INDIRECT COSTS PROGRAM

PROGRESS REPORT

FOR APRIL 1, 2011 TO MARCH 31, 2012

Canada

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Background

In 2001, the federal government provided a one-time investment of $200 million to alleviate some of the financial pressures associated with federally-funded research in Canadian postsecondary institutions. Subsequently, in 2003, the Indirect Costs Program (ICP) was established on a permanent basis and investments in the program have risen gradually, from $225 million in 2003-04 to $332.4 million in 2011-12.

These investments are used to cover a portion of the indirect costs[1] of research supported by the three federal funding agencies (the Canadian Institutes of Health Research, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council) at universities and colleges, and at their affiliated research hospitals and institutes.

Program objective

The objective of the Indirect Costs Program is to help universities, colleges, and their affiliated research hospitals and institutes maintain a research environment that will enable them to make optimal use of the federal investment in academic research.

ACCOUNTABILITY AND EVALUATION

The program has adopted the following approaches to address the issue of accountability:

- institutions receiving program grants must prepare yearly reports;
- the Program requires that institutions have current and valid agreements with their research hospitals and health research affiliates;
- during site visits, program officials review how the institutions manage their grants; and
- the program itself undergoes internal audit and evaluation on a periodic basis (usually once every five years).

Outcomes reports and Progress Reports

The program requires participating institutions to submit a yearly report on their outcomes, including a statement of account. The information obtained from the reports is intended to provide an account of federal funding and is a key element in the program's performance strategy. These institutional outcomes reports also form the basis of this report (the Indirect Costs progress report) which is produced yearly. Institutions submit their reports in June of every year, the Secretariat reads and analyzes them, seeks clarification where required and uses the contents to produce the report).

The outcomes report provides quantitative and qualitative information on the impact that expenditures have had in five expenditure categories: research facilities; research resources; research management and administration; regulatory requirements and accreditation; and

[1] Indirect research costs are an institution's administrative expenditures that support research but are not chargeable to specific research projects.

intellectual property management. The statement of account presents the amount of expenditures made with program funding invested by the institutions in each of the five areas.

Institution-Affiliate Agreements

In cases where institutions share their indirect costs grant with affiliated hospitals and health research institutes, the program requires that institutions have formal and valid institution-affiliate agreements which clearly indicate the nature of the relationship between the two and their roles and responsibilities in managing the grant. The parent institution is responsible for ensuring that its affiliates understand and follow the program's conditions for funding. Affiliate institutions must report annually to the institution. The institution specifies the exact format and required contents of the report, integrating the information received from each affiliate into its yearly outcomes report.

Site visits

Since September 2006, program managers have visited a total of 47 institutions: 21 major research-intensive universities and their affiliated research institutes, four large universities, seven mid-size universities, and 15 small universities, colleges and CEGEPs. The visits have had the following objectives:

- to assess the effectiveness of the control measures and systems used to ensure compliance with the program's policies and regulations;
- to review the expenditures or the methods used to allocate funds, in order to ensure that they follow program guidelines;
- to discuss program-related issues and challenges; and
- to obtain feedback on the program's policies and guidelines and its financial management practices.

The visits also provide opportunities to observe the working relationships between universities and their affiliated research institutes; to share with them other institutions' best practices; to encourage them to give more details about the impact of their grants in their annual outcomes reports; and to adopt new approaches for communicating program outcomes.

Internal audit and program evaluation

An internal audit of the program was carried out in the fiscal year 2008-09, and a sixth-year summative evaluation of the program was completed in 2009. Overall, the reports on these activities presented a positive picture of the program in terms of its administration and relevance.

The summative evaluation included recommendations for strengthening the information base used to assess the program's impact (the report is available on the program's website at http://www.indirectcosts.gc.ca/publications/index-eng.aspx). In response, the program's management staff established a working group of representatives of various organizations, including universities, the Association of Universities and Colleges of Canada (AUCC), the Canadian Association of University Business Officers (CAUBO), and the Canadian Association of University Research Administrators (CAURA). The working group has been mandated to define a set of parameters for use in assessing the state of the research environment at Canada's universities every five years.

The next program evaluation is slated for 2013-2014.

OVERVIEW OF INSTITUTIONS' EXPENDITURES IN FISCAL YEAR 2011-12

As a whole, institutions funded by the program use their grants largely for research management and administration, and for research facilities. These two categories combined accounted for 68 per cent of total spending in 2011-12. Figure 1 shows the proportion allotted to each of the five expenditure categories. This breakdown has remained fairly stable since the program's inception, and while a gradual increase in the proportion of funds allotted to complying with regulatory requirements and accreditation, as well as to management and administration has occurred over time, the proportion has remained constant from 2010-11 to 2011-12. However, as funding from the program covers only a portion of the indirect costs of research borne by institutions, this may not reflect trends in the actual costs or total investments of institutions in these areas.

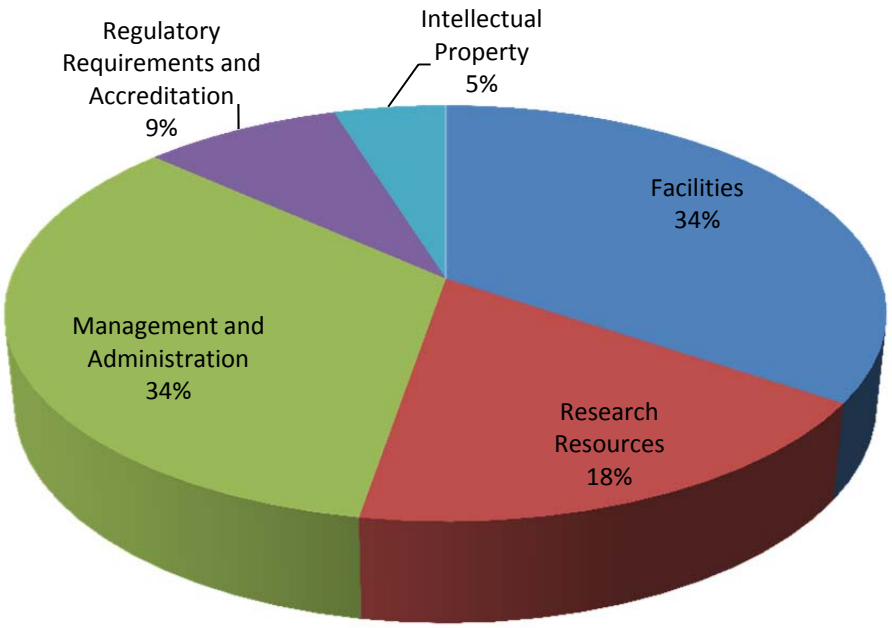

Figure 1: Proportion of grants allocated to each expenditure category, fiscal year 2011-12.

Institutions of different sizes tend to allocate their funding differently with respect to the five expenditure categories. Figure 2 illustrates this difference, comparing the investment patterns of the four sizes of institutions described in Table 1 and their affiliated research institutes. In general, small and mid-size institutions allotted a larger share of their Indirect Costs grants to the management and administration category than did large and research-intensive institutions; large and research-intensive institutions directed a greater proportion of their funds to the facilities category than did small and mid-size institutions. Differences in the proportion of the grant allotted to each expenditure category can be observed among institutions of the same size. This variability is greater for the intellectual property management category and could be explained, in part, by the

fact that some institutions do not have a technology transfer office and do not allocate funds towards this area.

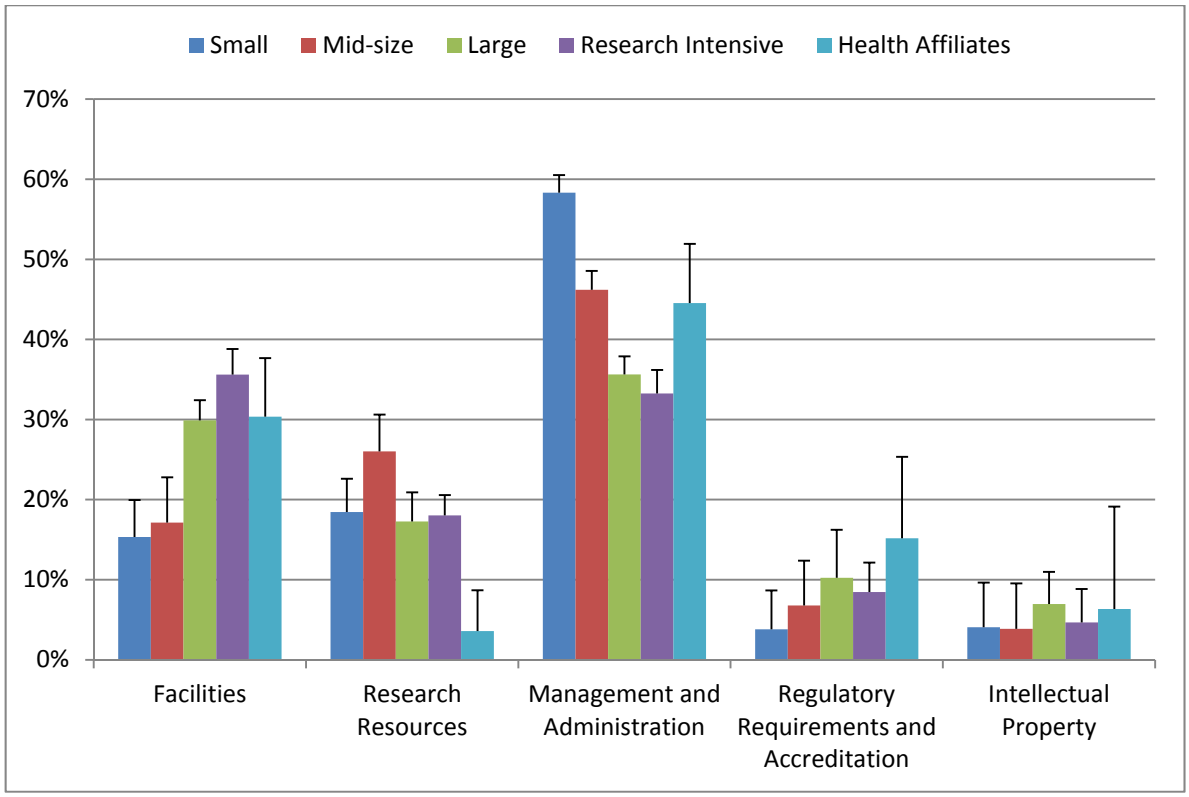

Figure 2: Proportion of grants allotted to each expenditure category, by size of institution. The bars represent standard deviation of the means.

Table 1: Institution types and proportion of total program budget received by each type

Type	Criterion[2]	Number of institutions	Proportion of program budget
Small	ICP grant of less than $100,000	53	0.5%
Mid-size	ICP grant of $100,000 to $1 million	25	3.2%
Large	ICP grant of $1 million to $3 million	16	8.3%
Research-intensive	ICP grant of more than $3 million	28	88%

In the fiscal year 2011-12, 23 institutions signed formal agreements with research hospitals or health research institutes. Expenditures by these affiliates accounted for 17% of the program's total budget and were spent primarily in management and administration, followed by spending in the

[2] Institutions have been categorized according to the amount of program funding they received. The figures shown are used solely for purposes of analysis in this report.

area of facilities. Affiliates also invested more heavily in regulatory requirements and accreditation than did all other types of institutions.

IMPACT OF EXPENDITURES

Impact by expenditure category

Institutions deem the Indirect Cost Program's funding to be essential to the success of their research enterprises; however, the program covers only a portion of the actual amount of indirect costs of federally funded research. For this reason, the impact of expenditures can be challenging to evaluate as the funds are, in general, widely dispersed within the institutions and their affiliates (where applicable). Institutional Outcomes Reports provide qualitative information and examples regarding their investment in the five expenditure categories, which can reveal certain trends. These are examined in the following sections:

1. Research facilities

The institutions' use of program funds related to maintaining research space and facilities ensures that they can provide high-quality and cutting-edge research environments, which is essential in order to facilitate research excellence. From investing in laboratory renovations to recruiting the required skilled technicians, institutions of all sizes face the challenge of maintaining suitable research facilities in the face of increasing research costs. The majority of institutions cited operating costs, including items such as renovations, electricity and heating as the largest category of expenditures in this investment area. Other highlighted spending included the costs associated with the maintenance of specialized research equipment, as well as the basic up-keep of research space, animal facilities, and laboratories.

"Funds received through the Federal Indirect Costs Program are essential to ensuring the continued research and teaching excellence at McGill University and our affiliate hospitals. Researchers and students across the spectrum of disciplines rely on the smooth operation of facilities in order to train and produce research outputs that push the boundaries of knowledge and innovation. There can be no doubt that [the] funds are instrumental in providing the necessary working environment for developing and realizing research and teaching goals. Facility improvements ensure that the University continues to attract and retain the very best researchers and trainees." McGill University, Québec

"The Indirect Costs grant enhances the capacity of the University to provide state-of-the-art laboratories and equipment for highly productive research. Without these, Mount Allison's researchers would be limited in their capacity to engage in emerging research activities and technology, and may seek other opportunities." Mount Allison University, New Brunswick

"The intensification of research continues to be a strategic priority for York. One component is the upgrading of existing research spaces to provide researchers with efficient and adequate space to expand agendas, create new knowledge and to maximize the potential from direct research grant funding. Ultimately, the achievement of these goals will have a positive societal impact in science and technology and social innovation research projects, locally and nationally. The funding from the Indirect Costs program assists in ensuring the achievement of these goals." York University, Ontario

2. Research resources

Improvements in facilitating the access to up-to-date and comprehensive knowledge resources are of capital importance for developing research capacity, and are vital to generating the high-quality, high-impact studies that benefit Canadians. Key drivers for library support for research include the active role that libraries play in supporting improved access to research resources, and the effective management and dissemination of results and data. As such, the majority of institutions spent the largest portion of ICP funds in this category on library and journal holdings. In particular, many institutions mentioned electronic journal access as a major cost. This has become increasingly important as the availability of online resources provides researchers with access to hundreds of journals and thousands of articles across a wide range of disciplines right at their fingertips, saving time and increasing efficiency. Larger institutions also commonly used a portion of the funds for the enhancement of high-speed networking capabilities that allow for the quick and effective sharing of large amounts of data between researchers, institutions and regions, and other upgrades to their IT services. Investments in this area contribute to strong collaborations amongst researchers and help support researchers' work. These are all important factors in recruiting and retaining faculty and attracting research funding.

"La réputation d'avoir l'une des meilleures bibliothèques d'affaires bilingues au monde est possible à HEC grâce à la subvention du programme de couts indirects. "

HEC Montréal, Québec

"With the support of ICP funding, Memorial's Libraries have invested in building a broad and deep collection of library resources required to support campus research activities and disciplines. This stable funding ensures key electronic resources will continue to be available whenever and however needed by Memorial's scholars and researchers. This stability has also allowed the Libraries to leverage its acquisitions to transform and customize primary research content into easily accessible and barrier free formats for in-depth research explorations."

Memorial University, Newfoundland

3. Research management and administration

Institutions agree that administrative support is an essential service for productivity because it relieves researchers of many administrative tasks. Across institutions of all sizes, administrative support benefits researchers in preparing grant applications and managing grant funds. Given the increasing complexity of research administration, institutions must often increase their administrative staff and rely on their expertise to maintain the quality of services to researchers. The largest portion of funding in this category went to salaries, and the hiring and retention of personnel with the vast expertise that is required in the multifaceted environment of research management. For smaller institutions, this typically meant the recruitment and establishment of a dedicated research administrator or office. For larger and research-intensive institutions, funding was associated with the recruitment and training of specialized research administrators and investment in IT systems to modernise grant applications and research funding tracking and management.

"Indirect Costs of Research funding also supports personnel in Research Accounting and Purchasing dedicated to assisting researchers with budget submissions, reporting and purchases. Many reports and submissions are complex and the dedication of support to this

area is crucial to the effective administration of research funding at the University. Without the Indirect Costs of Research, this support would not be possible.

University of Victoria, British Columbia

"The support provided by the ICP grant of the detailed staff and administrator positions is extremely important in enabling the University to manage the increases in externally sponsored research and graduate student numbers that fuel the research enterprise at Saint Mary's. Without the ICP grant support, the transformation of Saint Mary's to a research-dynamic institution would be incapacitated."

Saint Mary's University, Nova Scotia

La subvention du programme des coûts indirects a permis de consolider le Bureau de recherche du Collège. Elle a contribué à l'établissement de bonnes pratiques en recherche, particulièrement en ce qui a trait à une gestion et à une administration financière des projets qui soient parfaitement conformes aux exigences des organismes subventionnaires. La subvention a aussi consolidé la synergie existante entre le Collège Shawinigan et son centre de transfert technologique, le Centre national en électrochimie et en technologies environnementales (CNETE).

Collège Shawinigan, Québec

4. Regulatory requirements and accreditation standards

In an effort to ensure the safety of researchers and research staff, and the ethical treatment of research subjects, institutions must meet an increasing number of regulatory and ethical standards. In recent years, the different levels of government have introduced new regulatory requirements regarding, for example, the protection of animals, the use of human beings in research and the use of hazardous substances. Accordingly, the amount of time and resources that must be expended in order to comply with these standards has also been increasing. An increasing cost driver for this category, are the regulatory requirements themselves. As research projects become more complex, so do the needs for adhering to these requirements and regulations. For this reason, institutions directed the largest portion of their spending in this expenditure category towards the development and support of governing bodies such as research ethics boards and committees, and to provide teaching relief to those faculty members who sit on these boards. For research-intensive institutions, a large portion of the funds was most frequently devoted to technical support for animal care, especially for the salaries of veterinarians. The upgrading and maintenance of animal housing facilities to conform to new regulatory requirements, as well as the training of staff for the proper handling of dangerous substances and biohazards were also areas of investment.. Overall, institutions report that the amount of Program funds allocated to this expenditure area is increasing steadily, in order to comply with the provincial and federal standards governing research, and to ensure that institutions meet the highest ethical and safety standards.

"Without this grant, TRU would not be able to provide timely or efficient service to researchers in the area of research compliance. This grant also enabled many more faculty and students to be trained in the various areas of compliance." Thompson

Rivers University, British Columbia

"To maintain its standing as one of Canada's foremost research-intensive universities, Western has consistently assumed a leadership role in terms of research ethics and animal accreditation. Indirect costs funding plays a critical role in both maintaining and improving upon these standards system-wide."

The University of Western Ontario, Ontario

"Sans la contribution du Programme des couts indirects, l'Université de Moncton aurait peine à assurer la diligence et la rigueur requises dans le traitement du nombre croissant de demandes d'approbation réglementaires et d'agrément. "

Université de Moncton, Nouveau Brunswick

5. Intellectual property management

Transferring knowledge from academia to a broader range of sectors, including the private, public, and not-for-profit sectors, creates many economic, social, and cultural benefits for Canadians. Institutions recognize the importance of transferring knowledge, sharing their research discoveries through such activities as publishing, licensing, forming spin-off companies, and other forms of engagement with non-academic sectors. With the help of ICP funding, many research institutions continue to strive to maximize the impact of their research and the return on the money invested in research grants. Across institutions of all sizes, the greatest portion of ICP funds in this category was devoted to the creation, development, expansion and sustainment of technology transfer offices, allowing researchers to safeguard their inventions and discoveries and to exploit their economic and social potential as needed. Primarily invested in the payroll for specialized technology transfer personnel, funding was also devoted to technology licensing, commercialisation, legal assistance, and private sector partnerships. By providing funding in support of these services, institutions emphasised the significant economic and social benefits the ICP program has on them and the local community.

"From improved industrial processes to life-saving drugs, ideas developed at universities and hospitals benefit all of us every day. The University and its Affiliates have accepted the challenge of a growing role as a conduit between researchers, faculty and the business community, and have been channelling innovation born of research into protected inventions for the advances and benefit of economic growth."

University of Toronto, Ontario

"The grant provided the ability for the College to file its first ever patent application."

Red River College of Applied Arts, Science and Technology, Manitoba

> ***"La promotion des expertises et des réalisations des chercheurs auprès de la communauté socioéconomique joue un rôle prépondérant dans l'initiation de nouveaux partenariats de recherche et de valorisation."***
>
> ***Université du Québec à Rimouski, Québec***

General impact of investments

While the five expenditure categories demonstrate the immediate and direct outcome the program has on postsecondary research, the ICP ultimately aims to improve the overall ability to conduct research and to recruit and retain world-class researchers. Table 2 shows the institutions' responses regarding three general impact categories. Larger institutions, because they receive larger grants, appear to be better able than smaller institutions to identify positive impacts. In general, however, small and mid-size institutions also identify the ICP funds as having a positive effect on their overall research capabilities, playing a key role in the implementation and maintenance of their emerging research programs.

Table 2: Proportion of institutions reporting general positive impacts of their grants, by institution size **General impact**	**Small**	**Mid-size**	**Large**	**Research-intensive**	**Total**
Attraction of additional funding	73%	81%	81%	100%	85%
Making strategic investments possible	50%	69%	81%	79%	70%
Attraction and retention of researchers	100%	88%	100%	100%	97%

A number of institutions noted the growth in their research capabilities since the inception of the program. Some went further to emphasize that many of the research services and funding opportunities they now enjoy would not have been realized without the support of the ICP funds. These institutions recognize the vital role played by the program grants over the years in helping them to develop their research activities.

The majority of institutions agreed that the ICP funds contributed to their ability to attract and retain world class researchers. Many factors come into play when recruiting researchers and the institutional research environment and services offered to the researchers is an important one. The ICP funds can help institutions provide an adequate and supportive research environment that will attract new researchers and retain established ones.

Whether it is directly through supporting research administration and grant writing, or indirectly by helping to maintain the infrastructure necessary to support new initiatives, the program is cited by many institutions as an important factor in gaining new sources of funding. For some larger institutions, the ICP grant was especially supportive in producing new, sustainable research revenue through technology licensing and the attraction of international investors.

"The ICP has played a significant role in enhancing our research services and our profile as a research university, nationally and internationally, and opened up significant collaborations with the private sector…Overall, the contributions received through the ICP have allowed us to continue to provide high quality assistance with grant applications and timely submissions of proposals which have resulted in a positive impact on the growth of AU's research capacity".

Athabasca University, Alberta

"La subvention des couts indirects contribue au soutien et à une meilleure planification des activités de recherche dans les facultés et les départements. Ce support permet d'augmenter directement la capacité à l'Université à obtenir des fonds additionnels pour la recherche."

Université du Québec à Montréal, Québec

"The Indirect cost program has made a significant impact to our college research system in a number of ways, including attraction and retention of highly qualified researchers. By providing timely support to emerging contingencies in research operations, facilities, resources, etc., this program made a huge impact to the entire applied research operation of this college."

College of the North Atlantic, Newfoundland and Labrador

CONCLUSION

The Indirect Costs Program complements the research funding investment provided by the three federal research funding agencies by helping postsecondary institutions ensure that their federally-funded research projects are conducted in world-class facilities with the best equipment and administrative support available. Despite the variances in how the grant is used by the different institutions and that the program's funding is most heavily invested in the areas of research management and administration, research facilities, and research resources, the program has helped to increase or maintain the health of the research environment in all five expenditure categories. Overall, the program has allowed Canadian research institutions to raise their research profiles both at home and abroad, by supporting public outreach and private partnerships and by making their research environment attractive to researchers, students and research technicians. This has been especially true for small and mid-size institutions with relatively young research programs.

Generally, institutions highlighted the indispensable contribution the ICP has made in ensuring that they are able to achieve both their research and teaching mandates and to continue to enhance their vital role in Canadian society.