



# INDIRECT COSTS OF RESEARCH

Results of a joint survey administered by  
CAUBO/CAURA

## [Summary](#)

This Report explores key areas of policy and practice with regards to Indirect Costs of Research at Canadian institutions

October 2013



# Foreword

---

## **Background and Context**

High quality university-based research is essential to Canada's competitiveness in the global economy, and as such is encouraged and funded by a wide range of government and other sources. The ability of universities to provide an environment in which this activity can thrive helps to encourage innovation and development, attracting world leading researchers to Canadian universities.

In response to concerns raised by senior university administrators, CAUBO (the Canadian Association of University Business Officers), with the support of CAURA (the Canadian Association of University Research Administrators), undertook a study to provide information on the indirect costs of research (ICR) at Canadian universities.

This study was undertaken in a context of growing research activity and complexity, increases in infrastructure operating costs, increased levels of regulation and compliance requirements – all of which result in increases in costs driven by research but not funded as direct research costs.

At the same time as these increases occur, university operating budgets are under pressure because of the need of governments to control cost and by other demands on these same budgets. Unlike the approach taken in some countries, there has been no attempt in Canada to consistently measure and fund indirect costs of research.

Factors that would reduce universities' ability to adequately finance the research environment could lead to a reduction in the support offered, inability to sustain the more expensive research fields, and the weakening of this important economic engine.

## **Objectives of Study**

Specific objectives of the study were thus to:

- assess the impact of growing research activity and the resulting ICR on universities' ability to support research;
- identify and document barriers to the full recovery of ICR;
- consider the need to better communicate the impacts of ICR on the organization to internal and external stakeholders.

Given the broad objectives and the dearth of current information on the subject the study was, of necessity, exploratory. As the work evolved, it became clear that the greatest value would come from reviewing and documenting the policy and funding environment in which universities manage indirect costs.

The three key areas of policy and practice explored were:

- Measurement of indirect costs. To what extent and how do Canadian universities measure or estimate the indirect costs of research, and what are the results of that

exercise?

- Recovery of indirect costs. What are the policies and practices regarding cost recovery, and what are the challenges to such recovery?
- Allocation of funding received. How are indirect cost recoveries managed and allocated within the institution, and what is the basis for the allocation?

Most of the information in the report is based on the results of a broad survey, covering the three areas noted above, distributed to all Canadian universities. Responses were received from 48 institutions including all of the 15 most research-intensive universities and a broad sample of the others, both in terms of size and geographical location. With this response rate, the results are considered representative of the situation nationally.

### **Key Findings**

About half of Canadian universities measure indirect costs of research. This is done primarily to meet external reporting requirements but the results are also largely applied for internal budgeting purposes. Those that do not measure ICR indicate that they do not have appropriate systems in place or feel that the effort to undertake the exercise is not justified, noting that there is currently no incentive to implement such systems.

While the approaches used to measuring indirect costs vary, the results are consistent: those respondents that provided an estimate of indirect costs indicated that they were between 40% and 60% of the direct costs. Although differences in methodology make comparison difficult, this is similar to the results seen in other countries that have established more consistent and robust standards for measurement of ICR.

Policies for the recovery of indirect costs exist at most universities, typically as a fixed rate but with many variations depending on the type of research – e.g. grant or contract – or by sponsor, category, and other distinctions including direct negotiation with funders. The responses also indicated that exceptions to the policy could be made when justified, for example in response to sponsor policies and competitive pressures, or as a way of providing in-kind support in fields of strategic importance. The reasons for and complexity of these policies makes it difficult to classify and quantify the exceptions, and more work needs to be done to understand their full impact. For this reason, the discussion is limited to a consideration of the challenges that lead to exceptions and the possible measures that could be taken to avoid them.

The two most commonly cited challenges to the recovery of indirect costs, likely linked, were refusal on the part of some funding organization to pay indirect costs, and reluctance on the part of researchers to include them in their research budgets.

Probably related to this apparent reluctance to fund or charge indirect costs are widespread misconceptions regarding indirect costs themselves. There are indications that many researchers and some administrators see indirect cost recoveries as a “tax” on research that in fact is a profit to the university, while in the view of a significant number of funders, these are not “real” costs of research.

## **Policy Implications**

The approach by Canadian universities to the measurement, recovery and allocation of indirect costs, and the approach by funding bodies to the payment of indirect costs, is scattered and inconsistent. A more consistent and integrated approach would lead to better understanding and management of indirect costs, improving universities' ability to support leading-edge research, and would help to ensure that external reporting requirements focus on the documentation of real costs rather than the demonstration of incremental research benefits. Examples from universities that have implemented measurement models show that these do not need to be complex or onerous to be effective, and the need to keep any such system manageable must be taken into consideration.

Any effort to improve the tracking and management of indirect costs should involve administrators, researchers and funders, so that these groups can begin to develop a common understanding of the characteristics and impact of indirect costs, and the risk posed to universities as increasing research activity drives increased, but unfunded, indirect costs.

A necessary first step is for all stakeholders to acknowledge the current magnitude and impact of the indirect costs of research. Canadian estimates – consistent with international studies – clearly indicate that recoveries do not meet the true needs. Tacit acceptance of the status quo may not be a viable option.

## **Future Study**

As noted, this study was exploratory, and as such it may help to create a foundation for further work should there be an interest.

A key feature of such further work – from an administrative point of view – would be a detailed review of existing models for the measurement of ICR. A number of institutions have developed measurement models of varying degrees of sophistication; an understanding of these models, their commonalities, strengths and weaknesses could provide the basis for the identification of a common framework for the management of ICR.

Such a framework could be developed incrementally so that its implementation would not appear to be an insurmountable challenge, and would be within the reach of all universities. However, it must be repeated that any such exercise will only be of use if it is supported by a common understanding by all stakeholders of the impact of indirect costs and driven by a common desire by those same groups to improve the understanding, management and level of funding of this critical expense.

*The interpretation of policy documents and survey results, as well as any opinions stated within this report, are those of CAUBO. They do not necessarily reflect the position of all member institutions.*



# Indirect Costs of Research

---

Report prepared by Gilles Morier and Danielle Ménard  
with input from CAUBO staff.



## Contents

<b>1. Introduction</b> .....	3
<b>2. Definitions and Terminology</b> .....	5
<b>3. Reimbursement Models – Canada and Abroad</b> .....	9
<b>4. Measurement of Indirect Costs in Canada</b> .....	13
<b>5. Recovery of Indirect Costs</b> .....	23
<b>6. Allocation of Indirect Cost Recoveries</b> .....	33
Appendix 1: International Models for Measurement and Reimbursement / Recovery of Indirect Costs .....	47
Appendix 2: Internal Allocation of ICR Recoveries (Central / Faculty / PI) .....	51
Appendix 3: Survey Methodology and Profile of Respondents.....	55



## 1. Introduction

Research demands a broad range of physical facilities, scientific resources, management and support services and systems, all of which are generally provided by the organizations within which research is conducted. While “direct” costs of research are understood to be the costs of performing the work, for example, the time of the persons working on the project, the costs of materials and supplies consumed during the course of the work, etc., “indirect” costs are more nebulous to define and difficult to quantify. The costs associated with providing the physical facilities and the administrative and regulatory support functions are generally considered to be “indirect” costs of research. These costs are real, substantial, and necessary - research simply could not be done outside of a suitable physical, administrative, and regulatory compliance environment.

Yet, recent changes to the context in which research is conducted have impacted the universities’ ability to adequately support the research enterprise. Such changes include:

- increased basic infrastructure operational costs;
- the need to continually refresh technology in highly advanced research equipment and facilities;
- increased levels of regulation in many areas integral to research: reporting requirements, ethics, laboratory safety, occupational health and safety guidelines, animal care protocols, etc.;
- growing demands for compliance (financial, ethical, electronic data storage), IT and reporting requirements, and overall research administration costs;
- increasing complexity of research structures funded by Canadian funding agencies, e.g. team grants, which are more costly to administer.

These changes come at a time when operating resources otherwise available are increasingly constrained.

Without adequate funding for indirect costs of research, the efforts to sustain a high quality competitive research environment in Canada could be impaired at a time when global competitiveness in research is increasingly important. Universities would need to constrain their investments, with a resulting negative impact to researcher productivity and ability to attract the best talent in the world.

### Report Objectives

A university’s ability to provide high quality facilities and efficient and effective support services facilitates the management and conduct of research by its Principal Investigators and research community. Covering these indirect costs of research clearly necessitates the allocation of financial resources which, in turn, diminishes the availability of resources for other activities. Thus, optimizing the recovery of indirect costs from all sources not only benefits and enables a university’s research activities, but can also benefit its other, academic, activities.

This report presents the key results of a survey conducted jointly by the Canadian Association of University Business Officers (CAUBO) and the Canadian Association of University Research

Administrators (CAURA) aiming to better understand the policies and practices of Canadian universities on:

- methods and practices for measuring indirect costs;
- practices and sources of funds for the recovery of indirect costs;
- management practices for the internal allocation of different types of indirect costs recoveries.

The report also aims to situate Canadian practices with respect to the measurement and recovery of indirect costs in the United States, United Kingdom and Australia.

Further information on survey methodology and profile of respondents is provided in Appendix 3.

*Throughout this report institutions responding to the survey are classified by size:*

- “Small”                    *total research revenue less than \$ 10 million;*
- “Medium”                    *between \$10 - \$100 million;*
- “Large”                    *greater than \$100 million.*

**Survey Facts**

- Online survey of all CAUBO member institutions between April and June 2013.
- 48 responses (44%) including all U-15 institutions.
- Survey respondents manage 88.5% of the total research funding and 89.3% of the tri-council funding held by Canadian universities.
- They receive 85.0% of the funding available under the federal Indirect Costs of Research Program (ICP).
- Some underrepresentation from respondents in the Atlantic provinces.
- Small institutions are underrepresented (26%); large institutions are overrepresented (89%).

## 2. Definitions and Terminology

**“Indirect Costs”**: Also referred to as “Core Costs”, Indirect Costs are real costs occasioned by and incurred in support of research, but which are not direct costs and are not readily and specifically attributable to any particular project.

Each jurisdiction defines Indirect Costs differently, which in turn defines what costs can be included in the measurement and reimbursement of Indirect Costs from the various sources and programs. Sample definitions are:

- Canada Indirect Costs Program: “... central and departmental administrative costs that institutions incur to support research but are not attributable to specific research projects”
- United States (Circular A-21): “Facilities and administrative (F&A) costs, for the purpose of this Circular, means costs that are incurred for common or joint objectives and, therefore, cannot be identified readily and specifically with a particular sponsored project, an instructional activity, or any other institutional activity. F&A costs are synonymous with "indirect" costs ..... “
- Australia (Instructions for the Completion of the Indirect Costs Financial Return 2012): “Expenses that relate to goods and services which contribute to research but are not directly associated with any particular research project.”

Table 1 describes the main types of indirect costs and provides examples of their main components. Note that not all costs are eligible in all jurisdictions.

**Table 1: Broad categories of Indirect Costs and examples of typical costs within each category**

<b>Operating, maintaining and renovating the physical, computational and communications infrastructure within which research is conducted</b>
Utilities, custodial, security
Maintenance, repairs and upkeep
Depreciation
Debt service / Costs of capital employed
Leasing costs
<b>Providing research resources</b>
Libraries and holdings (books, databases, and other information resources, etc.)
Computing resources and communications / network infrastructure
Technical support for researchers, research spaces and facilities
<b>Managing the organization</b>
Financial management, planning, budgeting, accounting
Human resource management, including occupational health and safety
Procurement
Insurance, risk management and disaster preparedness
Management of physical resources and infrastructure and capital planning
Management information systems

Communications and public relations
Legal
Senior management
Student registration and management
<b>Managing the research enterprise</b>
Project and proposal development
Development of research partnerships
Negotiation of research contracts and other agreements related to the conduct of research (Materials Transfer Agreements, Confidentiality agreements, partnership agreements, etc.)
Pre- and post-award administration for sponsored research
Research specific information systems
Regulatory compliance including ethics of research with human participants, animal care, environmental assessment, biohazardous and radioactive materials, dangerous or controlled goods, export controls, etc.
<b>Managing research outputs</b>
Intellectual property management
Promoting knowledge transfer, mobilization and application, including technology transfer.

It is worth noting that some costs, such as for Animal Care and Veterinary Services and their associated physical infrastructure, as well as the costs of housing and operating research institutes, require special consideration. In many ways, all costs associated with these types of facilities are directly attributable to research and, as such, can be viewed as direct research costs. Yet, in Canada, the convention is that, housing and administrative support costs are considered to be *indirect* costs even for such dedicated research facilities.

**“Drivers”:** In general cost accounting terminology, a “driver” is a factor that creates or drives the cost of an activity ([http://en.wikipedia.org/wiki/Cost\\_driver](http://en.wikipedia.org/wiki/Cost_driver)). For example, costs associated with research space, libraries, staff (academic, research and administrative support), are all incurred at the institutional level in providing an appropriate research environment. The use of these resources “drives” the costs of providing them.

**“Proxies”:** “Proxies” are used to estimate the share of the cost of services and resources used by an activity, in this case research. Proxies must be representative of, and correlated, with resource utilization. They must also be trackable, verifiable and robust. Wherever possible, they should be simple and easily extractable from an institution’s financial and management information systems. Examples of drivers and proxies to allocate indirect costs to research, are:

- FTE: Full time equivalents of faculty and staff dedicated to research may be used to estimate the cost of utilization of various services (for example: Computing and Communication, Human Resources, etc.), provided in support of the institution’s research activities;
- NASM (Net Assignable Square Meters) of space dedicated to or used by research may be used to estimate research-related operating costs of physical infrastructure;
- Student numbers may be used to estimate the costs of providing services used by students active in research.

The basic approach used in estimating indirect costs of research using proxies is:

- Costs for certain drivers (e.g. building operating and maintenance costs) are pooled.
- Specific proxies are identified as reflective of those costs (e.g. square meters of space) and used to establish a standard cost (\$/sq.meter).
  - Standard costs may have different values for different drivers within a cost pool – for example, there may be a different cost value for laboratory space as opposed to non-laboratory space.
- Research utilization of those drivers is determined (e.g. number of square meters of research space as opposed to non-research space)
- Indirect costs of research for that pool of costs are allocated in proportion to the research utilization for that driver. (“X” numbers of square meters of research space times the cost of operating that space)
- The process is repeated for different drivers using the proxies most appropriate for each.

“Modified total direct costs”: These are typically the total research cost of a project less such costs as equipment, capital expenditures and certain other types of expenses, the precise definition of which can vary by sponsor and jurisdiction. “Modified total direct costs” are often used as a basis for expressing an indirect cost rate such as “x% of modified total direct costs.”



### 3. Reimbursement Models – Canada and Abroad

#### Canada

The federal Indirect Costs Program (ICP) provides funding to universities and colleges that receive grants from the three federal granting agencies: CIHR, NSERC and SSHRC. ICP grants are calculated on the basis of a three year rolling average of funding received by each institution from eligible granting programs. A graduated formula is applied that takes into account the size of the institution. Financial and narrative reporting is relatively simple. Overall the current reimbursement rate is about 20%.

#### United States

The US federal government reimburses indirect costs on a project-by-project basis for its grants and contracts using a reimbursement rate pre-negotiated with each institution. Circular A-21 “establishes principles for determining costs applicable to grants, contracts, and other agreements with educational institutions”, defines Facilities and Administrative (F&A) costs which may or may not be included in the calculation of the indirect cost of research rate, and identifies the principles to be used in allocating indirect costs to the research function. The process for determining the institutional rate is complex and highly prescriptive. Typical negotiated indirect costs rates are in the range of 50-60% of modified total direct costs.

#### Australia

Australia offers Higher Education Providers (HEPs) a scheme of block grants which provide funding for some operating costs of research infrastructure through the Research Infrastructure Block Grants (RIBG) program which focuses on the costs of acquiring and operating research facilities and equipment, and for other types of Indirect Costs, through the Sustainable Research Excellence (SRE) program, which includes a variety of administrative, management and facility operating costs. The SRE also aims to support HEPs (Higher Education Providers) to “build and maintain research excellence through the implementation of best practice financial management, performance and reporting frameworks. Payment of indirect costs through the SRE program is based on funding received through the Category 1 Australian Competitive Grants (ACG). To be eligible, institutions must participate in the Excellence in Research for Australia (ERA) process, which “evaluates the quality of the research undertaken in Australian universities against national and international benchmarks” using a variety of metrics.

To determine the allowable indirect costs, institutions conduct a time allocation survey of research-active researchers to measure the proportion of time spent on ACG research relative to total faculty FTEs. A very rough estimate is that combined RIBG / SRE grants can range from 31% to 90%, in relation to ACG awards.

#### United Kingdom

All universities participate in the Transparent Approach to Costing (TRAC), a process which establishes the Full Economic Costs of research. Under this scheme, Indirect Costs are expressed in the form of £ / FTE for research staff, included in grant budgets, and reimbursed at 80% by granting councils. The TRAC system is an activity-based costing that considers all

institutional costs, including cost of capital employed, and allocates them to “Research”, “Teaching” and “Other”. It requires a sampling of how academic staff are actually allocating their time to these categories of activities.

In addition, the Higher Education Funding Council for England (HEFCE) provides a Quality Related block grant which is based on research quality and takes into account the relative cost of research in different areas. Research Quality is assessed through a process called the Research Excellence Framework (REF) (replacing the earlier Research Assessment Exercise).

Additional details regarding international funding models are provided in appendix 1.

### **Comparison and Key Findings**

The US, Australia and UK systems are complex and nuanced – operating successfully within these systems to optimize indirect costs recovery requires significant expertise. Indirect Cost funding is, at least to some extent, intertwined with the broader university funding mechanisms.

The US, Australia and UK systems are top-driven and highly prescriptive on the methods of establishing the indirect costs of research. The methodologies are complex and labour intensive to implement.

The UK and Australia approaches i) require periodic surveys of staff time allocation to establish FTE drivers for indirect costs and ii) link indirect costs recovery to research performance. Both required some adaptation of accounting systems and practices and, most likely, expansion of accounting teams over time.

<b><u>Similarities and Differences Across Jurisdictions</u></b>	
<b><u>Costs: Same approach</u></b>	<b><u>Costs: Different approach</u></b>
<ul style="list-style-type: none"> <li>• Operating and maintaining physical and computational infrastructure within which research is conducted</li> <li>• Operating and maintaining libraries</li> <li>• Managing the organization generally (i.e – HR, procurement, risk management, legal, etc.)</li> <li>• Managing the research specifically (i.e. Offices of Research Administration, Industry Liaison offices, dedicated research finance teams etc.)</li> <li>• Research regulatory compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Depreciation costs : Not explicitly eligible in Canada, very limited allowability in Australia, but allowed in US and UK (as infrastructure adjustments)</li> <li>• Debt service / Costs of Capital: Not explicitly eligible in Canada, not allowed in Australia, but allowed in US and UK</li> <li>• Upgrades to infrastructure / equipment: Some are eligible in Canada but generally not elsewhere</li> <li>• Materials for ensuring operation and operational readiness of research equipment, (such as cryogenes for NMR systems, etc.) – Eligible in Canada but generally not elsewhere</li> <li>• IP Management / Technology Transfer: Not counted in US but included in Canada, UK, Australia</li> <li>• Research marketing / promotion: Not counted in US but included in Canada, UK, Australia</li> </ul>

<b><u>Implications for Best Practices</u></b>
<ul style="list-style-type: none"> <li>• In summary, the US, UK and Australia systems all require highly sophisticated calculations of indirect costs as a condition of receiving funding, either as a line item in a project (US), establishing the real full cost of research (UK) or as part of a block grant in support of Indirect Costs (Australia). This, in turn, requires sophisticated tracking of indirect costs and of drivers.</li> <li>• In the UK and Australia, Indirect Costs funding is also tied to research performance measurement. This suggests two different accountability standards for Indirect Costs funding – i) transparent and trustworthy identification of Indirect Costs and ii) outcome measurement focusing on research performance.</li> <li>• It would not be unreasonable to anticipate that, with time, a higher level of accountability will be sought by the federal Indirect Costs Program. Indeed, the program currently has ongoing projects on the development of Baseline Metrics for assessing the state of the research environment.</li> <li>• The development of reliable methods and processes for establishing indirect costs of research, supported by appropriate information systems, is important and will likely become more important in the future.</li> </ul>



#### 4. Measurement of Indirect Costs in Canada

This section of the report analyses the responses to the portion of the survey that probed respondents about their practices regarding the measurement of the indirect costs of research incurred in their institution.

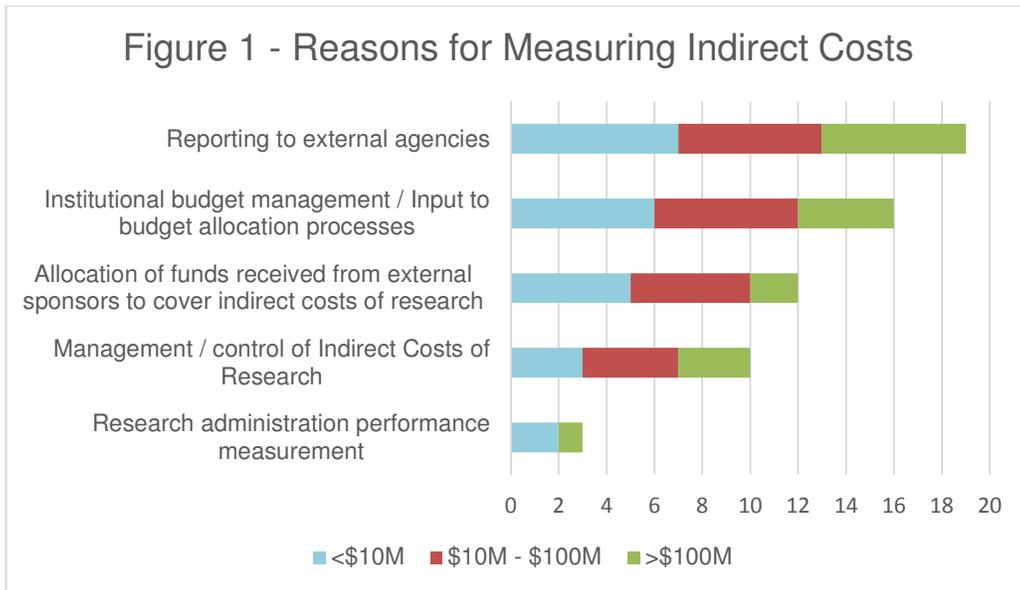
##### 4.1 Measuring Indirect Costs of Research: Motivation and Barriers

###### **Key Findings:**

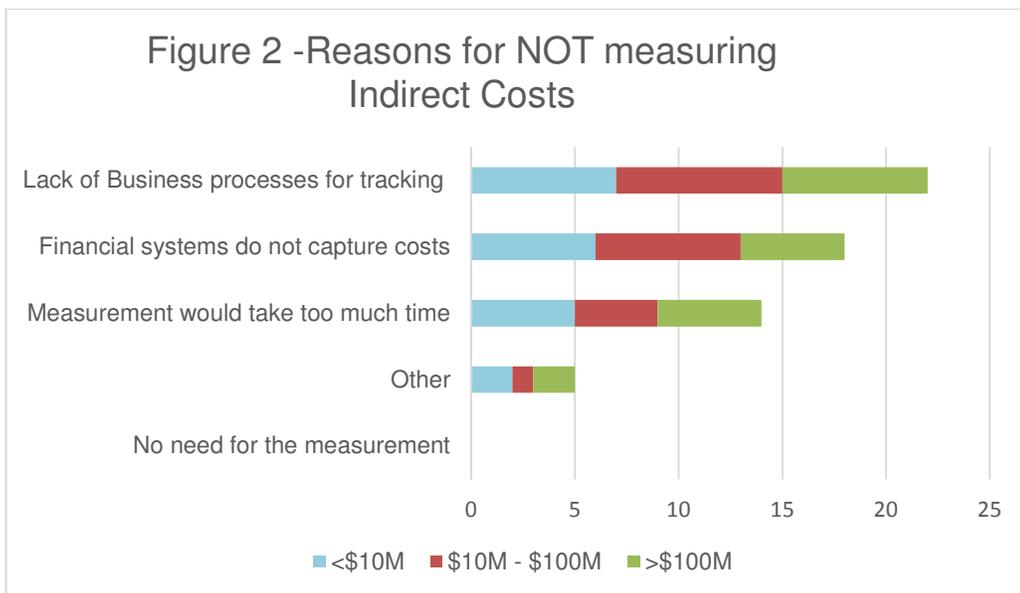
- Approximately half of survey respondents, distributed roughly equally across all size categories, do not measure their indirect costs of research,.
  - The main reasons for not measuring these costs are:
    - lack of appropriate systems and business processes
    - the perception that implementing such systems would be onerous and time-consuming
- Of those who do measure their Indirect Costs of Research, 83% do so for external reporting requirements and 70% for internal budget management reasons.

Half (50%) of all respondents measure their indirect costs of research. This proportion varies little across the size of institutions with a slightly higher proportion (56%) of large institutions measuring indirect costs compared to small institutions (44%).

The twenty-four respondents who measure indirect costs were asked about their reasons for doing so. The reason most commonly cited (79% of respondents) is for reporting to external agencies, followed closely (67%) by for managing the institutional budget and for input to budget allocation processes. These were the top responses across all institution sizes. Less frequently cited reasons (50% and 42% of respondents respectively) were for the allocation of funds received from external sponsors for indirect costs and for the management and control of indirect costs. Very few respondents (13%) measure indirect costs as part of measuring the performance of research administration.



Of the 24 institutions who indicated that they did **not** measure indirect costs, 23 provided reasons. The most commonly cited reason (96% of respondents) is the absence of business processes to track indirect costs, followed by a lack of financial systems to capture costs (78%). Sixty-one percent of respondents (61%) feel that a tracking processes would be too onerous or time-consuming. Three institutions indicated that they track some costs when needed but do not measure indirect costs on an on-going basis.



## 4.2 Measurement Methods and Practices - What Is Being Measured?

### **Key Findings:**

- Almost all respondents include dedicated research management, central management (HR, Finance, etc.) and senior management units providing research administrative functions in their measurement of Indirect Costs. A smaller percentage (60-65%) include research units or faculty / departmental units, mostly concentrated in smaller universities. 55% of large universities and even fewer small and mid-sized universities include their Faculties of Graduate Studies.
- Respondents generally capture costs for support staff, unit operating costs, library costs, information systems costs, technology transfer, and physical infrastructure (space) operating costs.
- Few respondents capture costs of capital and depreciation.

### **Comparison to international requirements**

- Both the types of costs being measured by respondents and the units for which they are being measured are consistent with UK, US and Australian requirements.
- Respondents seem to be particularly good at tracking space-related operating costs.
- There may be a systematic underestimation of Indirect Costs since the costs of administering and managing the population of students engaged in research are often excluded.
- Costs of capital and depreciation of infrastructure and equipment are not well captured. Although different foreign jurisdictions treat these costs differently, there is nevertheless a consensus that they are real Indirect Costs of research.

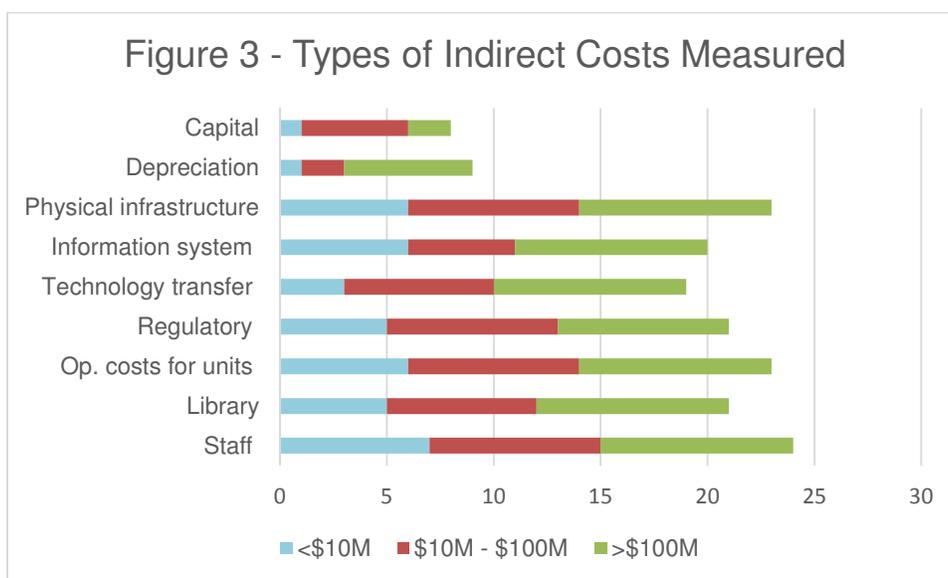
### **Implications for best practices**

- Costs for Faculties of Graduate Studies should be explicitly included in the measurement of Indirect Costs.
- Costs of capital and depreciation of infrastructure and equipment should also be included in the measurement of Indirect Costs.
- Both UK and Australia require periodic staff time allocation surveys as an integral part of their processes. This is not required in Canada and generally not tracked by respondents.

Respondents who indicated that they measure indirect costs were asked about the types of indirect costs they measure.

Staff, the operating costs of units and physical infrastructure were the costs cited by nearly all respondents. Library, regulatory and information system costs were also cited by a high

proportion of respondents (~85%). Technology transfer was cited by 79% of respondents while depreciation and capital costs were cited by only 38% and 33% of respondents, respectively. These three latter categories were comparatively much less cited by small institutions while significantly more of the large institutions measure depreciation.

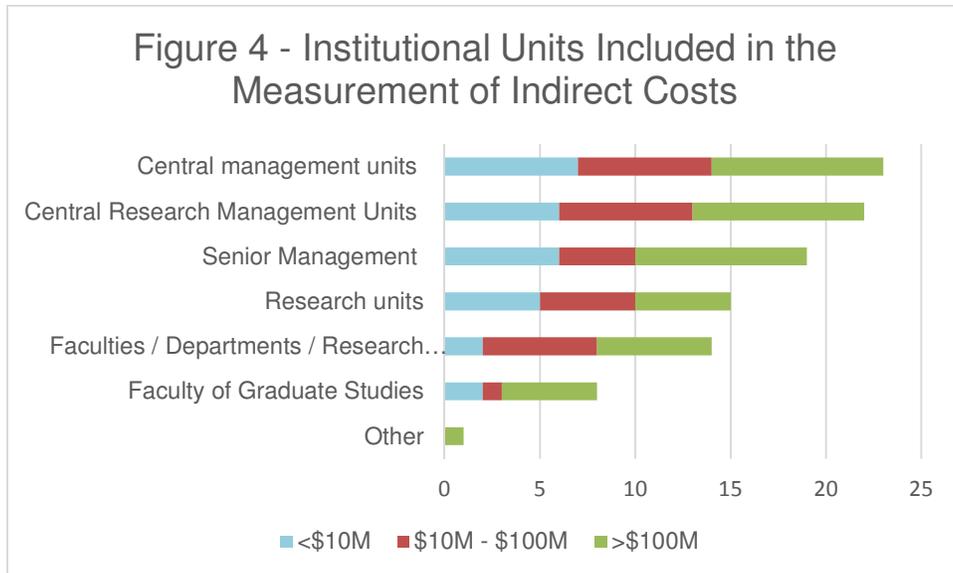


The costs of support staff were included in measurements by more than twice the number of institutions that included the costs associated with faculty. The costs for acquisition were included by slightly more respondents than the costs of operating libraries, although large institutions include both these costs. The operating and maintenance costs of information systems (including licenses) were the main aspects measured by over half of responding institutions under this category of costs although costs for the acquisition and development of new systems and upgrades to existing ones were also included by about 40% of respondents. As part of the costs of physical infrastructure, 75% of respondents measure operating costs, utilities, maintenance and repair and nearly 60% also include the costs of upgrades. This is consistent across all institution sizes. Few small and medium-size institutions include the depreciation costs of equipment and infrastructure in their measurement of indirect costs, but the majority of large institutions do. The majority of respondents from medium-size institutions include the capital costs of equipment (and to a lesser degree of infrastructure) in their measurement of indirect costs. Less than a quarter of small and large institutions include these costs.

The survey probed what institutional units were included in the measurement of the indirect costs of research.

Nearly all respondents (>90%) across all institution sizes include central management and central research management units in their measurement. Fewer institutions include senior

management (79%), research units (63%) and faculties / departments / research centres and institutes (58%) in the measurement. All responding large universities include senior management in their measurement whereas only a quarter of small universities include faculties/departments/research centres. Only a third of respondents, mainly from large institutions, include costs associated with the Faculty of Graduate Studies as part of their measurement of the indirect costs of research.



### 4.3 Models, Drivers and Proxies - How Are Indirect Costs Attributed to Research?

#### **Key Findings:**

- Space, and the costs of operating those spaces, are generally tracked well in systems that recognize different operating costs for different types of research space.
- Proxies are not required for units and staff fully dedicated to research because their costs are typically easily trackable and fully included when tracking indirect costs. For other units, support staff time is used as a driver by about 50% of respondents.
- In such cases, the Indirect Costs of Research are based on a proportionate share of FTE's. However, despite some respondents indicating other proxies (percentage of research transactions) or some staff time tracking systems, the proportionate share of FTE's for research is predominantly determined through consultations with unit managers and senior managers.
- Very few track the extent to which various services are used by research clientele or for research purposes specifically as opposed to academic or other purposes. This raises questions as to how costs associated with common resources such as libraries can be properly allocated to research.
- Most large universities and several smaller universities have developed analytical models for establishing Indirect Costs of Research, and most of those are willing to share these models.

#### **Comparison to international requirements**

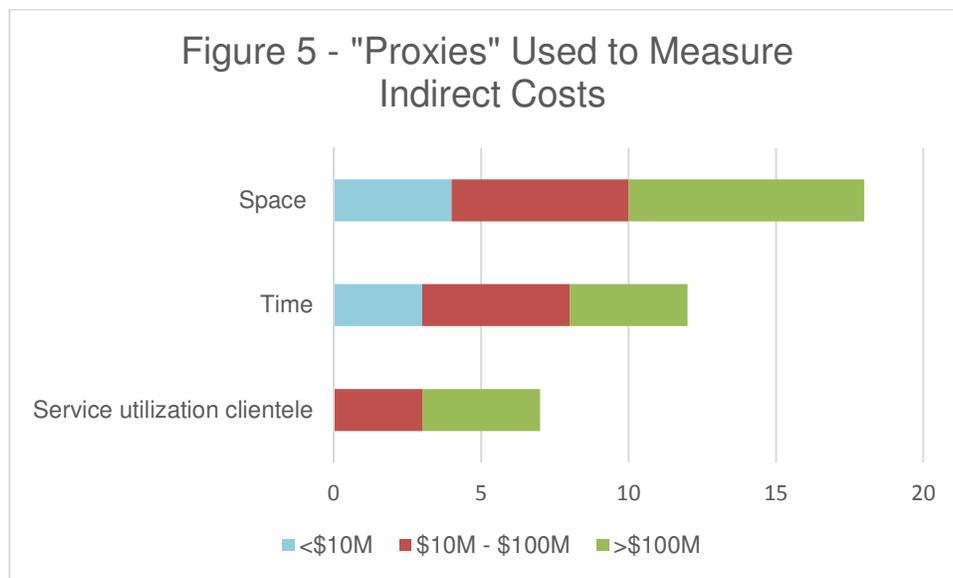
- Where measured, Canadian practices for measuring the costs of operating research spaces are consistent with, or can be easily adapted to, US, UK and Australian standards.
- 75% of large universities have a negotiated rate with the US federal government. Clearly, their systems are robust enough to meet basic US requirements.
- Canadian practices are probably less robust than required by US and UK standards, particularly with respect to the tracking research-related FTE and service utilization clientele. Capturing FTE dedicated to research without some form of staff time (academic, research and support staff) allocation surveys would probably not meet international standards.

#### **Implications for best practices**

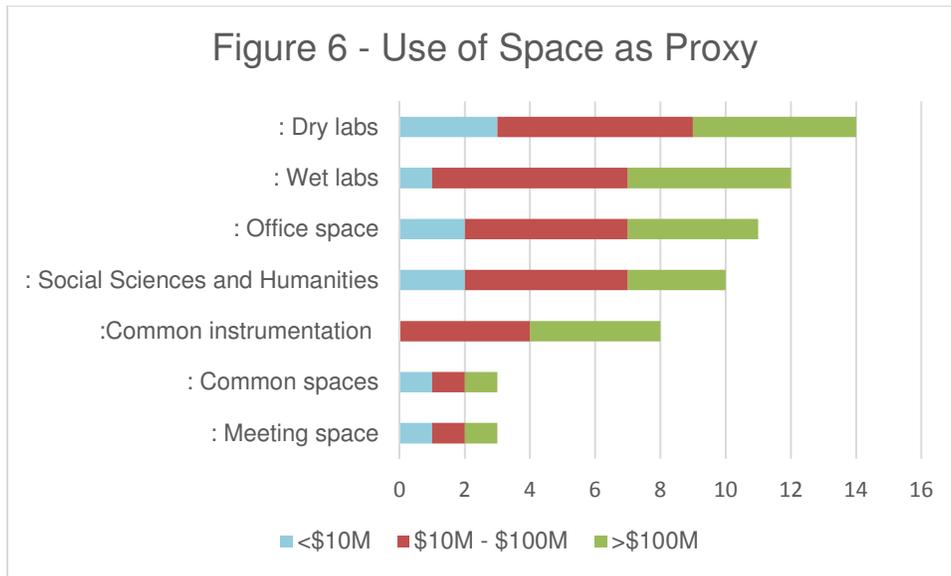
- Practices for assessing research utilization of resources and central services can be further refined to provide a more accurate assessment of Indirect Costs of Research.

Respondents who indicated that they measure indirect costs were asked about the types of models and proxies used to measure their indirect costs.

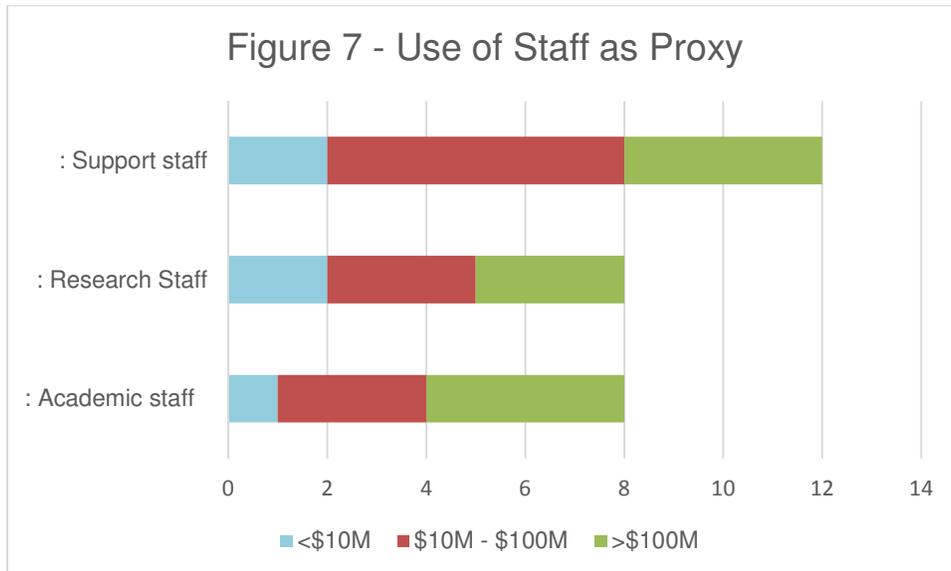
With respect to “proxies” used to measure or estimate indirect costs, 75% of respondents used space as a proxy while 50% use time dedicated to research and 29% use the research proportion of the clientele of various institutional services to estimate indirect costs. The proportion of institutions who use space as a proxy increases with size while time is used in somewhat similar proportions across institutions (although most by medium-size institutions). Small institutions do not use the utilization made of services by the research clientele as a proxy.



The chart below shows that dry and wet labs, as well as space used by researchers in the social sciences and humanities and office space are most commonly used in the calculation of research space as a proxy for measuring indirect costs. Common instrumentation space is not used in the calculation by small institutions while meeting rooms and common areas are seldom used in the calculations across all sizes of institutions.



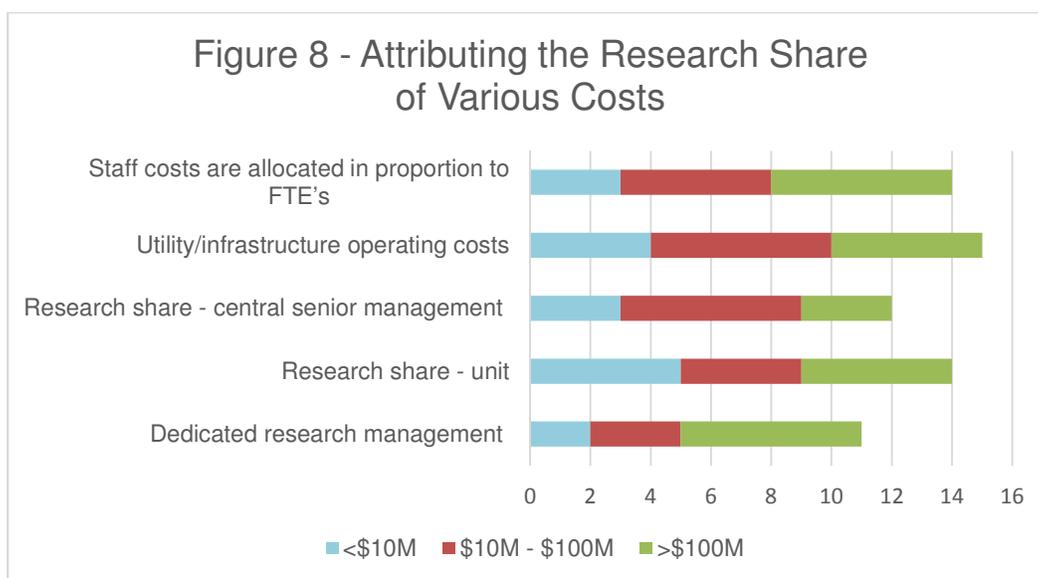
The chart below illustrates that institutions of all sizes include academic staff, support staff and research staff when using staff as a proxy for the estimation of indirect costs; support staff is the category most frequently used.



When the research clientele of a given institutional service is used as a proxy to estimate the indirect costs of research, institutions generally include professors, graduate students, research staff and support staff in the calculations.

Respondents were next asked how the share attributable to research is determined in order to estimate the indirect costs of research. Responses are shown below. They indicate that

research space is used most often as a proxy to estimate the indirect costs associated with utilities and infrastructure. Responses were fairly split regarding whether the research share is established through consultations with central management vs. unit managers with several institutions citing consultations with both.



#### 4.4 Measurement Models and Capabilities

Fifty-eight percent (58%) of institutions measuring indirect costs report that they have an analytical model or tool for measuring the indirect costs of research while 42% do not. All large institutions have such a model or tool while 57% of small institutions do and only 12.5% of responding medium-size institutions have such a model for measuring the indirect costs of research.

Fifty-eight percent (58%) of institutions provided information on what they consider to be strengths in terms of measuring indirect costs within their institution. These were wide ranging and related to practices used to measure, track or estimate specific costs. For example, a small institution reported using the ratio of research-related transactions to total transactions to estimate the costs related to the management of research in administrative units. Another has a tracking system to measure the time of staff involved in the management of research. Several institutions reported a strength in measuring indirect costs through the measurement of space allocated and personnel dedicated to research. Practices to measure the maintenance costs of research assets, the utilization of libraries, faculty costs, and costs eligible under the federal ICP were also mentioned. One institution mentioned the calculation made specifically for the US government.

The availability of institutional studies of Indirect Costs could provide further independent insight on how the authors of those studies assessed the costs.

A large institution reported using a methodology that fully identifies and attributes all institutional, shared and overhead costs using

the same framework, thus ensuring consistency with the calculation of institutional/overhead costs in general. The methodology uses the same cost drivers that are accepted and understood as part of the larger budget process.

#### 4.5 Estimates of Indirect Costs

##### Key Findings:

- There is a remarkable consistency in the estimation of Indirect Costs rates: 18 of 22 institutions who measure Indirect Costs and who provided an estimate, assess their indirect costs of research to be in the range of 40% to 60% of direct costs with an average of 49% and a median of 50%.

##### Implications for best practices

- Despite variations in cost measurement practices, and although a more precise figure would be desirable, the estimate of Indirect Costs, on a national scale, in the range of 40% – 60% seems fairly robust.

Among the 24 respondent institutions who measure indirect costs, 22 provided an estimate. Among the seven small institutions who provided an estimate, five cited a figure between 50 and 60%. The other two cited considerably lower figures (23% and 1%). While one medium-sized institution reported an estimate of 7-10%, the five others reported estimates between 40% and 50%. Finally, all nine large institutions, who measure indirect costs, reported estimates that ranged from 32% (including capital amortization) and 59%. Overall then, **18 institutions estimated their indirect costs of research to be in the range of 40% to 60% of direct costs with an average of 49% and a median of 50%.**

Only 12 institutions indicated that they have negotiated an indirect costs rate with the US government. All are large institutions. Eleven provided that rate. **The rates negotiated range from 32% to 59% with an average of 49.3% and a median of 52%.** These rates are very similar to those reported above as the estimates of institutions for their indirect costs.

Finally, 9 institutions indicated that they have completed (or commissioned) a review or study to establish the indirect costs of research. Five were large institutions, three were medium-size and one is a small institution. Eight are willing to provide CAUBO/CAURA with a copy.

## 5. Recovery of Indirect Costs

This section of the report analyses the responses to the portion of the survey that probed respondents about their policies and practices regarding the recovery of indirect costs of research from different sources.

### 5.1 Recovery Policies: Who Has Them and How Are They Used?

#### **Key Findings:**

- The vast majority of universities (81%) have a policy for the recovery of indirect costs; the V-P Research is generally responsible for developing it and managing its implementation.
- Affiliated hospitals and institutes generally have their own policy.
- Indirect cost recoveries are shared between institutions and their internal (esp. hospitals) and external partners on multi-party projects.
- Exceptions or exemptions to the policy are allowed and responsibility for allowing these generally rests with the V-P Research but is often shared with or delegated to other positions in the institution (e.g., Deans, Director of Research Services, etc.).
- Almost half (49%) of university policies indicate that the institution's approach to recovering indirect costs is through a fixed rate. The majority apply a different fixed rate for grants (these range from 10% to 40% of modified total direct costs) and for contracts (these range from 25% to 40%). Rates can also vary by sponsor, by category, eligibility requirements, or according to negotiated rates.
- About 30% of respondents review their indirect cost rate at least every 5 years.

#### **Implications for best practices**

- Consistent practices for universities across the country, with respect to IC recovery rates charged to sponsors, would strengthen the position of all institutions.
- The information from this report and university policies available on the web could be used by universities to formulate clear rules or guidelines, suitable to their own environment and circumstances, regarding if, when and by whom exceptions or exemptions can be made to their IC recovery policy.

### 5.1.1 Information collected from web sites

Information about the recovery of indirect costs was gathered from the web site of 43 Canadian universities by CAUBO staff. Almost half (49%) of university policies indicate that the institution's approach to recovering indirect costs is through a fixed rate. However, only five institutions apply a fixed rate for all research – the majority apply a fixed rate that differs for grants and contracts (other exceptions are also indicated). A number of universities apply both a fixed rate and a variable rate (i.e., an overall preferred fixed rate and then a rate schedule for certain organizations, departments or agencies; a fixed rate for grants and variable rates for contracts; or an overall minimum fixed rate for all contracts/grants from organizations other than federal government departments and agencies).

The overall fixed rates identified by the university policies range from 20-40% of modified total direct costs (which generally exclude major equipment). The fixed rate for grants ranges from 10-40% of modified total direct costs and the range for contracts ranges from 25-40% of modified total direct costs. The policies also indicate a number of exceptions to the fixed rates such as for clinical trials, partnership projects, research carried out by students or research agreements with charitable organizations and foundations – these ranged from 10-40%.

The variable rates outlined in the university policies vary considerably except where agreements with organizations and departments exist, such as with Public Works and Government Services Canada (PWGSC), Ontario Centres of Excellence, National Institutes of Health, and Canadian International Development Agency (CIDA). In general the range of rates for grants and contracts are similar for government (federal, provincial and US) but the ICR rate range for industry and charitable/non-profit organizations are broader.

Most of the universities in Québec follow the guidelines of le Ministère de l'Éducation, du Loisir et du Sport (MELS). MELS requires that all externally funded research include indirect costs. MELS has a list of accredited research sponsors and reimburses the universities for a portion of the indirect costs for these accredited sponsors. For organizations that are not accredited by MELS, it is suggested that the Universities charge a fixed rate for grants (15%) and contracts (40%).

The table below summarizes the variable rates identified in the university policies:

**Table 2: Indirect Costs Recovery Rates by Funding Source**

<b>Grants</b>			
	% of modified total direct costs	% of payroll	Other %
Federal Government	15-40%	65%	
PWGSC			
On-campus		65%	
Off-campus		30%	
Travel			2% of travel
Tri-Councils (researchpartnership program)	20-25%		
US Government	44.3%	50-64%	
Provincial Government	15-40%		
Municipal Government	40%		
Private Sector	15-40%		
Charities and Foundations, NGOs, non-profit organizations	10-15%		
Other*	8-40%	8-65%	5% on supplies
<b>Contracts</b>			
Federal Government	15-40%	65%	
On-campus	40%		
Off-campus	20%		
PWGSC			
On-campus		65%	30% on students
Off-campus		30%	15% on students
Travel			2% of travel
Tri-Councils			
US Government	8-44.3%	31.9-64%	
Provincial Government	15-40%	30%	2% of travel 30% on materials & supplies
Municipal Government	30-40%		
Foreign Government	40%		
Private Sector	30-50%		
Charities and Foundations, NGOs, non-profit organizations	20-40%		
Other†	13-40%	10-65%	5% on supplies 20% of stipends

\*Other sources include: Ontario Centres of Excellence, National Institutes of Health, industry sponsored grants, Affiliated Hospital Research, Clinical Trials, CIDA, research conducted off-campus

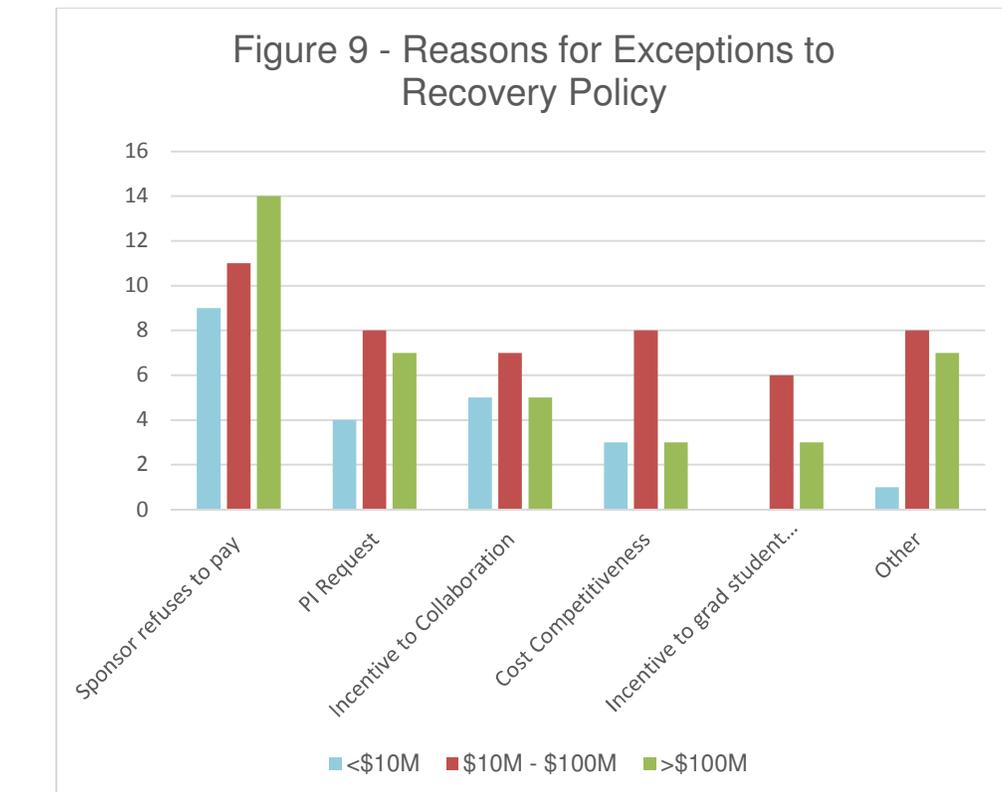
†Other sources includes: Clinical Trials, Federal and Provincial Government contribution agreements, Graduate Student Stipends, Industry sponsored contracts, Canadian Centre for Fisheries, IDRC, CIDA, Producer Groups, research conducted off-campus

### 5.1.2 Survey results

As part of the CAUBO/CAURA survey, thirty-nine (81%) of the 48 survey respondents indicated that they have a policy on the recovery of indirect costs and 67% of these institutions post their policy on the web. In 85% of cases, the V-P Research is the person responsible for the policy; in 8% of cases, the policy is under the responsibility of the V-P Finance. The remainder have shared responsibility, or assign responsibility to a V-P Academic or Dean(s).

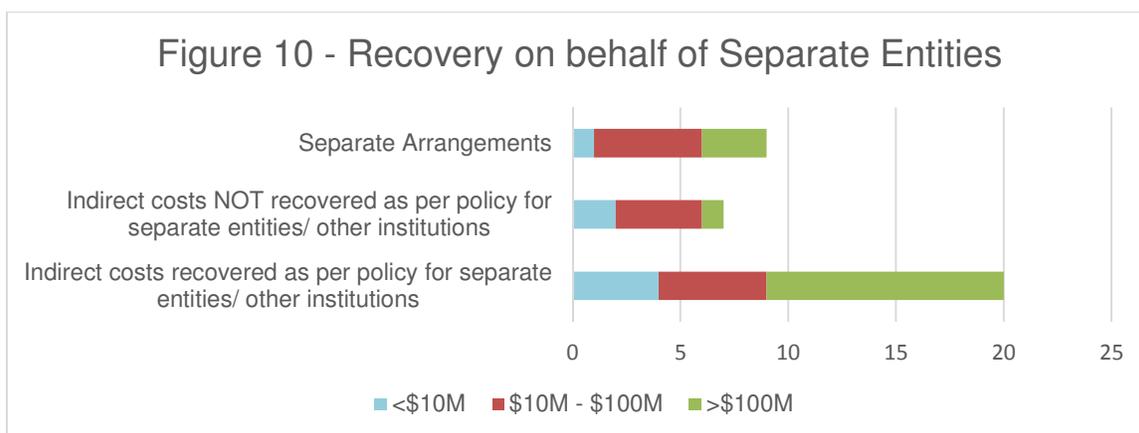
All but one of these respondents indicated that their policy allows for exemptions or exceptions. Respondents indicated that several position holders in the university have the authority to allow exceptions. The V-P Research is cited as having that authority by 79% of respondents. Deans and directors of centres or institutes have authority in 37% of cases, director of research services (21%), the V-P Finance and director of the University-Industry Liaison Office (13%). Two institutions require the approval of a management committee; in one case, principal investigators may have that authority.

Respondents were asked about the reasons for allowing exceptions. The figure below illustrates the responses. The most common reason cited (89% of respondents) is that sponsors refuse to pay indirect costs. Half of respondents indicated that exceptions are made at the request of the principal investigators involved in the contracts. Other important reasons include providing incentives to collaborations and improving the cost competitiveness of the contract.



Other reasons cited include sponsor policies or caps that limit the payment of indirect costs, cases where the contract activity is more of a grant nature (e.g., payment of a student stipend or equipment) and programs that don't allow the matching of partner contributions to indirect costs (e.g., NSERC CRD).

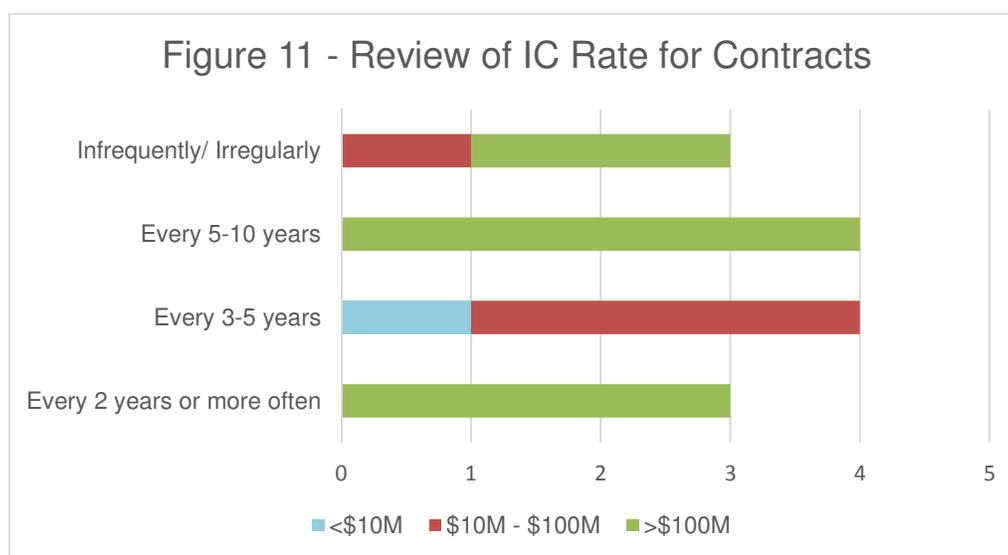
Respondents were asked whether, in the case of funding that involves researchers from separate entities within the university (e.g., hospitals, institutes) or co-investigators from other institutions, indirect costs are recovered as usual according to the institutional policy. Twenty respondents (51%) recover funds on behalf of separate entities as per their policy while 18% do not and 23% have other arrangements. Three of the 39 institutions who have a policy did not respond to this question.



In such cases, 49% of institutions transfer the funds received for indirect costs to the other entity in proportion with the direct costs incurred, 13% do not and 23% retain a portion as the host institution. Six institutions who have a policy did not respond to this question.

Regarding whether arrangements for the recovery of indirect costs are the same for affiliated hospitals and institutes, 13 institutions (mainly large ones) indicated that these entities have different policies; in 8 cases, arrangements for the recovery of indirect costs are covered by the same or similar policies. This question was not relevant for 14 institutions, mainly smaller institutions that, likely, don't have such affiliates.

Twenty three (59% of institutions who have a policy) periodically review the indirect costs of research rates included in grant / contract budgets. The frequency of this review is illustrated below.



Five institutions have a review of the rate underway now, the review was done in 2012 or 2013 for 6 institutions and before 2010 for 5 institutions.

## 5.2 Non-Recovery of Indirect Costs: Sources and Challenges

### Key Findings:

- Sources frequently cited as not allowing the recovery of indirect costs are funding agencies and programs of the federal government, charitable organizations and foundations, and federal and provincial government departments and agencies. Private corporations represented less than 10% of responses.
- The frequent citing of the programs of the tri-agencies is at odds with the fact that the funds provided through these agencies are considered in the calculation of awards made to institutions under the federal Indirect Costs Program. These awards are by far the largest source of indirect costs recoveries in Canada.
- Several main challenges were identified as impeding the recovery of indirect costs. The most often cited (~80% of respondents) relates to the lack of understanding by faculty members of the nature of indirect costs and the importance of recovering them, which leads to a reluctance to include them in budgets. The perception that indirect costs take away from the resources available for the direct costs of research contributes to this challenge.
- The second most often-cited challenge relates to a similar lack of understanding about indirect costs among research sponsors. This leads to a refusal to pay such costs as part of the budget for projects.
- The main strategies identified to overcome challenges to the recovery of indirect costs largely mirror the challenges: focus on the education of faculty and sponsors, limit exceptions and involve research administrators in negotiations, improve the measurement of indirect costs, and resolve internal issues related to the allocation of recoveries.

### Implications for best practices

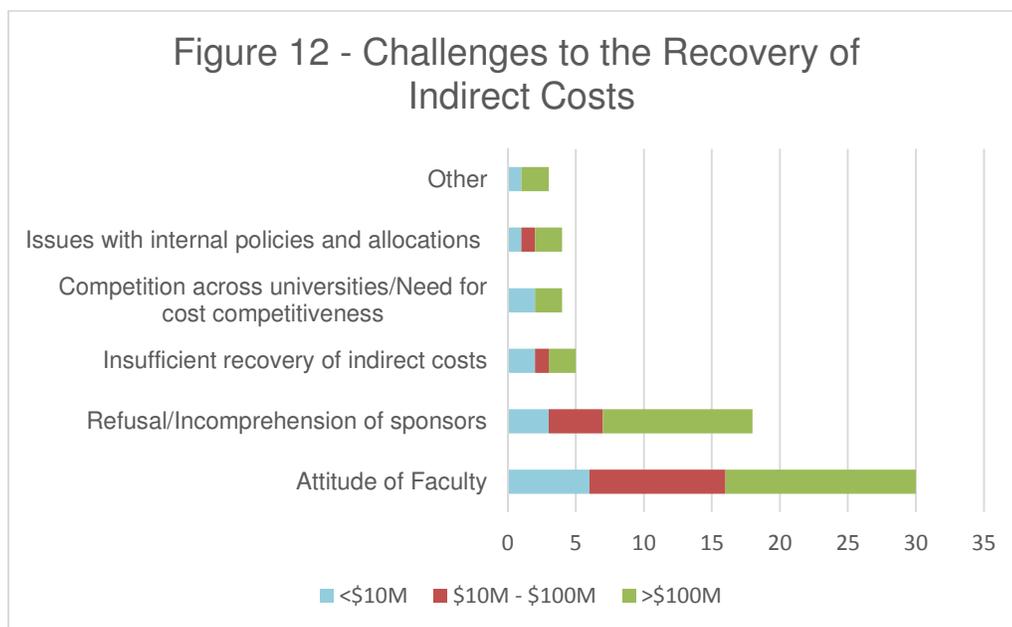
- The information in this report can be used to promote a better understanding of the current status of IC recovery in Canadian institutions. The fairly widespread misconception that tri-council programs do not allow IC recoveries is not productive nor conducive to the effective promotion of the case for higher recoveries.
- Clearly, working with and influencing investigators to include indirect costs in their project budgets, at appropriate rates, and developing internal mechanisms to create incentives to do so, offer opportunities to enhance indirect costs recoveries wherever possible.
- In so doing, it is critical not to view the Investigator as the “generic offender”. The leadership they provide, the research resources they attract, and the students they pay and mentor, are the life blood of the university. The discussion on indirect costs must be turned around to consider ways in which all can benefit from enhanced indirect costs recoveries.
- There is broad consensus about both the nature of the challenges to IC recoveries and strategies used to overcome these. More detailed information about the experience of institutions in establishing effective measures and strategies could be gathered and best practices developed and promoted to benefit all institutions.

When asked for the top 5 sponsors or sources of research funding that don't allow the recovery of indirect costs, the 36 respondents who answered this question provided on average 3.4 responses each. When grouped, the most common responses were the various research funding agencies and programs of the federal government (30 responses). Oddly, the tri-council agencies together (CIHR, NSERC, SSHRC) topped the list (15 responses from 10 institutions) even though, since 2002, indirect costs for awards made by these sources are paid at the rate of about 20% through the federal Indirect Costs Program. Among federal sources, CFI (8 responses), Genome Canada (4) and the Canada Research Chairs Program (which incidentally allows some IC recovery, 2 responses) were also mentioned.

Fifteen responses (15) related to contracts and funding from various federal government departments and agencies while twenty (20) related to funding from provincial departments and agencies (mainly from Alberta, Ontario and Quebec).

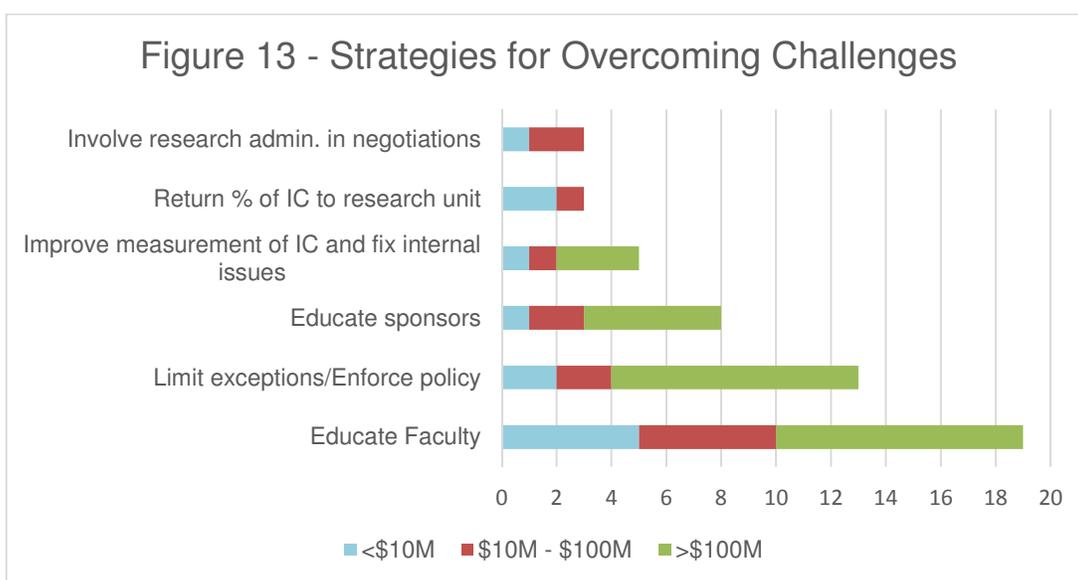
National health foundations and societies and other foundations and charities were cited by 29 respondents while private companies were cited 11 times. Various matching fund programs that do not allow the matching of partner contributions for indirect costs were mentioned 6 times.

Thirty-eight respondents provided input on the major challenges, barriers or impediments they encounter in recovering the indirect costs of research or in implementing their recovery policy. These can be grouped in five main categories. The most commonly cited challenge (79% of respondents) is the lack of understanding of faculty members about the nature of indirect costs. This frequently results in indirect costs not being included in the budgets presented and accepted by sponsors. Furthermore, faculty members often perceive the recovery of indirect costs as a tax that takes away from the funds available for research.



The second most frequently mentioned challenge (47% of respondents) is the refusal of sponsors to pay indirect costs. This also often stems from a lack of understanding about these costs or from the policies of sponsors that do not allow for the payment of indirect costs. These two challenges are most severe in large institutions. Other challenges cited include the insufficiency of the funds recovered as well as the competition for funds across universities and the need to keep contracts cost competitive resulting in lowering the rate charged for indirect cost recovery. A few respondents indicated that uneven treatment in the recovery of indirect costs across university departments and services and issues with the allocation of the funds recovered can be impediments to the application of the institutional policy. Finally, two respondents mentioned that increasingly, industrial funding comes through donations to avoid the payment of indirect costs.

Thirty-eight respondents provided comments regarding the strategies and approaches used by institutions for meeting challenges to the recovery of indirect costs.



Again the responses can be grouped in a small number of categories that are closely related to the challenges identified above. The most common strategy (50% of respondents) is to educate researchers about indirect costs, their importance and the benefits to be derived from including them in budgets. Next, 34% of respondents cited that part of their strategy is to limit exceptions to the recovery policy, have these closely scrutinized and approved by the board, enforce the policy or eliminate exceptions altogether. The sensitization of sponsors to the importance and legitimacy of indirect costs and increasing advocacy for increased funding of these costs were cited by 21% of respondents. Improving the measurement of indirect costs and fixing internal issues was cited by 13% of respondents while 8% considered that returning a portion of the indirect costs recovered to the research unit and ensuring that research management units (e.g., University-Industry Liaison Office) are involved in negotiations with sponsors were good strategies for improving the recovery of indirect costs.



## 6. Allocation of Indirect Cost Recoveries

This portion of the report analyzes survey responses on various questions relating to the management and allocation of indirect cost recoveries from various sources.

### **Key Findings:**

- Almost all large universities have policies on the allocation of indirect cost recoveries, and are more likely to have separate policies for recovery and allocation.
- Larger universities are also more likely to manage different sources of indirect costs recoveries differently
- This suggests that as research volume and indirect costs recoveries increase, mechanisms for the allocation of those recoveries become more formalized and well-defined.

### 6.1 Allocation Policies

This group of questions asked whether or not institutions had policies relating to the allocation of indirect cost recoveries, the extent to which these policies were integrated with policies on recovery of indirect costs, and whether or not internal allocations varied according to the source of the indirect cost recoveries. Table 1 summarizes the survey results:

Table 3 - Allocation Policies	Total Research Revenue			Total
	<\$10M	\$10M - \$100M	>\$100M	
<b>Is there an organizational policy?</b>				
Yes	7	10	15	32
No	8	3	1	12
% Yes	47%	77%	94%	73%
% No	53%	23%	6%	27%
<b>Are the recovery and allocation policies integrated?</b>				
Yes	7	9	10	26
No	0	1	5	6
% Yes	100%	90%	67%	81%
% No	0%	10%	33%	19%
<b>Are the funds received or released through the recovery of indirect costs of research managed differently depending on their source?</b>				
Yes	3	6	10	19
No	11	7	6	24
% Yes	21%	46%	63%	44%
% No	79%	54%	38%	56%

Overall, 32 of 44 (73%) survey respondents have a policy on how indirect costs recoveries are allocated within the institution. All but one of the large institutions (15/16 or 93%) have a formal policy while 77% of medium sized institutions and 47% of small institutions have policies.

For those institutions who do have policies, 19% had different policies for the recovery and for the allocation of indirect costs recoveries. None of the small institutions and only one of the medium sized institutions had separate policies while one third (5/15) of large institutions have separate policies.

For those institutions who do not have policies, allocation decisions are made either by Financial and Research Management teams or jointly. An insufficient number of responses were received to make a definitive statement.

Sixty-three percent of large organizations manage indirect costs recoveries differently according to the source of such recoveries, for example, contract indirect costs recoveries are managed differently than federal indirect costs grants. Forty-six percent and 21% of medium-sized and small organizations respectively also differentiate between indirect cost recovery sources in their management of such funds.

## 6.2 Budgeting and Planning

### **Key Findings:**

#### For Federal Indirect Costs:

- Most large and medium sized universities consider federal Indirect Costs Program grants in their annual budget projections. Small universities seem to be moving in that direction.
- In so doing, large universities consider internal allocations in either their budgeting or revenue allocation processes more frequently than small and medium sized universities.

#### For contract and grant indirect costs recoveries:

- Fewer institutions handle contract and grant indirect costs recoveries on a forward budgeting basis than for Federal Indirect Costs, even for large universities (who are roughly split 50/50).
- Of those who do forward budgeting, larger universities tend to incorporate the internal allocation into their budgeting processes.
- Very few allocate projected IC recoveries at the start of a contract and adjust at end. Almost all are allocated after actual receipt of the funds.

### **Implications for best practices:**

- Federal Indirect Cost recoveries are more predictable than indirect costs recoveries from contracts and grants. As such, they tend to be more integrated into normal university budget allocation processes.
- Grant and Contract Indirect Costs recoveries seem to be more uncertain, and tend to be managed as general revenues in the year in which they are received.

This group of questions focused on the way in which indirect costs recoveries were managed within institutions and, in particular, on the extent to which they were integrated with normal institutional (forward) budgeting processes and, if yes, the extent to which internal allocations were considered in such planning and budgeting processes.

Table 4 summarizes the survey results relating to the extent to which indirect costs recoveries, by source, are considered in normal institutional budgeting processes.

INDIRECT COSTS OF RESEARCH - RESULTS OF A JOINT CAUBO/CAURA SURVEY

Table 4 - Forward Planning		Total Research Revenue			Total
		<\$10M	\$10M - \$100M	>\$100M	
<b>Federal Indirect Costs Program</b>					
Are projections considered in annual internal budgeting processes?	Yes	6	7	13	26
	No	9	6	3	18
	% Yes	40%	54%	81%	59%
	% No	60%	46%	19%	41%
If yes, do such projections consider internal allocation?	Yes	1	3	8	12
	No	5	4	5	14
	% Yes	17%	43%	62%	46%
	% No	83%	57%	38%	54%
<b>Contract and Grant Indirect Cost Recoveries</b>					
Are projections considered in annual internal budgeting processes?	Yes	3	5	8	16
	No	6	8	8	22
	% Yes	33%	38%	50%	42%
	% No	67%	62%	50%	58%
If yes, do such projections consider internal allocation?	Yes	1	2	5	8
	No	2	3	3	8
	% Yes	33%	40%	63%	50%
	% No	67%	60%	38%	50%
<b>Provincial Indirect Costs</b>					
Are projections considered in annual internal budgeting processes?	Yes	2	4	7	13
	No	5	7	3	15
	% Yes	29%	36%	70%	46%
	% No	71%	64%	30%	54%
If yes, do such projections consider internal allocation?	Yes	0	1	3	4
	No	2	3	4	9
	% Yes	0%	25%	43%	31%
	% No	100%	75%	57%	69%

Fifty–nine percent of institutions integrate federal indirect cost funding with their normal budget planning processes: 40% of small institutions, 54% of medium-sized institutions, and 81% of large institutions. Large institutions (62%) incorporate internal allocations in such planning processes more frequently than medium sized (43%) and small institutions (17%).

A smaller percentage (42%) of institutions integrate contract and grant indirect costs recoveries into their annual budget planning: 33%, 38%, and 50% for small, medium-sized, and large

institutions respectively. Of those that do, 50% consider internal allocations in such processes: 33% of small institutions, 40% of medium sized institutions, and 63% of large institutions.

The survey results were inconclusive about handling of provincial indirect costs recoveries as the questions relating to Provincial Indirect Costs seem to have been interpreted differently depending on whether or not the respondent's province had a program for reimbursement of indirect costs of research. Quebec has such a program, as had Ontario until recently, but for other provinces, indirect costs are recovered under contracts from provincial agencies. As such, responses reflected a mix of "contract and grant indirect costs recoveries" and indirect costs recoveries received from federal and provincial programs.

Table 5, below, summarizes how institutions who do not do integrate indirect cost recoveries with their forward planning handle such recoveries. In almost all cases, regardless of institutional size, such revenues are handled and allocated as revenues in the year they are received.

For federal indirect cost funding, internal allocations are only considered by 14% of small institutions and 33% of medium-sized institutions, a situation which probably reflects their own internal allocations policies.

For contract and grant indirect cost recoveries, internal allocations were considered by 79% of institutions (including all large institutions in this who manage those recoveries funds this manner).

For provincial indirect costs recoveries, large institutions all considered any internal allocations while none of the small institutions and only 17% of medium sized institutions do, also likely representative of their own internal allocation policies.

For contract and grant indirect cost recoveries, 1 small, 2 medium sized and 2 large institutions handled these by allocating the funds at the start of the contract and adjusting amounts for actual recoveries at the end of the contract. All but one considered any internal allocations with this approach.

Similarly, a very small number of institutions managed indirect costs by setting up a special account or cost centre to which eligible costs can be charged. Of those who do, about half also do some kind of forward budget planning. This suggests that this approach is used mainly to facilitate external reporting.

Table 5 - Allocation as revenues (where not included in forward budget planning processes)		Total Research Revenue			
		<\$10M	\$10M - \$100M	>\$100M	Total
<b>Federal Indirect Costs Program</b>					
Are indirect cost recoveries handled as general revenues in the year received?	Yes	7	6	2	15
	No	2	0	1	3
	% Yes	78%	100%	67%	83%
	% No	22%	0%	33%	17%
If yes, do such recoveries consider internal allocation?	Yes	1	2	2	5
	No	6	4	0	10
	% Yes	14%	33%	100%	33%
	% No	86%	67%	0%	67%
<b>Contract and Grant Indirect Cost Recoveries</b>					
Are indirect cost recoveries handled as general revenues in the year received?	Yes	5	7	7	19
	No	1	1	1	3
	% Yes	83%	88%	88%	86%
	% No	17%	13%	13%	14%
If yes, do such recoveries consider internal allocation?	Yes	3	5	7	15
	No	2	2	0	4
	% Yes	60%	71%	100%	79%
	% No	40%	29%	0%	21%
<b>Provincial Indirect Costs</b>					
Are indirect cost recoveries handled as general revenues in the year received?	Yes	5	7	2	14
	No	0	0	1	1
	% Yes	100%	100%	67%	93%
	% No	0%	0%	33%	7%
If yes, do such recoveries consider internal allocation?	Yes		2	2	4
	No	5	5	0	10
	% Yes	0%	29%	100%	29%
	% No	100%	71%	0%	71%

### 6.3 Internal Allocations

#### **Key Findings:**

- Indirect costs recoveries in small universities tend to be much more controlled by central administration with limited sharing with Faculties and PIs
- As research volumes increases, medium sized universities retain control centrally for “program” oriented funding such as the federal Indirect Costs program, and there is increased sharing with Faculties on grant and contract Indirect Costs recoveries.
- For larger universities, all sources of indirect costs recoveries are shared. Sharing is generally in favour of central administration for “program” oriented funding such as the federal Indirect Costs program and generally in favour of Faculties for grants and contracts indirect costs recoveries.
- It is worth noting that funds allocated to Central Administration do not simply disappear into the university’s global budget. Rather, they are integrated into the normal budget management and resource allocation processes and the university management makes resource allocation decisions according to its financial management and overall governance processes.

#### **Implications for best practices:**

- As research volume increases, more units and individuals share in the recoveries. This suggests that it may be very important to establish guiding principles for the management of indirect costs recovery and allocation as both the number of stakeholders and the financial stakes increase as volume of research and indirect cost recoveries increase.
- The management processes for indirect costs recovered from contracts and grants tend towards much sharing of funds recovered with lesser integration with normal budgeting processes. These approaches are often written into policies.
- This risks promoting a perception amongst sponsors and investigators that Indirect Costs Recoveries are less about offsetting the real and substantial indirect costs of research than about generating a “profit” or raising funds for other purposes.
- Although there are understandable and pragmatic reasons for handling Indirect Costs Recoveries from contracts and grants in these ways, this heightens the need to develop a cohesive organizational rationale and approach for the management of these funds.

The next series of questions sought information on how universities allocate the funds generated as a result of indirect costs recoveries.

The general approach for this analysis was based on funds being allocated into three possible streams: Central Administration, Faculties, and Principal Investigators (whose projects generated the indirect cost recoveries). The “Central Administration” stream was then considered in a series of sub-categories such as VP, Research, Industry Liaison Office, Research Administration, Library, etc. while the “Faculty” stream was broken down into

Department and Principal Investigator (to accommodate situations where a share to the Principal Investigator (PI) is not contemplated or required by university policy but is done at the Faculty level).

### 6.3.1 Information collected from web sites

In addition to the survey, a web search of the top 50 research universities<sup>1</sup> was conducted by CAUBO staff to locate the ICR policies for each institution.

Almost three quarters (71%) of the University policies provided allocation details for recovered ICR funds. The internal allocation of funds varies widely from one university to another and, even within universities recovered funds may be allocated differently depending on a number of factors:

- Where the research was conducted (by faculty, research institute, etc.);
- If the research was funded by a grant or a contract;
- The source of the research funds and the associated indirect cost recoveries.

The table below summarizes the percentage range allocated to different university accounts regardless of the factors above.

**Table 6: General allocation areas and ranges for Indirect Cost Recoveries**

Areas of allocation	Allocation ranges
<b>University</b>	<b>10-100%</b>
<b>Central Administration</b>	30-50%
Library	9-11%
Information Technology	9%
University contingency fund	5%
Operating budget	10-55%
University General Revenues	35-100%
Other central university (Space, Administration Services, Reporting, Library and ITS)	16.5-100%
<b>Associate Provost, Research</b>	10%
<b>VP Research</b>	10-50%
Office of the VP Research	35-40%
Research Incentives Programs	7%
AVP Research	20%
Office of Research	20-50%
Office of Research Services Overhead Account	15-35%
VP Research, Promotion Fund	22.50%
<b>Faculty/school</b>	2-100%
Dean	10-75%

<sup>1</sup> The list of top 50 research universities for 2012 was based on the RESEARCH Infosource Inc. list.

Development fund	50%
Faculty Overhead account	15-50%
Faculty-based centre	25%
<b>Department/Academic Unit</b>	10-100%
Department Head	10-15%
Program Chair	25%
Dept. Overhead Reserve Account	10-100%
<b>Principal Investigator</b>	10-40%
<b>Research Initiatives Fund</b>	15%

### 6.3.2 Survey results

Some data cleaning was required because some respondents provided allocations in comment sections or in the “Other” category of the allocation questions.

This section focuses primarily on the federal Indirect Costs Program and Contract and Grant indirect costs recoveries. As noted above, Provincial indirect costs recoveries tend to be handled as a mix of those two.

#### Allocations of funds between Central / Faculty / PI

The survey results are summarized in Appendix 2, which provides histograms of allocation percentage ranges for universities with research revenues of < \$10M, from \$10M- \$100M, and > \$100M, for each of federal indirect cost program funding, contract and grant indirect cost recoveries, and provincial indirect cost funding.

#### **Universities with research revenues < \$10M**

Allocation of indirect costs in smaller universities is very highly weighted towards central administration, for all sources of indirect cost recovery or funding.

For federal indirect costs funding, 8/12 allocated the funds entirely to central administration, with three sharing lesser amounts (<40%) with Faculties and one providing some funding to the PIs.

Indirect Cost Recoveries from grants and contracts also tended to be managed centrally with 4 of 7 respondents allocating those funds entirely to central administration. Three of 7 share with the Faculty and one provides some funding to the PI.

#### **Universities with research revenues from \$10M to \$100M**

Funds from the federal Indirect Costs Program are managed differently than funds from grants and contracts or provincial indirect costs recoveries.

For federal indirect costs funding, 6 of 9 allocated the funds entirely to central administration with other three allocating >80% centrally and <20% to Faculties. None indicated any sharing with PIs.

Indirect Cost Recoveries from grants and contracts are shared between central administration, Faculties and PIs. Of 8 respondents, the central administration share was between 61% and 80% for 3 universities and 41%-60% for 5 universities. All 8 had some sharing with Faculties and 6 of 8 shared with the PIs.

### **Universities with research revenues \$100M**

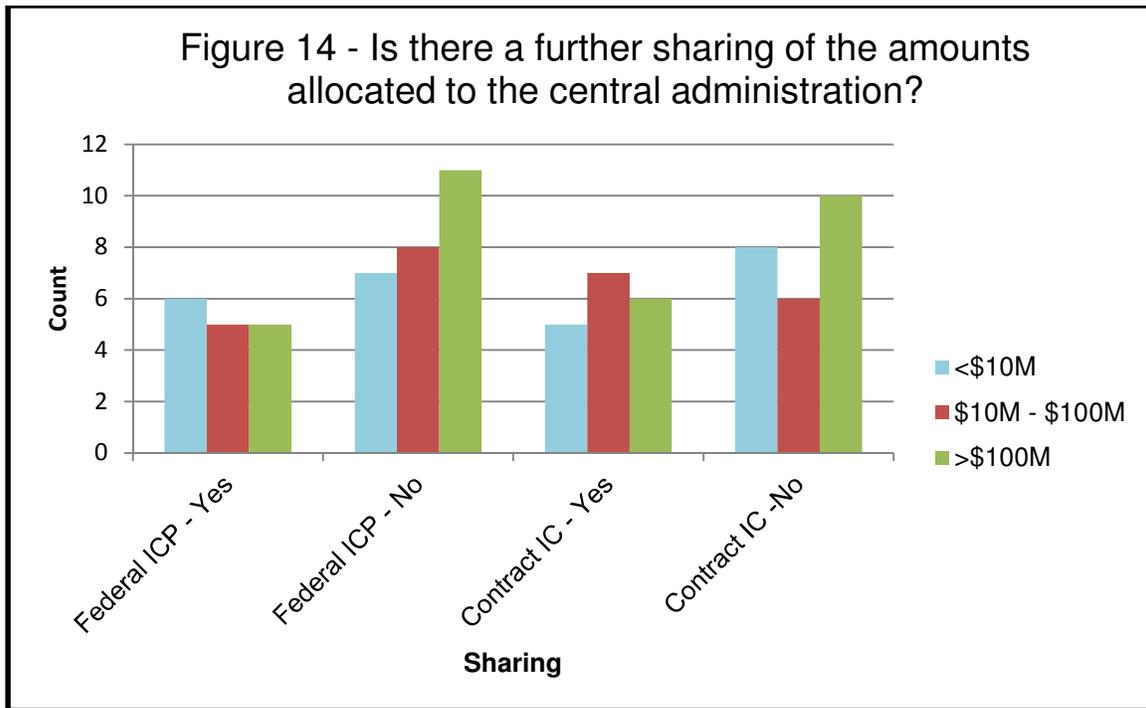
Funds from the federal Indirect Costs Program are managed differently than funds from grants and contracts or provincial indirect costs recoveries. There is also more extensive sharing of indirect costs recoveries from all sources than with small and medium-sized universities.

For federal indirect costs funding, 5 of 15 respondents retained all funds centrally. Of the other 11 respondents, 2 allocated the funds entirely to the Faculties and 8 of 11 sharing between 21% and 40% to the Faculties. Two had sharing with other organizations such as affiliated universities, and research institutes.

Indirect Costs Recoveries from grants and contracts are generally shared between central administration and Faculties. 7 of 15 respondents provided 41% - 60% to faculties and 2 provided 100% to Faculties. Three indicated a variable sharing between faculties and Central Administration. Two of 15 provided for sharing with PIs at the central level.

### Allocation of funds retained by central administration

The table below summarizes the survey results relating to whether or not there is a further sub-allocation of the amount retained by central administration.



It is worth noting that funds allocated to Central Administration do not simply disappear into the university's global budget. Rather, as discussed above, they are integrated into the normal budget management and resource allocation processes and the university management makes resource allocation decisions according to its financial management and overall governance processes. This series of questions does not address those processes but rather, inquires as to whether or not the universities contemplate a further "off-the-top" sharing of indirect cost recovery funds retained centrally.

Overall, about 40% of universities share the central administration portion of indirect costs recoveries from various sources. This may be understated since the funds may be effectively allocated to different purposes through normal budgeting processes. As such, where there are such allocations, it probably reflects a specific strategic intent or financial need.

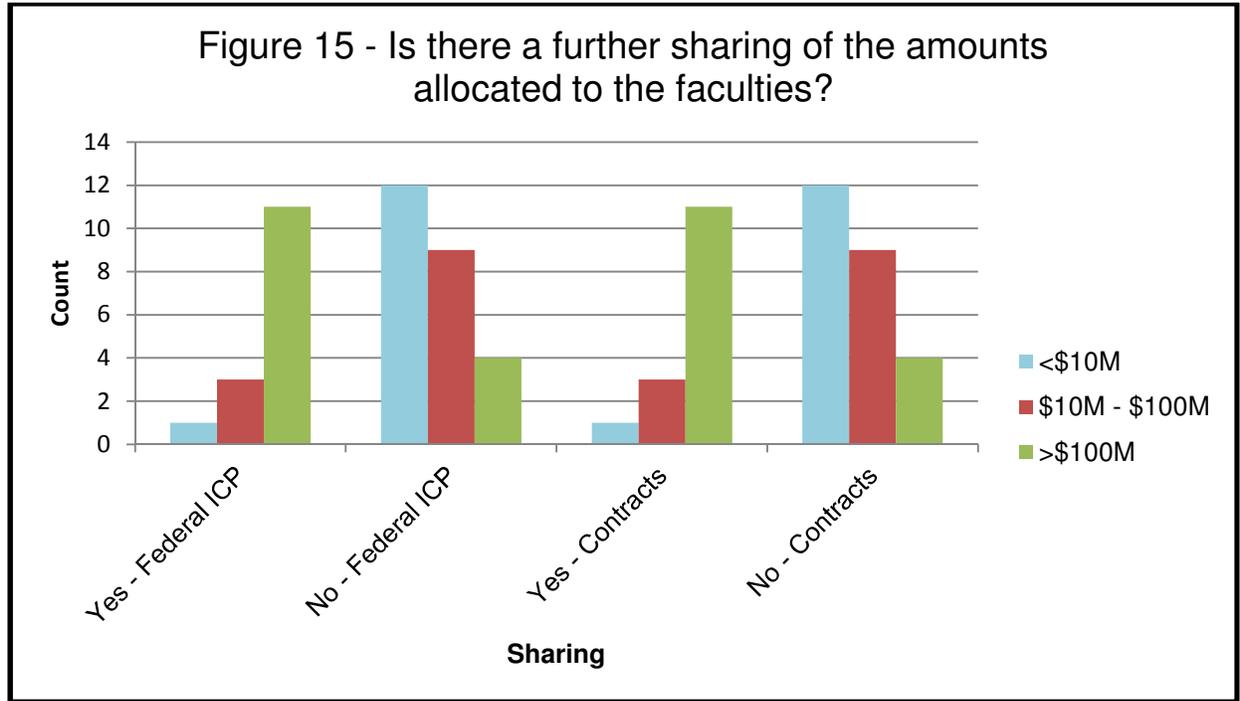
For those who stipulate some sharing of the central administration portion of Federal Indirect Costs, some typical ranges for key recipients are:

- 30% - 40% to Vice-President, Research or to research administration teams
- 10% - 15% to Industry Liaison Office
- 10% - 15% to the library
- Occasional amounts to ethics or other internal services or facilities

For indirect cost recoveries from contracts and grants, many of the larger universities already stipulate some significant sharing with Faculties. As such, lesser amounts remain for central administration. Any sharing is often targeted to the research administration function.

Allocation of funds provided to faculties

The table below summarizes the survey results relating to whether or not there is a further sub-allocation of the amount allocated to faculties.



The great majority of small and medium sized did not have any sharing beyond the Faculty level, while 71% of large universities do have a further sub-allocation of those funds. For those universities who do, funds are shared with the department and/or principal investigators but the sharing formulas can vary significantly from one faculty to another.



## Appendix 1: International Models for Measurement and Reimbursement / Recovery of Indirect Costs

This appendix provides a brief overview of three different systems, in addition to that in place in Canada, by which governments reimburse university indirect costs associated with the research funded by those governments. For further insight, the reader may also wish to consult the report entitled “Funding the Institutional Costs of Research: An International Perspective” issued by the Association of Colleges and Universities of Canada dated May 2009 for an overview of the US, UK, and Australian systems. The report is available at:

<http://www.aucc.ca/media-room/publications/funding-the-institutional-costs-of-research-an-international-perspective/>

**Canada:** At the federal level, the Indirect Costs program provides funding to universities and colleges who receive grants from the three federal granting councils namely, the Social Sciences and Humanities Research Council (SSHRC), the Natural Sciences and Engineering Research Council (NSERC), and the Canadian Institutes of Health Research (CIHR) (collectively, the “Tri-Council”), including each council’s contributions to the Networks of Centres of Excellence program. Grants are calculated on the basis of a three year rolling average of funding received by each institution from eligible granting programs. A graduated formula is applied whereby smaller institutions receive a higher rate of indirect cost reimbursement with institutions receiving over \$6 million per year from the three councils typically receiving an indirect costs grant on the order of 20% of their Tri-Council funding. Financial and narrative reporting is relatively simple, with a narrative report addressing the use of, and benefits arising from, the grant and a financial report demonstrating the allocation of the grant to eligible cost categories.

**United States:** The US federal government reimburses indirect costs on a project-by-project basis for its grants and contracts using a pre-negotiated indirect cost reimbursement rate. Each institution negotiates an Indirect Cost Rate with the US Federal Government, acting through the Department of Health and Human Services (HHS) or the Department of Defense's Office of Naval Research (DOD). That rate is then applied to all of that institution’s federal research grants and contracts. The rates are typically valid for three years, after which they are re-negotiated.

The Indirect Cost Rate negotiation is governed by Circular A-21 on “Cost Principles for Educational Institutions” which “establishes principles for determining costs applicable to grants, contracts, and other agreements with educational institutions” and which defines Facilities and Administrative (F&A) costs which may or may not be included in the calculation of the indirect cost of research rate, identifies the principles and in some cases the drivers to be used in allocating indirect costs to the research function. The process for determining indirect cost rate is complex and highly prescriptive, both as to the nature of costs to be included or excluded in the calculation of the indirect costs rate and as to the method of calculation. There is a simplified method for institutions with less than \$10 million / year in eligible federal income.

Typical negotiated indirect costs rates are:

- Cornell University's rate is 60% of modified total direct costs (excludes equipment, capital expenditures, patient care, student tuition remission, scholarships and fellowships, rental of off-site facilities, portion of sub-grants or sub-contracts in excess of \$25K).
- University of Michigan's rate is 54.5% of modified total direct costs
- University of Illinois in Chicago rate is 59.5% of modified total direct costs

**Australia:** The Australian system for indirect costs support evolved over the period of 2008-2010. Two insightful studies by the Allen Consulting Group in 2008 and 2009 describing the thought processes and rationale leading to the development and implementation of the Australian system are available at:

<http://www.innovation.gov.au/Research/ResearchBlockGrants/Pages/FullCostofUniversityResearch.aspx>

Australia offers Higher Education Providers (HEPs) a scheme of block grants which provide funding for some operating costs of research infrastructure through the Research Infrastructure Block Grants (RIBG), which focuses on the costs of acquiring and operating research facilities and equipment, and a program for other types of Indirect Costs through the Sustainable Research Excellence (SRE) program.

The Research Infrastructure Block Grants (RIBG) program supports infrastructure operating costs for “facilities such as libraries, laboratories, computing centres, animal houses, herbaria, experimental farms”, “equipment purchase, installation, maintenance, hire and lease”, and “salaries of research support staff (including research assistants; accounting and administrative staff; and technicians) employed to provide general support activity in a given area”, amongst others. Capital (construction) and senior management costs are specifically excluded. Research Infrastructure Block Grants are allocated on the basis of each institution's proportionate share of “Category 1 Australian Competitive Grants (ACG) research income and uses data averaged over two years...” as applied to the available RIBG budget.

The Sustainable Research Excellence (SRE) program has a broader definition of eligible indirect costs than the Research Infrastructure Block Grants, and includes a variety of administrative, management and facility operating costs. In addition to providing Indirect Costs funding, the Sustainable Research Excellence program has a second objective of “to support HEPs (Higher Education Providers) to build and maintain research excellence through the implementation of best practice financial management, performance and reporting frameworks.”

Each institution's Sustainable Research Excellence research grant is based on a three part formula:

- A “Base Element” using the same formula as for RIBG program described above, namely a proportionate share of “Category 1 Australian Competitive Grants (ACG) research income and uses data averaged over two years...” as applied to the

available base funds. In 2013, this represents about 20% of total national SRE funding.

- A “Threshold 1” element, also calculated on the basis of proportionate share of Category 1 Australian competitive grants research income up to \$2.5 million (AU) and uses data averaged over two years...”, as applied to available Threshold 1 funds. In 2013, this represents about 13% of total national SRE funding.
- A “Threshold 2” element based on proportionate share of ACG grants moderated by actual indirect costs (as determined through the Transparent Costing process) and an Excellence Index, as determined through Excellence in Research for Australia (ERA) process, a method of assessing each institution’s research performance. In 2013, this represents about 67% of total national SRE funding.

All payment of indirect costs through SRE program is based on funding received through the ACG. In addition, in order to be eligible for the Threshold 1 and Threshold 2 elements, institutions must participate in the [Excellence in Research for Australia](#) (ERA) process, which “evaluates the quality of the research undertaken in Australian universities against national and international benchmarks” using a variety of metrics and indices, and in the Transparent Costing (TC) processes, which defines a method for calculating allowable indirect costs according to the Australian ministry’s guidelines.

The Transparent Costing process for the determination of allowable indirect costs is based on a single driver: the “Proportion of ACG effort to total academic effort applied to total allowable indirect costs”. Institutions conduct a time allocation survey of research-active researchers to determine the proportion of time spent on ACG research relative to total FTEs. Institutions calculate allowable indirect costs according to ministry guidelines. Allowable indirect costs of research are then determined on the basis of the proportion of FTEs dedicated to ACG effort. This process requires a survey of all research active staff to determine the proportion of time they spend on Australian Competitive grants, as well as a formal process for determining total indirect costs of research.

Because the indirect costs reimbursement rate depend on i) SRE calculations, which in turn consider both actual costs and research performance, ii) RIBG awards which can be used for equipment acquisition, and iii) the timing on RIBG and SRE grants is based on prior year ACG data, it is difficult to estimate actual Indirect Cost reimbursement rates. As a rough estimate, 2013 RIBG grants can range from 13% to 38%, SRE grants can range from 15% to 52%, and combined RIBG / SRE grants can range from 31% to 90%, all in relation to 2011 ACGH awards.

**United Kingdom:** The UK operates in a fundamentally different manner than US, Australian or Canadian systems. All universities participate in a process called the Transparent Approach to Costing (TRAC), a process which establishes the Full Economic Costs (FEC) of research. These costs include i) directly incurred research costs (as established through project budgets), ii) Directly allocated costs which are the costs of shared or pooled services used by a research project charged at a standard charge-out rates (also established through the TRAC process), iii) indirect costs including such costs as clerical and administrative staff in academic departments, non-staff costs in academic departments, costs of capital employed, etc. and iv) estates costs (charged separately) including repairs and maintenance, utilities, rates, buildings depreciation etc. Indirect Costs are expressed in the form of £ / FTE for research staff (including academic staff, employees, and an adjusted amount for students) as established through an annual TRAC

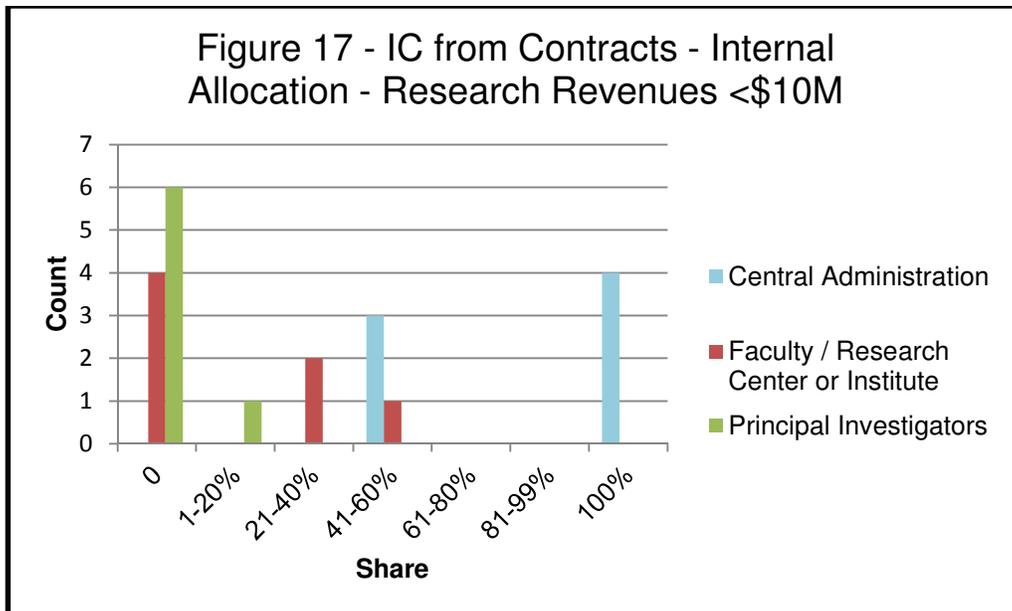
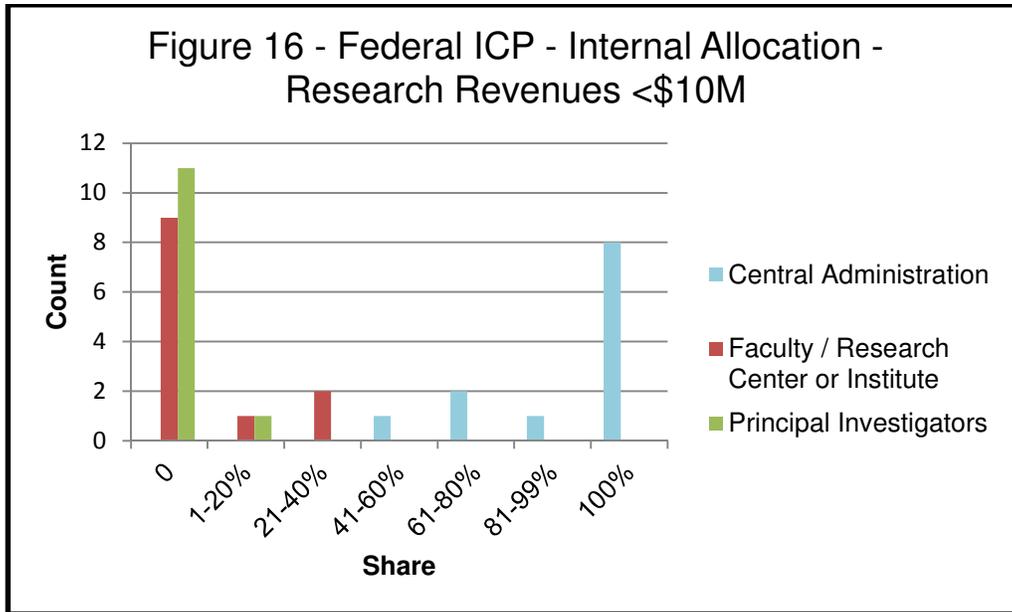
return. Grant budgets are based on Full Economic Costs (FEC) and funding councils pay 80% of that cost. Institutions must absorb the balance of 20% from their own resources.

The TRAC system is an activity-based costing that considers all institutional costs, including cost of capital employed, and allocates them to “Research”, Teaching” and “Other” on the basis of a variety of drivers. It requires a sampling of how academic staff actually allocate their time to these activities, which is then used to establish Indirect Costs Rates.

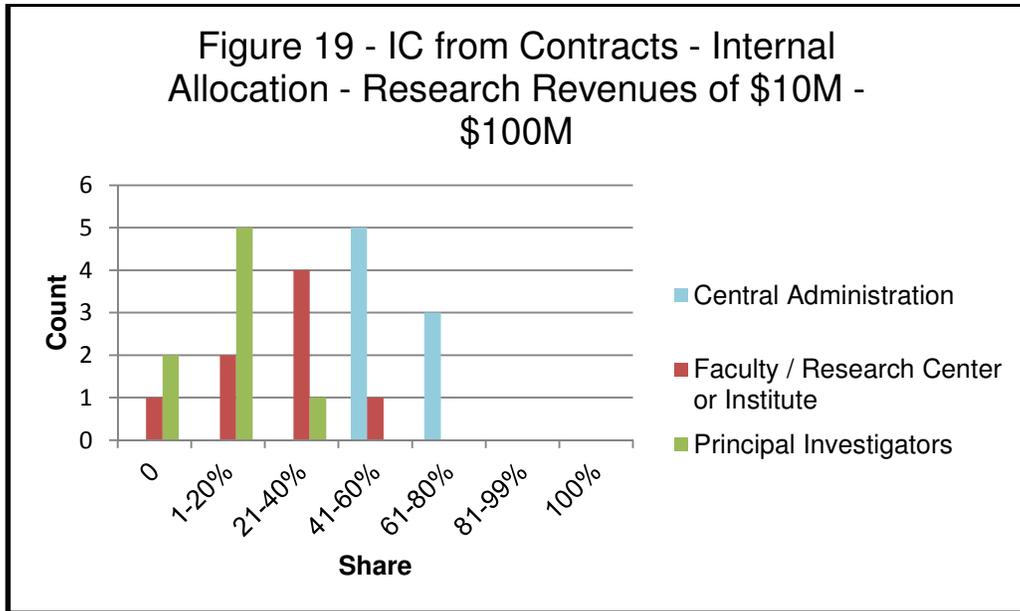
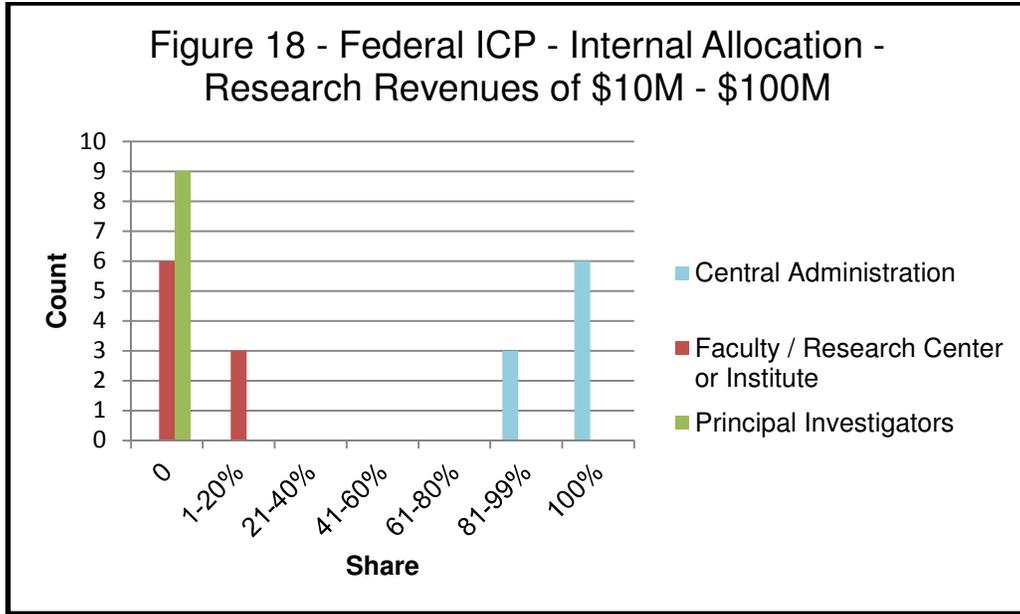
In addition, the Higher Education Funding Council for England (HEFCE) provides a Quality Related block grant which is based on research quality and takes into account the relative cost of research in different areas. Research Quality is assessed through a process called the Research Excellence Framework (REF) (replacing the earlier Research Assessment Exercise). Under the REF, institutions submit data on the quality and impact of their research outputs and the quality of the research environment in up to 36 different areas of research.

## Appendix 2: Internal Allocation of ICR Recoveries (Central / Faculty / PI)

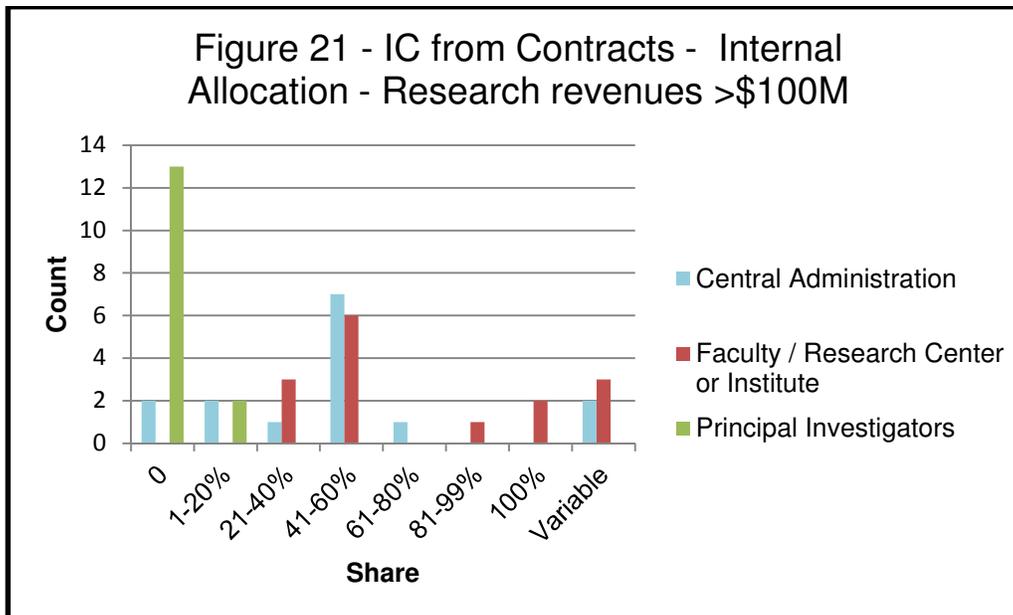
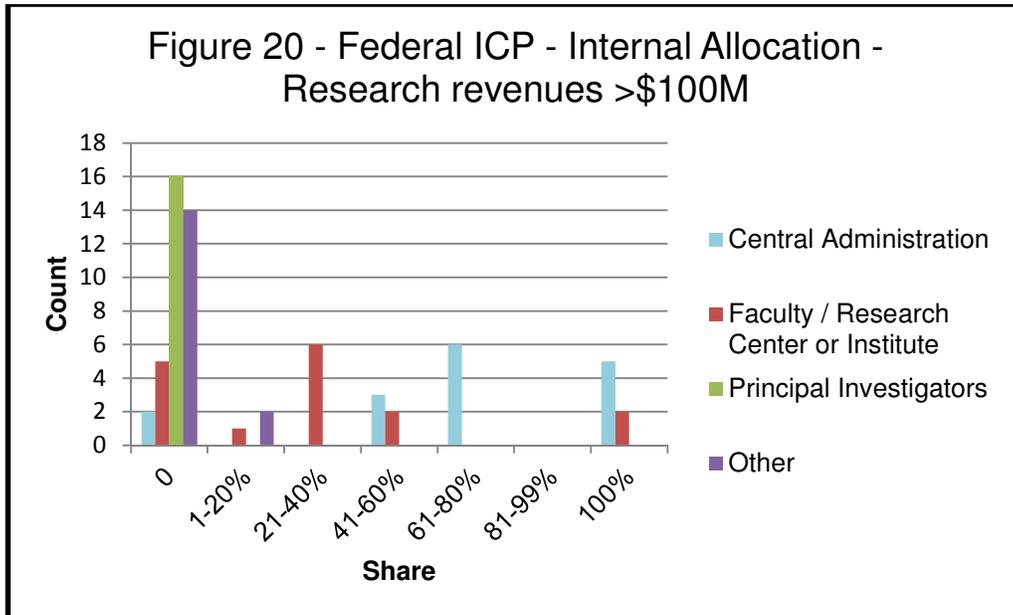
### Allocation of Indirect Cost Recoveries in universities with research revenues < \$10M



**Allocation of Indirect Cost Recoveries in universities with research revenues \$10 M to \$100M**



Allocation of Indirect Cost Recoveries in universities with research revenues > \$100M





## Appendix 3: Survey Methodology and Profile of Respondents

The main instrument to gather information about the management of the indirect costs of research in Canadian universities was an on-line survey of CAUBO / CAURA members eliciting information on:

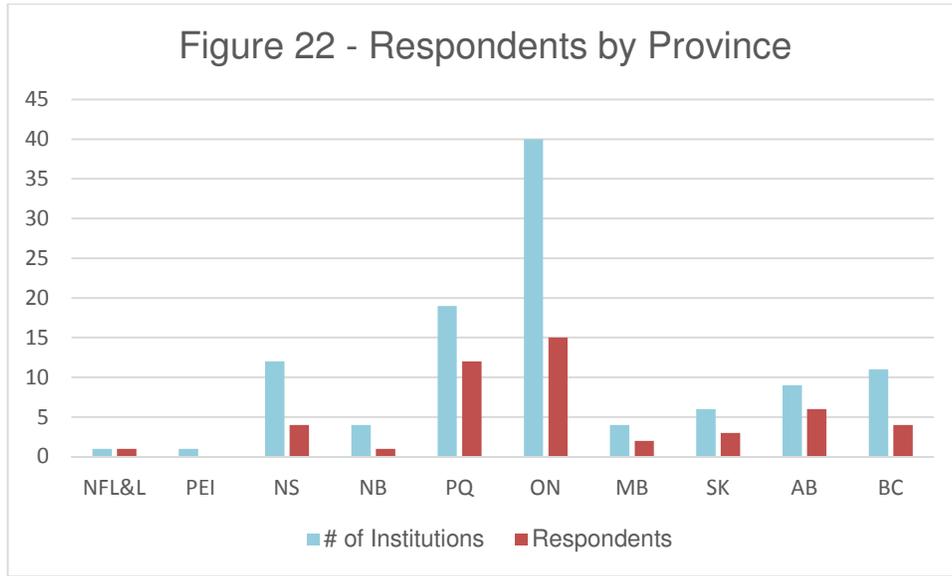
- Methods and practices for measuring indirect costs;
- Practices and sources of funds for the recovery of indirect costs;
- Management practices for the allocation of different types of indirect costs recoveries.

The survey was designed jointly by CAUBO staff and the consultants; it was approved by the project's Steering Committee. CAUBO and CAURA administered the survey: it was sent to the V-P (Research) of CAUBO/CAURA member institutions with a copy to the V-P Finance. The survey was conducted between April and June 2013.

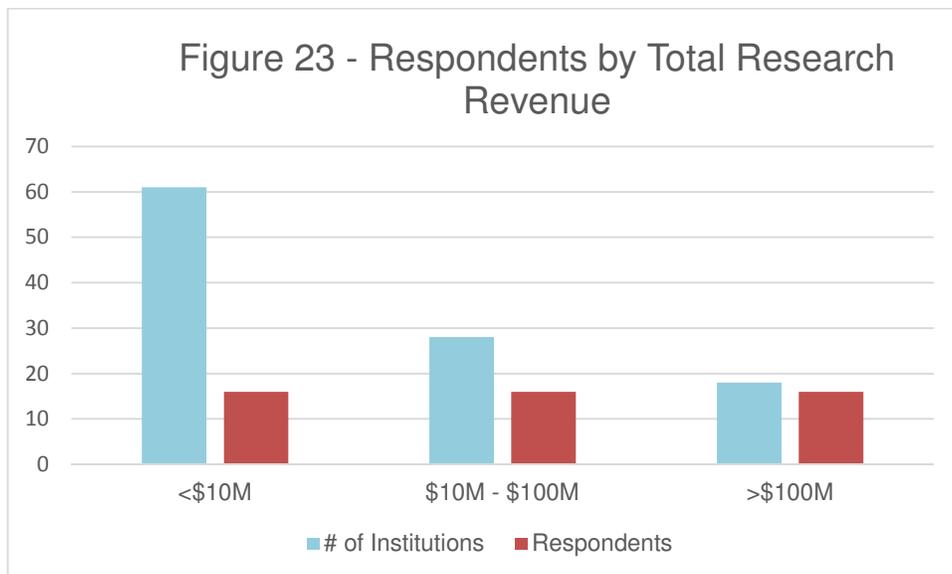
Forty eight (48) institutions responded to the on line survey. All of the "U15" universities completed the survey. Two responding institutions were not included in the list of 105 institutions for which CAUBO collects information on research funding. Their input is nevertheless included in this analysis.

Together, the survey respondents manage 88.5% of the total research funding and 89.3% of the tri-council funding held by Canadian universities. They also receive 85.0% of the funding available under the federal Indirect Costs of Research Program (ICP).

The figure below illustrates the distribution of respondents by province. The overall national response rate is 45%. The only institution from Prince Edward Island did not respond; the only institution from Newfoundland and Labrador did. The response from New Brunswick is low and there is some underrepresentation from institutions in Nova Scotia, Ontario and British-Columbia and some overrepresentation from Québec and Alberta institutions.



The distribution of respondents by size of institution is illustrated below. The total research revenue was used to classify institutions. The figure shows that small institutions (<\$10M in research revenue annually) are underrepresented (26%) in the survey while large institutions (research revenue>\$100M) are overrepresented (89%). Fifty-seven percent (57%) of medium-size institutions (research revenue between \$10M and \$100M annually) responded to the survey.



The distribution is similar when the size of the ICP award is considered. The response rate for institutions with ICP awards below \$100K and those with an ICP award between \$100K and \$1M is 24% and 36% respectively while the rate for institutions with awards between \$1M and \$3M and institutions with awards > \$3M is much higher at 60% and 75% respectively.