/'07	'07/'08	'08/'09	'09/'10	'10/'11	'11/'12
Average Per Cent Change	18.9%	6.4%	7.6%	8.1%	0.5%	4.9%	-4.4%	-5.0%	-5.8%	-0.7%	-5.3%	-3.7%	-7.2%

Table II shows the decrease in number of lending requests experienced at UA during the past eight years. While the rate of decrease at UA appears to be slowing, it remains to be seen if this trend will also be reflected or repeated in the national picture.

This preceding case study provides some insight into the state of ILL at research libraries in Canada. Like UA, many peer institutions are exploring new discovery systems for their users, face budget cuts in uncertain times and are affected by new trends in research. UA's lending programme is indicative of the slowed down demand over time of other institutions' users. This has often been attributed to increased access to online resources across Canada. Canadian institutions' use of consortial purchasing of online resources has also given them improved access to electronic resources, potentially decreasing the need for ILL. It will be interesting to see whether this trend continues or whether it will reverse in 2014.

Discussion

The data have shown that ILL at Canadian universities had been a different world prior to 2005/2006, with a significant event occurring during these years that changed the landscape dramatically. What exactly happened that resulted in a large decline in borrowing transactions during 2005? The authors have determined that one explanation for this event is the Canadian approach to building Canada's knowledge infrastructure through the Canadian National Site Licensing Project (CNSLP), incorporated as a not-for-profit organization and renamed in 2004 as the Canadian Research Knowledge Network (CRKN). The total membership by the end of 2004 was 74 institutions across Canada. Based on CNSLP's goal "to bolster the research and innovation capacity of the country's universities by licensing electronic versions of scholarly publications on a national scale" (Canadian Research Knowledge Network, 2014), member institutions had access to many high-impact collections of journals and backfiles. Collections have rapidly grown since 2004 by expanding into the humanities and social sciences. As students and researchers gained access to online full-text journal articles through their library subscriptions, their demand for ILL services diminished.

CRKN played a significant role in the falling borrowing transactions; however, the data showed that lending transactions had been gradually decreasing and did not display a dramatic change like borrowing transactions. It is more difficult to explain such a pattern, as we often think of borrowing and lending transactions as a causal relationship. However, the authors postulate that a moderating effect is at play for lending transactions, as they do not occur only between Canadian institutions, but also Canadian and non-Canadian institutions (many of them American). While all borrowing transactions in the data originate from users at Canadian institutions, the lending transactions can originate from Canadian and non-Canadian institutions. Further study

Figure 4 Number of CARL institutions experiencing a decrease versus increase in filled requests provided (lending) between 1999 and 2012

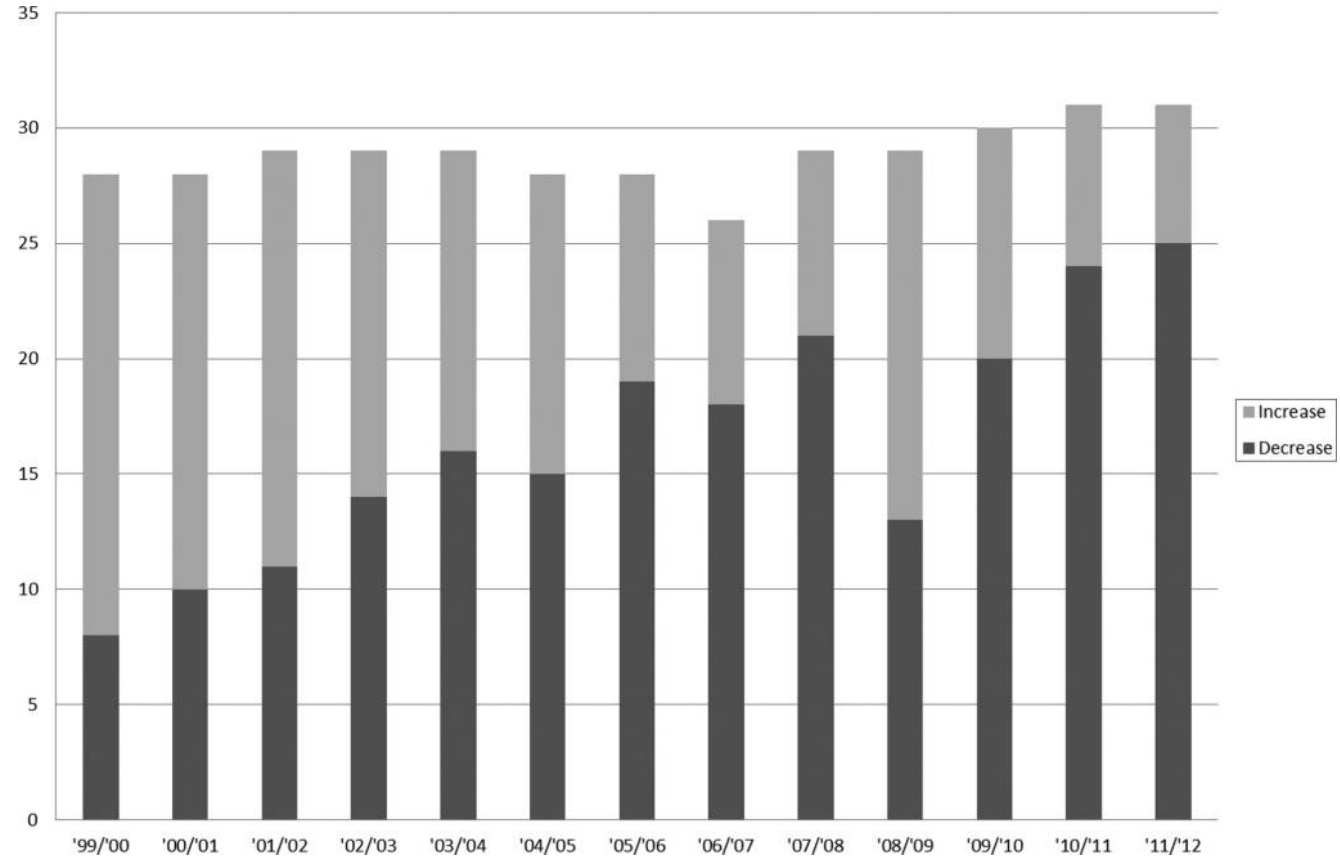


Table I Total borrowing requests at UA per year, 2009-2013

Year	Total borrowing requests received
2009	21,355
2010	22,218
2011	19,502
2012	16,609
2013	18,648

is required to determine the extent of international lending between institutions from Canada and elsewhere.

Despite some recent institutional gains, such as those described at UA, overall the demand for interlibrary borrowing and lending during the period between 2005 and 2012 has declined. Changes in the ILL landscape of Canada were not limited to the tremendous impact of CRKN on ILL transactions. The popular CISTI service was outsourced to Infotrieve in 2009, creating new costing structures and required staff mediation for faculty users to avoid high costs, which resulted in barriers in accessing the CISTI collections for many Canadian institutions. As evidenced by the data in Appendix 2, CISTI saw its largest reductions in lending transactions during 2010-2012. Even more pronounced was the precipitous decline in borrowing in 2012 (Appendix 1). Of course, declines were expected, but changes to this government programme had a pronounced effect.

The Library and Archives Canada (LAC) faced a 10 per cent budget reduction in 2012 and made the decision to suspend ILL services. LAC spent CDN$1.4 million on ILL operations in 2011-2012 (Ontario Library Association, 2012). Further information provided at the time by LAC indicated that they received 81,000 requests for ILL in 2000/2001, while only 34,000 requests in 2011/2012. This varies from CARL data (see Appendix 2) where for the same periods the number of filled ILL requests provided was reported as 37,055 and 31,023, respectively. LAC has reinstituted some ILL services since 2014, but acts only as a last resort and reserves the right to determine whether an item will be loaned or digitized. Further study will need to be done to assess the impact of changes to ILL at LAC.

It is clear that ILL transactions have been in steady decline, but as the UA case study points out, it is unclear whether the decline will continue across the country. The UA data

Table II Number of filled UA lending requests

Year	2006	2007	2008	2009	2010	2011	2012	2013
Number of filled lending requests	80,302	67,631	53,211	49,147	46,375	41,319	38,804	37,956

indicates an increase in borrowing requests received for 2013. Data from individual institutions that break the trend across the country could be indicative of changes within these institutions. For example, discovery tools can have an impact on ILL departments, as well as an institutional emphasis on systematic reviews. Further study is required to investigate why some institutions might be going against the national trend.

Conclusion

This brief overview of recent ILL activity in Canada brings up-to-date current professional literature on the topic, as well as statistical reporting of that activity by the CARL. Academic librarians in Canada, as elsewhere, have been tracking and benchmarking ILL borrowing and lending activity for many years. The data gathered from national surveys, of which CARL's Statistical Survey of Canadian University Libraries is but one example, are an important way that libraries become aware of how the research needs and expectations of the populations they support may be changing. The CARL data analysed has provided a map of the current resource sharing environment as seen through the lens of the Canadian research libraries, demonstrating that Canada's experience is indeed a Canadian-made experience.

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Appendix 1

Table AI Filled requests received (Borrowing) and % change by CARL institution per year

CARL institution	1999	2000	(%)	2001	(%)	2002	(%)	2003	(%)	2004	(%)	2005	(%)	2006	(%)
British Columbia	30,267	34,457	*13.8*	35,766	*3.8*	36,312	*1.5*	29,531	*−18.7*	27,873	*−5.6*	23,666	*−15.1*	24,371	*3.0*
Simon Fraser	21,195	31,611	*49.1*	42,333	*33.9*	46,581	*10.0*	37,699	*−19.1*	30,207	*−19.9*	28,532	*−5.5*	29,576	*3.7*
Victoria	22,327	27,833	*24.7*	35,328	*26.9*	32,959	*−6.7*	44,354	*34.6*	30,952	*−30.2*	36,723	*18.6*	32,314	*−12.0*
Alberta	35,526	33,380	*−6.0*	39,481	*18.3*	41,218	*4.4*	40,173	*−2.5*	N/P		33,776	*−15.9*	36,215	*7.2*
Calgary	36,645	46,519	*26.9*	26,903	*−42.2*	56,023	*108.2*	53,504	*−4.5*	32,365	*−39.5*	29,518	*−8.8*	22,670	*−23.2*
Manitoba	15,635	9,718	*−37.8*	9,866	*1.5*	11,544	*17.0*	33,216	*187.7*	26,748	*−19.5*	38,329	*43.3*	31,600	*−17.6*
Regina	16,207	16,221	*0.1*	17,195	*6.0*	14,687	*−14.6*	13,292	*−9.5*	12,776	*−3.9*	10,022	*−21.6*	8,880	*−11.4*
Saskatchewan	N/P	N/P		21,600		21,074	*−2.4*	24,387	*15.7*	21,067	*−13.6*	19,230	*−8.7*	15,544	*−19.2*
Brock	N/A	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Carleton	19,792	23,537	*18.9*	11,193	*−52.4*	14,407	*28.7*	13,957	*−3.1*	21,443	*53.6*	16,064	*−25.1*	17,142	*6.7*
Guelph	61,137	61,314	*0.3*	61,735	*0.7*	80,584	*30.5*	75,724	*−6.0*	97,196	*28.4*	66,594	*−31.5*	62,831	*−5.7*
McMaster	13,268	14,139	*6.6*	14,940	*5.7*	16,039	*7.4*	13,534	*−15.6*	21,008	*55.2*	15,370	*−26.8*	14,840	*−3.4*
Ottawa	9,571	15,853	*65.6*	10,227	*−35.5*	10,214	*−0.1*	11,762	*15.2*	16,229	*38.0*	9,879	*−39.1*	9,612	*−2.7*
Queen's	10,803	12,291	*13.8*	14,066	*14.4*	15,409	*9.5*	14,312	*−7.1*	17,176	*20.0*	13,349	*−22.3*	13,118	*−1.7*
Ryerson	N/A	N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Toronto	8,940	9,122	*2.0*	9,692	*6.2*	11,210	*15.7*	8,604	*−23.2*	9,574	*11.3*	8,453	*−11.7*	13,452	*59.1*
Waterloo	12,340	32,526	*163.6*	32,863	*1.0*	42,446	*29.2*	46,797	*10.3*	77,083	*64.7*	46,513	*−39.7*	46,413	*−0.2*
Western Ontario	4,569	5,062	*10.8*	6,808	*34.5*	6,354	*−6.7*	4,948	*−22.1*	7,641	*54.4*	5,780	*−24.4*	6,721	*16.3*
Windsor	8,650	12,533	*44.9*	8,612	*−31.3*	10,035	*16.5*	11,300	*12.6*	12,921	*14.3*	8,911	*−31.0*	9,071	*1.8*
York	4,190	4,537	*8.3*	5,165	*13.8*	4,813	*−6.8*	4,187	*−13.0*	7,777	*85.7*	4,846	*−37.7*	4,968	*2.5*
Concordia	7,755	8,987	*15.9*	6,761	*−24.8*	7,671	*13.5*	8,127	*5.9*	16,120	*98.4*	9,913	*−38.5*	8,529	*−14.0*
Laval	13,116	13,063	*−0.4*	13,839	*5.9*	15,476	*11.8*	14,505	*−6.3*	21,258	*46.6*	13,452	*−36.7*	12,940	*−3.8*
McGill	22,504	38,925	*73.0*	18,671	*−52.0*	17,499	*−6.3*	15,358	*−12.2*	22,937	*49.3*	14,309	*−37.6*	13,443	*−6.1*
Montreal	7,693	9,863	*28.2*	12,722	*29.0*	14,537	*14.3*	9,802	*−32.6*	19,170	*95.6*	13,336	*−30.4*	12,284	*−7.9*
Quebec	47,980	7,130	*−85.1*	6,164	*−13.5*	6,395	*3.7*	6,855	*7.2*	5,456	*−20.4*	7,166	*31.3*	6,186	*−13.7*
Sherbrooke	17,714	4,722	*−73.3*	6,376	*35.0*	6,335	*−0.6*	7,673	*21.1*	8,571	*11.7*	7,362	*−14.1*	8,229	*11.8*
Dalhousie	17,787	22,497	*26.5*	19,778	*−12.1*	25,347	*28.2*	26,621	*5.0*	22,168	*−16.7*	14,329	*−35.4*	12,295	*−14.2*
Memorial	14,539	15,151	*4.2*	13,738	*−9.3*	14,899	*8.5*	17,041	*14.4*	21,553	*26.5*	14,284	*−33.7*	12,862	*−10.0*
New Brunswick	12,617	13,447	*6.6*	12,105	*−10.0*	13,014	*7.5*	12,435	*−4.4*	17,873	*43.7*	11,478	*−35.8*	9,521	*−17.1*
CISTI	17,048	19,867	*16.5*	23,959	*20.6*	25,115	*4.8*	24,968	*−0.6*	27,730	*11.1*	27,684	*−0.2*	26,331	*−4.9*
NL/Library and Archives Canada	712	873	*22.6*	921	*5.5*	753	*−18.2*	1,094	*45.3*	1,761	*61.0*	1,076	*−38.9*	1,162	*8.0*
Average % Change:			15.7		−0.7		10.6		6.0		25.0		−19.8		−2.4
Decrease			5		10		9		17		9		26		19
Increase			23		18		20		12		21		3		10

(*continued*)

Notes: Filled requests received (Borrowing) and % change by CARL institution per year; N/A = not applicable; N/P = not provided; underlined data is the result of a two year % change, rather than a one year % change; data sources: Canadian Association of Research Libraries - Association des bibliothèques de recherche du Canada www.carl-abrc.ca/statistics.html; Association of Research Libraries Statistics - Analytics www.arlstatistics.org/analyticsx

Table AI

CARL institution	2007	(%)	2008	(%)	2009	(%)	2010	(%)	2011	(%)	2012	(%)
British Columbia	23,269	−4.5	22,542	−3.1	16,602	−26.4	15,907	−4.2	12,228	−23.1	10,139	−17.1
Simon Fraser	22,030	−25.5	16,633	−24.5	14,031	−15.6	12,094	−13.8	9,886	−18.3	9,821	−0.7
Victoria	17,162	−46.9	12,883	−24.9	11,904	−7.6	12,489	4.9	10,597	−15.1	8,560	−19.2
Alberta	26,040	−28.1	24,949	−4.2	17,670	−29.2	15,968	−9.6	15,524	−2.8	12,669	−18.4
Calgary	22,922	1.1	23,911	4.3	27,506	15.0	23,234	−15.5	19,069	−17.9	15,335	−19.6
Manitoba	28,787	−8.9	25,400	−11.8	24,583	−3.2	24,687	0.4	24,016	−2.7	21,525	−10.4
Regina	7,778	−12.4	5,438	−30.1	4,498	−17.3	2,730	−39.3	2,336	−14.4	1,947	−16.7
Saskatchewan	12,404	−20.2	11,791	−4.9	9,024	−23.5	7,491	−17.0	6,403	−14.5	6,104	−4.7
Brock	N/A		N/A		8,948		6,157	−31.2	5,562	−9.7	4,748	−14.6
Carleton	16,120	−6.0	14,211	−11.8	16,650	17.2	16,307	−2.1	12,463	−23.6	10,911	−12.5
Guelph	63,140	0.5	54,470	−13.7	46,607	−14.4	35,373	−24.1	30,044	−15.1	24,469	−18.6
McMaster	13,608	−8.3	12,689	−6.8	13,172	3.8	14,197	7.8	13,866	−2.3	12,219	−11.9
Ottawa	8,838	−8.1	8,692	−1.7	9,273	6.7	11,445	23.4	13,449	17.5	9,996	−25.7
Queen's	11,507	−12.3	9,722	−15.5	7,168	−26.3	7,930	10.6	6,754	−14.8	5,802	−14.1
Ryerson	N/A		N/A		N/A		10,398		9,797	−5.8	8,209	−16.2
Toronto	11,113	−17.4	11,471	3.2	7,482	−34.8	8,867	18.5	7,893	−11.0	6,185	−21.6
Waterloo	48,204	3.9	47,160	−2.2	46,099	−2.2	40,579	−12.0	36,585	−9.8	33,069	−9.6
Western Ontario	7,519	11.9	8,087	7.6	9,613	18.9	12,217	27.1	10,406	−14.8	11,102	6.7
Windsor	7,883	−13.1	7,883	0.0	4,672	−40.7	6,324	35.4	5,417	−14.3	3,961	−26.9
York	5,129	3.2	5,233	2.0	5,554	6.1	5,786	4.2	5,656	−2.2	5,572	−1.5
Concordia	8,634	1.2	12,894	49.3	14,294	10.9	15,528	8.6	13,370	−13.9	11,786	−11.8
Laval	12,756	−1.4	9,720	−23.8	8,892	−8.5	8,538	−4.0	7,386	−13.5	7,057	−4.5
McGill	12,235	−9.0	11,162	−8.8	11,257	0.9	11,029	−2.0	11,767	6.7	7,482	−36.4
Montreal	13,382	8.9	11,764	−12.1	13,297	13.0	13,177	−0.9	12,239	−7.1	12,867	5.1
Quebec	N/P		4,467	−27.8	3,892	−12.9	4,036	3.7	4,047	0.3	4,527	11.9
Sherbrooke	N/P		8,543	3.8	6,596	−22.8	5,991	−9.2	5,458	−8.9	6,983	27.9
Dalhousie	10,678	−13.2	10,487	−1.8	25,984	147.8	26,509	2.0	26,065	−1.7	23,860	−8.5
Memorial	8,173	−36.5	9,641	18.0	8,017	−16.8	8,244	2.8	7,240	−12.2	7,126	−1.6
New Brunswick	10,174	6.9	8,944	−12.1	8,973	0.3	10,240	14.1	10,952	7.0	11,044	0.8
CISTI	24,695	−6.2	22,062	−10.7	22,271	0.9	16,578	−25.6	16,578	0.0	1,030	−93.8
NL/Library and Archives Canada	1,209	4.0	1,194	−1.2	1,250	4.7	1,319	5.5	1,128	−14.5	0	−100.0
Average % Change:		−8.7		−5.7		−1.9		−1.4		−8.8		−15.6
Decrease		18		21		16		15		26		26
Increase		9		8		13		15		5		5

Appendix 2

Table AII Filled requests provided (Lending) and % change by CARL institution per year

CARL institution	1999	2000	(%)	2001	(%)	2002	(%)	2003	(%)	2004	(%)	2005	(%)
British Columbia	38,395	41,970	*9.3*	44,557	*6.2*	34,909	*−21.7*	31,711	*−9.2*	30,626	*−3.4*	24,718	*−19.3*
Simon Fraser	16,465	16,586	*0.7*	17,086	*3.0*	20,477	*19.8*	22,652	*10.6*	2,1691	*−4.2*	19,685	*−9.2*
Victoria	3,834	4,871	*27.0*	6,845	*40.5*	7,753	*13.3*	7,040	*−9.2*	7,110	*1.0*	6,321	*−11.1*
Alberta	78,699	1,02,666	*30.5*	1,03,442	*0.8*	1,07,831	*4.2*	1,21,918	*13.1*	11,6241	*−4.7*	97,042	*−16.5*
Calgary	21,054	23,688	*12.5*	26,903	*13.6*	31,438	*16.9*	27,036	*−14.0*	25,118	*−7.1*	24,471	*−2.6*
Manitoba	21,172	16,678	*−21.2*	9,892	*−40.7*	9,313	*−5.9*	32,881	*253.1*	24,361	*−25.9*	27,540	*13.0*
Regina	4,987	5,121	*2.7*	4,656	*−9.1*	5,342	*14.7*	8,635	*61.6*	9,730	*12.7*	7,954	*−18.3*
Saskatchewan	N/P	N/P		16,016		14,831	*−7.4*	15,449	*4.2*	14,411	*−6.7*	14,671	*1.8*
Brock	N/A	N/A		N/A		N/A		N/A		N/A		N/A	
Carleton	9,330	10,291	*10.3*	9,528	*−7.4*	8,766	*−8.0*	9,305	*6.1*	10,459	*12.4*	10,144	*−3.0*
Guelph	20,857	26,516	*27.1*	28,787	*8.6*	35,131	*22.0*	38,783	*10.4*	42,655	*10.0*	46,319	*8.6*
McMaster	37,696	25,405	*−32.6*	20,322	*−20.0*	21,115	*3.9*	19,636	*−7.0*	15,276	*−22.2*	16,093	*5.3*
Ottawa	17,033	9,807	*−42.4*	19,235	*96.1*	22,070	*14.7*	22,660	*2.7*	20,332	*−10.3*	15,268	*−24.9*
Queen's	11,264	13,062	*16.0*	13,525	*3.5*	15,346	*13.5*	17,017	*10.9*	13,812	*−18.8*	26,157	*89.4*
Ryerson	N/A	N/A		N/A		N/A		N/A		N/A		N/A	
Toronto	18,001	28,201	*56.7*	28,259	*0.2*	32,976	*16.7*	26,874	*−18.5*	35,820	*33.3*	40,934	*14.3*
Wat−erloo	10,863	46,120	*324.6*	53,927	*16.9*	78,891	*46.3*	68,460	*−13.2*	70,411	*2.8*	72,073	*2.4*
Western Ontario	20,909	23,226	*11.1*	21,557	*−7.2*	21,557	*0.0*	21,723	*0.8*	18,901	*−13.0*	18,037	*−4.6*
Windsor	6,055	6,736	*11.2*	7,685	*14.1*	6,964	*−9.4*	6,017	*−13.6*	6,370	*5.9*	6,088	*−4.4*
York	14,921	14,360	*−3.8*	14,794	*3.0*	13,330	*−9.9*	13,812	*3.6*	13,586	*−1.6*	14,783	*8.8*
Concordia	3,241	3,810	*17.6*	4,264	*11.9*	4,380	*2.7*	4,018	*−8.3*	3,596	*−10.5*	3,755	*4.4*
Laval	25,240	24,809	*−1.7*	24,324	*−2.0*	27,103	*11.4*	26,141	*−3.5*	23,280	*−10.9*	21,326	*−8.4*
McGill	16,184	15,412	*−4.8*	14,719	*−4.5*	15,849	*7.7*	15,993	*0.9*	17,142	*7.2*	17,596	*2.6*
Montreal	13,225	14,356	*8.6*	16,451	*14.6*	17,297	*5.1*	11,913	*−31.1*	15,630	*31.2*	25,919	*65.8*
Quebec	8,875	7,942	*−10.5*	9,181	*15.6*	8,402	*−8.5*	7,951	*−5.4*	7,638	*−3.9*	5,975	*−21.8*
Sherbrooke	2,830	3,035	*7.2*	3,279	*8.0*	6,884	*109.9*	5,561	*−19.2*	5,594	*0.6*	5,761	*3.0*
Dalhousie	18,710	23,055	*23.2*	22,449	*−2.6*	23,207	*3.4*	24,895	*7.3*	23,905	*−4.0*	43,171	*80.6*
Memorial	23,602	24,152	*2.3*	19,411	*−19.6*	16,948	*−12.7*	18,999	*12.1*	19,393	*2.1*	18,329	*−5.5*
New Brunswick	5,511	7,259	*31.7*	7,372	*1.6*	6,180	*−16.2*	5,545	*−10.3*	7,472	*34.8*	6,197	*−17.1*
CISTI	4,66,674	5,67,364	*21.6*	7,91,780	*39.6*	7,73,172	*−2.4*	7,55,746	*−2.3*	6,92,587	*−8.4*	6,18,534	*−10.7*
NL/Library and Archives Canada	41,549	39,402	*−5.2*	37,055	*−6.0*	35,419	*−4.4*	36,058	*1.8*	41,969	*16.4*	49,791	*18.6*
Average % Change:			18.9		6.4		7.6		8.1		0.5		4.9
Decrease			8		10		11		14		16		15
Increase			20		18		18		15		13		13

(*continued*)

Notes: Filled requests provided (lending) and % change by CARL institution per year; N/A = not applicable; N/P = not provided; underlined data is the result of a two-year % change, rather than a one year % change; data sources: Canadian Association of Research Libraries - Association des bibliothèques de recherche du Canada www.carl-abrc.ca/statistics.html; Association of Research Libraries Statistics - Analytics www.arlstatistics.org/analytics

Table AII

CARL institution	2006	(%)	2007	(%)	2008	(%)	2009	(%)	2010	(%)	2011	(%)	2012	(%)
British Columbia	26,371	6.7	28,417	7.8	22,884	−19.5	23,978	4.8	27,140	13.2	30,369	11.9	27,558	−9.3
Simon Fraser	19,633	−0.3	16,584	−15.5	14,285	−13.9	14,677	2.7	13,571	−7.5	11,825	−12.9	11,058	−6.5
Victoria	5,585	−11.6	4,832	−13.5	5,105	5.6	52,63	3.1	5,766	9.6	7,134	23.7	7,496	5.1
Alberta	80,302	−17.3	67,631	−15.8	52,211	−22.8	49,147	−5.9	46,375	−5.6	41,319	−10.9	38,804	−6.1
Calgary	24,522	0.2	22,263	−9.2	20,929	−6.0	19,016	−9.1	17,157	−9.8	15,928	−7.2	14,643	−8.1
Manitoba	22,026	−20.0	23,751	7.8	20,917	−11.9	18,981	−9.3	17,840	−6.0	14,749	−17.3	13,786	−6.5
Regina	7,516	−5.5	8,515	13.3	6,724	−21.0	7,123	5.9	6,220	−12.7	6,049	−2.7	5,801	−4.1
Saskatchewan	12,150	−17.2	9,551	−21.4	7,370	−22.8	6,386	−13.4	6,697	4.9	6,635	−0.9	6,458	−2.7
Brock	N/A		N/A		N/A		3,182		2,953	−7.2	2,492	−15.6	2,521	1.2
Carleton	10,626	4.8	9,742	−8.3	11,320	16.2	12,218	7.9	12,008	−1.7	10,048	−16.3	8,010	−20.3
Guelph	47,732	3.1	47,582	−0.3	45,774	−3.8	44,136	−3.6	39,799	−9.8	33,627	−15.5	30,838	−8.3
McMaster	16,061	−0.2	14,319	−10.8	15,680	9.5	16,161	3.1	14,032	−13.2	13,033	−7.1	11,645	−10.6
Ottawa	17,697	15.9	20,939	18.3	19,204	−8.3	20,023	4.3	17,051	−14.8	18,556	8.8	16,021	−13.7
Queen's	23,016	−12.0	18,195	−20.9	20,064	10.3	17,610	−12.2	18,644	5.9	14,885	−20.2	12,562	−15.6
Ryerson	N/A		N/A		N/A		N/A		4,589		4,673	1.8	3,964	−15.2
Toronto	48,854	19.3	31,444	−35.6	34,023	8.2	30,099	−11.5	40,455	34.4	36,913	−8.8	36,714	−0.5
Wat−erloo	68,736	−4.6	64,683	−5.9	56,757	−12.3	50,116	−11.7	41,590	−17.0	35,541	−14.5	29,869	−16.0
Western Ontario	19,825	9.9	21,852	10.2	17,446	−20.2	13,138	−24.7	12,825	−2.4	13,720	7.0	12,201	−11.1
Windsor	4,844	−20.4	3,837	−20.8	3,837	0.0	47,05	22.6	4,209	−10.5	3,217	−23.6	3,533	9.8
York	14,590	−1.3	15,714	7.7	13,665	−13.0	15,335	12.2	14,936	−2.6	13,001	−13.0	10,694	−17.7
Concordia	3,555	−5.3	5,167	45.3	4,933	−4.5	5,127	3.9	5,923	15.5	5,212	−12.0	5,229	0.3
Laval	20,088	−5.8	N/P		17,826	−11.3	18,724	5.0	19,282	3.0	20,275	5.1	17,927	−11.6
McGill	17,229	−2.1	16,337	−5.2	19,028	16.5	20,387	7.1	17,808	−12.7	16,345	−8.2	9,440	−42.2
Montreal	21,449	−17.2	21,789	1.6	19,770	−9.3	19,837	0.3	20,109	1.4	18,634	−7.3	16,004	−14.1
Quebec	5,973	0.0	N/P		5,266	−11.8	3,698	−29.8	4,144	12.1	4,071	−1.8	3,557	−12.6
Sherbrooke	6,492	12.7	N/P		5,026	−22.6	6,591	31.1	1,495	−77.3	3,461	131.5	4,536	31.1
Dalhousie	21,758	−49.6	16,111	−26.0	20,735	28.7	24,503	18.2	23,121	−5.6	22,129	−4.3	21,576	−2.5
Memorial	19,354	5.6	17,576	−9.2	17,953	2.1	16,321	−9.1	17,781	8.9	16,792	−5.6	15,160	−9.7
New Brunswick	6,191	−0.1	5,838	−5.7	5,632	−3.5	6,562	16.5	6,502	−0.9	6,171	−5.1	5,832	−5.5
CISTI	5,73,501	−7.3	5,13,621	−10.4	4,41,859	−14.0	3,55,536	−19.5	2,17,173	−38.9	86,432	−60.2	68,557	−20.7
NL/Library and Archives Canada	45,402	−8.8	41,899	−7.7	36,175	−13.7	32,827	−9.3	29,427	−10.4	25,641	−12.9	31,023	21.0
Average % Change:	−4.4		−5.0		−5.8		−0.7		−5.3		−3.7		−7.2	
Decrease	19		18		20		13		20		24		25	
Increase	9		8		8		16		10		7		6	