For Cash and Future Considerations:
Ontario Universities and Public-Private Partnerships

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ISBN: 0-88627-327-7

September 2003

CAW 567 OTTAWA

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Executive Summary

Public-Private-Partnerships (known as PPPs or P3s) are heralded as an innovative approach to the provision of a wide range of public goods and services, inherently generating an array of "win-win" benefits. But whether viewed through the lens of financial cost, accountability, quality of service, community engagement or corporate influence over public policy, the intensification of the interdependence of corporate and political interests that result from PPPs undermine the public good.

For Cash and Future Considerations examines the growing presence of PPPs within several sectors and jurisdictions. It explores their impact in Ontario, with particular attention to education in general and the university sector in particular.

Within the university sector, the development and reinforcement of PPPs is facilitated through a number of Ontario government initiatives: SuperBuild, the Ontario Research and Development Challenge Fund (ORDCF), the Access to Opportunities Fund (ATOP), the Ontario Innovation Trust (OIT) and the Ontario Centres of Excellence (OCE). All serve to direct public funding towards specific research initiatives and programs, in many cases necessitating matching private funding. In some cases, research only qualifies for public funding once private sector funding has been secured.

Examination of funding sources for research and building infrastructure conducted by Ontario's universities illustrates the degree to which targeted research funding is reinforcing massive inequities between institutions, between departments, and between students. There is a clear hierarchy in funding, not just of the type of research but of the infrastructure priorities as well.

SuperBuild funding clearly is directed towards the infrastructure of specific programs, and to those students enrolled there. In 1999-2000, 40% of students were enrolled in Humanities and Social Sciences, but received only 3% of SuperBuild funds and 0.8% of private sector funds while the 24% of students in Engineering, Computer science and Business received 51%of SuperBuild funds and 62% of private sector funds. Fine arts (2% SuperBuild, 1.8% private sector), Education (0% SuperBuild, 0% private sector), and Libraries (0.14% SuperBuild, 19% private sector) are clearly not high on the Ontario government's priority list of infrastructure development.

It is not just in infrastructure that PPPs are prevalent; research and development are also desirable targets—but here, too, we see vast and growing inequities. The 58% of students at Ontario's seven best-endowed universities received almost 92% of provincial sponsored research funding, while 42% of students at the 10 smaller institutions received 8%. Clearly, some institutions are better positioned to attract sponsored research funding from any source, public or private—but this inherently reinforces inequities between the "have" and "have not" institutions. And, clearly, this pattern is only enhanced through PPPs as public money is evermore closely tied to private or "alternative" funding sources.

Furthermore, certain types of research are clearly more "desirable" to potential private sector sponsors, particularly if the research is seen to have direct and immediate commercial application. Disturbingly, there is an appalling lack of information detailing the full amount of funding, per corporation and per research project, particularly when the ability of a university to conduct independent research is involved. Much greater transparency is vital to understanding the degree to which university research is currently or may be accountable to "the economic development of Ontario through directed research, commercialization of technology, and training for highly qualified personnel" in general, or private funders with no accountability to the public.

The convergence of increased student demand due to the double cohort, a rapidly decaying infrastructure, an accumulated debt, levels of underfunding that risk compromising educational quality, an aging professoriate among other factors have increased the university sector's vulnerability to quick-fix solutions. However, Public-Private Partnerships provide no solution to these problems, most of them the result of deliberate financial decisions. Disguised as programs to facilitate research, infrastructure development, faculty retention or generalized excellence, these arrangements entrench inequality among institutions, predictably privileging technology and science disciplines over the liberal arts programs in which the vast majority of Ontario students are enrolled. These vehicles of PPPs have begun to transform public-serving universities into contracted-out centres for private-sector R & D initiatives.

When universities come to be viewed as little more than vehicles of productivity, the public loses sight of the contribution of higher education to personal and societal advancement. Increasingly, a university education is viewed as a strategic personal investment, the kind that society has little desire to underwrite. As knowledge and its acquisition become commodified, the public reduces its expectation that it can turn to the university for a perspective that is not corrupted by commercial interests.

Introduction

> There is no clear evidence from experience that the investment which is socially advantageous coincides with that which is the most profitable.
>
> John Maynard Keynes[1]

The conventional method of financing public endeavours in Ontario is undergoing rapid and substantive reform. Public-Private Partnerships, or PPPs, may be relatively new to Ontario, but the approach is hardly original. It has been borrowed from the most aggressively neo-conservative states upon which Ontario models itself. Ontario's current government is determined to pursue such arrangements despite compelling evidence of their serious shortcomings.

When a government denies the inherent tension between private and public interests, it virtually guarantees that private interests will prevail. PPPs reflect and foster a dangerous degree of public confusion over the relationship between public and private spheres. Yet the words "dangerous" and "PPPs" are rarely linked; the official language of PPPs is intentionally soothing and reassuring. After all, surely "partners" share a common goal, have nothing to gain by weakening the other, and necessarily succeed or fail together. All for one, and one for all. True partners are invested equally, and share both the risks and rewards.

The purpose of this paper is to demonstrate that since PPPs manifest none of these characteristics of partnership, deceit and distortion are built into their very foundation. PPPs not only skew concepts of the public good and public priorities, they waste human and financial resources, often on a remarkable and indefensible scale. In a mixed economic system such as Canada's, public policy is rarely entirely independent of corporate interest, but neither has it been utterly dependent on private sector approval.

PPPs transform the public-private dialectic into a one-way dependency. Limiting public works to those ventures that accommodate corporate ambitions is problematic in all sectors, but absolutely disastrous for universities whose existence is predicated on autonomy, and safeguarded by a broad public recognition of the need to protect that autonomy. PPPs are changing Ontario's universities in ways that contradict the preferences and judgements of the faculty, students, and citizens affected by them, and erode the public's understanding of the very role of universities in modern society. Unchecked, PPPs will compromise universities, undo many of their accomplishments and mortgage their future "for cash and future considerations."

Curiously, despite being the excuse for and the vehicle of what one critic described as "a rip-off, a steal, a plunder, a legalized mugging, piracy, licensed theft, a diabolical liberty, a huge scam, a cheat, a snatch and a swindle"[2]—and this in the *Financial Times*—PPPs are outside the vocabulary and below the political radar of most Canadians, even those who pride themselves on possessing considerable familiarity with neo-conservative tactics. We hope to interrupt public complacency by exploring the state of PPPs in Ontario with a particular focus on their impact on the university sector in this province.

This paper draws on the analyses and experiences of other sectors and other jurisdictions with PPPs, and identifies some of the short- and long-term consequences of abandoning public policy to the pursuit of partnerships. It will conclude that trading off public policy in exchange for cash and future considerations is not only bad economic policy, it threatens to narrow Ontarians' future policy options to those that provide the private sector with the greatest role and the greatest reward. No sector will be more damaged by such limitations than universities.

Defining PPPs

> Perhaps PPPs are best defined as a form of neo-mercantilism.
>
> *Christopher Sheil*[3]

PPPs have come to dominate a substantial portion of government activity in Ontario and yet managed to remain surprisingly invisible. Even among the relatively small proportion of the population most interested in policy issues, PPPs have not been identified as a significant departure from practice, nor as a particular threat to policy autonomy. The fog of acronyms associated with PPPs can be somewhat overwhelming, but effective opponents need a sense of their multiple incarnations and the terminology PPPs have spawned. It is necessary but not sufficient to recognize that PPPs are a general problem; unlocking their complexity must precede efforts to discredit them.

But this goal, in turn, requires pinning them down. In the UK, PPPs are referred to as PFI, or Private Finance Initiatives. In Canada, P3 is used at least as commonly as PPP, the latter a term also used in Australia. According to the Canadian Council [in favour of] Public-Private Partnerships (CCPPP), in the United States the all-purpose term "privatization" tends to be applied to all types of PPPs, which suggests either a failure to discern structural differences among models or else an admirable degree of honesty on the part of Americans.

Among those Canadians who recognize the term, PPPs are most frequently associated with "leaseback" arrangements. In this type of PPP, public funds, and sometimes user fees, are paid to the private partner over an extended period, in exchange for the public's partial or exclusive use of some type of privately-financed (and sometimes privately owned and operated) infrastructure facility: a hospital, a road, or a school. The status of the ownership of the asset at the end of the lease period is subject to the terms of the agreement. In some ways, leasebacks resemble automobile leasing. Lease-payers pick up all the responsibilities of ownership, but none of its privileges.

But leasebacks are just one of many types of PPPs, and not all deals involve infrastructure. Types of PPPs tend to be identified by insiders through a particular set of acronyms that spell out the extent of the private sector's role: DBO stands for Develop-Build-Operate; BOOT stands for Build-Own-Operate-Transfer, and so forth. Certain types are most problematic because of the degree to which they waste public finances; in other cases the predominant risk is the impact of the private sector acquiring excessive influence on public policies, or the purposes that public spaces serve. Still other PPPs endanger public services whose fragile (and contestable) protection from the scope of GATS (the General Agreement on Trade in Services) depends on ensuring that these services are not "co-delivered" by the private sector.[4] Some of these hazards are built into the essence of PPPs, some arise because of the nature of the sector involved, while still other hazards are the unhappy consequence of the terms and conditions of the specific deal in question.

Critics will be most effective when they can refine their general critique of PPPs to address the specific problems associated with each type. Whether the consequences to the public are overspending, underdelivering, compromising public purposes, or making a formerly public service more private, the template for each critique should be an assessment of the relative proportion of risk and reward that both sectors can reasonably anticipate. This assessment, in turn, rests on appreciating the fundamental dynamics of PPPs.

Spin and Substance

> We should drop the language of partnership in the public interest. Let's simply call these deals Private Involvement in infraStructure Service. At the least, this description would supply an acronym to remind us of what now needs to be taken out of the latest policies.
>
> *Kenneth Davidson*[5]

At first, the abbreviation PPP referred to "Private-Public Partnerships," but rather quickly the order of the first two words was inverted in an apparent attempt to re-brand PPPs as driven primarily by public rather than private interests. This is characteristic of the PPP "movement," as it calls itself, and an example of the effort to get the public to focus on the spin rather than the substance. Obviously the "partnership" concept is questionable, but so is the use of the term "public." The public can hardly be said to be party to any partnership, arrangement, or contract (let alone movement) whose terms are secret. Most PPPs are more accurately described as "government-private sector deals" (GPSD's?); although this phrase lacks the alliterative advantage of PPPs, it is rather too transparent.

Those who promote PPPs tend to infuse their discussions with the aggressive win-win language of business best-sellers merged with the hype of advertisers. When journalist Murray Dobbin attended a PPP conference in Vancouver, he wrote that he could have acquired an entirely new vocabulary:

> There were times when I felt I was at a meeting of the Shriners or some other secret society. The P3 priesthood even makes up its own language, with several promoters talking about the need for the "incentivization" of businesses to get involved, and how to "incent" business and government into embracing P3s…[6]

The (sold out) event that Mr. Dobbin attended was held in Vancouver, where the election of the unabashedly privatization-friendly Campbell government has spiked PPP excitement. The conference was sponsored by the Canadian Council for Public-Private Partnerships (CCPPP), an influential lobby group whose purpose is to promote PPPs on behalf of its membership, which includes corporations as well as certain provincial ministries and federal departments.[7] CCPPP avoids using derivations of the word "incentive" in its definition of PPP, which it calls: "cooperative ventures between the public and private sectors, built on the expertise of each partner, that best meet clearly defined public needs through the appropriate allocation of resources, risks, and rewards."[8]

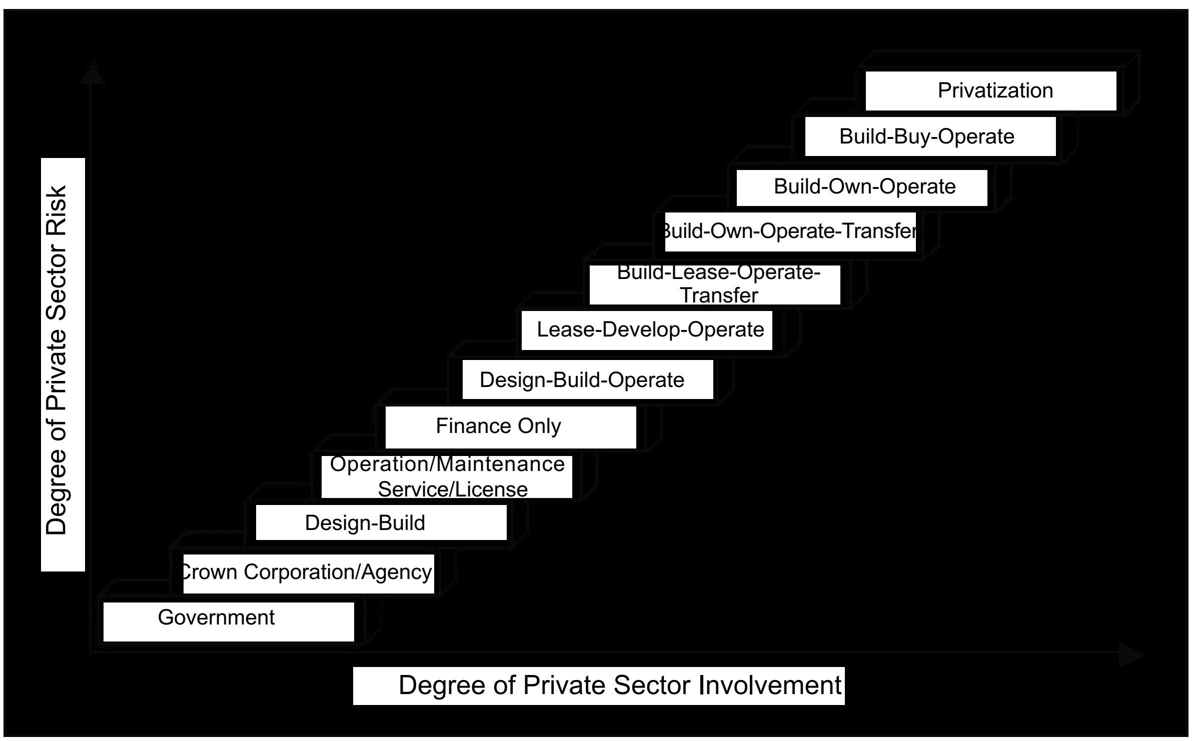
Critics have not yet adopted a common definition of PPPs, but the authors of this paper suggest a provisional version that situates PPPs as purposeful mechanisms of neo-conservativeism:

> PPPs refer to the systematic replacement of public funding, services and purposes by

> private funding, services and purposes. The goal of PPPs is to secure an illegitimate degree of private benefit at low risk in such a way that governments gain political advantage. Public welfare is compromised as a result.

This definition is necessarily vague, since PPPs manifest in a variety of ways. CCCPP describes PPPs as occupying a spectrum that “progressively engage[s] the expertise or capital of the private sector.” According to CCPPP’s schematic, “Straight contracting out” is a modest form of PPP, while full privatization refers to “the furthest point on the PPP spectrum.”[9] According to CCCPP, each step reflects the degree of private sector involvement and risk entailed. It is noteworthy that neither CCPPP’s model nor the discussion that follows it makes any reference to the escalating private sector reward associated with each step along the continuum, nor does it reflect the involvement or risk levels taken on by the public “partner.” Surely this is a remarkably one-sided view of partnership. Apparently, impacts on the public partner are considered inconsequential or assumed to be the reciprocal of those entertained by the private sector.

Figure 1
CCPPP’s Spectrum of Public-Private Partnerships



Marketing PPPs

> Deep opposition to privatization in the community poses a challenge to organizations with an interest in touting PPPs. In response to this challenge a significant public relations industry now exists to sell PPPs to a cynical public. When confronted with community opposition, some private partners….have gone so far as to contract with consultants who specialize in turning local hostility into viable support….In essence, overcoming local opposition is a cost of doing business in making public-private partnerships work.[11]
>
> *John Spoehr*

Critics of PPPs contend that this partnership continuum merely identifies the progression of privatization, a word that rarely appears in pro-PPP discourse outside the U.S., perhaps for good reason. As Australian economist Christopher Sheil observes, "given its unpopularity, our politicians have simply removed the word; they have scrubbed out 'privatization' and replaced it with a new descriptor called 'partnership,' and continued to advance their privatization policies under this new banner."[12] It is just as important for critics to insist that PPPs be named as a means of privatization as it is for proponents to avoid the term. As with many current contests for public opinion, sometimes the winner is the one who controls the language of the debate.

But the real marketing battle is over subtext, because the marketing of perspectives depends more on implicit than explicit claims. Advocates of PPPs nurture the perspective that "partnership" with the private sector guarantees higher quality goods and services at a lower cost and in a more timely way than publicly-delivered goods and services. This premise, in turn, rests on the assumption that the private sector is better-managed, more cost-conscious and can deliver a superior product in less time than the public sector. The public sector is perceived as burdened by regulation, having a convoluted and bureaucratized decision-making process, suffering political interference with a labour force made expensive by unionization and having a culture of indolence and incompetence. Whether asserted or merely implied, this rationale exploits (and promotes) public antipathy towards government and trades on the entrepreneurial ingenuity, accountability, and integrity alleged to characterize the private sector. One might expect this argument from the private sector, but as CCPPP points out, the scheme is very much dependent on governments, rather than the private sector, becoming PPPs most enthusiastic advocate.

Obviously, it is in the private sector's interest to ensure that the mystique surrounding its virtues permeates a culture that might otherwise question the benefits of neo-conservativeism. Thomas Frank calls the effects of this propaganda "market populism."[13] It is also in the élite's interest to maintain the illusion that a growing dependence on the private sector is a matter of prudent choice rather than the inevitable consequence of public policy that restricts all other options. Failures of neo-conservativeism must be cast as the consequences of "not going far enough" along the path to the free market, that place where all our problems will be resolved. Proponents suggest that class consensus has been achieved:

> At present, almost all élite Americans, with corporate chiefs and fashionable economists in the lead, are utterly convinced that they have discovered the winning formula for economic success—the only formula—good for every country, rich or poor, good for all individuals willing and able to heed the message, and, of course, good for élite Americans: PRIVATIZATION + DEREGULATION + GLOBALIZATION = TURBO-CAPITALISM = PROSPERITY.[14]

Only blind faith in this formula can explain support for PPPs extending beyond the "partners" who need only believe that one way or another they will be enriched by the transaction. A closer examination of who wins and who loses when the "partners" take on pent-up public demand for infrastructure illustrates what is at stake.

PPPs and Infrastructure

The demand for infrastructure (schools, hospitals, highways, etc.) cuts across all sectors of public services, and providing it has always entailed significant public expense. However, in addition to being increasingly expensive, the state of the nation's infrastructure file is increasingly politically dangerous. After all, when the public's infrastructure needs are not met, voters blame the government in power. If meeting these needs is seen as contributing to higher taxes or risking a deficit, voters will still blame the government. From the perspective of politicians, finding a way to meet the public's demands for infrastructure at less expense is a significant priority. This reality has not been lost on the private sector, which is quite willing to help governments out of this bind—for a price.

Providing new infrastructure ordinarily entails significant short-term capital costs that are financed through governments' operating budgets. Appropriately managed, this is good public policy for several reasons, including efficiency. Governments can borrow at advantageous rates, pay on time for services provided by contractors selected through a competitive tendering process, and anticipate problems that may add to costs. Depending on the type of project, public servants can provide appropriate degrees of hands-on expertise and oversight in determining project specifications, carrying out contract negotiations, supervising progress and ensuring regulatory compliance. Government officials can apply a variety of rewards and sanctions (regarding completion dates, for example) that encourage efficiency. Public expenditures are kept under control because as "general contractors," there is no incentive for governments to spend more than necessary on infrastructure in general, or on any specific project. It is not in the government's interest to inflate its costs by taking longer than necessary to repay associated debt. Poor project management risks negative political consequences that governments seek to avoid.

This conventional approach to building or renewing infrastructure also benefits the private sector, which acquires engineering, construction, and related contracts, as well as the workforce, whether employed by the private or public sector. In effect, the traditional model is a "partnership" in the sense that neither sector can prosper for long at the other's expense. If government refuses to offer sufficient financial incentives, firms can choose not to bid for contracts. If the private sector seeks an unreasonable profit margin, government can look to another source. While recognizing that this model is rarely perfectly executed, in the main, it has successfully provided the infrastructure that is necessary for delivering public services. Its chief advantage is that it contains built-in disincentives for either side to gouge the other. The principle of transparency—although again, occasionally honoured more in the breach rather than in the observance—provides a reasonable measure of public accountability. Either partner's failure to discharge its role competently entails consequences, whether financial or electoral. Both in theory and in practice, this process meets financial, public interest, and accountability criteria.

But PPPs make "partner interest" more important that public interest. PPPs promise to take the political risk out of infrastructure by hiding its true costs through the idiosyncrasies of accounting practices. When governments spend or borrow to finance infrastructure construction, amounts involved are recorded as capital costs, and borrowing for this purpose is deemed debt. But if a government contracts with a private source to raise money or finance the costs incurred, these amounts are treated differently within public accounts. Typically, the government pays down its "brokered" debt through a lease, an amount that is treated as an operating expense. This allows government to reduce the appearance of debt and spread it over time, and to avoid recording what would have been the entire capital cost—of building a new school, for example—as a much more manageable monthly lease. Following accounting principles, this amount is treated as an operating cost. This is referred to as "off-book" accounting. The optics of off-book accounting have lured many politicians into supporting PPPs, although as Sheil points out, whether such liabilities are entered into the public accounts as expenses or as debt, "all the fiscal characteristics of the PPPs are exactly the same as public debt, except these funds are more expensive and less flexible."[15]

He also points out that recently disgraced U.S.-based company Enron, too, called its deals "partnerships" and made extensive use of off-book accounting practices.[16]

As any credit card user knows, paying less every month always means paying more later, and reduces future spending flexibility. Every card user knows that he or she is not making the most efficient use of personal resources, but (as record levels of consumer debt will attest) not all financial decisions are rational ones. The political appeal of deferring (and consequently inflating) the costs of infrastructure financing have proven to be unbearably tempting to governments elected on promises to restrain spending and still provide services. It will surprise no one to be reminded that political time frames are remarkably short. This type of PPP helps governments maintain the illusion of fiscal prudence, and can even pave the way for further tax cuts. These tax cuts generate more pressure on budgets, simultaneously eroding public services and providing fertile ground for the next wave of privatization that promises service improvement.

The root of the private sector's enthusiasm for infrastructure PPPs is equally straightforward: They are a great way to make money at very low risk to investors.

The predictability of a stable relationship between the cost of an investment and the revenue that it will generate is very attractive to investors. When demand for a product or service depends on consumer preferences and economic factors that exist outside the enterprise, revenues fluctuate and profits can be compromised, so investors demand a premium rate of return in exchange for assuming this risk. PPPs are "low-risk" because estimating the revenue stream generated by operating a prison is more exact than estimating the revenue from a shopping mall, a coffee shop, or an airline. Demand is remarkably steady; neither prisons nor schools go out of business with any regularity and even during a recession, demand for prisons, schools, libraries, and so forth is relatively constant, while (under the right conditions) costs can be contained. In general, only change in public policy influences PPP revenue streams, and policies—"right-to-work" legislation, for example—can drive down costs. PPPs are extraordinarily low risk investments.

But profitability can be enhanced with the right mix of public policies. Making prisons "better" has little impact on attracting more inmates, but lobbying for automatic sentencing and longer terms increases demand. Housing inmates under more punitive and overcrowded conditions while providing them with less access to education and rehabilitation improves the corporate bottom line. This explains why corporations engaged in "prison partnerships" lobby so vigorously for so-called "prison reform."

The chance for the private sector to exploit or "scaffold" the existing physical, social and human infrastructure that has created public services—at public expense, and for public purposes—is itself a lucrative opportunity that can be enjoyed at low risk. In pursuing its own self interest, the private sector will naturally seek additional concessions from governments as the price of "partnering" them out of their difficulties.

In the long run, however, it is the private sector's positioning to shape corporate-friendly public policies, and to influence public opinion about these policies that may combine to be the most potent impact of PPPs. It would be extraordinarily naïve to expect the private sector not to take full advantage of weakened or ambitious governments increasingly dependent on carving out more and more agreements. And equally naïve to ignore their appreciation of the link between public opinion and opportunities to help the rich get richer.

The Politics of Depoliticization

In order to create more PPP-friendly attitudes among the public, neo-conservative governments and the private sector have, in effect, created a partnership to sell partnerships. This united marketing team pitches a potentially persuasive message, one that is not limited to PPPs. Both parties are equally eager to shift public opinion and public policy towards the increased acceptance of the conditions that characterize PPPs, including user fees, the tiering of service, reduced protection for low-wage earners, a limited role for government, etc. Both governments and private sector parties are equally invested in making PPPs synonymous with innovative, win-win solutions that provide better and more timely services at lower public cost. It isn't coincidental that PPPs are often introduced in association with pent-up needs often hyped as "crises." It is easier to win support for privately-operated MRI clinics when waiting lists are growing.

It is in the private sector's interest to expand partnerships into more sectors, and more deeply into those sectors experimenting with PPPs, i.e. to move more quickly along CCPPP's privatization continuum. But for this to occur at an escalating rate, Canadians' strong views on keeping the "public" in education, health care and other services will have to change, according to the CCPPP, which contends that this attachment springs from unwarranted fears about PPPs, and Canada's "political culture":

> Those opposed to public-private partnerships most often cite the loss of public control that occurs when a private sector company is involved in financing, building, or delivering public services. Compared to other countries with vibrant P3 activity, the political culture of Canada is often seen as a barrier to further progress on P3s. Especially in such areas as healthcare and when delivering such "public goods" as water, Canadians remain suspect of partnerships that put "shareholder" value above public interest. Public-private partnerships are often seen by organized labour as resulting in job loss, poor quality and lack of oversight. These objections are overstated and often misrepresent fact-based research in this field.[17]

This defence of PPPs is telling in several respects. By placing "public good" in quotation marks when it refers to water, is CCPPP suggesting that water is only a "so-called" public good rather than an actual public good? Which part of Canada's political culture is hostile to P3s—the part that has the temerity to think that public interest should eclipse shareholder value? How very twentieth century! The opposition to PPPs is credited exclusively to "organized labour," an interest group that allegedly prefers "non-fact-based research." Note that "organized capital" doesn't say what the facts are, just that critics are wrong.

Again, according to CCPPP, if Canadians' suspicions about PPPs cannot be put to rest, perhaps they can be made moot by positioning PPPs as unavoidable or inevitable. Just as Canadians grudgingly acquiesced when they were told that there was no alternative to slashing social programs in order to slay the deficit, they are now being told that the choice is between no new infrastructure or PPP infrastructure; no services or privatized services. This approach tends to mute general criticism, and the apparent lack of opposition can be spun as consent. As CCPPP's Cynthia Robertson claims in her modestly-titled presentation World in Review, one of the outcomes attributable to the PPP is that "Relationships between the private and public sectors [are] becoming 'apolitical,' [i.e.] supported by all parties."[18]

Reflecting on more than a decade of the selling of PFI/PPPs, John Spoehr et al. zero in on this strategy of depoliticization.

> The focus on the practical, efficiency and value for money of PFI/PPP projects is a trap. The advocates of PFI/PPP need to narrow the debate as much as possible to exclude discussion about principles, ideology, and political beliefs. They want to confine the debate to the "business" of how services are provided, in effect depoliticizing public services. This sidesteps crucial issues about democratic accountability, the limitations of government by contract, social need, and service quality.[19]

If PPPs are to be countered effectively, a critique that addresses their political and structural deficiencies must be added to an economic critique. Opponents have tended to take aim at the financial weaknesses of PPPs, but this strategy may need rethinking on several fronts. Much of the most useful financial data is difficult to obtain because it is (conveniently) considered proprietary corporate information. In circumstances where financial information has come to light, it has tended to be forensic and after-the-fact, penetrating public consciousness well after commitments have been signed and promises made. It is almost impossible to win an argument based on costs projected several decades into the future; such debates can deteriorate into a battle of accountants' assumptions, and the public loses interest. Even being able to demonstrate that similar PPP projects have been profligate with public money isn't a particularly powerful argument when proponents need merely claim to have learned from previous errors that will never be repeated. It is common, in fact, for PPP proponents to talk about "Generation 2" or "Generation 3" partnerships when confronted by the evidence of the failure of projects already completed—all of which are alleged to belong to Generation 1.

Tales from Generation 1

A consideration of one set of Generation 1 projects illustrates two linked PPP problems. First, many of the worst outcomes of PPPs are those that are unanticipated. Unfortunately, unanticipated problems built into contracts can be just as severe—and just as binding—as the anticipated type. Secondly, these PPPs demonstrate just how much the public interest can be compromised when governments come to see themselves as the "partners" of business. This Generation 1 case study reinforces the need to engage with the public on many different levels—political, legal, financial, and community—to reverse the momentum of PPPs. And it suggests that sometimes help arrives from unexpected sources. This is an abbreviated version of the story of Nova Scotia's experiment with PPP schools.[20]

Facing intense pressure to renew its crumbling school infrastructure without raising taxes, in 1997 the Liberal government of the day hastily signed long-term, PPP agreements with private developers. In CCPPP terms, this project was quite far along the privatization continuum, since each school was to continue to be corporate-owned, largely corporate-managed, and despite hefty lease payments from the province, the buildings would continue to be used by the owners for largely unrestricted purposes, while the leasers' rights were strictly limited. The first Nova Scotian PPP school attracted considerable interest, and in 1998, it was even awarded first prize in CCPPP's "infrastructure" category recognizing outstanding PPP ventures. For a while, everyone was happy, especially the developers, until the scrutiny began with the opposition asking some difficult questions:

> The scheme could have continued indefinitely, had it not been for a scathing assessment by the provincial auditor, who concluded (in more refined terms) that the public was being hosed by greedy developers and a government desperate to improve the optics on the state of the public purse. Nova Scotians would be paying at least $1 million more for each school that had been constructed as a P3 than if it had been built in the conventional manner—and much greater savings could have resulted from renovating existing buildings.[21]

Both the government and the developers attempted (unsuccessfully) to shield the terms of the leases from public view by citing the sanctity of proprietary corporate information. Little wonder that the partners were nervous: CBC reported that over the 20-year duration of the lease, the province would pay $47 million for a school that cost only $27 million to build, putting $20 million of scarce public money into the hands of private investors. Alongside allegations that some high-profile Liberal supporters were implicated in a series of land flips related to school construction, the uproar over PPP schools helped defeat the government. Although in 2000 the new Conservative premier declared a moratorium on planning more PPP schools, Nova Scotians remain bound by the terms of 39 such agreements.

As these school PPPs projects have proceeded, it has become clear to everyone involved that the woes associated with PPP schools are not limited to their exorbitant cost.

It seemed that schools were being located where developers already owned property, not where the need was greatest. The private sector showed a distinct preference for building in upscale suburbs, allegedly to increase demand for home construction on adjacent land owned by the developers that were part of the consortium.

Developers had been explicitly exempted from any legal or financial liability for shoddy school construction, or even faulty wiring or plumbing. The public component of the partnership assumed all the risk, the private sector all the benefits. The public partner was responsible for operating costs, ongoing capital improvements and maintenance, and technology upgrading costs.

Because developers had everything to gain and nothing to lose by building palatial schools—after all, their profit margins would expand proportionately—no expense was spared. One school included an orchard, an amphitheatre, two soccer fields, air conditioning and two sets of shades for the windows. The community school down the road held a bake sale to help buy drapes for the bare windows and fix a leaking roof. Soon that community was demanding its own P3 school as well.

Other problems with P3s revealed themselves only gradually. Only new school construction, not renovation, unleashed the magic of P3s, so existing schools were allowed to run down. Both the government and developers were anxious to get more influential (i.e. wealthy) Nova Scotians on side, so the needs of inner cities and rural areas were ignored in favour of more affluent areas. In order to use all the shiny technology wired into each school, owners began trying to influence which teachers and administrators would be assigned to their schools. They pressured school boards to pick up the cost of "training" teachers to become heavy users of the technology. And because they owned the schools, developers allocated prime space in the buildings to corporate offices and fast food franchises. In January, 2003, an arbitrator ruled that the private owners of P3 schools had the right to demand a percentage of the take from on-site school fund-raising.[22] The owners wanted a chunk of every chocolate bar sold.

Worse yet, developer-owners ensured that the terms of their leases severely limited the use of the facilities after hours, during weekends and summer holidays. Now neither students nor the public has any right to their schools after hours unless they pay for the privilege. At $75 per hour, the drama club can't afford to rehearse. Community groups, even parent councils are billed for every meeting. Yet some of the schools are quite busy after hours, even if the Boy Scout troop can no longer afford to meet there. The enterprising developer-owners use the schools' facilities to run technology training courses, using equipment and facilities whose maintenance and upkeep are the sole responsibility of the public.

When their Auditor-General, with help from the CBC, blew the whistle on the finances of PPP schools, Nova Scotians became more familiar with "off-book" accounting. But as those who lived (or followed) this saga discovered, the true off-book costs are not limited to those that are financial. The costs to communities, democracy, and accountability as a result of favouring private profit over public interest are incurred not just because of the terms of a particular deal. The problems are intrinsic and structural to PPPs, cutting across all sectors and all projects.

Why PPPs Cost More

If the problems associated with PPPs were exclusively financial, there would be sufficient evidence to dismiss them as poor public policy. While PPPs may differ in detail and substance each project shares a common means of making profit: Charging substantially more than it costs to deliver the product or service; driving down quality; cutting the costs of production, usually by reducing staff or salaries. The ways to profit vary little, whether the "partnership" consists of contracting out janitorial services, building a hospital, or running a for-profit jail.

The involvement of the private sector as a "partner," rather than merely as a provider, influences all cost variables, but to an uncertain degree. It would be convenient if critics could confidently assert that all PPPs cost 20% more than necessary, or even that a particular project, such as a hospital, could be built for $X million less if it was not built as a leaseback. Unfortunately, measuring the cost gap between private and public provision is an inexact calculation, and all such numbers should be treated as estimates that have incorporated a particular set of assumptions, especially when the full disclosure of the specific terms of agreements are routinely withheld. Nor is it safe to assume that the cost of one project predicts the cost of subsequent projects, even of the same type or between the same partners. Governments facing an impending election may cut hasty (and expensive) deals in order to promise a "deliverable" to the public. Investors may be prepared to accept a low return on investment in order to get "a foot in the door" that promises enhanced profits to be extracted from future projects.

In addition, there are many significant financial costs that are impossible to calculate with any certainty. What is the true cost of paying lower wages to employees? or building another highway rather than encouraging the use of in public transit? What is the true cost of treating water as a commercial commodity? or of abandoning the precautionary principle in food inspection? These gaps in information render any financial calculations that claim to be exact or comparative highly suspect, and explains, in part, why opponents of PPPs are encouraged to avoid "playing the numbers game" when challenging a particular project. At the same time, it has been extraordinarily helpful when a "disinterested" source, such as Nova Scotia's auditor general, has contended that a PPP has squandered public dollars.

Organizations opposing PPP must consider their strategic options in the face of these dynamics. To this point, most attempts to expose infrastructure PPP have concentrated on their value-for-money vulnerabilities. The Canadian Health Coalition, NUPGE, CUPE websites, and others recount anecdotes and examples of PPP-induced waste.

Though restricting a PPP critique to financial issues is difficult, nonetheless, it is reasonable that economic issues should be part of most PPP challenges. For this strategy to have the maximum impact, the public finance analysis must be made simple and accessible. The following examples of the ways that PPPs waste public money requires only a rudimentary grasp of financial matters:

- Paying twice: The terms of most PPP agreements are not parallel to the terms of a mortgage, in which the mortgagee eventually owns the property on which he or she has been making payments, with interest. Many PPP arrangements are "leases" rather than mortgages. No matter how much the public borrower has paid by instalment, either ownership of the facility is never transferred, or else the leaser is required to purchase the facility at the end of the term, irrespective of its condition or changing public priorities.
- Paying inflated interest rates: Using the private sector to finance public investments is indefensibly expensive. Governments can raise necessary funds to finance infrastructure projects at very advantageous interest rates. Consortia of private interests pay a premium to raise cash from banks, private funders and even pension funds. Taxpayers and citizens pay substantially more to finance these projects than if they had been publicly financed—thus enriching the relatively small proportion of the public with a direct interest in the stock market.
- Making profit the old-fashioned way: Profit is maximized by cutting costs, reducing the quality and range of services, and by charging premium fees. PPPs can succeed only if they promise a superior rate of return on investment, often including tax-break "incentives" that further drain public coffers. Most public services, including health care and education, are labour-intensive, making profit in these sectors means cutting employees and their salaries.[23]
- Subsidizing monopolies: Most infrastructure projects are by definition monopolies, or at least category exclusives: there will be only one Confederation bridge joining P.E.I. to New Brunswick, and prisons don't "compete" for customers. However, as private rather than "public" monopolies, they are outside the information and accountability loop that Canadians associate with public services. When private monopolies raise user fees (for using a bridge or highway, for example) the public has little recourse since it can't benefit from the price-moderating effects of competition.
- The price of advice: Consultants, lobbyists, and lawyers who claim PPP expertise find their services in growing demand. For example, compared with the conventional method of government-tendered construction projects, PPPs require whole contingents of "experts" advising both parties. Expertise that once resided within various ministries has been lost through downsizing, some of the same individuals are rehired, at much greater expense, to act as project consultants. Whether hired by the private or public partner, the costs of these advisers and experts is inevitably added to the price the public pays.
- Bells and whistles: As illustrated by Nova Scotia's PPP schools, the private partner stands to gain opportunities (and profit) when communities become convinced that they require new facilities with more high-end features, and that "renovation" (or patience) just isn't an option. As the capital costs for any venture increase, the proportional profit increases accordingly.
- Exaggerating problems, limiting solutions: Just as those in favour of a greater

role for the private sector in health care delivery have been prone to exaggerate the "crisis" in health care, and the investment industry tends to exaggerate the vulnerability of public pension funds, so the development business (and ancillary services) gain from exaggerating public problems and governments' inability to deal with them. For example, CCPPP is eager to draw attention to problems associated with infrastructure, from crowded schools and hospitals to the productivity-associated costs of crowded freeways. When building more infrastructure is positioned as the solution to these problems, more creative, environmentally-responsible and economically-sustainable options are overlooked. Building and leasing hospitals is considerably more profitable than promoting wellness and healthy lifestyles.

- Subsidizing hypocrisy: Many of those who track the ascendancy of PPPs point to the sources and consequences of political and legislative constraints on governments' financing options. Anything that restricts governments' ability to incur a deficit, borrow or raise taxes forces them towards private financing as the only option available to them. Because PPP commits future governments to costs or leases generated to meet current needs, it adds to the constraints that subsequent governments must accommodate, thus further restricting governments' policy options. The idea that deficits are never justifiable directly benefits the private sector, despite its own reliance on borrowing and its dependency on types of consumer debt.
- The price of expediency: One of the more difficult-to-quantify costs is what premium, if any, the public partner pays to get the project off the ground in a timely manner, particularly if the government is seen as being "over a barrel." The private partner is often in a position to benefit financially from opportunities to exploit the political considerations that motivate governments to engage in high-profile PPPs in the first place. Rather remarkably, in its haste to announce the first school PPP project, the new building was actually under construction before the terms of the agreement had been finalized (which may, or may not, explain the national honours this project received from CCPPP.) The costly and bungled privatization of Ontario Hydro illustrates the problems that can arise from the haste of attempting to make political mileage out of privatizing a public service.

Power and PPPs

The second cluster of problems associated with public private partnerships is their impact on the manner that power is distributed in society. Here power is used in both concrete and figurative ways. While the word "partnership" suggests an equilibrium and an equity, in every case these arrangements draw power away from citizens and channel it towards the private sector. Indeed, the public is not even a party, let alone a partner to these arrangements, which are more accurately described as side-deals between governing political parties and corporations. That taxpayers bear the greater consequences and pay the bills does not make the public a "partner" in any ordinary understanding of the word.

The ways in which the public interest is compromised when governments become corrupted by aligning themselves with the private sector serves as a basic critique of neo-conservativeism. Once government sees itself as existing "in partnership" with the élites who dominate development consortia and sources of finance, the reality of whom government serves, and to what purpose, changes substantively. This process of realignment is not replicated by the private partner: There is no evidence that as a result of their investment in a PPP, privatizers come to see themselves as partners in respecting the diverse interests of government or public welfare. Indeed, from an entirely self-interested viewpoint, they have every reason to hope that the public loses confidence in government, that crime rates rise and sentences become extended, that public health flounders, and so forth. This is not because the private sector is populated by evil and greedy human beings, but because the logic of the market dictates that the business of business is business, not public service.

This further illustrates the inaccuracy of the term "partnership." In a true partnership, each party benefits from the competency of the other, but in PPPs the private participant benefits from any ineptitude demonstrated by government. Should a government negotiate away its fair share of toll revenue from a PPP highway, the private partner reaps the benefit. As well, in true partnerships, reward is commensurate with risk. But as already pointed out, it is the public, not investors, that bears the risk. The predominant appeal of PPPs to private investors is that their capital can grow essentially risk free, often in an unregulated monopoly—the best of both worlds from a profit perspective. The public partner is unlikely to default on payment, walk away from the project, or declare bankruptcy. But should a privately-financed or operated PPP fail—a hospital, for example, or a school—the service in question must nonetheless continue to be provided at public expense. There's little risk the private partner will be dragged into court if it cuts a few corners in delivering its part of the bargain. For political reasons, the government partner is unlikely to raise public or legal complaints against the private partner, since to do so would risk suggestions of its own incompetence in managing the public interest. Governments pursuing their self-interest through PPPs must side with élite investors or risk public humiliation and political consequences.

Diminished Accountability

The inflated cost of PPPs and the inherent shift in power they leverage could be considered "structural faults" embedded in PPPs. While conditions in the deals can intensify their impact, structural problems by definition cannot be eliminated. A third structural fault of PPPs is their distortion of accountability. In general terms, within a business partnership, in addition to the separate accountabilities of each partner to its principals and investors, each partner takes on reciprocal obligations to the other.

In a PPP, the private sector partner can be held accountable for its decisions and performance by individual investors or shareholders. As recent headlines attest, this general exercise may be subject to manipulation, but at least the legitimacy of the principle of "shareholder accountability" is acknowledged, and nothing forbids a disgruntled individual shareholder from selling off his or her shares. But is there a parallel accountability that constrains the public partner? While it might be argued that citizens make up the "shareholder" class that can hold the government accountable for all aspects of each PPP, in the real world of citizenship this is an untenable responsibility. That is, it's unlikely most citizens have the time or the expertise to unlock the complexity of such deals. CUPE points out that Australia's Coventry Walsgrave Hospital's PPP contract ran to 17,000 pages.[24]

Even if specific contracts were made publicly available—and typically such documents are withheld as proprietary information—it is unreasonable to expect the political opposition, concerned citizens, or interested groups to monitor these ventures in order to convey their findings to the public. Government cannot perform as a "third party" representing the interests of citizens, since it is already implicated as a full party to any deal in question. Opposition parties may or may not wish to take on this role; if their criticism extends beyond the terms of a particular deal to challenging the problems inherent within all PPPs, they may scuttle their own chance to use PPPs for their own political purposes should they become elected. Even effectively criticizing a particular contract is difficult, since its terms are not subject to the transparency of public audits and freedom of information requests. Without any watchdog, political or statutory, who protects the public interest? In Nova Scotia, it was a particular auditor general whose report, with media assistance, scuttled PPP schools. But, by definition, the scope of concern of an auditor general is financial, while many of the most serious problems that arise from PPPs extend beyond accounting.

Here the media could be of assistance, and on occasion they have undertaken their own investigations into the financial, political and personal connections among parties with an interest in a particular PPP. On January 28, 2003, Paul McKay of The Ottawa Citizen reported that

> Ontario Health Minister Tony Clement received political donations last year from partners in all three private consortiums [sic] short-listed for a pending 60-year deal to build and operate a redeveloped Royal Ottawa Hospital….Members of two con-

> sortium finalists have hired lobbyists with close political connections to Mr. Eves and Mr. Clement. Both lobbyists, Hugh Mackenzie and Leslie Noble, are longtime personal friends and advisers to the premier and health minister.[25]

One of the consortia donated directly to Mr. Eves' leadership campaign; another included the Bank of Montreal, which had donated $227,511 to the Ontario PC party since 1995. In the same article, York University's Robert MacDermid observed:

> This is not about crude pay-offs; it's about arranging influence and access so that the tender process is approved, drawn up and decided before the public finds out what the terms are.

Nonetheless, a spokesman for Mr. Clement said that "the political donations were immaterial to the Royal Ottawa bidding process."

Whether the donations were immaterial or not, relationships such as these fuel public cynicism about rampant cronyism among politicians, loyalists, and the corporate friends of political parties. This cynicism is itself anathema to accountability, since the public's inclination to maintain the vigilance that is essential to accountability is eroded by such reports, and media disinterest is encouraged by the tepid public reaction to them. In this case, despite what some might view as a shocking indictment of the integrity of the Royal Ottawa Hospital's PPP process, Mr. McKay's article elicited no (printed) letters to the editor, nor did it apparently register among Ottawa's politically-astute constituents. And despite its enthusiasm for ferreting out and condemning civic, provincial and national tax expenditures that it considers dubious, Mr. McKay's employer, The Ottawa Citizen, heartily endorsed the ROH deal in an editorial, even if it would take a few decades before its consequences were known:

> We should have a better idea some time this summer [after the contract/lease has been signed] as to what the hospital will be paying the consortium over the 20- or 24-year contract for the main hospital building. Taxpayers will be able to judge for themselves the merits of this approach…[26]

Regrettably, whatever taxpayers conclude about "the merits of the approach" will be moot, since their governments will already be committed to an irrevocable 66-year lease. It may take significant spin to make this deal palatable. According to a CUPE-commissioned report on PPPs written by Lewis Auerbach, a former Director in the Audit Operations Branch for the Auditor General of Canada, hospitals constructed under PPP (including the ROH) "will likely cost taxpayers millions of dollars more than publicly owned hospitals."[27] Auerbach concluded that not only will such construction projects waste public money, they may compromise the provision of other services, such as homecare. "The argument that there are no government funds available for capital investments, so that P3s are the only way these facilities can be built, is bogus and disingenuous. The absence of capital funds for publicly owned hospitals is a completely self-imposed restraint."

PPPs and the Politics of Ontario

It is not surprising that Ontario's Conservative government would undertake the most bold PPP initiatives, given its repeated commitment to "do away with government" whenever possible. Carving out a larger and less restricted place for the private sector to do business in Ontario has been the Tory's unabashed intention since 1995. Collapsing and confusing private and public spheres, merging the concepts of "customer" and "citizen" and overturning historic traditions of government accountability came together in locating the delivery of the ill-fated 2003 provincial budget on the premises of a Tory-friendly corporation.

But this government's enthusiasm for PPPs would seem to have as much to do with strategy as with ideology. As its popularity declines, and as the provincial economy stumbles through difficult times, the Conservative government will market itself to voters as prudent managers of the public purse and as tax-cutters who can spend less but deliver more. The political advantages of PPPs, especially the lure of shiny new projects financed with off-book debt, are particularly attractive at election time.

Critics can expect to hear a familiar refrain: We had no alternative. In his capacity as Ontario's Deputy Premier and Finance Minister, Jim Flaherty told an enthusiastic audience attending a 2001 CCPPP conference that "the decade of infrastructure" had arrived. Mr. Flaherty announced that "the old way to finance everything was through tax revenues or government borrowing. This is no longer feasible. The public purse is not large enough to fund both today's services and tomorrow's infrastructure."[28] To maintain a "competitive economy" and "value for money," his government would tap what Mr. Flaherty called the "massive pools of capital" in the private sector. He did not add that the public purse would be a very long time paying down those "massive pools" that he intended to tap.

Mr. Flaherty went on to praise Private Finance Initiatives, as PPPs are known in the U.K. His visit to the Darent Valley Hospital in Kent, where "the private sector has not only built the building but is also providing non-clinical services" confirmed Mr. Flaherty in his view that PPPs "are about more than bricks and mortar." In the vocabulary of PPPs, this phrase locates a venture well along CCPPP's continuum of partnerships and privatization (see Figure 1 page 6). Initiatives that "are about more than bricks and mortar" are about transferring the delivery of at least some of the associated services, and their management, from the public to the corporation that has built and owns the facility in question. For example, the private partner to a hospital PPP could retain the right to operate food services, or (perhaps) establish a private MRI clinic on site; today the cafeteria and tomorrow hip replacement surgery. Perhaps a fast food mall? When the building is privately-owned, the leasing "partner" can end up having very little say about what takes place under someone else's roof. Predictably, Mr. Flaherty ended his speech by assuring his audience that PPPs were "non-political, having nothing to do with left or right on the political spectrum."

No one disagreed with him at this event, and too few Ontarians are challenging his assertion that PPPs are "apolitical." Few Canadians routinely keep up with the vagaries of infrastructure financing in the UK or Australia; how schools are funded in Nova Scotia is not seen as newsworthy in Ontario. The low-key response to PPPs is partly due to the failure to make connections across types of privatization as well as across sectors and across geography. It is not clear that public reaction to the privatization of Highway 407, the mess caused by privatizing-not-privatizing Ontario Hydro and the Walkerton water tragedy are connected in Ontarians minds as problematic ways of providing public services, or merely as a series of poor but unrelated judgement calls made by the same government. If the privatization connection cannot be established across such notorious events, it is almost impossible to believe that the public will spontaneously connect them to what's happening with the Royal Ottawa Hospital. Nor is it clear that "privatization" is necessarily problematic for Ontarians. They do not like the word, but as long as it is called something else (like partnership) they are not unduly troubled. According to a number of public opinion polls, while the general public is in favour of "public" services, it is not too concerned if these are delivered by the private sector, and even less concerned if these services are received in a location owned by the private sector. Canadians are far more anxious about having high-quality services available in a timely way than they are about their provenance.[29]

The Intellectual Infrastructure

> At a certain point…we don't have universities any more, but outlying branches of industry. Then all the things that society turns to the university for are lost.[30]
>
> *John Polanyi*

To this point the discussion has focused on the physical infrastructure, that part of "the public space" in its most literal sense. But, this is not the only type of infrastructure that is at risk. Through PPPs, the private sector is appropriating and exploiting universities' intellectual infrastructure. It is skewing the type of knowledge acquisition that is funded, pursued, and valued by faculty, students, and ultimately by society. As a result, PPPs within the university sector change the purposes as well as the practices of higher education.

Some consider this realignment to be desirable as well as inevitable. In 1988, the Science Council of Canada's final report predicted "that destiny includes closer university-industry interaction…It is imperative that the university's knowledge be put to work for winning in a world economy."[31] After a decade of orchestrating such associations, then Industry Minister John Manley told a university audience:

> [L]inkages between business and universities need to be strengthened further still…We want universities to become key focal points for economic activity, as well as research. When researchers tap the commercial applications of their findings, knowledge becomes both an input and an output of the economy.[32]

The federal government's views on post-secondary education have had multiple impacts on its form and function. The decision to cut post-secondary funding as a key to deficit-fighting during the 1990s provided much of the economic context to which universities in all provinces had to adapt. Yet, two previous ministers of finance, both of whom were instrumental in creating and maintaining the current inadequate financial context in Canadian post-secondary education, were jockeying to position themselves as "the education candidate" in the federal Liberal leadership race. Consecutive Liberal governments have disproportionately punished post-secondary education during the deficit years, and failed to allocate monies in the surplus budgets to keep pace with real expenses.

Despite expressed worries of a "brain drain" and the need to be competitive in the knowledge economy, between 1995 and 2000, while American post-secondary institutions received 32% more public funding, their Canadian counterparts absorbed a decrease of 7.5% Yet, with a straight face, former finance minister and the author of the many cuts to universities, Paul Martin has attempted to position himself in the race to become prime minister as the proponent of a post-secondary system marked by equity, access, and affordability. According to Martin, cutting money and resources from our education system is the "most counterproductive thing" any government can do…"there's no excuse for the kinds of cutbacks we've seen in education in Canada."[33]

Mr. Manley, the current Minister of Finance, was only superficially more generous towards post-secondary education than Mr. Martin had been. The 2003 federal budget was sold as "good news for education," but by cutting federal cash transfers to the provinces, it further squeezed the operating budgets of post-secondary institutions. According to CAUT, the reallocation that will be implemented in 2004 will enrich healthcare spending, but funding available for post-secondary education will fall from $2.8 billion in 2003-04 to just $1.8 billion in 2004-05. Department of Finance records demonstrate how many federal PSE expenditures are increasingly geared toward tax credits (for tuition and education credits and student loan interest) rather than making the entire system more accessible and fiscally sound through adequate tax-based funding.[34]

In addition, the much-promoted Registered Education Savings Plan (RESP) is another means by which public funding is replaced by targeted grants geared towards individual investors. The Canada Education Savings Grant (CESG), the Federal contribution to the RESP program, represented $412 million in 2001-02 (projected) and $528 million in 2002-03 (projected) in lost revenue and expenditure, combined; a substantial amount of money that could have been allocated to making the entire education system more financially stable, rather than benefiting individual investors.[35]

When campaigning among students and parents, the Liberal government can be counted on to draw attention to "innovations" such as RESP and CESG, and to attempt to use these programs as evidence of its commitment to post-secondary education and its effort to make it more affordable. But like RRSPs, RESPs are of value only to those who have money available to invest. Kevin Milligan, writing for the conservative C.D. Howe Institute, concluded that "RESP's do a good thing but in a needlessly complicated way, while CESGs give scarce public funds to the wrong households"[36] Indeed, according to Statistics Canada, in 1998 students from families in the highest income quartile were 2.5 times more likely to attend university as those in the lowest income quartile. In 2001, less that half the young adults from low income families were participating in post secondary education of any kind, although their families' tax burdens helped to underwrite this transfer of income from the poor to the rich. [37]

But the 2003 budget also signalled an intensified federal commitment to the "strategic" targeting of public dollars. The "new" money will be aimed at research, not operations. The budget speech strongly hinted that the annual allocation of $225 million, beginning in 2003-04, may well be tied to performance indicators that reward the commercialization of university research.[38]

This is consistent with the government's views of post-secondary education. The federal government released two white papers in February, 2002, that proposed targets and goals for improving Canada's innovation performance. *Achieving Excellence: Investing in People, Knowledge and Opportunity,* produced by Industry Canada, focuses on innovation and research while *Knowledge Matters: Skills and Learning for Canadians* addresses the issues of skills and education.[39] The papers suggest that in return for greater commercialization efforts, individual universities would receive a "long-term government commitment to their knowledge infrastructure."

There are many who believe that squeezing the university sector for cash was less a response to budgetary pressures than to creating a climate in which universities would be forced to make compromises, especially with the private sector, that would never have been tolerated under other conditions. Even provinces, or individual institutions, which reject the privatization of universities and the commercialization of their activities must operate within the context set by the federal government. Some provinces (and universities), however, more than welcome this reinforcement of their vision of post-secondary education, both in practical and ideological terms.

PPPs and the Ontario University Sector

University entry grade hits 85% or higher

The Ottawa Citizen, April 16, 2003.[40]

The Statistics Canada report showed that, nationally, the fraction of university education paid for by the public fell from 81% in 1986 to 55 % last year….Ontario and Nova Scotia have most enthusiastically embraced university finance restructuring, with government grants and contracts accounting for as little as … 47.8 % in Ontario.

The Ottawa Citizen, June 12, 2003[41]

A number of factors influencing Ontario's universities have made conditions ripe for the proliferation of PPPs in this sector.

The "double cohort," created by the simultaneous graduation of Grade 12 and OAC students in June 2003, constituted the largest increase in first-year students since the baby boom years, and its impact will be felt for years to come. Whether every qualified student will find a place in Ontario's post-secondary system remains to be seen, but this goal can only be accomplished if the institutions involved find ways to cope with extraordinary levels of organizational stress.

Especially when added to the probability of post-secondary participation rates increasing over the next decade, the double cohort will almost certainly keep Ontario's higher education system "bursting at the seams."[42] By 2005-06, the projected university enrolment is 30% greater than enrolment in 2001-02. By 2015, the high school graduation year for 2002's grade one students, there are expected to be 100,000 more students at Ontario's universities than in 2001. As Rosenfeld and Kaufman point out, this is the equivalent of "two University of Torontos."[43]

Anxiety is not limited to the ivory tower. From the dinner table to the boardroom to the back room, concerns about a gap between what the public and private sectors want from their universities, and what governments are willing and or able to provide, are taking on a new intensity.

When the retirement bulge and the enrolment bulge coincide, a system struggling to maintain quality despite already increasing student-faculty ratios will be put under even greater pressure. At 22:1, Ontario's ratio of students to faculty (both FTE) has increased significantly from 18:1 in 1991, and it is significantly higher than the 19:1 average ratio found in other provinces. Both Canadian and Ontario ratios compare very unfavourably with those of American institutions, where it is typically 30% lower.[44] The Council of Ontario universities projects the need for 11,000—13,000 new and additional faculty by the end of the decade, but at present the provincial government anticipates hiring just 4000 new faculty by 2005-06.

Too many students, too few faculty; deteriorating infrastructure; a sector facing competition from other provinces, especially in high-demand programs. The future for universities looks pretty bleak, especially when operating grants, both per capita and per student, place Ontario at the bottom of all the provinces.

Despite being Canada's richest province, Ontario spends 24% less than the national average on operating grants,[45] and students have been expected to make up the difference. In 1995-96, when the Conservatives formed the government, tuition fees made up just 29% of operating revenues. Five years later, this had increased to 41%. Mackenzie and Rosenfeld calculate that once enrolment growth and inflation are factored in, tuition and fees had increased, in inflation adjusted dollars, by 69% during this period.[46]

In June 2002, the Ontario government promised to "fully fund" every new student, to restore $70 million in operating grants and to make an additional $6 million available for Northern universities. The government has committed $295 million to cover the enrolment growth spiked by the double cohort, an announcement that was welcome, even if the government's calculations seem dubious. Indeed most of the "new spaces" had been announced, and re-announced.[47] As OCUFA (The Ontario Confederation of University Faculty Associations) points out, there have been large and consistent gaps between the Ministry's conservative enrolment projections and reality.

Nor does "fully" funding new students deal adequately with the accumulated shortfall of $400 million in operating funds (1995-2002),[48] nor the estimated $1.2 billion in deferred university maintenance costs expected by 2005-06. Ontario's parsimony is particularly remarkable when its per-student PSE expenditures are compared with the other provinces. In 2001-02, while Nova Scotia and New Brunswick managed to spend slightly less per full-time university student than Ontario's $6831, five provinces spent more than $10,000, including conservatively-inclined Alberta at $10,932. Saskatchewan ($14,786) and Manitoba ($14,936), with far less claim to wealth, have more than doubled Ontario's annual commitment to the post-secondary education of each student.[49]

Predictably, university administrators have decried their straightened circumstances. It should be noted that, at least with respect to the 11 largest Ontario universities, funding decreases were not absorbed within university operating budgets, but passed on to students through increased tuition. Mackenzie and Rosenfeld conclude that between 1995-96 and 2000-01, these universities actually raised $100 million more in tuition and fees than they lost in provincial grants.[50] Passing costs on to students is not just an economic strategy; it signifies a capitulation to neo-conservative ideas of education that emphasize personal and economic impacts over public and social contribution. Statistics Canada describes the dependence on "user-pay" financing as "a shift in philosophy."[51]

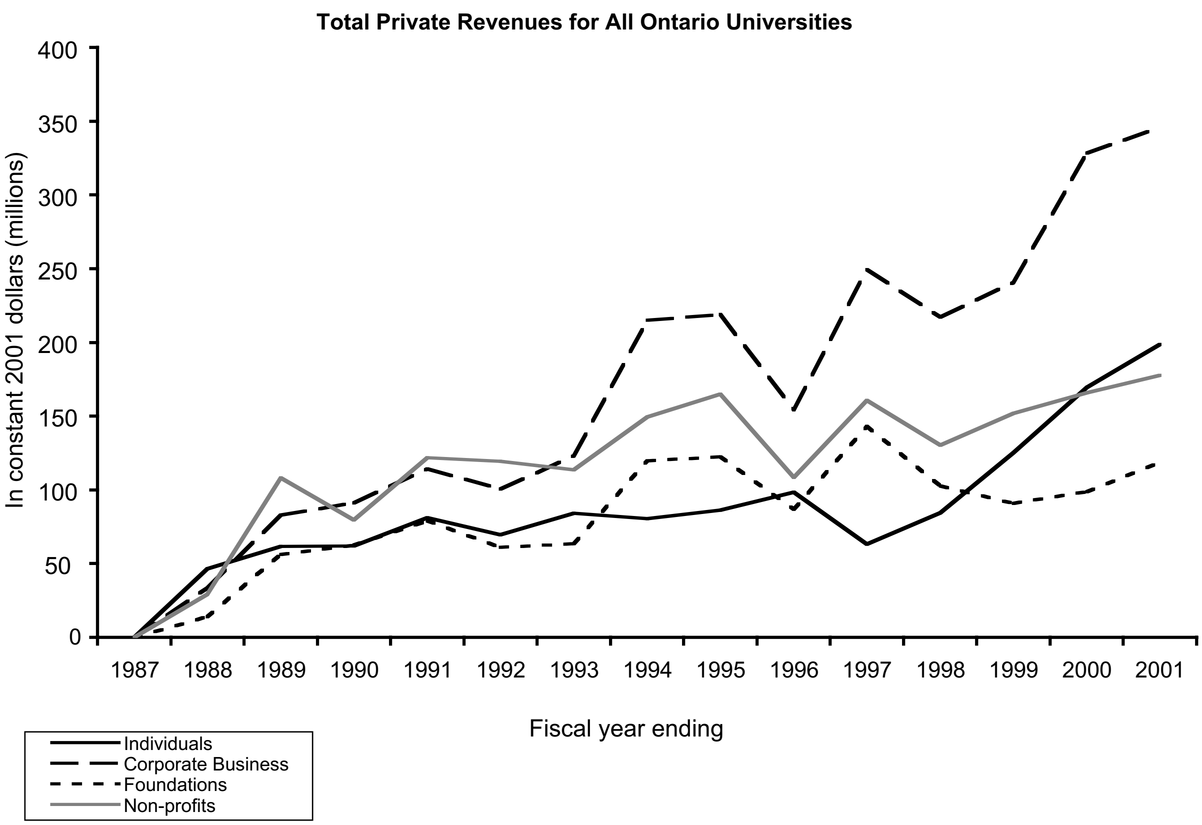
Students have been recast as "users" of the post-secondary system, and as such they can expect to pay user fees. Between 1993-94 and 2002-03, the average tuition at Ontario universities increased by 123%[52]; within deregulated programs (such as medicine) students can expect to pay as much as $14,000 per year. Pundits claim that the government considered deregulating tuition entirely, but (during this mandate, at least) it "compromised" by continuing to squeeze public universities while giving private universities a provincial toe-hold.[53] In a further sleight of hand, Ontario's universities are required to set aside 30% of each tuition fee increase for student assistance, making students themselves the primary source of funding for each other's grants and bursaries, which are rapidly becoming an institutional rather than a governmental responsibility. Altering the eligibility criteria for the Ontario Student Assistance Program (OSAP) resulted in a 42% decline in the government's funding of Ontario Student Loans between 1997-98 and 2001-02. The $330 million (amount corrected for inflation) pulled out of the system by 2001-02 resulted in a 27% decline in the number of student loan recipients and an increase in average debt load: $22,000 for a four-year BA.[54]

Higher Learning Inc.

The Ontario government's decrease in public funding is particularly revealing when we look at the resultant increase in private revenues excluding tuition fees -- which are among the highest in the country. The following chart demonstrates total revenues (all funds) by source: bequests, donations, and non-government grants and contracts since 1986-87. While all have increased, revenues from corporate business far outpace other types of private revenue sources at Ontario universities.

It is within this context of increased private funding (all kinds, all sources) that specific provincial programs have been established, promoting and reinforcing infrastructure and intellectual privatization. A number of these initiatives are examined in the following section of this report.

Figure 2
Total Private Revenues for All Ontario Universities



Privatizing the Ontario University Sector Via PPPs

Since its election in 1995, the Conservative government has promoted the gradual privatization of the university sector, primarily through private-public partnerships that wear the labels of a variety of government programs. The approach has been systematic and comprehensive, demonstrating the government's commitment to partnerships as a core business strategy for the province. Some programs have focused on the physical infrastructure, others on the intellectual activities of the university; still others focus on access and research.[55] While the programs may appear to be designed with different objectives, together they have a multiplier effect that intensifies the sense of the university as an instrument of the private sector. The four key provincial programs are described below.

Ontario Research and Development Challenge Fund (ORDCF)

In 1997, the Ontario Research and Development Challenge Fund (ORDCF) became the first PPP-enabler introduced by the Conservative government. ORDCF allocates public money for research to universities only after they find private sector business partners whose interests coincide with the research to be funded. In return for their involvement, "partnering" corporations receive tax incentives commensurate with their investment.[56]

ORDCF investment decisions are made by its eleven-member board of directors, which includes representatives of Canadian Medical Discoveries Fund, RBC Dominion Securities, WaveNET, COMDEV, the Goeken Group, Geometrica, Ontario Agri-Food Technologies, Aero-Safe Technologies, Research In Motion, and Stantive Solutions. (The gene pool from which these corporations emerge would suggest that high-tech and bio-tech are the only types of research still being conducted in Ontario.) Two other board members are the CEOs of crown corporations that are involved in PPPs: David Lindsay, CEO of the SuperBuild Corporation and Michael Gourley, CEO of the Ontario Financing Authority. The only board member whose primary allegiance could be assumed to be the university sector is Dr. Desmond D. Anthony, a retired associate professor of biological and environmental sciences at Nipissing University. Board membership has its privileges: on at least two occasions, in a flagrant conflict of interest, the ORDCF has approved giving money to companies represented on the ORDCF board.[57]

According to its website, this fund is intended to promote research excellence by increasing the R&D capacity of Ontario universities and other research institutions through partnerships. The ORDCF is associated with four ministries: (Enterprise, Opportunity, and Innovation; Training, Colleges, and Universities; Finance; and Agriculture and Food). Unlike other research initiatives that focus on project funding or infrastructure, ORDCF focuses on human resources:

> If Ontario is to continue taking advantage of the economic growth that stems from applying innovation, we must first make

> sure that our best and brightest scientists, researchers and technicians remain in our province, and second, we must attract other top researchers to make their home here.[58]

This first part of the assertion is not particularly argumentative, but the contention that keeping and attracting "the best and the brightest' is a function of rewarding "real committed partnership between business and universities, colleges, hospitals and other research institutions" is left hanging. Nonetheless, proof of a "real committed partnership" could result in receiving a share of this $750 million fund.

According to ORDCF's 2001 annual report, the total value of all projects (1998-2001) was $1.5 billion; ORDCF's investment over that period was $435 million. Funding priorities are geared towards certain industries: geonomics, bio-medicine, imaging, science, telecommunication, engineering and protemics received most of the funding ($1.14 billion) compared to a total of $373.7 million for IT, photonics, transportation, e-commerce, environment, business, social science, geophysics and mining technology. Minister of EOI Jim Flaherty's explanation of the funding preferences is that "these are complex areas that ultimately have a profound impact on our quality of life and standard of living."

A breakdown of ORDCF funding indicates which universities benefit most (or not at all) from this fund. While the majority of Ontario universities received ORDCF funding (at various levels) in 2001-02, Brock, Lakehead, Nipissing , Ryerson, Trent, Wilfrid Laurier, and York received nothing.

Table 1

Ontario Research and Development Challenge Fund (ORDCF) as a Percentage of Total Provincially Sponsored Research Funding and Per Full-Time Equivalent (FTE)

University	2001/02 ORDCF funding (expressed in $1000)	ORDCF funding as a percentage of provincial funding	ORDCF funding ($) per Full-Time Equivalent student
Carleton	905	17.08	62.40
Guelph	660	1.29	47.64
Laurentian	731	26.14	134.42
McMaster	2491	16.39	163.67
Ottawa	12299	49.00	609.60
Queen's	7087	23.58	473.21
Toronto	13347	22.35	292.00
Waterloo	992	5.98	55.64
Western	5052	22.64	201.82
Windsor	275	7.06	25.05

Access to Opportunities Fund (ATOP)

> The University of Windsor [has] introduced an automotive engineering option in mechanical engineering which was designed to "assist in the development of the automotive industry by providing graduate engineers with the specialized skills and knowledge base needed by this sector." Heads of industry are given seats on bodies like the board of governors in order to ensure that universities are properly training students….Tuition in engineering has increased 21% since 1999, the year that automotive engineering stream was introduced at the University of Windsor.[59]
>
> *University of Windsor Students' Alliance*

In 1998, the Access to Opportunities Fund (ATOP) became the second "family" of post-secondary PPPs. According to the government's website, on February 1st, 1998, John Roth, vice-chairman and CEO of Nortel, wrote to the premier outlining the need for the province's post-secondary institutions to increase their capacity to graduate students in disciplines of communication and information technology, computer scientists, electrical and computer engineers, physicists, mathematicians, and other professions. (Perhaps Mr. Roth was still riding high on the success of Nortel, and his then recent accolade as "Businessman of the Year." He had recently informed the federal government that unless his sector saw significant tax concessions, he would move his company to the U.S. where he claimed many of his key staff had already defected.[60] His higher taxes-equals-brain drain argument was covered widely by the media, although there was little mention of Mr. Roth's 1998 salary: $682,783, a bonus of $2,261,248 and stock options worth $40 million—at the time.)[61]

On February 18, 1998, the high-tech lobby called The Canadian Advanced Technology Alliance (CATA) "challenged the Ontario government to work with industry to 'Double the Pipeline' of IT professional workers by increasing enrolment at colleges and universities."[62] On May 5th, 1998, Ontario's minister of finance obligingly introduced ATOP and committed $150 million to the creation of 17,000 new student spaces in Ontario universities for computer science and engineering.

To obtain access to ATOP money, however, the universities had to match "dollar-for-dollar" the amount of money they requested with money from the private sector. Private sector contributions could be in the form of cash, new or used equipment, software, or work-terms for students. In effect, the private "partners" determined how much government funding would be allocated to each university. An advisory ATOP board representing companies that would benefit from more graduates in this area was also appointed, with then-Nortel CEO John Roth, serving as its chair.[63] In July 1999, the Ontario government announced that it would expand the target of ATOP to 23,000 new student spaces in engineering and computer science and increase its funding to the program by $78 million.[64] In effect, the high-tech corporate lobby has been put in charge of using public resources to train its future workforce, to increase its supply of labour, and to enhance profits.

This sector is not shy about this PPP windfall. Joanne Curry, of TeleLearning Solution, Inc. reports that benefits to the high-tech sector include their access to "new" (i.e. public) financial resources to underwrite research and bankroll its commercialization. But she claims that universities gain as well, since they have direct access to corporate opinions on "the knowledge and skills needed by employers for program graduates." And instructors can enjoy the "reuse of [the partner's] training content." Curry concludes, universities gain status by "develop[ing] a more recognizable brand that can be marketed through the partner and identify new opportunities for outsourcing."[65]

Ontario Innovation Trust (OIT)

In 1999, the Ontario government announced the creation of Ontario Innovation Trust (OIT). Its initial funding of $250 million had grown to $1 billion by the 2003 budget.[66] OIT funds are designed to be merged with funds provided by the federal government's Canadian Foundation for Innovation (CFI).[67] The purpose of both CFI and OIT is to invest in the "research infrastructure" of not-for-profit institutions including universities, hospitals, colleges, and research institutes. In the case of Ontario universities, OIT and CFI provide 40% of the cost of any project, while the host university has to make up the balance, either from its own budget or, as is usually the case, through tapping one or more private sector partners.

The OIT is directed toward the infrastructure needed to support R&D in the science and technology sector, and thus it "complements" the human resource focus of ORDCF. Since 1999, more than $1 billion has been allocated to the fund. According to its website, R&D projects that directly encourage collaboration with the private sector are more likely to be considered favourably, along with "your ability to capitalize on the investment, the ownership and use of the infrastructure, your project's sustainability, and the cost/benefit relationship."[68]

Investing in Ontario's Future Through Research (1999-2001) reports that OIT trust investments of $362.4 million over this three-year period "leveraged" over $531 million from other sources. A total of $893.4 million funded 294 projects in 16 universities, 6 colleges, 10 hospitals, and 300 industry "partners." OIT, which operates ostensibly at an "arm's length" relationship from government, boasts that it announces its major investments to the public so that citizens will know "how Ontario tax dollars are being used to their ultimate benefit." Notably, OIT is under no obligation to disclose the amount of private sector contributions that "leveraged" these tax dollars. The very structure of the OIT exempts it from having to disclose fully the sources and amounts of private funding, even though this research is conducted in public institutions.

OIT's research priorities closely resemble SuperBuild's infrastructure priorities (Table 2). While 55.2% of investment has been allocated to health sciences and 37.5% to natural sciences and engineering, only 6.7% went to multidisciplinary studies, 0.6% to humanities and social sciences, and 0.05% to arts and letters. The broadly defined social sciences may make up more than 33% of total university enrolment across Ontario, compared with 9.2% enrolled in engineering and applied sciences, 6% in health professions and occupations, 7.7% in mathematics and physical sciences and 6% in agriculture and biological sciences.[69] OIT research money is evidently not representative of enrolment. In fact, disciplines representing 33% of all students received less than one percent of OIT funding. Only marketable research with immediate commercial applications and

Table 2
Ontario Innovation Trust(OIT) as a Percentage of Total Provincially Sponsored Research Funding and Per Full-Time Equivalent (FTE) Student

University	2001/02 OIT funding (expressed in $1000)	OIT funding as a percentage of provincial funding	OIT funding ($) per Full-Time Equivalent student
Carleton	2080	39.26	143.43
Guelph	4961	9.73	358.12
Lakehead	1092	40.22	200.24
Laurentian	715	25.57	131.48
Ottawa	1459	5.81	72.31
Queen's	14511	48.28	968.92
Toronto	29094	35.49	636.51
Trent	928	46.46	205.54
Waterloo	6528	39.39	366.20
Western	4271	19.14	170.62
Wilfrid Laurier	124	48.06	13.47
Windsor	1036	26.59	94.36
York	3072	77.98	100.62

clear ties to corporate dollars appears to benefit in any significant way from OIT funding, leaving the vast majority of university students in underfunded areas of study. (See Appendix 2: Statscan research about enrolment by field of study)

Nor is OIT funding equitably shared across institutions. Among those institution receiving OIT funding in 2001-02, the "per-student" average varies from the price of a pizza to 25% of a year's tuition fees. Note that Brock, McMaster, Nipissing, and Ryerson receive no OIT money.

Ontario Centres of Excellence (OCE)

The Ontario Centres of Excellence, established in 1987, have become important PPP vehicles. To date, four Centres have been established:

- Communications and Information Technology Ontario (CITO)
- The Centre for Research in Earth and Space Technology (CRESTech)
- Materials and Manufacturing Ontario (MMO)
- Photonics Research Ontario (PRO)

The OCE website claims that the centres promote "the economic development of Ontario through directed research, commercialization of technology, and training for highly qualified personnel."[70] Within the web of federal and provincial programs that directly or indirectly facilitate PPPs and the commercialization of research, Ontario Centres of Excellence are probably the least self-conscious about this agenda. Not surprisingly, their focus is high-tech, a business sector that expects to be treated with deference, and one that is rarely disappointed:

> The Centres are among the few publicly funded institutions that systematically integrate and manage connections from university to marketplace to ensure the successful application of innovative science and technology to profitable new businesses…[T]he innovation challenge involves defining and funding research projects with the potential for commercialization, managing them to the point of market-ready products, and defining and negotiating license agreements/contracts with industry partners that can deploy the technology.[71]

The Ontario Centres of Excellence define this final phase of the innovation process as "technology transfer from universities to the marketplace," a process which fosters a healthy and attractive business environment and, consequently, keeps Ontario vital." In other words, innovation requires commercialization. If research does not contain within it the potential of immediate market application, it is not only not innovative, but conceivably does not "assist in job creation and economic growth." Some OCE-funded research illustrates its close ties with marketability: The University of Western Ontario (through Materials and Manufacturing Ontario), in cooperation with Pine Tree Law Enforcement Products of Canada, "has developed a rubber bullet better designed to take down a police or military target without causing fatalities."[72]

SuperBuild

Having tasted the first fruits of PPPs in 1997 and 1998, the Ontario government was prepared to launch its most ambitious program to broker partnerships. The SuperBuild program, announced in the 1999 Ontario provincial budget, became the Ontario SuperBuild Corporation (OSBC) in December 1999. The government calls OSBC its "central agency for capital planning and investment."[73] For the first time, all provincial infrastructure policy, investment and capital decisions were to be consolidated within one super-agency.

The OSBC is controlled by the Cabinet Committee on Privatization and SuperBuild (a surprisingly frank "partnership" of portfolios), and is chaired by Finance Minister Janet Ecker. The committee reports directly to the whole cabinet, and is advised by a 12 member board. Board members include the presidents of corporations including TD Bank, Coldwell-Banker Real Estate, McLeod Capital Corporation, BankWorks Trading, Consumers Gas Company, and Bell Canada—along with a couple of deputy ministers. The SuperBuild program is intended to spend $10 billion on capital infrastructure (highways, health care, water filtration, prisons, and post-secondary education) over five years, to be matched with another $10 billion in private sector funding.[74] For universities to make use of SuperBuild funds for infrastructure projects, they must first have commitments from a private partner or another "source" in order to meet SuperBuild eligibility guidelines.

SuperBuild Projects in Ontario's University Sector

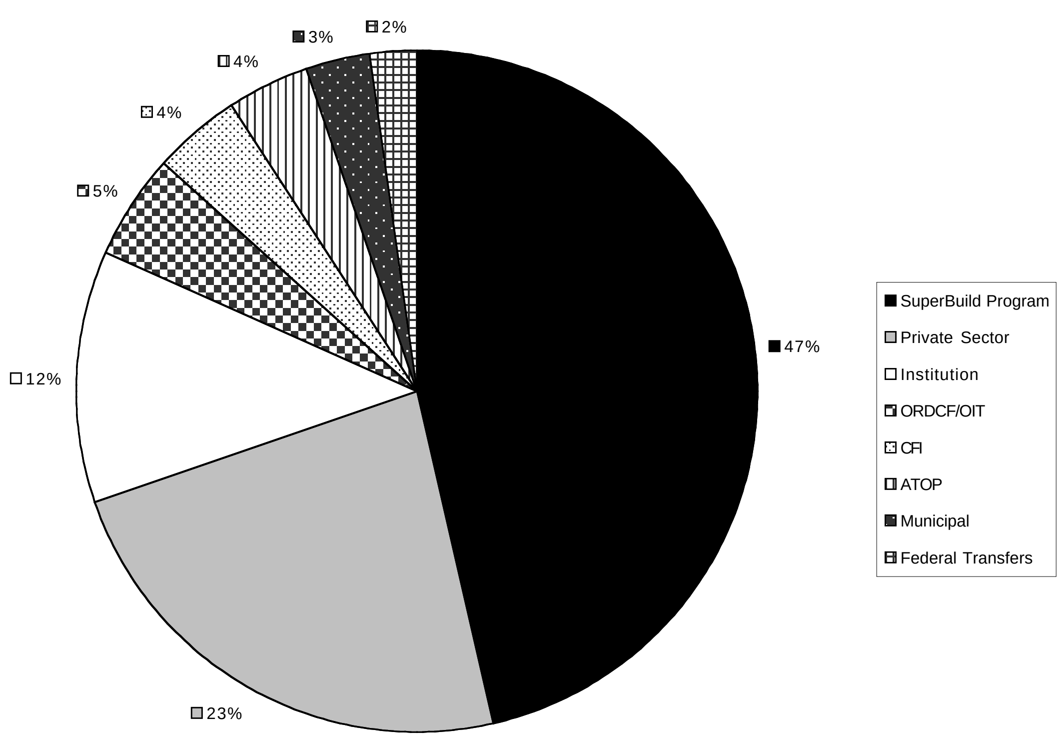
The SuperBuild program has resulted in 22 projects in the Ontario university sector since 1999. (See Appendix 3 for an itemized list) The following chart illustrates the source of funding associated with these projects.

The SuperBuild program itself has furnished approximately 46% of the funding for these 22 projects, while the private sector contributed approximately 23%. The remaining 31% came from a variety of sources. The institutions themselves provided 12% of the funding from their own revenues, which would have been comprised of both tuition and endowment revenue. Overall, universities were able to obtain another 8.6% of their budgets from a combination of provincial government program money: ORDCF, OIT, or ATOP. Finally, universities found another 6.4% from federal government sources through CFI and direct federal transfers, and 3.2% from municipal governments.

Table 3 illustrates how the SuperBuild and private sector monies were invested, compared with the percentage of all students enrolled in each discipline.

When non-SuperBuild, non private-sector spending on these infrastructure projects is examined, a similar distortion in the proportion of spending allocated to each discipline is evident. "Marketable" programs of studies are being favoured consistently over those areas less profitable to the private sector, even though these programs contain a large proportion of all students.

Figure 3
Breakdown of SuperBuild Funding in Ontario Since 1999



SuperBuild and Infrastructural Inequality

When the private sector becomes involved in funding universities, it is to be expected that the bulk of the money they control will be dedicated to programs of study providing the greatest strategic value to this sector. When disciplines compete directly with each other for private sector funding, engineering, computer science, and business will win out over fine arts, humanities, education, and social sciences programs.

As Table 3 illustrates, the SuperBuild program has leveraged a dramatic increase in the amount of construction at Ontario universities dedicated to engineering, computer science, business, natural sciences, and health sciences. These categories account for a 79% share of funding that the government allotted to the SuperBuild programs, and a full 87% of private sector funding, even though these disciplines enrol only 42% of all students. The degree of distortion is quite remarkable: Education, social sciences and humanities received only 5% of government and 3% of private sector SuperBuild funding, even though they enrol 49% of all students.[76] Even though arts and humanities students make up 40% of the student population, and therefore account for roughly 40% of tuition fees, Ontario universities devote only 0.3% of their contribution to SuperBuild projects on these subject areas. The 15% of government and 10% of private SuperBuild funding allocated to "multipurpose" projects will hardly make up for the two-tiered look of Ontario's university campuses.

When the Ontario government mandated private sector involvement through SuperBuild, it condemned certain programs to "infrastructural inequality." There is no counterbalancing program (or apparent inclination) to offset the evident unattractive-

Table 3
Percentage of SuperBuild and Private Sector Funding, By Subject Area, Compared to Enrolment[75]

Projects by discipline/ subject area	Allocation of SuperBuild funds	Allocation of private sector funds	Student enrolment in 1999-2000 by discipline/subject area
Engineering, Computer science and Business	51%	62%	24%
Multipurpose	15%	10%	---
Natural and Health Sciences	28%	25%	18%
Humanities and Social Sciences	3%	0.8%	40%
Fine Arts	2%	1.8%	3%
Education	0%	0%	9%
Library	0.14%	0.19%	---

Table 4
Percentage of Institutional, ORDCF/OIT, ATOP, Municipal, and Federal Funding By Discipline/Subject Area Compared to Enrolment

Project areas by subject area	Institutional funding	ORDCF/ OIT funding	CFI funding	ATOP funding	Municipal funding	Direct federal transfers	Enrolment in 1999-2000 by subject area
Engineering, Computer science, and Business	65%	27%	15%	97%	18%	13%	24%
Multipurpose	12%	9%	11%	0%	35%	0%	---
Natural and Health Sciences	20%	62%	76%	1%	28%	87%	18%
Humanities and Social sciences	0.3%	0.8%	0%	1%	0%	0%	40%
Fine Arts	2%	0%	0%	0%	18%	0%	3%
Education	0%	0%	0%	0%	0%	0%	9%
Library	0%	0.19%	0%	1%	0%	0%	---

ness of education, humanities, and social sciences to the private sector. The private sector may not be investing all the money, but the SuperBuild scheme gives it control of all infrastructure decision-making and priority-setting on campus, along with defacto control over how federal, provincial, and municipal funds are allocated—and even how student tuition fees are spent. This takeover of the functions of setting public policy by democratically-elected and accountable officials has consequences well beyond the university sector. It exemplifies how one of PPPs key "structural faults"—the breakdown of accountability—operates in practice.

Public Finances and SuperBuild Partnerships

> A private-sector partner expects that the financial return of the project will reflect the level of risk and effort. This includes consideration of: market demand, pricing risk, revenue risk, capital costs, operating risk, financing costs, legislative risk, and other factors affecting financial performance of a business. In general, the private sector's primary motive in any venture is to earn a return commensurate with the risks it undertakes and its performance on the project.
>
> *From the guidelines for SuperBuild*[77]

Most Ontarians do not consider "profit" to be a dirty word, and they bear no grudge against the private sector, unless they perceive themselves or their neighbours as being gouged or manipulated for profit. They do not want their governments toadying to the private sector, nor cutting back room deals.[78] It is conceivable that the public would be prepared to trade off some accountability and transparency in the university sector in exchange for efficiency. When something is cheaper, or when more of it can be purchased for the same price, certain trade-offs become acceptable. Unfortunately, it appears that SuperBuild gives taxpayers the worst of both worlds: less accountability at a higher cost.

In addition to the general arguments about how PPP's' run up costs, the private money associated with SuperBuild generates tax write-offs for corporations that must be offset by other taxpayers, or be absorbed within shrinking provincial budget. As well, universities are required to expend considerable resources on stalking potential partners; "rebranding" doesn't come cheaply. The administrative and legal costs associated with drawing up deals, monitoring partners' compliance, etc. add up quickly. And because many high-profile partnerships have involved high-profile "donors" with high-profile egos, infrastructure projects have ended up becoming considerably more elaborate than their functions could justify. Taken together, these above- and below-the-line costs make SuperBuild and similar projects bad business deals and bad public policy.

The consequences of these deals extend well beyond the university, beyond infrastructure and beyond the balance sheet. PPPs of the SuperBuild type compromise the public good by forcing us to pretend to ignore the obvious: corporations are not entering into PPPs in order to demonstrate "good corporate citizenship," nor should the private sector be expected to invest shareholders' dollars in the pursuit of philanthropy. The business of business is business, to earn a profit for shareholders, both over the short and long term. The return they seek includes being able to ensure that universities will have the facilities and the inclination to conduct research that can be purchased at bargain rates, saving corporations the cost and bother of investing in their own research and development capacities. The same infrastructure will support the "training" of future employees to industry specifications, and give the private sector much influence over favourable human resource conditions, including their supply and demand.

These incentives explain why Ontario universities could find private sector "partners" only for projects dedicated to engineering, computer science, business, natural sciences and health sciences. These disciplines generate the raw material of productivity and profit for high-tech, manufacturing, agribusiness, banking, and pharmaceutical companies. In exchange, students pursuing studies and professional training essential to society, but less profitable to the private sector suffer dilapidated buildings and enjoy little infrastructural support.

Conclusion

The gradual privatization of Ontario's university system has been directed and controlled by a corporate-friendly cabinet, a few like-minded bureaucrats and the CEOs of Ontario's largest corporations. Together, these programs have provided the mechanisms to transform the university into a service-provider to the private sector. The massive infrastructural inequalities that result threaten to exacerbate "tiering" within the university, privileging one set of privately-profitable disciplines over those that are publicly useful. The priorities and activities within the "more-valued" sector are themselves compromised by an escalating dependence on corporate funding and the provision of corporate services. Together, these effects risk undermining the university's obligations to meet students' needs and to carry out its commitment to public service.

Corporations come and go. Market niches come and go, along with the products sold to them. The same cannot be said for the creations of the public sector: public health, public education, planning for the public good are not "trends" whose existence depends on the whims of commerce. There is no substitute, waiting in the wings, to replace a university system mortally compromised by its devotion to what is currently useful at the expense of what is good and true—and therefore useful—over time. No other institution can treasure what the university aspires to embrace, preserve and advance: the antidote to "common sense." Put this way, the university is the antithesis of public opinion, while to the market, public opinion is everything. It is the means by which today's investment can be transformed into tomorrow's return. It is sorrowful when the institution that sets out to free people's minds from these manipulations ends up as their agent.

Recommendations

1. That OCUFA continue its efforts to broaden awareness among its membership of the dynamics of PPPs and their influence in the university sector

2. That OCUFA seek support among other public employees, professionals and public interest groups in lobbying for a moratorium on further SuperBuild agreements, pending a transparent cost/benefit analysis.

3. That OCUFA emphasize the "structural inequality" that disadvantages the majority of university students when their funding is determined by the private sector, and urge compensatory funding .

4. That OCUFA request that all Universities publish the linkages between the PPPs with which they are involved, and the corporate interests represented by their boards of directors.

5. That OCUFA continue to lobby for funding for post-secondary institutions sufficient that they are not forced to seek private sector alternatives.

6. That OCUFA urge that the Task Force on Commercialization be reconstituted.

7. That OCUFA work with like-minded groups to restore accountability to infrastructure finance in all sectors.

8. That OCUFA continue to assert leadership in extending public understanding of PPPs and alternatives that would better reflect an appropriate relationship between public and private sectors, and between the public and its elected government.

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39 Both papers are available at http://www.innovationstrategy.gc.ca/cmb/innovation.nsf/pageE/Contents In *Achieving Excellence*, it is claimed that Canada has a serious productivity problem necessitating immediate action. This problem, it is suggested, stems in large part from Canada's relatively poorer performance in getting "new ideas into the market more quickly." It recommends that universities facilitate this process more aggressively.

40 April Lindgren, "University entry grade hits 85% or higher." *The Ottawa Citizen* . April 16, 2003. p. A8

41 Sarah Schmidt, "Public funds for tuition fall 32% since '86." *The Ottawa Citizen*. June 12, 2003 p. A5.

42 Mark Rosenfeld and Amy Dickieson Kaufman, "The state of higher education in Ontario: Bursting at the seams." In *Missing Pieces IV*, op. cit. p.59.

43 ibid, p. 60

44 Ontario Confederation of University Faculty Associations (OCUFA), "Brief to the Standing Committee on Finance and Economic Affairs." Pre-Budget Consultation, Jan 30 2003. p.4. http//:www.ocufa.on.ca/briefs/budgetJan03.pdf

45 Mark Rosenfeld and Amy Dickieson Kaufman, op.cit p. 60.

46 Hugh Mackenzie and Mark Rosenfeld, "University Funding Cuts: Shortchanging Ontario Students" in *Missing Pieces IV*, op.cit. p.30.

47 CUPE National Research Branch, "SuperBuild Update: Public-Private Partnerships in Ontario's Colleges and Universities." Canadian Union of Public Employees. March 3, 2003.

48 Mark Rosenfeld and Amy Dickieson Kaufman, op.cit. p. 60

49 ………, "Background data: Quality." *In Missing Pieces IV*, op. cit. P.20.

50 Denis Doherty-Delorme and Erika Shaker, op. cit. P. 31.

51 Todd Robertson, "Changing patterns of university finance." *Statistics Canada: Education Quarterly Review*, 2003 V9 N7, p. 10.

52 ……….,"Background data: Accessibility, affordability, opportunity." In *Missing Pieces IV*, op.cit. p.11.

53 See, for example, the Canadian Federation of Students "Fact sheet, Private Universities: Privileged Education." Dec. 2000, V 7, N2. Dec, 2000.

54 Mark Rosenfeld and Amy Dickieson Kaufman, op.cit. p.62.

55 See Appendix #4 for a more detailed analysis of sponsored research funding by university.

56 p. 69, Healy, Teresa. "Public Exclusion, Under Funding and the Intensification of Work: Universities and the Erosion of Democracy in Ontario." *Just Labour*, Volume 1, 2002, p. 68-76. http://www.yorku.ca/julabour/volume1/jl_healy.pdf

57 Both cases involved the company Research in Motion whose CEO (Mike Lararidis) and one member of its Board of Directors (Doug Wright) sit on the ORDCF board. In 2001, the ORDCF gave $5.95 million to a joint project between Research in Motion and University of Waterloo (See p. 11: http://www.ontariochallengefund.com/english/annual_report/Report2002.pdf). In 1999, the ORDCF gave $500,000 to a joint project between Research in Motion and Laurier University (See p. 12: http://www.ontariochallengefund.com/english/annual_report/Report2000.pdf). Both projects involved information technology and therefore research from these projects could definitely be used to benefit Research in Motion.

58 http://www.ontariochallengefund.com

59 ———, "U of W, St. Clair College Agreement Designed to Profit the Automotive Industry." University of Windsor Students' Alliance. http://www.uwsa.ca/articles/articles.asp?Article=9

60 E. Pearce, "In Conversation with John Roth: Networking the World." *Ivey Business Journal*. V64 N2 November/December 1999.

61 Heather-jane Robertson, *Risky Business*. Paper presented to the 4th National Meeting of Economist, Havana Cuba. Feb. 14, 2002.

62 See http://www.edu.gov.on.ca/eng/general/postsec/atop/atop3.html

63 http://www.edu.gov.on.ca/eng/general/postsec/atop/atop2.html

64 http://www.edu.gov.on.ca/eng/document/nr/99.07/atop.html

65 Joanne Curry, "Canadian Experiences in Developing Public Private Partnerships in the eLearning Sector." Presentation to TeleLearning 2001, Vancouver, Canada. http://www.telelearn.ca/conference

66 http://www.oit.on.ca/Pages/AboutTrust.html

67 According to CFS-Quebec, "the federal program, Canadian Foundation for Innovation and the Canadian Research Chairs Program "has made government funding available to researchers only on the condition that private sponsorship is also acquired, often in amounts that equal what is contributed by government. In effect, these programs transform federal research funding into a subsidy for corporate-driven research agendas that would otherwise have been funded entirely by the private sector." Rob Green, Research Funding & the Public Interest. *EducationAction*. CFS-Quebec. http://www.education-action.net/ruckuseng/rfundingpi.htm

68 http://www.oit.on.ca/

69 Centre for Education Statistics, Statistics Canada. "University enrolment in Ontario by 1st digit field of study. 2000-01."

70 http://www.oce-ontario.org

71 ibid.

72 Project literature explains that after September 11, 2001 the market for "less-lethal weapons systems" increased by 300% (the U.S. market alone is estimated to exceed $159 million in annual sales, 2004) and the U.S. government contacted Pine Tree immediately following the attacks to purchase 10,000 pieces of ammunition. The resultant new rubber bullet is deemed to be more accurate and reusable, and will be used "for police and military training, crowd control and riot squads." Explains Amer Ebied, engineering graduate from UWO and recipient of an MMO Industrial Masters Scholarship, "these bullets are revolutionizing the less-lethal ammunitions market!"

73 *Annual Report of the OSBC*, 2000-01 p.4 http://www.superbuild.gov.on.ca/userfiles/page_attachments/Library/2/2000-01_Annual_Report.pdf

74 Ontario Government. "A Guide to Public-Private Partnerships." January 2001. P.1. http://www.superbuild.gov.on.ca/userfiles/page_attachments/Library/2/Partnership_Guide.pdf

75 For a breakdown of the SuperBuild projects in the university sector see: http://www.edu.gov.on.ca/superbuild/ english/projects/universities.html. The enrolment figures of Ontario universities are provided by Statistics Canada. Note 6% of students are reported as Arts and Science, Interdisciplinary, or not known and not included in the totals for student enrolment. The subject areas are broken down as follows. Fine Arts includes: applied arts, fine arts, music, performing arts. Education includes: elementary-secondary teacher training, human kinetics, nursery and kindergarten education, physical education, recreology and recreation administration. Humanities includes: classics, classical and dead languages, English, French, history, journalism library science, translation and interpretation, linguistics, other languages and/or literatures, mass communications studies, philosophy, records science, religious studies and theology. Social Sciences includes: anthropology, archaeology, area studies, Canadian studies, criminology, demography, economics, geography, law, environmental studies, military studies, political science, psychology, social work, sociology

and specialized administration studies. Engineering, Computer Science and Business includes: computer science, commerce, management, business administration, aeronautical and aerospace engineering, architecture, chemical engineering, civil engineering, systems engineering, electrical engineering, engineering science, general engineering, forestry, industrial engineering, mechanical engineering, metallurgical engineering and mining engineering. Natural and Health Sciences includes: agriculture, biochemistry, biology, biophysics, botany, fisheries and wildlife management, household science, toxicology, veterinary medicine, zoology, chemistry, geology mathematics, metallurgy, meteorology, oceanography, physics, medical sciences, dentistry, medical technology, medicine, nursing, optometry, paraclinical sciences, public health, pharmacy and rehabilitation medicine.

76 This inequity becomes particularly marked in the case of education. Few disagree that the education of children determines our society's social, political and economic future. Yet not one penny of SuperBuild money has thus far been spent on the preparation of their future teachers. Among all 22 SuperBuild University projects, only one minor project may have a distant connection to education. The study of education is clearly of little value to private sector "partners;" it is governments and school boards, not private companies, which will employ (or at least be scrambling to find) qualified teachers in the next decade. Corporations do not use educational research in the manufacture of cell phones, and what they need to know about children themselves they can learn from marketers. Private companies pursue self-interest, not the public good. This is not a political criticism, it is recognition that profit-seeking is a characteristic of the private sector, not a character flaw. It is naïve at worst and disingenuous at best to expect the private sector to behave otherwise.

77 http://www.superbuild.gov.on.ca/userfiles/HTML/nts_2_25809_1.html

78 Corporate-government alliances grow in a variety of ways, including the smarmiest ones. A number of companies that dominate the boards who control the OSBC, ORDCF and ATOP are also major contributors to the Ontario Progressive Conservative Party. Between 1995 and 2001, Toronto Dominion Bank and Securities, which is represented on the OSCB advisory board, donated $79,418 to the Progressive Conservative Party of Ontario. Bell Canada, also a member of the OSBC board, has received funding from the ORDCF for a joint project with Carleton University and the University of Ottawa. Bell Canada and Bell Mobility also donated $30,200 to the Conservative Party between 1995 and 2001.

Appendix 1

Sponsored Research Funding

University finance data from Statistics Canada for 2001-02 provides a more thorough analysis of the breakdown for university income, including grants and contracts, and other sources of sponsored research funding—from federal and provincial grants, and other sources—and allows us to determine the degree to which university total income is supplemented by income from sponsored research (both from public and private sources).

When looking at the percentage of university income from sponsored research, McMaster is first at 36.3%, followed by U of T at almost 32%. Ottawa is also at nearly 32%, followed by Guelph (almost 27%), Queen's (25.2%) and Western (24.28%). Compare this with Trent (14.6%), Brock (6.5%), York (7.68%), and Ryerson (3.5%). Clearly, larger institutions see sponsored research (from all sources) as a substantial source of income. Perhaps smaller institutions are not as well positioned to take advantage of sponsored research as a lucrative income source.

University	Percentage of sponsored research income from provincial government (2001-02)	Percentage of sponsored research income from federal government (2001-02)	Percentage of sponsored research income from other sources (2001-02)	Sponsored research income as percentage of total university income (2001-02)
Brock	10.31	76.65	12.78	6.5
Carleton	9.47	53.83	36.70	17.33
Guelph	44.81	29.97	25.21	26.92
Lakehead	27.92	60.0	11.79	11.0
Laurentian	19.36	37.50	43.14	16.20
McMaster	7.70	37.24	55.05	36.30
Nipissing	10.18	2.77	87.03	0.52
Ottawa	16.48	45.92	35.58	31.88
Queen's	19.94	39.81	40.24	25.20
Ryerson	0.00	50.46	49.53	3.53
Toronto	17.98	42.86	39.15	31.95
Trent	16.87	68.32	14.80	14.61
Waterloo	18.95	49.35	31.68	22.43
Western	14.94	37.05	47.99	24.28
Wilfrid Laurier	5.05	75.88	19.05	4.27
Windsor	23.48	63.98	12.52	9.39
York	9.33	66.27	24.39	7.68

University	Total eligible FTE (undergraduate and graduate)	Total sponsored research income from province ($1000)	Sponsored research income per student
Brock	9,277.6	811	$87.41
Carleton	14,502.0	5298	$365.32
Guelph	13,853.0	50951	$3677.97
Lakehead	5,453.4	2715	$497.85
Laurentian	5,438.0	2796	$514.15
McMaster	15,220.0	15196	$998.42
Nipissing	2,316.4	22	$9.49
Ottawa	20,175.5	25095	$1243.83
Queen’s	14,976.4	30054	$2006.75
Ryerson	16,666.0	0	N/A
Toronto	45,708.6	81955	$1792.98
Trent	4,515.0	1997	$442.30
Waterloo	17,826.2	16571	$929.58
Western	25,031.8	22310	$891.26
Wilfrid Laurier	9,199.4	258	$28.04
Windsor	10,978.8	3895	$354.77
York	30,530.0	3939	$129.02
Total	263,780.2	263,863	$1,000.31

This inequity becomes even more interesting when calculating universities’ total sponsored research income from the provincial government per student (full-time equivalent, or FTE). There is a clear divide between the larger and the smaller universities, as indicated in the table above.

Of the 17 universities included in this table, only four are above the national average (provincial sponsored research income per student) of $1,000.31: Guelph, Ottawa, Queen’s and Toronto. McMaster is almost at the national average at $998.42, as is Waterloo ($929.58) and Western ($891.26). The remaining universities fall well below the national average, ranging from $514.15 at Laurentian to $9.49 at Nipissing. This corresponds to what we know—the larger universities are able to attract substantially more research dollars than the smaller universities, which is particularly striking on a per-student basis. In fact, the seven larger universities attract a total of $242,132,000 or 91.76% of provincial sponsored research funding, and the 10 smaller ones $21,731,000 or 8.23%. To put it in student terms, the seven best-endowed universities representing 57.92% of Ontario students (152,791.5 FTE 2001-02) received almost 92% of the sponsored research money provided by the provincial government while 42.07% (110,988.7 FTE 2001-02) received less than 9%.

Appendix 2

University Enrolment in Ontario By First Digit Field of Study, 2000-01

Field of study	2000-2001	Percentage
Agricultural and biological sciences	19,165	6.00
Arts and science	33,853	10.60
Education	29,024	9.09
Engineering and applied sciences	29,281	9.17
Fine and applied arts	10,911	3.42
Health professions and occupations	19,207	6.01
Humanities and related	33,611	10.52
Mathematics and physical sciences	24,545	7.69
Not applicable	13,102	4.10
Not reported	140	0.04
Social sciences and related	106,415	33.3
Ontario total	319,254	100%

Appendix 3

Breakdown of SuperBuild Funding by Project (in $millions)

University	Multipurpose	SuperBuild	Private	Institution	Muncipal	ATOP	ORDCF/OIT	CFI	Federal	Other Prov . $
Algoma	Learning Pavilion	0.65								
Brock	New Academic Complex	15.57	9.9							
Hearst	Modernization of Kapuskasing	0.12								0.175
Fleming and Trent	Cooperative Ventures Initative	2.81	0.3							
Western	Classroom Renovations	40.5	10	13	10		4	4		
Totals		59.65	20.2	13	10		4	4		
	Natural and Health Sciences	SuperBuild	Private	Institution	Muncipal	ATOP	ORDCF/OIT	CFI	Federal	Other Prov . $
Carleton	Stacie Building	28.66	1.64	1.65			1.5	4.25	17.4	
U of T	Health Sciences Complex	28.8	20	18.51			25.6	24		
Guelph	Advanced Learning and Training Centre	45	30	1.3	8					
Totals		102.46	51.64	21.46	8		27.1	28.25		
	Engineering,Computer Science, Business	SuperBuild	Private	Institution	Muncipal	ATOP	ORDCF/OIT	CFI	Federal	Other Prov . $
Lakehead	Advanced Technology and Academic Centre	13.38	7.22	3	0.5	3.34	0.44	0.44	2.5	
McMaster	Science, Health Sciences, and Engineering Rehabilition	18.53	7.6	8.15		4				
Nipissing	Academic Expansion	11.2	0.8	1		1.5				
Queen`s	New Chemistry Building and School of Business Renovation	39.96	39	11.16						
Ryerson	Centre for Graphic Communications Management	4.15	6							
Ottawa	School of Information Technology and Engineering	4.5	13.43	4		9				
U of T	Centre for Information Technology	24.03	12.6	26.85		10.2	9.46	2.35		
U of T and Sheridan	Communication, Culture and Information Technology	27.3	1.93	3	4.5	0.43	0.5	0.75		
Waterloo	Environmental and Information Technology and Cooperative Centre	31.21	18.33			3	1.62	1.62		2.28
Laurier	Schleger Centre for Entreprenuial Studies	6.3	4.02	1.4		0.55				
York	Schulich School of Business	30.49	17.5	10.22						
Totals		211.05	128.43	68.78	5	32	12.02	5.16		
	Library	SuperBuild	Private	Institution	Muncipal	ATOP	ORDCF/OIT	CFI	Federal	Other Prov . $
Laurentian	Brenda Wallace Reading Room	0.61	0.41			0.25				
	Arts and Science	SuperBuild	Private	Institution	Muncipal	ATOP	ORDCF/OIT	CFI	Federal	Other Prov . $
Trent	Faculty of Arts and Science Academic Facilities	27.32	3.63	0.73		0.68	0.74			
	Dramatic Art and Multimedia Learning	SuperBuild	Private	Institution	Muncipal	ATOP	ORDCF/OIT	CFI	Federal	Other Prov . $
Windsor	Multimedia Learning Centre and Dramatic Art Project	10.66	3.8	2.5	5					
Overall Totals		411.75	208.11	106.47	28	32.9	43.86	37.41	19.9	2.455

Appendix 4: Ontario Public Universities (CAUBO Members) Income 2001-02

				Sponsored research						
Institution	Line	General	Special purpose	Entities	Entities not	Sub-total	Ancillary	Capital	Endowment	Total
name	title	operating	and trust	Consolidated	Consolidated		enterprises			funds
INSTNAME	VAR_ENGLISH	C01	C02	C03	C04	C05	C06	C07	C08	C09
Brock University	1. Social Sciences and Humanities Research Council	0	0	415	0	415	0	0	0	415
Brock University	3. Natural Sciences and Engineering Research Council	0	0	2878	0	2878	0	0	0	2878
Brock University	4. Canadian Institutes of Health Research (CIHR)	0	0	100	0	100	0	0	0	100
Brock University	5. Canada Foundation for Innovation (CFI)	0	0	259	0	259	0	0	0	259
Brock University	7. Other federal	0	0	2236	0	2236	0	0	0	2236
Brock University	Ministry of Health	0	0	596	0	596	0	0	0	596
Brock University	Ontario Ministry of Training, Colleges and Universities (MTCU)	44975	0	140	0	140	127	685	0	45927
Brock University	C. Total of all departments and agencies under $100,000	71	0	75	0	75	0	0	0	146
Brock University	Total (calculated) *	45046	0	811	0	811	127	685	0	46669
Brock University	9. Municipal	0	0	0	0	0	0	443	0	443
Brock University	12. Credit course tuition	39959	0	0	0	0	0	0	0	39959
Brock University	13. Non-credit tuition	1548	0	0	0	0	0	0	0	1548
Brock University	14. Other fees	2317	0	0	0	0	0	0	0	2317
Brock University	15. Individuals	0	757	0	0	0	0	1214	156	2127
Brock University	16. Business enterprises	0	673	0	0	0	0	1307	0	1980
Brock University	17. Foundations	0	115	0	0	0	0	155	0	270
Brock University	18. Not-for-profit organizations	0	51	0	0	0	0	69	0	120
Brock University	20. Business enterprises	0	0	412	0	412	0	0	0	412
Brock University	21. Foundations	0	0	431	0	431	0	0	0	431
Brock University	22. Not-for-profit organizations	0	0	139	0	139	0	0	0	139
Brock University	23. Endowment	0	636	0	0	0	0	0	-982	-346
Brock University	24. Other investment	467	0	0	0	0	0	312	0	779
Brock University	25. Sale of services and products	0	0	0	0	0	9891	0	0	9891
Brock University	26. Miscellaneous	0	0	0	0	0	4953	0	0	4953
Brock University	**27. Total**	**89337**	**2232**	**7681**	**0**	**7681**	**14971**	**4185**	**-826**	**117580**
Carleton University	1. Social Sciences and Humanities Research Council	0	0	2408	0	2408	0	0	0	2408
Carleton University	2. Health Canada	0	0	764	0	764	0	0	0	764
Carleton University	3. Natural Sciences and Engineering Research Council	353	0	10126	0	10126	0	0	0	10479
Carleton University	4. Canadian Institutes of Health Research (CIHR)	0	0	464	0	464	0	0	0	464
Carleton University	5. Canada Foundation for Innovation (CFI)	0	0	2873	0	2873	0	0	0	2873
Carleton University	7. Other federal	687	0	13482	0	13482	0	3005	0	17174
Carleton University	Ontario Research & Development Challenge Fund	0	0	905	0	905	0	0	0	905
Carleton University	Ontario Innovation Trust (OIT)	0	0	2080	0	2080	0	0	0	2080
Carleton University	Premier's Research Excellence Awards	0	0	122	0	122	0	0	0	122
Carleton University	Ontario Ministry of Training, Colleges and Universities (MTCU)	89512	321	0	0	0	208	25750	0	115791
Carleton University	C. Total of all departments and agencies under $100,000	40	0	2191	0	2191	0	0	0	2231
Carleton University	Total (calculated) *	89552	321	5298	0	5298	208	25750	0	121129
Carleton University	9. Municipal	0	0	134	0	134	0	0	0	134
Carleton University	10. Other provinces	0	0	2010	0	2010	0	0	0	2010
Carleton University	12. Credit course tuition	74657	0	0	0	0	0	0	0	74657
Carleton University	14. Other fees	5455	0	0	0	0	0	0	0	5455
Carleton University	15. Individuals	970	19876	274	0	274	0	0	374	21494
Carleton University	16. Business enterprises	133	1499	0	0	0	0	0	7	1639
Carleton University	19. Individuals	0	0	835	0	835	0	0	0	835
Carleton University	20. Business enterprises	689	0	3259	0	3259	0	0	0	3948
Carleton University	21. Foundations	67	0	1054	0	1054	0	0	0	1121
Carleton University	22. Not-for-profit organizations	0	0	599	0	599	0	0	0	599
Carleton University	23. Endowment	0	0	0	0	0	0	0	16893	16893
Carleton University	24. Other investment	1865	2446	0	0	0	0	2043	0	6354

Carleton University	25. Sale of services and products	0	0	0	0	0	7424	0	0	7424
Carleton University	26. Miscellaneous	3093	0	12368	0	12368	9450	30	0	24941
Carleton University	**27. Total**	**177521**	**24142**	**55948**	**0**	**55948**	**17082**	**30828**	**17274**	**322795**
University of Guelph	1. Social Sciences and Humanities Research Council	0	0	1062	0	1062	0	0	0	1062
University of Guelph	2. Health Canada	0	0	458	0	458	0	0	0	458
University of Guelph	3. Natural Sciences and Engineering Research Council	0	0	13126	0	13126	0	0	0	13126
University of Guelph	4. Canadian Institutes of Health Research (CIHR)	0	0	1860	0	1860	0	0	0	1860
University of Guelph	5. Canada Foundation for Innovation (CFI)	0	0	4867	0	4867	0	0	0	4867
University of Guelph	6. Canada Research chairs	0	0	1300	0	1300	0	0	0	1300
University of Guelph	7. Other federal	0	88	11396	0	11396	0	0	0	11484
University of Guelph	Ontario Innovation Trust (OIT)	0	0	4961	0	4961	0	0	0	4961
University of Guelph	Guelph Humber	418	0	0	0	0	0	0	0	418
University of Guelph	Ministry of Agriculture	9890	0	44275	0	44275	0	0	0	54165
University of Guelph	Ontario Research & Development Challenge Fund	0	0	660	0	660	0	0	0	660
University of Guelph	Ontario Research Performance Fund	3967	0	0	0	0	0	0	0	3967
University of Guelph	Premier's Research Excellence Awards	0	0	560	0	560	0	0	0	560
University of Guelph	Ontario Ministry of Training, Colleges and Universities (MTCU)	104226	924	0	0	0	273	1735	0	107158
University of Guelph	Ministry of Natural Resources	0	0	205	0	205	0	0	0	205
University of Guelph	Ontario Grad Scholarship	0	894	0	0	0	0	0	0	894
University of Guelph	C. Total of all departments and agencies under $100,000	0	1684	290	0	290	0	0	0	1974
University of Guelph	Total (calculated) *	118501	3502	50951	0	50951	273	1735	0	174962
University of Guelph	10. Other provinces	0	0	900	0	900	0	0	0	900
University of Guelph	12. Credit course tuition	67372	0	0	0	0	0	0	0	67372
University of Guelph	13. Non-credit tuition	4878	0	0	0	0	0	0	0	4878
University of Guelph	14. Other fees	9001	0	0	0	0	0	0	0	9001
University of Guelph	15. Individuals	0	4083	0	0	0	0	0	3679	7762
University of Guelph	16. Business enterprises	0	637	0	0	0	0	7404	1239	9280
University of Guelph	17. Foundations	0	642	0	0	0	0	0	418	1060
University of Guelph	18. Not-for-profit organizations	0	154	0	0	0	0	0	177	331
University of Guelph	19. Individuals	0	45	1002	0	1002	0	0	0	1047
University of Guelph	20. Business enterprises	0	323	14868	0	14868	0	0	0	15191
University of Guelph	21. Foundations	0	75	1933	0	1933	0	0	0	2008
University of Guelph	22. Not-for-profit organizations	0	0	1933	0	1933	0	0	0	1933
University of Guelph	23. Endowment	0	0	0	0	0	0	0	-274	-274
University of Guelph	24. Other investment	2067	6736	0	0	0	297	2673	0	11773
University of Guelph	25. Sale of services and products	0	0	0	0	0	27973	0	0	27973
University of Guelph	26. Miscellaneous	15860	1878	8028	0	8028	26963	190	0	52919
University of Guelph	**27. Total**	**217679**	**18163**	**113684**	**0**	**113684**	**55506**	**12002**	**5239**	**422273**
Lakehead University	1. Social Sciences and Humanities Research Council	0	78	490	0	490	0	0	0	568
Lakehead University	2. Health Canada	0	0	663	0	663	0	0	0	663
Lakehead University	3. Natural Sciences and Engineering Research Council	0	116	1637	0	1637	0	0	0	1753
Lakehead University	4. Canadian Institutes of Health Research (CIHR)	0	0	229	0	229	0	0	0	229
Lakehead University	5. Canada Foundation for Innovation (CFI)	0	0	1051	0	1051	0	0	0	1051
Lakehead University	6. Canada Research chairs	0	0	200	0	200	0	0	0	200
Lakehead University	7. Other federal	766	0	1592	0	1592	0	0	0	2358
Lakehead University	Ministry of Natural Resources	0	68	87	0	87	0	0	0	155
Lakehead University	Ontario Innovation Trust (OIT)	0	0	1092	0	1092	0	0	0	1092
Lakehead University	Ontario Ministry of Training, Colleges and Universities (MTCU)	31381	315	97	0	97	50	615	0	32458
Lakehead University	Ministry of Health	162	0	593	0	593	0	0	0	755
Lakehead University	Ministry of Energy, Science and Technology	136	0	0	0	0	0	0	0	136
Lakehead University	Northern Ontario Heritage Fund	0	0	646	0	646	0	0	0	646
Lakehead University	C. Total of all departments and agencies under $100,000	0	0	200	0	200	0	0	0	200
Lakehead University	Total (calculated) *	31679	383	2715	0	2715	50	615	0	35442
Lakehead University	9. Municipal	0	0	28	0	28	0	0	0	28

Lakehead University	10. Other provinces	0	0	34	0	34	0	0	0	34
Lakehead University	12. Credit course tuition	22966	0	0	0	0	0	0	0	22966
Lakehead University	13. Non-credit tuition	454	0	0	0	0	0	0	0	454
Lakehead University	14. Other fees	1526	0	0	0	0	0	0	0	1526
Lakehead University	15. Individuals	138	24	3	0	3	0	63	168	396
Lakehead University	16. Business enterprises	308	80	494	0	494	0	5563	102	6547
Lakehead University	17. Foundations	3	28	1	0	1	0	78	2	112
Lakehead University	18. Not-for-profit organizations	10	91	0	0	0	0	0	1	102
Lakehead University	20. Business enterprises	70	41	340	0	340	0	0	0	451
Lakehead University	21. Foundations	0	0	19	0	19	0	0	0	19
Lakehead University	22. Not-for-profit organizations	211	0	76	0	76	0	0	0	287
Lakehead University	23. Endowment	0	254	0	0	0	0	0	95	349
Lakehead University	24. Other investment	0	14	0	0	0	184	73	0	271
Lakehead University	25. Sale of services and products	0	0	0	0	0	10755	0	0	10755
Lakehead University	26. Miscellaneous	897	5	152	0	152	0	0	0	1054
Lakehead University	**27. Total**	**59028**	**1114**	**9724**	**0**	**9724**	**10989**	**6392**	**368**	**87615**
Laurentian University	1. Social Sciences and Humanities Research Council	0	0	91	0	91	0	0	0	91
Laurentian University	3. Natural Sciences and Engineering Research Council	0	183	1632	0	1632	0	0	0	1815
Laurentian University	4. Canadian Institutes of Health Research (CIHR)	0	0	117	0	117	0	0	0	117
Laurentian University	5. Canada Foundation for Innovation (CFI)	0	0	778	0	778	0	0	0	778
Laurentian University	6. Canada Research chairs	0	0	300	0	300	0	0	0	300
Laurentian University	7. Other federal	12	68	2497	0	2497	0	0	0	2577
Laurentian University	Ministry of Environment	0	0	100	0	100	0	0	0	100
Laurentian University	Ministry of Northern Development and Mines	0	1326	281	0	281	0	0	0	1607
Laurentian University	Ontario Research & Development Challenge Fund	0	0	731	0	731	0	0	0	731
Laurentian University	Ontario Innovation Trust (OIT)	0	0	715	0	715	0	0	0	715
Laurentian University	Ontario Ministry of Training, Colleges and Universities (MTCU)	38092	1833	0	0	0	0	1547	0	41472
Laurentian University	Ontario Research Performance Fund	405	0	0	0	0	0	0	0	405
Laurentian University	Ministry of Health	394	0	139	0	139	0	0	0	533
Laurentian University	Ministry of Natural Resources	0	0	550	0	550	0	0	0	550
Laurentian University	Premier's Research Excellence Awards	0	0	280	0	280	0	0	0	280
Laurentian University	Total (calculated) *	38891	3159	2796	0	2796	0	1547	0	46393
Laurentian University	9. Municipal	0	0	113	0	113	0	0	0	113
Laurentian University	10. Other provinces	0	0	7	0	7	0	0	0	7
Laurentian University	12. Credit course tuition	17370	0	0	0	0	0	0	0	17370
Laurentian University	13. Non-credit tuition	1072	0	0	0	0	0	0	0	1072
Laurentian University	14. Other fees	1052	0	0	0	0	0	0	0	1052
Laurentian University	15. Individuals	0	46	31	0	31	0	0	11	88
Laurentian University	16. Business enterprises	1125	200	221	0	221	0	0	0	1546
Laurentian University	17. Foundations	0	38	77	0	77	0	0	0	115
Laurentian University	18. Not-for-profit organizations	0	5	0	0	0	0	0	30	35
Laurentian University	20. Business enterprises	25	0	3630	0	3630	0	0	0	3655
Laurentian University	21. Foundations	0	1	1534	0	1534	0	0	0	1535
Laurentian University	22. Not-for-profit organizations	0	0	159	0	159	0	0	0	159
Laurentian University	23. Endowment	0	162	40	0	40	0	0	0	202
Laurentian University	24. Other investment	622	0	0	0	0	0	0	0	622
Laurentian University	25. Sale of services and products	0	0	0	0	0	4196	0	0	4196
Laurentian University	26. Miscellaneous	2097	539	414	0	414	2205	0	0	5255
Laurentian University	**27. Total**	**62266**	**4401**	**14437**	**0**	**14437**	**6401**	**1547**	**41**	**89093**
McMaster University	1. Social Sciences and Humanities Research Council	0	0	2522	0	2522	0	0	0	2522
McMaster University	3. Natural Sciences and Engineering Research Council	0	0	15433	0	15433	0	0	0	15433
McMaster University	4. Canadian Institutes of Health Research (CIHR)	0	0	24571	0	24571	0	0	0	24571
McMaster University	5. Canada Foundation for Innovation (CFI)	0	0	6220	0	6220	0	0	0	6220
McMaster University	6. Canada Research chairs	0	0	4696	0	4696	0	0	0	4696

McMaster University	7. Other federal	0	0	20048	0	20048	0	4151	0	24199
McMaster University	Ministry of Health	0	0	12417	0	12417	0	0	0	12417
McMaster University	Ontario Research & Development Challenge Fund	0	0	1431	1060	2491	0	0	0	2491
McMaster University	Ontario Ministry of Training, Colleges and Universities (MTCU)	113727	1707	0	0	0	0	1748	0	117182
McMaster University	C. Total of all departments and agencies under $100,000	0	0	288	0	288	0	0	0	288
McMaster University	Total (calculated) *	113727	1707	14136	1060	15196	0	1748	0	132378
McMaster University	9. Municipal	0	0	26129	0	26129	0	0	0	26129
McMaster University	11. Foreign	0	0	10311	0	10311	0	0	0	10311
McMaster University	12. Credit course tuition	81125	0	0	0	0	0	0	0	81125
McMaster University	13. Non-credit tuition	1287	0	0	0	0	0	0	0	1287
McMaster University	14. Other fees	273	0	0	0	0	0	0	0	273
McMaster University	16. Business enterprises	0	25038	0	0	0	0	10048	13023	48109
McMaster University	20. Business enterprises	0	0	30665	30635	61300	0	0	0	61300
McMaster University	21. Foundations	0	0	7584	65	7649	0	0	0	7649
McMaster University	24. Other investment	6946	-161	0	1822	1822	0	1452	0	10059
McMaster University	25. Sale of services and products	0	0	0	0	0	26777	0	0	26777
McMaster University	26. Miscellaneous	43262	0	99	1334	1433	15758	0	0	60453
McMaster University	**27. Total**	**246620**	**26584**	**162414**	**34916**	**197330**	**42535**	**17399**	**13023**	**543491**
Nipissing University	7. Other federal	75	0	6	0	6	0	0	0	81
Nipissing University	Ontario Ministry of Training, Colleges and Universities (MTCU)	12446	0	0	0	0	73	8559	0	21078
Nipissing University	C. Total of all departments and agencies under $100,000	17	0	22	0	22	0	0	0	39
Nipissing University	Total (calculated) *	12463	0	22	0	22	73	8559	0	21117
Nipissing University	12. Credit course tuition	12312	0	0	0	0	0	0	0	12312
Nipissing University	13. Non-credit tuition	148	0	0	0	0	0	0	0	148
Nipissing University	14. Other fees	1412	0	0	0	0	0	0	0	1412
Nipissing University	15. Individuals	0	44	0	0	0	0	13	100	157
Nipissing University	16. Business enterprises	0	140	0	0	0	0	0	0	140
Nipissing University	17. Foundations	0	60	0	0	0	0	0	0	60
Nipissing University	20. Business enterprises	0	0	188	0	188	0	0	0	188
Nipissing University	24. Other investment	42	482	0	0	0	0	362	0	886
Nipissing University	25. Sale of services and products	0	0	0	0	0	3288	0	0	3288
Nipissing University	26. Miscellaneous	1215	0	0	0	0	0	0	0	1215
Nipissing University	**27. Total**	**27667**	**726**	**216**	**0**	**216**	**3361**	**8934**	**100**	**41004**
University of Ottawa	1. Social Sciences and Humanities Research Council	0	719	3652	117	3769	0	0	0	4488
University of Ottawa	2. Health Canada	0	0	1539	244	1783	0	0	0	1783
University of Ottawa	3. Natural Sciences and Engineering Research Council	0	1529	9972	636	10608	0	0	0	12137
University of Ottawa	4. Canadian Institutes of Health Research (CIHR)	0	0	9371	0	9371	0	0	0	9371
University of Ottawa	5. Canada Foundation for Innovation (CFI)	0	0	11325	1328	12653	0	0	0	12653
University of Ottawa	6. Canada Research chairs	0	0	1974	325	2299	0	0	0	2299
University of Ottawa	7. Other federal	3538	1572	19588	9832	29420	0	204	0	34734
University of Ottawa	Ministry of Health	1786	0	1665	0	1665	0	0	0	3451
University of Ottawa	Ontario Research & Development Challenge Fund	0	0	12299	0	12299	0	0	0	12299
University of Ottawa	Hospital	0	0	0	9009	9009	0	0	0	9009
University of Ottawa	Ontario Innovation Trust (OIT)	0	0	1459	0	1459	0	0	0	1459
University of Ottawa	Ontario Ministry of Training, Colleges and Universities (MTCU)	149686	918	0	0	0	0	3957	0	154561
University of Ottawa	Ministry of Energy, Science and Technology	1212	0	0	0	0	0	0	0	1212
University of Ottawa	C. Total of all departments and agencies under $100,000	105	4872	663	0	663	0	0	0	5640
University of Ottawa	Total (calculated) *	152789	5790	16086	9009	25095	0	3957	0	187631
University of Ottawa	9. Municipal	0	1020	187	348	535	0	0	0	1555
University of Ottawa	10. Other provinces	30	0	114	3789	3903	0	0	0	3933
University of Ottawa	11. Foreign	0	0	0	3030	3030	0	0	0	3030
University of Ottawa	12. Credit course tuition	102101	0	0	0	0	0	0	0	102101
University of Ottawa	13. Non-credit tuition	3978	0	0	0	0	0	0	0	3978
University of Ottawa	14. Other fees	7060	0	0	0	0	0	0	0	7060

University of Ottawa	15. Individuals	432	867	1249	0	1249	0	7	796	3351
University of Ottawa	16. Business enterprises	210	760	272	25	297	0	0	650	1917
University of Ottawa	17. Foundations	40	66	3	40	43	0	0	0	149
University of Ottawa	18. Not-for-profit organizations	7	81	278	266	544	0	0	131	763
University of Ottawa	19. Individuals	0	0	33	105	138	0	0	0	138
University of Ottawa	20. Business enterprises	0	0	7337	4315	11652	0	0	0	11652
University of Ottawa	21. Foundations	0	11	4193	9915	14108	0	0	0	14119
University of Ottawa	22. Not-for-profit organizations	7	1119	12171	5761	17932	0	0	0	19058
University of Ottawa	23. Endowment	0	0	0	0	0	0	0	1615	1615
University of Ottawa	24. Other investment	5305	4257	-86	3701	3615	1	1108	0	14286
University of Ottawa	25. Sale of services and products	0	0	0	0	0	3339	0	0	3339
University of Ottawa	26. Miscellaneous	4759	1581	83	71	154	13384	291	0	20169
University of Ottawa	**27. Total**	**280256**	**19372**	**99341**	**52857**	**152198**	**16724**	**5567**	**3192**	**477309**
Queen's University	1. Social Sciences and Humanities Research Council	0	951	2110	0	2110	0	0	0	3061
Queen's University	2. Health Canada	0	15	730	0	730	0	0	0	745
Queen's University	3. Natural Sciences and Engineering Research Council	0	1974	15169	0	15169	0	0	0	17143
Queen's University	4. Canadian Institutes of Health Research (CIHR)	0	0	10485	0	10485	0	0	0	10485
Queen's University	5. Canada Foundation for Innovation (CFI)	0	0	14652	0	14652	0	0	0	14652
Queen's University	6. Canada Research chairs	0	0	1575	0	1575	0	0	0	1575
Queen's University	7. Other federal	18	869	15282	0	15282	0	248	0	16417
Queen's University	Ministry of Trade and Commerce	0	0	2326	0	2326	0	0	0	2326
Queen's University	Ontario Innovation Trust (OIT)	0	0	14511	0	14511	0	0	0	14511
Queen's University	Network Centre of Excellence	0	0	2280	0	2280	0	0	0	2280
Queen's University	Ministry of Energy, Science and Technology	1545	0	0	0	0	0	0	0	1545
Queen's University	Ministry of Natural Resources	0	0	102	0	102	0	0	0	102
Queen's University	Ontario Ministry of Training, Colleges and Universities (MTCU)	120168	3540	0	0	0	58	1810	0	125576
Queen's University	Ministry of Health	56199	720	2326	0	2326	0	0	1250	60495
Queen's University	Ontario Research & Development Challenge Fund	0	0	7087	0	7087	0	0	0	7087
Queen's University	Premier's Research Excellence Awards	0	0	1127	0	1127	0	0	0	1127
Queen's University	C. Total of all departments and agencies under $100,000	-400	575	295	0	295	0	0	0	470
Queen's University	Total (calculated) *	177512	4835	30054	0	30054	58	1810	1250	215519
Queen's University	9. Municipal	0	15	12	0	12	0	0	0	27
Queen's University	10. Other provinces	0	44	33	0	33	0	0	0	77
Queen's University	11. Foreign	0	49	2222	0	2222	0	0	0	2271
Queen's University	12. Credit course tuition	95888	0	0	0	0	0	0	0	95888
Queen's University	13. Non-credit tuition	12541	0	0	0	0	0	0	0	12541
Queen's University	14. Other fees	8256	0	0	0	0	0	0	0	8256
Queen's University	15. Individuals	1580	11675	122	0	122	6	4874	11353	29610
Queen's University	16. Business enterprises	220	3097	203	0	203	0	569	1433	5522
Queen's University	17. Foundations	531	605	293	0	293	0	1171	799	3399
Queen's University	18. Not-for-profit organizations	0	0	0	0	0	0	0	1903	1903
Queen's University	20. Business enterprises	153	493	24591	15108	39699	388	0	0	40733
Queen's University	21. Foundations	0	474	4188	164	4352	0	220	0	5046
Queen's University	22. Not-for-profit organizations	40	1486	11224	35	11259	0	588	0	13373
Queen's University	23. Endowment	2217	14410	818	0	818	0	0	8056	25501
Queen's University	24. Other investment	124	6614	1057	27	1084	-167	2371	0	10026
Queen's University	25. Sale of services and products	0	0	0	0	0	21625	0	0	21625
Queen's University	26. Miscellaneous	966	7295	557	0	557	31240	2390	0	42448
Queen's University	**27. Total**	**300046**	**54901**	**135377**	**15334**	**150711**	**53150**	**14241**	**24794**	**597843**
Ryerson University	1. Social Sciences and Humanities Research Council	0	0	356	0	356	0	0	0	356
Ryerson University	3. Natural Sciences and Engineering Research Council	0	0	1853	0	1853	0	0	0	1853
Ryerson University	5. Canada Foundation for Innovation (CFI)	0	0	459	0	459	0	0	0	459
Ryerson University	7. Other federal	258	0	1566	0	1566	0	0	0	1824
Ryerson University	Ontario Ministry of Training, Colleges and Universities (MTCU)	86780	0	0	0	0	331	1254	0	88365

Ryerson University	C. Total of all departments and agencies under $100,000	101	0	0	0	0	0	0	0	101
Ryerson University	Total (calculated) *	86881	0	0	0	0	331	1254	0	88466
Ryerson University	9. Municipal	0	0	112	0	112	87	0	0	199
Ryerson University	12. Credit course tuition	81744	0	0	0	0	0	0	0	81744
Ryerson University	13. Non-credit tuition	2870	0	0	0	0	0	0	0	2870
Ryerson University	14. Other fees	6269	0	0	0	0	0	0	0	6269
Ryerson University	16. Business enterprises	0	6496	36	0	36	0	0	3412	9944
Ryerson University	19. Individuals	548	0	2067	0	2067	0	0	0	2615
Ryerson University	20. Business enterprises	784	65	322	0	322	39	0	0	1210
Ryerson University	21. Foundations	0	0	42	0	42	0	0	0	42
Ryerson University	22. Not-for-profit organizations	37	0	156	0	156	0	0	0	193
Ryerson University	23. Endowment	0	0	0	0	0	0	0	17	17
Ryerson University	24. Other investment	2188	218	0	0	0	3	2065	0	4474
Ryerson University	25. Sale of services and products	0	0	0	0	0	17739	0	0	17739
Ryerson University	26. Miscellaneous	2432	453	1421	0	1421	6440	6195	0	16941
Ryerson University	**27. Total**	**184011**	**7232**	**8390**	**0**	**8390**	**24639**	**9514**	**3429**	**237215**
University of Toronto	1. Social Sciences and Humanities Research Council	0	0	10741	14	10755	0	0	0	10755
University of Toronto	2. Health Canada	0	413	2172	769	2941	0	0	0	3354
University of Toronto	3. Natural Sciences and Engineering Research Council	0	0	40805	0	40805	0	0	0	40805
University of Toronto	4. Canadian Institutes of Health Research (CIHR)	0	0	35930	44430	80360	0	0	0	80360
University of Toronto	5. Canada Foundation for Innovation (CFI)	0	0	1017	5813	6830	0	0	0	6830
University of Toronto	6. Canada Research chairs	0	0	6017	0	6017	0	0	0	6017
University of Toronto	7. Other federal	0	32	41860	5793	47653	0	490	0	48175
University of Toronto	OISI/UT Prov. Of Ont. Grants	1196	0	0	0	0	0	0	0	1196
University of Toronto	COE:Materials & Manufacturing Ont.	0	0	4604	40	4644	0	0	0	4644
University of Toronto	Community Care Access Centre of Toronto	0	0	121	0	121	0	0	0	121
University of Toronto	Centre for Automotive Materials	0	0	129	0	129	0	0	0	129
University of Toronto	Ontario Housing Corporation	0	4063	0	0	0	0	0	0	4063
University of Toronto	COE:Communications & Information	0	0	2203	14	2217	0	0	0	2217
University of Toronto	COE:Centre for Research in Earth	0	0	402	0	402	0	0	0	402
University of Toronto	Ontario Graduate Scholarship	5957	0	0	0	0	0	0	0	5957
University of Toronto	COE:Photonics Research Ontario	0	0	1046	328	1374	0	0	0	1374
University of Toronto	Aim for the Top Scholarships	3135	0	0	0	0	0	0	0	3135
University of Toronto	Workplace Safety and Insurance	0	0	0	301	301	0	0	0	301
University of Toronto	Ministry of Health	8839	0	7466	11812	19278	0	0	1000	29117
University of Toronto	Ontario Research Performance Fund	3472	0	0	0	0	0	0	0	3472
University of Toronto	Ontario Research & Development Challenge Fund	0	0	4975	13347	18322	0	0	1100	19422
University of Toronto	Ontario Innovation Trust (OIT)	0	0	23286	5808	29094	0	0	0	29094
University of Toronto	Ontario Ministry of Training, Colleges and Universities (MTCU)	361544	0	709	0	709	305	8851	-566	370843
University of Toronto	Ont. Work Study Grants	909	0	0	0	0	0	0	0	909
University of Toronto	Ontario Rehabilitation Technology	0	0	0	648	648	0	0	0	648
University of Toronto	Premier's Research Excellence Awards	0	0	3807	0	3807	0	0	0	3807
University of Toronto	Other (less than 100) uncoded accounts	74	284	84	666	750	0	0	0	1108
University of Toronto	C. Total of all departments and agencies under $100,000	0	40	159	0	159	0	0	0	199
University of Toronto	Total (calculated) *	385126	4387	48991	32964	81955	305	8851	1534	482158
University of Toronto	9. Municipal	0	0	327	0	327	0	0	0	327
University of Toronto	10. Other provinces	0	0	78	38	116	0	0	0	116
University of Toronto	11. Foreign	0	0	4843	11852	16695	0	0	0	16695
University of Toronto	12. Credit course tuition	256154	0	0	0	0	0	0	0	256154
University of Toronto	13. Non-credit tuition	26717	0	0	0	0	0	0	0	26717
University of Toronto	14. Other fees	64267	0	0	0	0	0	0	0	64267
University of Toronto	15. Individuals	0	14927	676	0	676	0	5023	21414	42040
University of Toronto	16. Business enterprises	0	5286	820	0	820	0	1031	9044	16181
University of Toronto	17. Foundations	0	4111	712	0	712	0	52	56818	61693
University of Toronto	18. Not-for-profit organizations	0	1249	0	0	0	0	10	1210	2469

University of Toronto	19. Individuals	0	0	0	648	648	0	0	0	648
University of Toronto	20. Business enterprises	0	1955	20515	41704	62219	0	0	0	64174
University of Toronto	21. Foundations	0	389	10030	20337	30367	0	0	0	30756
University of Toronto	22. Not-for-profit organizations	0	3403	22776	43221	65997	0	0	0	69400
University of Toronto	23. Endowment	35950	-48921	-665	0	-665	0	0	0	-13636
University of Toronto	24. Other investment	-7042	1861	556	0	556	1069	4954	0	1398
University of Toronto	25. Sale of services and products	0	0	0	0	0	85242	0	0	85242
University of Toronto	26. Miscellaneous	5977	0	0	0	0	15785	1414	0	23176
University of Toronto	**27. Total**	**767149**	**-10908**	**248201**	**207583**	**455784**	**102401**	**21825**	**90020**	**1426271**
Trent University	1. Social Sciences and Humanities Research Council	26	0	505	0	505	0	0	0	531
Trent University	2. Health Canada	0	0	550	0	550	0	0	0	550
Trent University	3. Natural Sciences and Engineering Research Council	0	287	2624	0	2624	0	0	0	2911
Trent University	4. Canadian Institutes of Health Research (CIHR)	0	0	226	0	226	0	0	0	226
Trent University	5. Canada Foundation for Innovation (CFI)	0	0	934	0	934	0	0	0	934
Trent University	6. Canada Research chairs	0	0	425	0	425	0	0	0	425
Trent University	7. Other federal	96	37	2824	0	2824	1	0	0	2958
Trent University	Ontario Ministry of Training, Colleges and Universities (MTCU)	24572	196	23	0	23	8	436	0	25235
Trent University	Ministry of Natural Resources	490	0	668	0	668	0	0	0	1158
Trent University	Ministry of Health	0	0	300	0	300	0	0	0	300
Trent University	Ontario Innovation Trust (OIT)	0	0	928	0	928	0	0	0	928
Trent University	C. Total of all departments and agencies under $100,000	4	0	78	0	78	0	0	0	82
Trent University	Total (calculated) *	25066	196	1997	0	1997	8	436	0	27703
Trent University	10. Other provinces	0	0	16	0	16	0	0	0	16
Trent University	12. Credit course tuition	22830	0	0	0	0	0	0	0	22830
Trent University	13. Non-credit tuition	557	0	0	0	0	0	0	0	557
Trent University	14. Other fees	2996	0	0	0	0	0	0	0	2996
Trent University	15. Individuals	395	189	115	0	115	0	197	762	1658
Trent University	16. Business enterprises	38	112	656	0	656	0	270	84	1160
Trent University	17. Foundations	8	133	65	0	65	0	0	0	206
Trent University	18. Not-for-profit organizations	64	5	5	0	5	0	0	1	75
Trent University	20. Business enterprises	23	32	580	0	580	0	0	0	635
Trent University	21. Foundations	0	7	222	0	222	0	0	0	229
Trent University	22. Not-for-profit organizations	0	7	93	0	93	0	0	0	100
Trent University	23. Endowment	0	808	0	0	0	0	0	104	912
Trent University	24. Other investment	543	71	0	0	0	9	1196	0	1819
Trent University	25. Sale of services and products	0	0	0	0	0	8126	0	0	8126
Trent University	26. Miscellaneous	1021	26	0	0	0	351	2013	0	3411
Trent University	**27. Total**	**53663**	**1910**	**11837**	**0**	**11837**	**8495**	**4112**	**951**	**80968**
University of Waterloo	1. Social Sciences and Humanities Research Council	0	544	1610	0	1610	0	0	0	2154
University of Waterloo	2. Health Canada	0	0	580	0	580	0	0	0	580
University of Waterloo	3. Natural Sciences and Engineering Research Council	15	3132	22153	0	22153	0	0	0	25300
University of Waterloo	4. Canadian Institutes of Health Research (CIHR)	0	0	1174	0	1174	0	0	0	1174
University of Waterloo	5. Canada Foundation for Innovation (CFI)	0	0	4502	0	4502	0	0	0	4502
University of Waterloo	6. Canada Research chairs	0	0	1175	0	1175	0	0	0	1175
University of Waterloo	7. Other federal	0	0	11961	0	11961	0	0	0	11961
University of Waterloo	Ministry of Energy, Science and Technology	13	0	102	0	102	0	0	0	115
University of Waterloo	Ontario Research & Development Challenge Fund	0	0	992	0	992	0	0	734	1726
University of Waterloo	Ontario Innovation Trust (OIT)	0	0	6528	0	6528	0	0	0	6528
University of Waterloo	Premier's Research Excellence Awards	0	0	1010	0	1010	0	0	0	1010
University of Waterloo	Ontario Ministry of Training, Colleges and Universities (MTCU)	113301	4020	0	0	0	0	1752	0	119073
University of Waterloo	Ministry of Health	0	0	1972	0	1972	0	0	0	1972
University of Waterloo	Ontario Centres of Excellence	0	0	4965	0	4965	0	0	0	4965
University of Waterloo	Ontario Research Performance Fund	2107	0	0	0	0	0	0	0	2107
University of Waterloo	Ministry of Citizenship, Culture and Recreation	0	0	400	0	400	0	0	0	400

University of Waterloo	Ontario Power Generation Inc.	0	0	190	0	190	0	0	0	190
University of Waterloo	C. Total of all departments and agencies under $100,000	5	18	412	0	412	0	0	0	435
University of Waterloo	Total (calculated) *	115426	4038	16571	0	16571	0	1752	734	138521
University of Waterloo	9. Municipal	12	0	371	0	371	0	0	0	383
University of Waterloo	10. Other provinces	0	0	29	0	29	0	0	0	29
University of Waterloo	11. Foreign	0	0	289	0	289	0	0	0	289
University of Waterloo	12. Credit course tuition	88461	0	0	0	0	0	0	0	88461
University of Waterloo	13. Non-credit tuition	462	0	0	0	0	0	0	0	462
University of Waterloo	14. Other fees	12032	0	0	0	0	0	0	0	12032
University of Waterloo	15. Individuals	224	2786	402	0	402	0	928	3305	7645
University of Waterloo	16. Business enterprises	123	1529	663	0	663	0	509	1814	4638
University of Waterloo	17. Foundations	38	470	214	0	214	0	156	557	1435
University of Waterloo	18. Not-for-profit organizations	3	34	50	0	50	0	12	41	140
University of Waterloo	20. Business enterprises	0	0	15400	0	15400	0	0	0	15400
University of Waterloo	21. Foundations	0	0	947	0	947	0	0	0	947
University of Waterloo	22. Not-for-profit organizations	55	0	5014	0	5014	0	0	0	5069
University of Waterloo	23. Endowment	0	2768	0	0	0	0	0	0	2768
University of Waterloo	24. Other investment	2950	18	350	0	350	0	1460	0	4778
University of Waterloo	25. Sale of services and products	0	0	0	0	0	34361	0	0	34361
University of Waterloo	26. Miscellaneous	5676	155	3977	0	3977	15522	162	0	25492
University of Waterloo	**27. Total**	**225477**	**15474**	**87432**	**0**	**87432**	**49883**	**4979**	**6451**	**389696**
The University of Western Ontario	1. Social Sciences and Humanities Research Council	0	879	1806	0	1806	0	0	0	2685
The University of Western Ontario	2. Health Canada	0	0	281	0	281	0	0	0	281
The University of Western Ontario	3. Natural Sciences and Engineering Research Council	266	1994	12280	0	12280	0	0	0	14540
The University of Western Ontario	4. Canadian Institutes of Health Research (CIHR)	0	0	15135	0	15135	0	0	0	15135
The University of Western Ontario	5. Canada Foundation for Innovation (CFI)	0	0	5097	0	5097	0	0	0	5097
The University of Western Ontario	6. Canada Research chairs	0	0	2175	0	2175	0	0	0	2175
The University of Western Ontario	7. Other federal	1000	808	9864	8676	18540	26	0	0	20374
The University of Western Ontario	Premier's Research Excellence Awards	0	0	1188	0	1188	0	0	0	1188
The University of Western Ontario	Ontario Ministry of Training, Colleges and Universities (MTCU)	144771	2757	0	0	0	104	2886	0	150518
The University of Western Ontario	Min. of Community, Family & Children's Services	193	0	0	0	0	0	0	0	193
The University of Western Ontario	Ministry of Health	2277	0	1019	0	1019	0	0	0	3296
The University of Western Ontario	Ontario Research Performance Fund	729	0	0	0	0	0	0	0	729
The University of Western Ontario	Ontario Innovation Trust (OIT)	0	0	4271	0	4271	0	0	0	4271
The University of Western Ontario	Prov. Share of Cdn. Task Force for Prev. Health	0	0	129	0	129	0	0	0	129
The University of Western Ontario	Ontario Research & Development Challenge Fund	0	0	5052	0	5052	0	0	0	5052
The University of Western Ontario	C. Total of all departments and agencies under $100,000	144	17	807	9844	10651	35	0	0	10847
The University of Western Ontario	Total (calculated) *	148114	2774	12466	9844	22310	139	2886	0	176223
The University of Western Ontario	9. Municipal	14	1003	0	0	0	31	0	0	1048
The University of Western Ontario	10. Other provinces	10	9	0	0	0	0	0	0	19
The University of Western Ontario	11. Foreign	470	49	829	7561	8390	0	0	0	8909
The University of Western Ontario	12. Credit course tuition	137614	0	0	0	0	0	0	0	137614
The University of Western Ontario	13. Non-credit tuition	9200	0	0	0	0	0	0	0	9200
The University of Western Ontario	14. Other fees	12037	0	0	0	0	0	0	0	12037
The University of Western Ontario	15. Individuals	1348	5675	6609	56	6665	13855	436	7667	35646
The University of Western Ontario	16. Business enterprises	3037	9130	723	0	723	585	0	1325	14800
The University of Western Ontario	17. Foundations	377	2651	520	0	520	0	0	517	4065
The University of Western Ontario	18. Not-for-profit organizations	146	1252	14	0	14	0	0	288	1700
The University of Western Ontario	19. Individuals	7	0	0	0	0	0	0	0	7
The University of Western Ontario	20. Business enterprises	869	54	9457	10002	19459	0	0	0	20382
The University of Western Ontario	21. Foundations	93	574	4772	3877	8649	0	0	0	9316
The University of Western Ontario	22. Not-for-profit organizations	586	8	6957	20181	27138	0	0	0	27732
The University of Western Ontario	23. Endowment	0	0	0	0	0	0	0	-12453	-12453
The University of Western Ontario	24. Other investment	7464	8519	88	0	88	501	2320	0	18892
The University of Western Ontario	25. Sale of services and products	0	0	0	0	0	77929	0	0	77929

The University of Western Ontario	26. Miscellaneous	3711	0	0	0	0	5496	2070	0	11277
The University of Western Ontario	**27. Total**	**326363**	**35379**	**89073**	**60197**	**149270**	**98562**	**7712**	**-2656**	**614630**
Wilfrid Laurier University	1. Social Sciences and Humanities Research Council	0	0	790	0	790	0	0	0	790
Wilfrid Laurier University	2. Health Canada	0	0	404	0	404	0	0	0	404
Wilfrid Laurier University	3. Natural Sciences and Engineering Research Council	0	0	937	0	937	0	0	0	937
Wilfrid Laurier University	4. Canadian Institutes of Health Research (CIHR)	0	0	277	0	277	0	0	0	277
Wilfrid Laurier University	5. Canada Foundation for Innovation (CFI)	0	0	111	0	111	0	0	0	111
Wilfrid Laurier University	6. Canada Research chairs	0	0	200	0	200	0	0	0	200
Wilfrid Laurier University	7. Other federal	0	0	1155	0	1155	0	0	0	1155
Wilfrid Laurier University	Ontario Innovation Trust (OIT)	0	0	124	0	124	0	0	0	124
Wilfrid Laurier University	Ontario Ministry of Training, Colleges and Universities (MTCU)	39765	1122	0	0	0	156	600	0	41643
Wilfrid Laurier University	C. Total of all departments and agencies under $100,000	0	0	134	0	134	0	0	0	134
Wilfrid Laurier University	Total (calculated) *	39765	1122	258	0	258	156	600	0	41901
Wilfrid Laurier University	10. Other provinces	0	0	29	0	29	0	0	0	29
Wilfrid Laurier University	11. Foreign	0	0	11	0	11	0	0	0	11
Wilfrid Laurier University	12. Credit course tuition	41330	0	0	0	0	0	0	0	41330
Wilfrid Laurier University	14. Other fees	3066	0	0	0	0	0	0	0	3066
Wilfrid Laurier University	15. Individuals	0	1958	0	0	0	0	291	905	3154
Wilfrid Laurier University	16. Business enterprises	0	707	0	0	0	0	116	275	1098
Wilfrid Laurier University	17. Foundations	0	52	0	0	0	0	20	38	110
Wilfrid Laurier University	18. Not-for-profit organizations	0	24	0	0	0	0	0	13	37
Wilfrid Laurier University	19. Individuals	0	0	158	0	158	0	0	0	158
Wilfrid Laurier University	20. Business enterprises	0	0	422	0	422	0	0	0	422
Wilfrid Laurier University	21. Foundations	0	0	233	0	233	0	0	0	233
Wilfrid Laurier University	22. Not-for-profit organizations	0	0	120	0	120	0	0	0	120
Wilfrid Laurier University	23. Endowment	0	0	0	0	0	0	0	10	10
Wilfrid Laurier University	24. Other investment	544	716	0	0	0	0	223	0	1483
Wilfrid Laurier University	25. Sale of services and products	0	0	0	0	0	12100	0	0	12100
Wilfrid Laurier University	26. Miscellaneous	69	120	0	0	0	9994	84	0	10267
Wilfrid Laurier University	**27. Total**	**84774**	**4699**	**5105**	**0**	**5105**	**22250**	**1334**	**1241**	**119403**
University of Windsor	1. Social Sciences and Humanities Research Council	0	157	222	0	222	0	0	0	379
University of Windsor	3. Natural Sciences and Engineering Research Council	0	290	4992	0	4992	0	0	0	5282
University of Windsor	5. Canada Foundation for Innovation (CFI)	0	0	1710	0	1710	0	0	0	1710
University of Windsor	6. Canada Research chairs	0	0	500	0	500	0	0	0	500
University of Windsor	7. Other federal	0	0	3186	0	3186	0	0	0	3186
University of Windsor	Ontario Ministry of Training, Colleges and Universities (MTCU)	64250	915	0	0	0	123	1841	0	67129
University of Windsor	Law Foundation of Ontario	0	0	281	0	281	0	0	0	281
University of Windsor	ANS Invasion Risk from NOBOB	0	0	148	0	148	0	0	0	148
University of Windsor	Collabrative Nursing Program	138	0	0	0	0	0	0	0	138
University of Windsor	Ontario Problem Gambling Research Centre	0	0	169	0	169	0	0	0	169
University of Windsor	Material and Manufacturing Ontario	0	0	223	0	223	0	0	0	223
University of Windsor	Ontario Legal Aid Plan	0	0	680	0	680	0	0	0	680
University of Windsor	Ontario Innovation Trust (OIT)	0	0	1036	0	1036	0	0	0	1036
University of Windsor	Ontario Research & Development Challenge Fund	0	0	275	0	275	0	0	0	275
University of Windsor	Ministry of Health	0	0	164	0	164	0	0	0	164
University of Windsor	C. Total of all departments and agencies under $100,000	0	0	919	0	919	0	0	0	919
University of Windsor	Total (calculated) *	64388	915	3895	0	3895	123	1841	0	71162
University of Windsor	11. Foreign	0	0	257	0	257	0	0	0	257
University of Windsor	12. Credit course tuition	54833	0	0	0	0	0	0	0	54833
University of Windsor	14. Other fees	4842	0	0	0	0	0	0	0	4842
University of Windsor	15. Individuals	0	1541	0	0	0	0	26	24	1591
University of Windsor	16. Business enterprises	0	1672	0	0	0	0	362	1162	3196
University of Windsor	17. Foundations	0	66	0	0	0	0	211	0	277
University of Windsor	18. Not-for-profit organizations	0	0	0	0	0	0	88	0	88

University of Windsor	19. Individuals	0	0	13	0	13	0	0	0	13
University of Windsor	20. Business enterprises	0	0	1503	0	1503	0	0	0	1503
University of Windsor	21. Foundations	0	0	90	0	90	0	0	0	90
University of Windsor	22. Not-for-profit organizations	0	0	214	0	214	0	0	0	214
University of Windsor	23. Endowment	0	0	0	0	0	0	0	59	59
University of Windsor	24. Other investment	1689	1418	0	0	0	0	627	0	3734
University of Windsor	25. Sale of services and products	0	0	0	0	0	11129	0	0	11129
University of Windsor	26. Miscellaneous	3656	758	0	0	0	9728	-1746	0	12396
University of Windsor	**27. Total**	**129408**	**6817**	**16582**	**0**	**16582**	**20980**	**1409**	**1245**	**176441**
York University	1. Social Sciences and Humanities Research Council	0	0	6292	0	6292	0	0	0	6292
York University	2. Health Canada	0	0	480	0	480	0	0	0	480
York University	3. Natural Sciences and Engineering Research Council	0	0	8964	0	8964	0	0	0	8964
York University	4. Canadian Institutes of Health Research (CIHR)	0	0	930	0	930	0	0	0	930
York University	5. Canada Foundation for Innovation (CFI)	0	0	2893	0	2893	0	0	0	2893
York University	6. Canada Research chairs	0	0	1200	0	1200	0	0	0	1200
York University	7. Other federal	1749	860	7210	0	7210	0	0	0	9819
York University	Ontario Innovation Trust (OIT)	0	0	3072	0	3072	0	0	0	3072
York University	Ontario Tobacco Research Unit	0	0	226	0	226	0	0	0	226
York University	Superbuild grants transfer from Seneca College	0	0	0	0	0	0	23490	0	23490
York University	Premier's Research Excellence Awards	0	0	213	0	213	0	0	0	213
York University	Ontario Ministry of Training, Colleges and Universities (MTCU)	180894	120	272	0	272	289	2494	0	184069
York University	Ontario Graduate Scholarship	0	1834	0	0	0	0	0	0	1834
York University	C. Total of all departments and agencies under $100,000	175	0	156	0	156	0	0	0	331
York University	Total (calculated) *	181069	1954	3939	0	3939	289	25984	0	213235
York University	9. Municipal	13	0	909	0	909	0	298	0	1220
York University	10. Other provinces	0	0	8	0	8	0	0	0	8
York University	11. Foreign	0	0	2470	0	2470	0	0	0	2470
York University	12. Credit course tuition	165823	0	0	0	0	0	0	0	165823
York University	13. Non-credit tuition	16812	0	0	0	0	0	0	0	16812
York University	14. Other fees	20749	0	0	0	0	0	0	0	20749
York University	15. Individuals	1059	739	0	0	0	0	0	0	1798
York University	16. Business enterprises	600	419	0	0	0	0	1385	3548	5952
York University	17. Foundations	565	394	0	0	0	0	1250	0	2209
York University	20. Business enterprises	317	222	1426	0	1426	0	0	0	1965
York University	21. Foundations	530	369	3024	0	3024	0	0	0	3923
York University	22. Not-for-profit organizations	459	320	2457	0	2457	0	0	0	3236
York University	23. Endowment	0	5700	0	0	0	0	0	1685	7385
York University	24. Other investment	2605	0	0	0	0	0	6898	0	9503
York University	25. Sale of services and products	0	0	0	0	0	47131	0	0	47131
York University	26. Miscellaneous	8890	1643	0	0	0	1909	2578	0	15020
York University	**27. Total**	**401240**	**12620**	**42202**	**0**	**42202**	**49329**	**38393**	**5233**	**549017**