INDIRECT COSTS PROGRAM

PROGRESS REPORT

FOR APRIL 1, 2008 TO MARCH 31, 2009

Canada

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Background

In 2001, the federal government made a one-time investment of $200 million to alleviate the financial pressures on research being conducted in Canadian postsecondary institutions. Subsequently, the Indirect Costs Program (ICP) was established on a permanent basis in 2003. Federal investments through the Program have risen gradually, from $225 million in 2003-04 to $330 million in 2008-09. The investments are used to cover a portion of the indirect costs[1] of research supported by the federal funding agencies at universities and colleges, and at their affiliated research hospitals and research institutes.

Program objective and planned outcomes

The overall objective of the Program is to help postsecondary institutions create a research environment that lets them make best use of the full amount of federal funding for university research. The Program thereby helps to build a strong, innovative Canadian research environment that is better equipped to conduct world-class research. More specifically, the Program seeks to contribute to:

- the ability of Canadian research institutions to operate at the leading edge and to comply with regulatory requirements;
- the ability of these institutions to transfer knowledge and commercialize research results; and
- Canada's economic growth and an improved quality of life for Canadians.

ACCOUNTABILITY AND EVALUATION

The Program has adopted a number of approaches to address the issue of accountability. Institutions receiving Program grants must prepare yearly reports; during site visits, Program officials review how the institutions manage their grants; and the Program itself undergoes internal audit and evaluation.

Outcomes reports

The Program's Results-based Management and Accountability Framework 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.

The outcomes report provides quantitative and qualitative information on the impact that expenditures have had in five priority areas: research facilities; research resources; research management and administration; regulatory requirements and accreditation; and intellectual property management. The statement of account presents a list of expenditures made with Program funding in each of the five areas.

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

Site visits

Since September 2006, Program managers have visited 12 major research-intensive universities and their affiliated research institutes, 3 large universities, 4 mid-size universities, and 15 small universities, colleges and CEGEPs. The visits 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 evaluation of the Program

An internal audit of the Program was carried out in 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. 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, the Canadian Association of University Business Officers, and the Canadian Association of University Research Administrators. The 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.

OVERVIEW OF INSTITUTIONS' EXPENDITURES IN FISCAL YEAR 2008-09

On the whole, the institutions funded by the Program use their grants mainly for research facilities, and for management and administration. Figure 1 shows the proportion allotted to each of the five priority expenditure areas. The breakdown remains very similar from year to year but the proportion of funds allotted to regulatory requirements and accreditation seems to be increasing over time, from 5 percent in 2003-04. The upward trend probably reflects the greater responsibilities of institutions and researchers in this area. In contrast, the proportion of funds allotted to resources seems to be decreasing, from 22 percent in 2003-04.

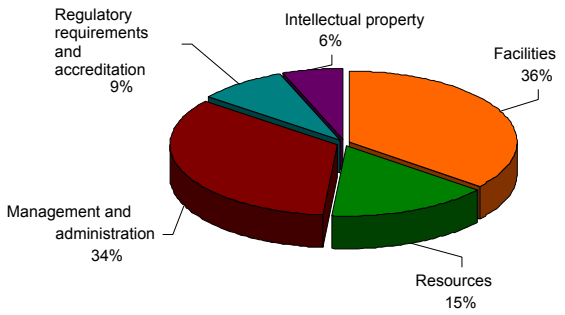

Figure 1: Proportion of grants budgets allocated to each priority expenditure area, fiscal year 2008-09

In general, small institutions apportion their grant money differently from large ones. Figure 2 illustrates this difference by showing the investment patterns of the four categories of institutions described in Table 1 and their affiliated research institutes. It is noteworthy that small- and mid-size institutions allotted a significant share of their Indirect Costs grants to management and administration of their research activities, while large institutions and research-intensive institutions allotted almost the same proportion to facilities as they did to management and administration.

In fiscal year 2008-09, 19 institutions signed agreements with research hospitals or research institutes. Expenditures by the affiliates accounted for 16 percent of the Program's total budget.

Table 1: Institution categories, and proportion of total Program budget received by each category

Category	Criterion[2]	Number of institutions	Proportion of Program budget
Small	grant of less than $100,000	54	0.4%
Mid-size	grant of $100,000 to $1 million	27	3.3%
Large	grant of $1 million to $3 million	15	6.6%
Research-intensive	grant of more than $3 million	28	89.7%

[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.

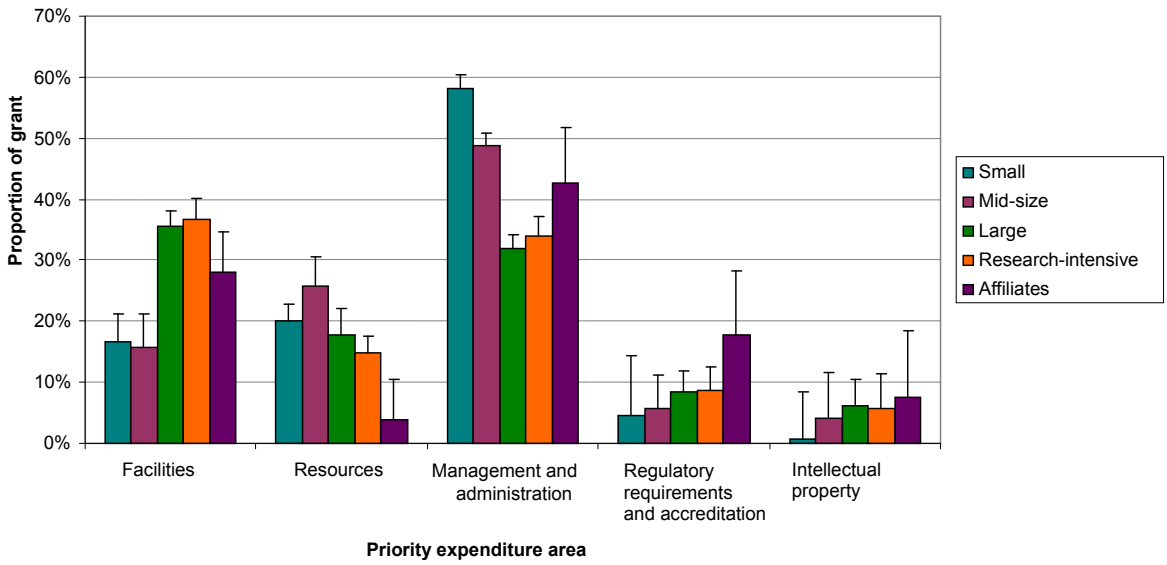

Figure 2: Proportion of grants allotted to each priority expenditure area, by size of institution. Standard deviations are also shown.

IMPACT OF EXPENDITURES

Impact of expenditures by priority area

Institutions regard the Program's funding as crucial, but it covers only a portion of the actual amount of the indirect costs of research supported by the federal government. The impact of expenditures is thus hard to evaluate because it is in general diffuse and spread over several years. However, the institutions' reports provide very helpful information and examples that reveal certain trends. These are examined in the following sections.

Impact of investments in research facilities

Operating costs (e.g., for electricity and heating) made up the largest single category of expenditures within the area of investments in research facilities. Not only does Program funding help institutions to cover part of the ever-growing costs of research but it also enables them to improve their facilities, as they must do to offer an innovative, productive research environment. By renovating their research spaces and modernizing equipment, institutions can provide a better work environment to their researchers and stay on the cutting edge of technology. Also, many institutions use some of their funding to provide and maintain the technical support needed to operate certain types of equipment and keep it running properly—something that very often is costly and requires considerable expertise. This spending on technical support reduces the risks associated with using the equipment and protects the institutions' investment in it. All these factors contribute directly to researchers' productivity and ability to obtain more research funding, as well as to the institutions' overall ability to attract new researchers.

The grant is also an essential piece of base funding that supports much-needed renovations and repairs to research labs that would otherwise be unfunded. This investment is vital for providing our researchers with healthy and safe working environments, and allows them to remain focused on their primary research activities. The costs of maintaining high-quality research facilities continue to escalate. The Indirect Costs grant is vital to the university research administration in helping to offset a portion of these significant costs and in helping to recruit and retain high-quality researchers at the University.

St. Francis Xavier University, Nova Scotia

The Pharmaceuticals Outcomes and Policy Innovations group at the Child and Family Research Institute . . . was previously dispersed throughout the facility, but ICP funds supported urgent renovations that co-located the group to ensure the effective and timely use of funding and other resources.

The University of British Columbia, British Columbia

Infrastructure quality directly affects research teams' ability to generate high-quality scientific results and hence to remain competitive. It is essential for institutions to recruit the skilled personnel needed for technical support of their laboratories and operation of certain kinds of modern infrastructure.

Université de Montréal, Quebec

Impact of investments in research resources

What has been learned provides the basis for new research. Institutions therefore recognize that access to past discoveries is crucial for their research teams. This is why, in the expenditure area of research resources, the majority of institutions allocate the largest proportion of funds to the acquisition of library resources, with the aim of upgrading their collections. Institutions report, for example, that rapid access to relevant information helps researchers make the most not only of their time but also of their grant money because it helps them to be more productive. Institutions also seem to place growing importance on the availability of online resources because researchers can access them remotely and can search the documents much more easily. Some institutions also invest in telecommunications technology to facilitate national and international collaborations. All of these initiatives help to support researchers' work and are important factors in recruiting and retaining faculty.

The King's University College provides library facilities which are used for instructional as well as research purposes. These facilities include various print and electronic resources in King's own collection, as well as access to over 75,000 other journals through the various electronic databases to which we have access. This access is made possible through the various local, provincial and national library consortia of which King's is a member. We are thus able to provide research resources far in excess of what a small, undergraduate institution would normally be able to offer.

The King's University College, Alberta

A broad variety of information resources on current research, such as those housed in the library facilities, along with ubiquitous access to those resources, and the information technology infrastructure and information services needed to support that access are the critical and fundamental foundation for new research. New research builds on the findings of previous

research. Such access to information ensures that researchers' productivity is maximized and without it, research could not go forward.

Queen's University, Ontario

Researchers use the videoconferencing facilities in the studio to organize applications for multi-university research grants and contracts, to coordinate the implementation of multi-university research projects, and to organize research seminars with colleagues at a distance.

University of Calgary, Alberta

Impact of investments in research management and administration

Institutions agree that administrative support for research is an essential service for the productivity of researchers because it relieves them of a great many administrative tasks. Institutions are launching various pioneering initiatives to support activities such as preparing grant applications, managing and monitoring the grants obtained, and procuring equipment. Institutions also say that, given the growing complexity of research administration, they must often expand their professional staff and rely on their expertise to maintain the quality of services to researchers. A high proportion of institutions also invest in research promotion and public relations to make themselves known and present their research across Canada and internationally.

Research has become extremely sophisticated. Along with advancements in research comes increased complexity of the research environment, which has evolved to the point where it requires a professional management and administrative infrastructure capable of (i) efficiently supporting leading-edge research in an era requiring increased transparency and accountability, and (ii) optimizing the productivity and effectiveness of the front-line research team.

University of Toronto, Ontario

Funding from the Indirect Costs Program has been directed to research management and administration at Acadia for a number of years, with results that demonstrate how vital it is—Acadia's research levels have steadily risen since the implementation of the Program. Overall funding through the three federal granting councils has increased steadily over time. . . . We believe this increase in research levels and funding can be partially attributed to increased staffing that has allowed Acadia to provide more and better services to the research community that help to build our researchers' capacity, and improve their likelihood of success. Faculty can focus more on research activities. Without the Indirect Costs Program funding, it is unlikely that Acadia could sustain the needed staffing levels that have helped facilitate our research growth.

Acadia University, Nova Scotia

ICP funds contributed to supporting the position of Public Relations Manager. Elevating awareness of the Faculty, its brand, its researchers, its students and their achievements is essential to attracting and retaining top researchers, students and staff. It is also essential in attracting funding and reaching potential collaborators in the private and public sectors to pursue primary and applied research leading to discovery and/or commercialization.

McMaster University, Ontario

Impact of investments in meeting regulatory requirements and accreditation standards

To ensure that their research is safe and consistent with ethical principles, institutions must meet a variety of regulatory requirements. In recent years, the different levels of government have introduced new regulatory requirements, particularly regarding the protection of animals, the use of human beings in research and the use of hazardous substances. Although the requirements do not necessarily target research activities, they have an impact on institutions. For this reason, institutions direct the largest share of their spending in this expenditure area toward creation and support of regulatory organizations, e.g., ethics committees. But most institutions also allocate funds in this area to training research personnel and students who, because they conduct research, must be informed about various policies and procedures. In some cases, institutions must renovate and upgrade their facilities to meet regulatory requirements and provide a safer research environment. The upgrades, which sometimes go beyond these objectives, may also be designed to ensure the validity of the experimental data gathered. Overall, institutions report that the amount of Program funds allocated to this expenditure area is increasing steadily with the ongoing adoption of new legislation and standards governing research.

Research ethics compliance, animal care, the conduct of university affairs pertaining to environmental health and safety, and controlled goods are vital and integral to Concordia's research enterprise. This is particularly so given an increasingly complex research and regulatory environment. Support for indirect costs in this area was critical not only to meeting regulatory requirements but also to helping researchers navigate compliance requirements and administrative processes in a timely and enhanced manner.

Concordia University, Quebec

The ICP has provided the funds necessary to aid in the recruitment of committee members for ethics, animal protection, and nuclear and biological security committees, support training and education initiatives, recruit a qualified veterinarian and calibrate inspection equipment to ensure that all provincial and federal regulatory requirements are met. As a result, researchers are being provided with a high level of support to ensure they can conduct their research safely and in a timely manner, while adhering to the appropriate regulatory requirements.

University of Ontario Institute of Technology, Ontario

In 2008-09, the Animal Care Facility team began offering Mouse Rederivation Services, which allow researchers to rid certain genetically engineered strains of mice of unwanted pathogens. This allows researchers to decrease variability in their research and to import unique genetically engineered animal models into quarantine from a source with contaminated health status.

Dalhousie University, Nova Scotia

Impact of investments in intellectual property management

Institutions recognize the importance of transferring knowledge, commercializing inventions and discoveries, and engaging with the private sector. Accordingly, they strive to maximize the impact of their research and the return on the money invested in research grants. Institutions that allocated Program funds to the intellectual property expenditure area used the money mostly for their technology transfer departments or offices, thereby enabling researchers to protect their inventions and exploit their economic potential as needed. These are things that researchers probably could not do on their own because the processes are so complex and time-consuming. Some institutions also underscored significant economic benefits having an impact on them and the local economy (e.g., job creation).

We were also able to cover part of the costs of patent applications with funds from this grant. The benefits in fiscal year 2008-09 have been quite considerable: our institution received 56 new invention disclosures and negotiated 18 new commercialization licensing agreements. Our costs of protecting intellectual property amounted to more than $900,000, while we earned more than $1.4 million under our 80 current agreements.

Université Laval, Quebec

Without proper funding, it would be difficult, if not impossible, to pursue these opportunities. Researchers would be forced to attempt to patent their own technologies if resources like those at WORLDiscoveries were not in place. This would be costly and time-consuming, which would inevitably lead to the abandonment of many potentially valuable discoveries. In time, WORLDiscoveries expects to capitalize on the services it provides and to be a national leader in the development and deployment of commercially viable inventions into the marketplace for economic return and social benefit.

The University of Western Ontario, Ontario

General impact of investments

As stated at the start of this report, the overall objective of the Program is to help research institutions create a research environment that lets them make best use of federal funding for university research. In addition to the Program's impacts in the five priority expenditure areas, other important impacts include enhancing institutions' overall ability to conduct research and to recruit and retain researchers. Table 2 shows the institutions' responses regarding three general impact categories. Because larger institutions receive larger grants, they seem more able than smaller institutions to identify the Program's positive impacts. However, in general, small and mid-size institutions say that even though their grants are smaller, the funding plays a key role in implementation of their research programs and makes a big difference in terms of their researchers' work.

Table 2: Proportion of institutions reporting general positive impacts of their grants, by institution size

General impact	Small	Mid-size	Large	Research-intensive	Total
Securing additional funding	67%	85%	93%	100%	88%
Making strategic investments possible	47%	70%	80%	82%	72%
Recruiting and retaining researchers	73%	81%	100%	100%	89%

Many institutions noted a significant increase in their research capacity and the research funding they have obtained since the Program was established on a permanent basis in 2003. These institutions recognize the vital role played by their Program grants over the years in helping them to develop their research activities.

Institutions say that Program funding not only relieves researchers of certain administrative tasks, but also provides them with important support with activities such as seeking funding opportunities, preparing grant applications, and looking for contracts and establishing partnerships with the private sector and various associations. All these activities are examples of support for researchers who are trying to obtain research funding. In addition, research administration staff make a major contribution to research promotion and knowledge transfer, thus giving researchers greater visibility among their peers.

Given that Program grants generally cover a portion of the expenditures being incurred by institutions before the Program began, the grants often enable the institutions to free up funds and strategically reallocate them to other initiatives—the most common probably being the creation of internal grant and scholarship programs. Such initiatives let institutions help new researchers set up their research programs and laboratories, while rewarding top researchers and launching new research undertakings. Other strategies include providing research scholarships to students; building and fitting out new research spaces; and participating in conferences, workshops, and special events. All these initiatives clearly help institutions to increase their research capacity and to recruit and retain the best researchers.

More specifically, institutions say that a high-quality research environment and proper administrative support are decisive factors in recruiting and retaining researchers. Investments in three expenditure areas appear to do most to help make an institution's research environment attractive not only to researchers but also to students and research technicians. In descending order, the areas are research facilities, research administration services and research resources.

Funding from sources such as the Indirect Costs Program enriches the University of Alberta's ability to continue developing leaders and to continue seeking solutions to today's and tomorrow's challenges. Research productivity would have been severely hampered by lack of funds for these aforementioned activities and output would be slowed. Thanks to the ICP support, which helps redirect operating dollars, the University of Alberta is once again leading the way, not only in research but in attraction and retention of world-renowned researchers who work in state-of-the-art facilities.

University of Alberta, Alberta

CONCLUSION

Although institutions apportion their Indirect Costs Program funding in different ways in the five priority expenditure areas, the funding essentially has the same general impacts: it helps to increase or maintain research capacity, and to recruit and retain researchers. Institutions use Program funding to upgrade their researchers' workplace and the research environment in general, as shown by the numerous impacts and examples of expenditures mentioned in the institutions' reports. The reports stress that the Program lets institutions cover expenditures that are sometimes not eligible under other grant programs or for which there is simply no other funding. Moreover, the Program offers a degree of flexibility within the five expenditure areas, giving institutions latitude to strategically choose the category or area in which they want to invest, in accordance with their own priorities.

General comments about the Program indicate that institutions are satisfied with its administration and functioning. Small and mid-size institutions especially appreciate the method used to calculate Program grant amounts; this adjusts grants according to the institution's size. However, some large institutions and research-intensive institutions are disappointed that the grants cover only a portion of their indirect costs of research.

Despite the institutions' widely varying comments, there is one point on which all agree: the Program meets an essential need and plays a crucial role with regard to the research environment and its development in Canada.