



# Private Means to Public Ends:

*The Future of Public-Private Partnerships*

Finn Poschmann

*In this issue...*

*Why governments should contract with private partners, and what the public should watch out for.*

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## *The Study in Brief*

Public-private partnerships, PPPs, have taken centre stage in current plans to build out public infrastructure and, in some cases, restructure public service delivery. PPPs are often controversial, from one perspective being seen as part of an anti-labour privatization agenda, from another as unleashed corporatism, and taxpayers are often wary.

This *Commentary* looks at the rationale for PPPs and highlights their potential benefits. Case studies, Alberta's Swan Hills waste-treatment facility in particular, serve to flag potential downsides and the risk of harm to taxpayers' wallets. These success and failure stories bring to light the characteristics of sound, functional partnerships and suggest opportunities for future projects.

Governments choose PPPs so that private financial means can be put to use in achieving public ends. The public aim is not, however, solely to attract the money. When private investors put their own resources at risk, they bring with them their own incentives to properly manage project costs in pursuit of good returns on their investment. Hence the private sector bring money, managerial tools *and* powerful incentives to deliver successful projects sooner and at lower cost than when delivered by the public sector alone.

A successful partnership requires careful sharing of the financial risks and rewards associated with uncertain outcomes. Private partners should be fully compensated, but no more, for the share of risk they lift from public shoulders. In the Swan Hills case the private rewards exceeded risks, and the Alberta public got an expensive facility with unneeded capacity.

This fair sharing of risk and reward must be made readily evident to the voting public. If private rewards appear often to outstrip their fair share, current and future ventures will be undercut and sound projects will go unpursued. Private *and* public partners must allow light to shine on their agreements if they expect to maintain public faith in their ability to properly conduct their fiduciary responsibilities.

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Governments have long struggled over how best to finance the major public projects their electorate wants and needs. The usual solution, until relatively recently, has been to issue publicly backed debt to finance a project directly managed by the relevant agency, with the private-sector role limited to responding to procurement requests. Even in the case of bond issues that finance initiatives with saleable revenue streams, such as the tolled U.S. interstate highway system, the projects' financial risks remain entirely with the responsible public agency. Taxpayers remain on the hook for potential losses.

By the 1980s, however, numerous governments worldwide found themselves overwhelmed by public debt,<sup>1</sup> with the rising service costs causing public dissatisfaction and driving a search for alternatives. That effort was strongly encouraged in those jurisdictions where ideological or intellectual currents were particularly favourable to market-oriented approaches, or where senior government leaders were keen to pursue private managerial and financial methods within public agencies, or to have services taken over by private institutions, or even to fully privatize public institutions.

While debate focused on social-spending pressures and government balance sheets that did not have room for more debt-financed construction, the appeal of increased private-sector involvement was broader than financial. A conviction grew that companies often could manage things better than governments. This constituted a sea-change in how governments thought about the choice of means for achieving public ends. The leading innovator was Margaret Thatcher's Britain, where privatization programs came to the fore. A subsequent Conservative government in 1992 introduced the private finance initiative (PFI) policy, or public-private partnerships (PPPs) as they are known in North America.

PPPs tend to be attacked from the political left as an incipient privatization program and from the free-market right as creeping corporatism. The aim of this *Commentary* is to refresh debate over the role of PFIs or PPPs in the Canadian economy and to rehabilitate PPP's image as a sensible tool for achieving desired public purposes.<sup>2</sup>

The question is not privatization *per se*; while a significant part of the Thatcher agenda was straightforward privatization of Crown-owned institutions, that approach properly suits only those publicly provided goods or services that have no predominant *public-good* component.<sup>3</sup> When there are public-good

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In preparing earlier drafts I have benefited from comments by Denton Byers, Jack Mintz, Al O'Brien, Erik Peters, Anne Poschmann, John Richards, Bill Robson and staff at Accenture. Any errors or omissions are mine.

- 1 That debt typically was not issued in support of infrastructure projects, but to fund current services; in many Western jurisdictions the politics that drove the expansion of social spending simultaneously crowded out long-lived infrastructure initiatives.
- 2 In the media, the PPP approach is often associated with privatization and union-busting and thus part of a reactionary agenda; it is not, and partnerships are tried by governments of all stripes seeking alternative means to deliver public services.
- 3 I am using *public good* in the economic sense, to mean a good or service that is not provided to beneficiaries on a cost-recovery, or for-profit basis, either because non-payers cannot be excluded or because it is intellectually impossible, or otherwise practically problematical, to establish a suitable fee and collect it from individuals according to the degree of their respective benefits. National defense is the usual example.

characteristics inherent in the delivery of a good or service, as may be the case with regional infrastructure projects, elected governments routinely respond by intervening in markets to ensure that voters receive that delivery. Public-sector intervention, however, need not mean publicly provided design services, construction, financing or operation. It can include the use of private capital in the form of financial risk-sharing in any of these phases and, more generally, encompass the use of private-sector methods and institutions to respond to public demands.

This *Commentary* sets these issues in the current Canadian context by examining recent PPP ventures, as well as drawing on some historical examples. I use particular cases to tease out the general principles that should be at the heart of future projects seeking to link public goals and private finance.

The first key point is that successful projects, conceived as those that efficiently achieve public purposes through the use of private risk-taking, will fairly share among the contracting parties the risk and reward offered by an undertaking. Secondly, they must also be seen to do so because if private rewards appear to outstrip the share of risk lifted from public shoulders, current and future ventures will be undercut and sound projects will not be pursued.

Keeping up appearances requires an acceptable (to the public) degree of transparency, which will inevitably be in conflict with private agents' desire for confidentiality. There is no single solution to this conflict because, from the companies' point of view, it is not just a matter of keeping business private, it is the fact that what private companies often bring to the table is the ability to effectively structure projects and performance contracts in a risk-sharing context. Giving away intellectual property is not often a sustainable tactic.

Governments, too, often seek to keep terms private, in part because they may be negotiating with several parties and will not want to reveal their final bargaining position. They also worry about public perception of the transactions they consider. Still, a certain clarity in public and private commitments needs to be a persistent feature if partnerships are to remain in the array of acceptable policy choices. Public and private parties have to be willing to let some light shine on their agreements if they expect to maintain public faith in their ability to properly conduct their fiduciary responsibilities.

I will continue with more on the rationale for PPPs and follow with a few key terms and concepts, illustrated with examples.

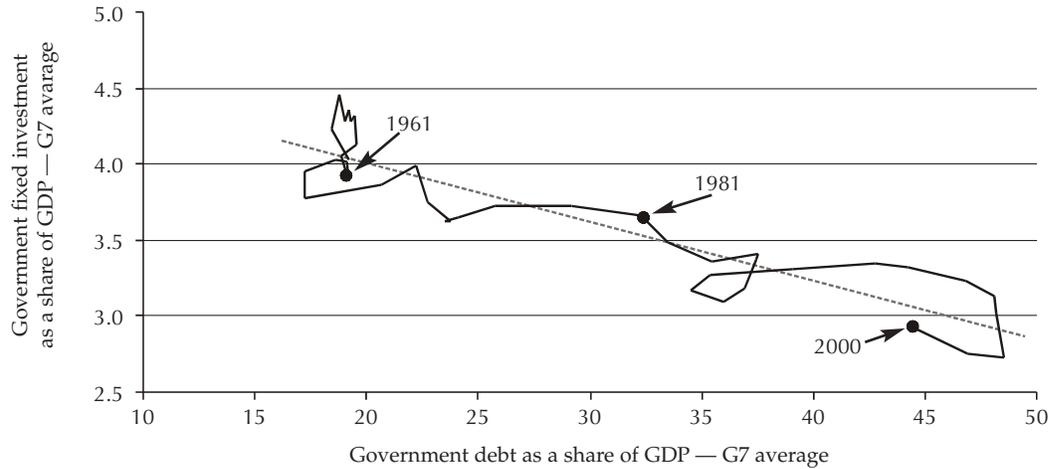
## Why PPPs?

At the heart of the partnership approach is governments' desire to bring private money and management to public-service provision. The reasons for involving private capital are clear enough. The process provides new money, managerial skill, access to innovative technology and novel approaches to service delivery. What is probably most important is that when private agents pledge their own resources, they have a strong incentive to closely monitor project management to ensure the best possible overall financial return on their investment.<sup>4</sup> At the same

<sup>4</sup> This incentive is typically muted or missing if only public-sector managers are responsible for a project.

*Keeping up appearances calls for more transparency than private companies are often comfortable with.*

**Figure 1: Progression and Trend Over Time of Public Debt and Infrastructure Spending**



Source: Author's calculations.

time, if there is uncertainty over how best to manage a project, and technical issues that make it difficult to monitor the relationship between inputs and results, financial incentives help steer and keep a check on private agents' behaviour. In other words, properly aligned incentives require private partners to assume appropriate shares of risks and rewards, improving the likelihood of a successful, and cost-effective outcome and thereby generating social gains. When public managers incur debt on others' behalf, and when they do not share directly in the financial benefits of a successful project, they have less of an incentive to carefully monitor a project's performance.<sup>5</sup>

Further, when a project is operated by a private institution with a financial stake in collecting appropriate user fees or tolls, the costs of the project are passed through to users in proportion to the benefit they receive and investment by willing participants potentially frees residents of the tax burden associated with public-debt interest costs. Of course, to the extent they are thereafter charged for services, they will still pay, although payment will become tied to usage and the economic efficiency of the arrangement will typically improve.

Getting private money to the table with proper incentive mechanisms obviously serves to keep down operational costs. Moreover, partnerships can make new infrastructure available for public use much more quickly than through conventional procurement. This is important because of the continuous challenge of persuading policymakers — and voters — of the need to steer resources to capital construction and maintenance projects. I emphasize this because infrastructure spending in OECD countries in the 1970s and 1980s may have been crowded out by mounting debt. That debt typically was not issued in support of construction, but to fund current services; in many Western jurisdictions the

<sup>5</sup> Of course, public-sector managers do not operate altogether without market incentives. Poorly performing projects will reflect poorly on an individual manager's career, and if sufficiently visible, underperformance will affect elections and thereafter the fortunes of managers whose projects become election issues.

politics that drove the expansion of social spending pushed down the priority attached to long-lived infrastructure initiatives. Figure 1 provides a suggestive illustration, showing a measurable link between debt buildup and a fall in capital spending across the OECD.

Governments wishing to see large infrastructure projects fall into place must wrestle with competing demands for available resources. As a result, the decisions about whether and when to proceed, and at what scale, are inevitably political ones; elaborate cost-benefit analyses can establish the economic merit of a project, but they cannot resolve the political merits of one choice over another. A bridge or a highway extension might be an economically justifiable venture; however whether to build it this year or next, or to launch a different project first, are questions that can be answered only through political calculus and negotiation. The result is that a publicly financed infrastructure project will tend to be developed over a much longer period than a privately financed one, even when the project's managerial and technical issues are similar.

Yet it is reasonable to wonder if it is always or ever possible to procure services in a way that is simultaneously faster, better and cheaper than the alternative; in practice, one of these qualities is likely to fall by the wayside. Concerns in the transportation sector include safety standards and the social or political desirability of tolling. More generally, some policymakers contend that the financial risk of large infrastructure projects makes private capital expensive, reducing the public's potential savings; finally, the public partner may be simply unable to design and enforce an appropriate contract, owing to asymmetries in negotiating strengths or in the information available to the contracting parties. Each of these issues points to the importance of deal structure — the very centre of a partnership arrangement — in raising the likelihood of a good outcome, and the wide range of options in designing deals.

The range of possible financing arrangements and incentive models is indeed broad. Human imagination is a powerful force and new partnership models have recently come into being for managing public sector activities unrelated to infrastructure or basic procurement. A current example derives from the commercial practice of business-process outsourcing, where an independent contractor takes over responsibility for a particular function previously managed inside the company.

The influence driving outsourcing seems to be in large part technological. Coase's theory of the firm<sup>6</sup> emphasized the role of transactions and information costs in obscuring the avoidable cost of producing a particular good or service inside the company. A company would keep functions internal only as long as its managers could foster internal competition that kept the cost of those factors of production lower than they would be in the external market.

However, if information systems and cost-management techniques lowered the costs of transactions crossing the company's corporate boundaries, and contracts were created that properly assigned responsibilities and aligned incentives, we would increasingly expect to find that previously internal functions could be sourced competitively from outside contractors. Workplace automation and the

*Automation in the workplace may have hastened the process of business-process outsourcing.*

<sup>6</sup> Coase (1937).

digitization of business-process data may have shifted the practical Coasian boundaries of the firm, permitting rapid growth of business-process outsourcing.

The application of the outsourcing concept as applied to core institutional functions is not necessarily an easy fit for any company, especially for a public agency, where non-priced imperatives and responsibilities may play a large role. In the public sphere, therefore, the approach and the choice of language are tempered. A partnership that reorganizes a line of public business to include private participation is sometimes described as common-purpose procurement, or value-based contracting. In these arrangements, partners' financial costs are compiled in a notional cost-pooling account, the project's benefits over time are assigned a dollar value and a commensurate portion of that is paid to the outside partners. This process will be explained in more detail in a later section of this *Commentary*, though in essence it remains a sharing of rewards in proportion to partners' financial exposure.

There are other, financially driven, reasons for seeking partners in delivering public services. In part, they are covered by the earlier discussion of the need to draw on private-sector managerial skills, as well as the increasing demographic pressures on the work force. The retiring wave of baby-boom employees will affect the public sector more quickly and severely than the private sector because of the former's older age profile and earlier retirement patterns. This will be most evident in the health and education fields; here it is not just private-sector capital that Canada will need to draw on, but the people and the skills they embody. The need for fresh capital and people in health and education will drive partnership developments in these sectors in the coming decade. Indeed, several programs are already on the table in some Canadian provinces; it is in these very fields that the number of partnership programs is already high in Britain and growing in Australia.

### *Procurement Options and Private Finance Initiatives*

No Western government produces all of its output in-house. Indeed, goods and services are procured from outside parties under a number of evolving arrangements. In a conventional procurement process, the desired product — a pencil or a computer, by way of example — is specified, perhaps in exhaustive detail, and from the tenders received, the public agency chooses the lowest-cost bid that meets tender specifications.

At the other end of the spectrum of relationships, the public agency might describe in general terms the output required — an information-management system, or a telecommunications network — with little specific concern for the details of how the product or system is assembled. In these cases, a request for proposals is published and the winning bid will be the one that meets overall requirements at the least cost over the life of the project; bid evaluation is necessarily more complex in this scenario.<sup>7</sup> The reason is that under the request for

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<sup>7</sup> See F/P/T Working Group (1999).

proposals approach, the potential longevity of the project and the uncertain future demands on the contracting parties introduce an element of partnership between them. The outside contractor, who may have to agree to fixed terms for continuing maintenance and upgrades, for example, effectively takes on some part of the financial risk of the project.<sup>8</sup> As a result, a procurement arrangement may be thought of as a partnership if it involves formally shifting some degree of financial risk and responsibility to the private contracting party.<sup>9</sup>

It is helpful to isolate the design, building, financing and operating (DBFO) functions in identifying where risks and duties lie. By way of example, imagine a call for tenders for 100 gross of HB pencils; a successful bidder's job is to supply appropriate pencils at the time and place specified. The supplier takes on no financial risk other than the business risk associated with seeking a profit by producing and selling pencils; it is a design-and-build arrangement. The procurer avoids investing in pencil design and pencil manufacturing systems, while becoming exposed to the very small risk that the pencils will not function as expected, although there may be recourse available in that event.

In any case, the design-and-build arrangement exemplified by pencil procurement is an agreement between public and private parties, though it is not recognizable as a true partnership. In this, it is representative of most government procurement, whether the product is a pencil or a highway. The performance risk (the liability for delivering on time and to specification) is obviously larger and more difficult to evaluate in the case of a highway than a pencil, but most of the overall project risk — is the right product delivered at a fair price? — remains with the procuring agency.

Consider instead an early example of a design, build, finance and operate arrangement. Authority over building and maintaining lighthouses in the United Kingdom is held by Trinity House, but over the course of the 17th century the agency conspicuously failed to erect enough new lighthouses for the protection of a growing commercial shipping industry.<sup>10</sup> Shippers' strong financial interest in safe passage created an opening for projectors (entrepreneurs) to find ways to fund lighthouse construction and operation. Royal patents and later, Acts of Parliament, granted individuals the right to build a lighthouse at a particular location and to operate it at their own expense, while collecting tolls at domestic ports. Parliament deputized private agents or customs collectors to collect tolls based on ships' tonnages and what lighthouses were passed on each ship's individual voyages,<sup>11</sup> and these were distributed to the various lighthouse owners.

8 A government's use of a request for proposals does not by itself make the arrangement a PPP. There must be a clearly defined sharing of risk and reward to warrant that nomenclature.

9 When a company publishes a standing offer, or prepares a bid in response to a call for tender, it does take on some financial risk merely by doing so — there is the cost of preparing the offer, as well as the risk that winning the work will fail to generate profit. However, in these cases the explicit sharing out of risk and reward is not a unique feature of the contract; the risk is just the normal risk of doing business.

10 Here I rely heavily on Coase (1974).

11 A variation on this toll-collection system, called light dues, continues to finance Trinity House's lighthouse upkeep in England, Wales, the Channel Islands and Gibraltar, and similar organizations service Scotland and Ireland.

*Winstanley  
replaced a  
lighthouse once at  
his own expense;  
he and the light  
were swept away  
in a storm in 1703.*

**Table 1: Typical Infrastructure Project Risks and Hypothetical Allocations**

Risk Category	Examples	Partner Likely Suited to Bear Risk*
Technical risk	Engineering or design failures	Private
Construction risk	Cost escalation owing to faulty technique or delays	Private
Operating risk	Costly operation and maintenance	Private
Revenue risk	Deficient revenue owing to low volume or price of delivered service	Public / Private
Financial risk	Costs of inadequate revenue hedging, debt management	Private
Force majeure	Losses from war, acts of God	Public / Private
Regulatory / Political risk	Changes in law or policy that undermine project finances	Public
Environmental risks	Damage through adverse environmental impacts / liability	Private
Project default	Failure through any combination of the above or other factors	Public / Private

\* "Private" partner includes outside lenders or investors.

Sources: Grimsey and Lewis (2002), author.

In 1696, one Henry Winstanley won an agreement to build a lighthouse at the Eddystone Rocks, a vital mark *en route* to Plymouth; he would receive all profits for the first five years and share equally with Trinity House any profit earned over the following 50 years.<sup>12</sup> Winstanley clearly took on almost all of the financial risk associated with building and operating the lighthouse;<sup>13</sup> the Crown took on no capital risk but did grant the right to collect tolls and assisted in their collection, pursuing the useful public purpose of facilitating safe navigation. Viewed in this light, it is easy to see a 17th century (and later) British private lighthouse construction and operation agreement as a DBFO public-private partnership.

These examples are intended to highlight two issues.

The first is that the financial structure of a project, including the method by which continuing operations are financed and the length and depth of the interaction between partners, largely determines the nature of the partnership that underpins a venture and ultimately the degree of risk-sharing. A standard enumeration of the central features of a partnership is:<sup>14</sup>

- the public partner shifts a significant level of responsibility and risk to the private partner, so that risk is allocated to the party best able to manage it;

12 An agreement of this sort would not normally allow salary expenses for the owner/operator to flow into the profit measure, keeping in place his incentive to maximize profit.

13 He took on more than financial risk. The lighthouse was replaced once, at Winstanley's expense, and then it and Winstanley were swept away in a storm in 1703.

14 Drawing on F/P/T Working Group (1999), p. 5.

- contractual arrangements are built around performance-based results, not detailed input specifications, and
- the relationship is supported by a long-term contractual arrangement.

A delicately negotiated allocation of project risk is at the heart of the public/private relationship. A typical project has multiple points for failure and the financial risk associated with any of these must be contemplated in the agreement, or else the contract will be dangerously incomplete, heightening the potential for acrimony.<sup>15</sup> As a matter of economic efficiency, particular risks should be assigned to the party best able to influence the relevant outcomes; for example, bad incentives would arise if a construction contractor bore no risk for construction flaws. I have suggested some typical possible risk assignments in Table 1, with general risk categories drawn from Grimsey and Lewis (2002).

The second general point is that there is an astonishing number of ways to structure financing and risk and the appropriate method will depend on the project's characteristics and on local customs, institutions and political norms. It would be difficult, for example, to manage lighthouse toll collections if there were not preexisting methods for keeping ships' records, as well as customs inspectors to examine those documents in local ports.<sup>16</sup> In this example, the political will for putting public capital to this particular public project was unavailable, but it was possible to tune public professional practice to be compatible with private service provision.

With this background in hand, I turn to a more detailed discussion of specific examples, followed by a short discussion of the emergent issues and principles that future partnerships may confront.

## The Alberta Special Waste Management System

In 1987 the Alberta Special Waste Management Corporation (ASWMC), a provincial Crown corporation, completed negotiations with BOVAR Inc. to create the Alberta Special Waste Management System (ASWMS) of which BOVAR, the private partner, was to be the 60-percent owner.<sup>17</sup> According to the regulatory overseer, Alberta's Natural Resources Conservation Board (NRCB):

The Government of Alberta established the Alberta Special Waste Treatment Centre near Swan Hills to provide a single, integrated hazardous waste-treatment facility to meet the environmental protection priority of avoiding hazardous waste contamination ... [A] fully integrated hazardous waste management facility might

<sup>15</sup> As a result, because lenders to a private partner will be exposed to a significant share of the financial risk of project default, they will tend to have quite complete lending agreements that include monitoring roles.

<sup>16</sup> Extending the point to an obvious example, the appropriateness of road tolls is dependent on the practicality of collecting them; technological change over time opens new options.

<sup>17</sup> This discussion draws heavily on Mintz (1995). I am profoundly indebted to the author for making this analysis available to me.

not be feasible in Alberta as a private commercial venture because of high costs and limited volumes of hazardous wastes. It was recognized that the economics of hazardous waste management precluded the private sector from assuming responsibility to establish the required facilities ... the economics of hazardous waste management are special and unusual, because of the overriding criterion of safety.<sup>18</sup>

In other words, the government took the position that safe management of hazardous waste is an activity with social benefits exceeding social costs, while realizing that a commercial company attempting to serve the market would find private benefits falling short of private costs — that is, a purely private venture would fail. More succinctly, the activity was important enough to government that it wanted it to happen even if a subsidy was required.<sup>19</sup>

### *Project Overview*

The large waste management facility subsequently built at Swan Hills was owned by ASWMS and operated by Chem-Security (Alberta) Ltd., a subsidiary of BOVAR. BOVAR collected 60 percent of the profit of the joint venture and all the net earnings of the operator (Chem-Security). As well, under the terms of the partnership agreement, BOVAR received a guaranteed minimum return on capital invested; regardless of the profitability of the venture, BOVAR would receive a return on its investment linked to the current prime rate plus four percentage points to reflect the opportunity cost of not investing its money elsewhere. The agreement provided for Government of Alberta debt guarantees for BOVAR, as well as indemnity against any future remediation or insurance liabilities in excess of \$1 million that might otherwise accrue to the private partner.

### *Analysis*

The financial arrangements guaranteed that the facility would be built and operated; indeed, the parties later modified the agreement to permit a large capacity expansion. However, the subsidy turned out to be larger than expected, at about \$445 million between 1986 and 1995 (Mintz, 1995, p. 17), and the capacity turned out to be excessive; the quantity of waste sent to the facility was far less than anticipated.<sup>20</sup> For the past decade, the plant has been capable of treating

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18 Natural Resources Conservation Board (1994), pp. 6–2.

19 It seems that the government was not overly troubled by the likelihood that subsidizing waste management would have the presumably unwanted effect of subsidizing waste production.

20 Plant operator Chem-Security said the reasons for this included generators' pursuit of lower-cost options for waste. These included immediate management, waste minimization and on-site treatment or disposal, postponement of site clean-ups, an increase in the waste-treatment options available to Alberta generators, including recycling and resource-recovery options and out-of-province disposal options, as well as regulatory changes that mandated upstream reductions in waste production. (NRCB, 1994, pp. 6–8).

40,000 metric tons of hazardous waste per year, yet since its inception in 1987 it has treated just over 200,000 tons.

But the Alberta government had from the outset decided that this waste management system was a public good worth paying for; the fact that it was expensive did not vitiate the decision. The question is whether the cost was significantly more than it had to be to achieve the desired result: the answer seems to be an unequivocal yes. And the reason was an inappropriate sharing of risks and rewards under the terms of the joint venture's agreement.

The flaw stems from a guaranteed rate of return that was set too high. This ensured that whatever amount of capital the private partner chose to invest, the cost to taxpayers would be excessive. It provided an incentive for the private partner to overcapitalize the project and it gave the private partner no compelling reason to monitor costs incurred by the plant operator.

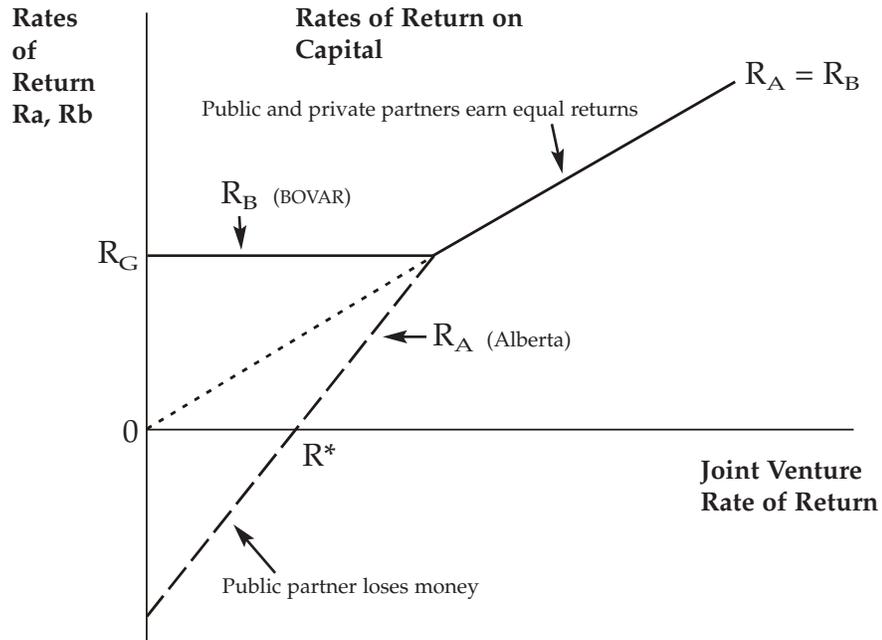
That the guaranteed return was too high is easy to show, despite the complexity of the partnership agreement and subsequent revisions. Because the rate of return was guaranteed by the public partner, there was no need for a risk adjustment of any size, much less four percentage points over prime. The appropriate alternative investment for comparison would be one that generated a risk-free rate of return, such as that offered by government bonds or an investment-grade corporate bond offering. The obvious result is that the private partner was overcompensated for the actual risk to which it was exposed.<sup>21</sup> As a result, it is hardly surprising that the company should overinvest — recall that the waste facility expanded capacity in the face of weak demand for its services. And overinvestment is the classical prediction under rate-of-return regulation, as described in Averch and Johnson (1962). What makes the example entertaining is that the Averch and Johnson result is regularly described as unrealistic<sup>22</sup> on the basis that it depends on the regulatory rate of return being set higher than the regulated company's cost of capital. Because that is exactly what happened, it is no surprise that Albertans got a bigger waste plant than they needed, and an expensive one for its size.

Why, beyond the figures I just mentioned, should we be so confident that it was expensive? The reason lies again in the high guaranteed rate of return, and its unfortunate effect on the private partner's incentive to monitor the plant operator. If BOVAR and Chem-Security were unrelated, the owners of each company would have had incentives to control costs within their operations, at least to the extent that this control would be required for those owners to maximize profits. But BOVAR owned Chem-Security and its owners would not have been concerned with maximizing profits at the subsidiary if doing so would have impinged on the profits of the parent. Moreover, the profits of BOVAR did not depend on revenue exceeding costs; the company's earnings were a function of capital investment. So,

*The more capital that BOVAR or Chem-Security invested, the higher the profit at BOVAR, even if Chem-Security operated at a loss.*

21 Data reported in Mintz (1995) imply a weighted return on equity of 15.9 percent for the period 1989-to-1994, far above the contemporary risk-free return. Mintz (1995) explains other assumptions underpinning the agreement, such as the treatment of hypothetical income-tax liabilities, that conspired to make the guaranteed return too high, but for this note it is sufficient to observe that the return was too high.

22 As in Ergas and Small, 2001.

**Figure 2: Rates of Return for Project Partners**

Source: Mintz (1995).

the more capital BOVAR or Chem-Security invested, the higher the profit at BOVAR, even if Chem-Security operated at a loss.<sup>23</sup> Without the need to operate under an expectation of profit, traditional managerial incentives to control costs disappeared.<sup>24</sup>

The difficulty again stemmed from a guaranteed rate of return that was too high. Figure 2 shows the bifurcation of returns for the public and private partners, depending on the actual return earned by the joint venture. Should actual returns exceed guaranteed returns (the guaranteed rate indicated by  $R_G$ ), both partners would earn the same rate. For any realized returns below  $R_G$ , the Alberta government's return ( $R_A$ ) would be less than the guaranteed rate, while BOVAR would continue to receive  $R_B = R_G$ .<sup>25</sup> As a result, there was a wide range of likely outcomes where the rewards to BOVAR would exceed those available to the public partner.

High returns are unexceptionable when they are compensation for high risk-taking. Recall, however, the debt guarantee by the public partner and the other indemnities: in a substantive sense, the private capital contribution did not face

23 Of course, if it was clear that Chem-Security and BOVAR could actually earn profits higher than the guaranteed rate of return, they would have a normal incentive to control costs. However, Mintz (1995) shows that even with some positive probability of profit, the companies would have an incentive to over-invest (p. 33 and appendix).

24 The Alberta government retained an incentive to correctly monitor costs as part of its duty to taxpayers. To say that the government has such an incentive, however, is not the same as saying that line employees have sufficient information or incentives to do so.

25 At a rate below some  $R^*$ , the Alberta government would actually earn a negative return.

market risk. Essentially, BOVAR was exposed to no risk that would justify returns in excess of a risk-free return on capital.

Because there was no commensurate sharing of risk and reward between the public and private partners, it would be wrong to classify the Swan Hills agreement as a successful PPP. The result was a waste-treatment facility with capacity that exceeded Alberta's needs, having been built and operated under terms very costly to provincial taxpayers.

There is no happy end to this story: The Alberta government paid BOVAR \$150 million in 1995 to take over the plant in full. Because the plant was uneconomic without a subsidy, in exchange for \$1, BOVAR returned the Swan Hills facility to the province on December 31, 2000, a procedure that the 1995 agreement permitted. The cash drain on Alberta finances for fiscal 2001/2002 was about \$11 million.<sup>26</sup> A subsequent partnership agreement was negotiated with a private operator, and that company took over plant operations in April 2003.<sup>27</sup>

### **The Highway 407 Express Toll Route**

The urgency that was attached to mitigating congestion around Metropolitan Toronto in the early 1990s was the leading reason for the government's choice of a private partnership for the delivery and funding of Highway 407, a controlled-access multilane highway that now arches 108 kilometres across the north side of the metro area. The schedule for the project was ambitious, as many observers have noted,<sup>28</sup> with the request for proposals appearing in fall 1993 and the first 36-kilometre segment of highway to be operational by late 1996.<sup>29</sup>

Highways are often treated as public goods because the benefits of their existence are assumed to spill over to people on whom it is difficult to levy commensurate charges. This changes when tolls are an option and direct beneficiaries can be assessed fees that match the benefits they derive from the highway.<sup>30</sup> The existence of tolls makes possible private finance and operation as well as provision of the infrastructure.

Ontario's finances were also an issue because the province was emerging from a recession that had markedly increased its deficit and debt positions; conventional highway procurement clearly would have delayed the project's fruition. Indeed, without the pressure of the province's relatively weak financial position, it seems unlikely the highway would have emerged as it did: it is the only tolled highway in Ontario and the electronic system chosen to implement the toll was entirely novel.

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26 Alberta (2002), p. 70.

27 See <http://www.gov.ab.ca/acn/200302/13952.html>.

28 Ontario (1996), for example, which gives very good background on the project's design issues.

29 It did not open until June 1997.

30 Indirect beneficiaries also pay to the extent that costs are passed through to the goods and services they consume. In the highway example, other indirect beneficiaries include people who enjoy less congestion as traffic migrates; they do not pay for this benefit and the public at large pays fewer wear-related costs for non-tolled road maintenance. This might militate for a subsidy from regional taxpayers to a private provider.

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## *Project Overview*

The 407 project was launched through the Ontario Transportation Capital Corporation (OTCC), a provincial special-purpose entity that the Ontario government created in February 1993 to manage the procurement process.

The original request for proposals was unusual in ways other than the short timelines; it described a very large project for which private proposals were to contemplate the full DBFO spectrum.<sup>31</sup> The private partner was expected to include financing and operation, while more typical highway procurement proposals are restricted to design-and-build. In addition to requiring a plan for debt and equity, the proposal was to guarantee to the government a maximum construction price. As a result, in principle, the bulk of the financing risk was to be assumed by the private partner and proceeding with a toll mechanism was the most-readily conceivable method of permitting that risk transfer. As well, while the province would be responsible for land assembly and related costs, Queen's Park did not propose to guarantee traffic levels, or otherwise guarantee toll revenues, and financing risk would, in practice, rest with the private partner.

The other interesting feature of the 407 RFP was the lack of specific information on the *how* of the project. For example, while the highway was intended to bridge the metro area from east to west, how many lanes were to be where, and what sort of tolling mechanism was to be created where and how, were questions left for the private partners' designers to sort out. The successful bidder was to be the one that presented the "best overall proposal for the project,"<sup>32</sup> according to criteria such as overall plan viability, the size of the cost guarantee and the length of time allowed to the operator to recoup costs and profit and return highway ownership to the province, as well as some other design and engineering features.

The flexibility implied by this specification of performance, rather than detailed description of components and methods, was presumably intended to draw out private-sector innovation, technical skills and management ability. In retrospect, however, given this presumed aim, it was perhaps unfortunate that the province qualified only two groups of companies to assemble proposals. As I discuss later, having just two consortiums participating was an issue flagged by the provincial auditor<sup>33</sup> as being problematic from the point of view of assuring the objectives were met at the lowest cost; the low number of bidders no doubt reduced the range of technical options, as well.

Part way through the procurement process, the province decided to split off the financing part of the project; one consortium would be responsible for the DBO phases, as well as highway maintenance, and another would manage the tolling system in its entirety. The main reason for taking out the financing was interest cost: with the project's financial risk in private hands, the interest rate at which capital could be raised would have been higher than if the same capital was provided, or guaranteed directly, by the provincial government. Because taxpayers

31 Excellent discussion of the RFP and its implications is found in SG Hambros (1999), on which I rely in part in what follows.

32 Ontario (1993).

33 Ontario (1996).

*The Highway 407 Toll Project succeeded in relieving congestion on other roads around the Greater Toronto Area — and it was built quickly.*

would pay one way or another, the argument seems to go, through higher tolls or higher provincial debt, they might as well pay the lowest cost possible.<sup>34</sup>

With the financing split off and the bulk of the capital cost and financial risk shifted to the province, the project necessarily lost much of its partnership quality. The private partner retained the business risk that must accompany tendering to a fixed-price contract, and the design and quality assurance risks were shared, but the province assumed ownership and operational risk. Much of provincial risk, however, has since been removed because the province sold the highway's operating concession to a Canadian-Spanish-Australian consortium. The highway is eventually to be returned to the province,<sup>35</sup> though in the meantime, the arrangement has the characteristics of privatization. The highway for the present is operated as an all-electronic toll road, with billings tracked through a combination of transponders and license-plate photo identification; collection is enforced in part through the province's licensing bureau.<sup>36</sup>

### *Analysis*

The 407 project has been successful in one critical way: a working highway with extensive inter-linkages was built very quickly. The highway now draws more than 300,000 daily vehicle trips, and the gross number of kilometres traveled that it lifts from un-tolled public highways is nearing 200 million per month.<sup>37</sup> These figures indicate there was indeed significant demand for the road: recall that each vehicle kilometre is billed to users and there is no part of the highway that holds an effective monopoly over the route from one point to another. Consumers' marginal willingness to pay to avoid congestion is at least as large as the toll revenues.

Unfortunately, it is a little difficult to tell if the procurement mechanism, PPP or not, in fact delivered good value for money for Ontario taxpayers. Part of the reason is that full costs and benefits are not in practice readily assignable to the project and another part is a simple lack of information. For example, the terms of the tolling contract between OTCC and its partners have not been publicized, making evaluation hard even for well-informed outsiders. The provincial auditor concluded that the province had shown "due regard for economy and efficiency in the planning, development and implementation" of Highway 407,<sup>38</sup> though he expressed a number of concerns about the tendering and financing arrangements.

The striking financial feature, and the one that ultimately undermined the 407 project as a model PPP, was the fact that the province stepped in to take on the capital risk. In responding to the RFP, both consortiums indeed came forward with proposals for private equity and debt participation; however, they also sought extensive provincial backing for the debt. If the provincial balance sheet was not

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34 Ontario (1996).

35 Ontario taxpayers should be very interested in knowing in what state of repair the highway will be in when it is returned to public management at the end of the lease term.

36 This arrangement is wonderfully reminiscent of the 17th century (and current) U.K. arrangements for financing lighthouses. In the 407 case, enforcement arrangements have been negotiated with some outside jurisdictions.

37 Per [www.407etr.com](http://www.407etr.com), accessed October 25, 2002.

38 Ontario (1996).

going to be clear of the liability in either case, there was a reduced incentive to seek private capital.<sup>39</sup> But the overriding reason for the province taking on the financial risk, as already mentioned, was the interest rate differential — without a toll-revenue guarantee that might have helped a private company achieve an investment-grade rating for its debt and, faced with construction and operational risk, the private partner would have had to pay at least 75 basis points more for debt than would the province.<sup>40</sup>

Yet this logic is ultimately unsatisfactory; it is open-ended. If capital could uniformly be raised more cheaply by the public sector and that is the basis on which the public, as opposed to the private sector, ends up carrying out a given function, the public sector would eventually displace entirely the corporate form and the economic activity it undertakes.

Coase considered the analogous problem of pricing the output of public utilities (which in some respects are like highways) when the producer's cost was a declining function of quantity provided; contemporary wisdom had it that there should be a public subsidy so that price could be set below average cost.

Some financial autonomy is a necessary aspect of efficient administration ... otherwise it would lead in the end to the complete centralization of the administration of public utility industries ... state enterprise superseding private enterprise. (Coase 1970, p. 119.)

Obviously something more is needed, as Coase recognized, otherwise government should provide a capital subsidy for nearly every activity where costs decline over the relevant range of scales of production, eventually encompassing much of the economy. Similar logic applies to the tax stream that escapes a province's grasp when its private partner's income becomes exposed to federal income tax, a leakage that would not occur if the activity were conducted by an arm of government.<sup>41</sup> The question then is where to draw the line on public subsidies when capital risk makes private financing expensive.<sup>42</sup>

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39 I am eliding a problem that is present on many balance sheets, public and private: implicit guarantees or other exposures for which accounting standards do not require recognition on the liabilities side. In the economic sense, and from the taxpayers' point of view, it doesn't matter whether a liability is explicitly recognized; from the point of view of managers and their political masters, it does seem to matter whether a contract's terms will cause a liability to be recorded on the balance sheet. Some analyses, F/P/T (1999) for example, recognize that the threat of a liability being recognized on the balance sheet constitutes a political reason to not explicitly guarantee debt, whether a province or state does so implicitly, as is often the case of municipal infrastructure borrowing, is an issue that is routinely fudged.

40 SG Hambros (1999).

41 This is sometimes raised as a serious obstacle to partnerships and privatizations. There is no question that the leakage issues in fact hinder government decision-making, yet it is an error all the same. If *all* economic activity were undertaken by a provincial government, there would be *no* corporate income tax leakage to the federal level — but neither would there be much of an economy.

42 It is not an accident that I say "expensive" rather than "impossible." Recall that one of the drivers of the partnership model is the difficulty in finding public capital to apply to a project; obviously...

Part of the answer might be found in the fact that the difference in financing costs is surely overstated. The reason is that the private partner's borrowing costs are paid for out of the company's earnings and those costs are priced by outside investors' estimates of the company's overall financial risk. It is incorrect, however, to treat those costs as analogous to the public borrower's bond interest rate. The public borrower's costs are underpinned by the government's access to the tax base at large, of course, tends to be quite secure. All the same, the low bond interest rate is not the correct discount rate to use in comparing projects because it does not take account of the additional cost to the economy of repaying public debt using tax revenue. Taxes impose deadweight costs that private partners' revenue streams do not impose on the economy, and these incremental costs ought to gross up the discount rate when calculating the cost of government infrastructure finance (this is discussed in some detail in Dahlby 2003).

Part of the answer also may lie in incentives to manage employee compensation when it is difficult for a company to monitor employees' efforts; in other words, how companies deal with the *principal-agent problem*, a subject that I discuss in Box 1. Incentive-based compensation may prove very effective when it is expensive for the principal to monitor the true costs of contractors' components and efforts.

*The presence of substantial risk does not always lead to more expensive private as opposed to public financing.*

In the general context of infrastructure projects, the lesson is that the presence of significant risk does not automatically mean private financing is on balance more expensive than public financing — if the financial exposure of the partner exerts sufficient discipline over behaviour. Even if government is risk-neutral and outside investors are risk-averse, the higher cost of private capital, which is in any case an overstated prospect, will typically be offset by the costs saved through tauter management and reduced need for government monitoring.<sup>43</sup>

In the specific context of the 407, the point is that when the province took on the capital risk it could no longer be sure that the construction-price guarantee was reasonable or that the toll contract was the best possible.<sup>44</sup> This implied a shift in monitoring costs back to the province and it also meant that the risk of the project no longer rested in the hands of the party best able to manage it. Indeed, the provincial auditor suggested (Ontario 1996) that once financing was split off, the remaining parts might have been re-tendered separately. That would have made it easier to assess each bid component on a value-for-money criterion.<sup>45</sup>

**Note 42 - continued**

...the traditional assumption that public, as opposed to private, finance is necessary for public infrastructure — owing simply to the size of projects and the amount of capital required — is not generally applicable in economies with developed capital markets and functioning financial intermediaries.

43 The potential capital and operating cost reductions is a topic of many studies, which I won't review here; the savings estimates range from 5 percent-to-30 percent, easily outweighing even large differences in public versus private cost of capital.

44 Presumably the subsequent sale of the highway lifted these concerns.

45 But more and smaller bids would have raised more difficulties in coordination. The project might have been completed more cheaply; likely it would have taken longer which, in turn, would have implied a cost in finance and in safety, because of congestion on alternative routes.

*Box 1: Risk, Incentives and the Principal-Agent Problem*

When it is difficult for a company to monitor employees' efforts and therefore to pay them their just reward, and employees are uncertain how successful they will be even if they commit significant effort, it is difficult to manage employee compensation. This is the principal-agent problem in the presence of uncertainty on the part of the agent, and the employee compensation literature phrases this question as the trade-off between risk and incentives.

The traditional understanding of the issue is that because principals (owners, or the province in the 407 example) cannot clearly enough discern subcontractors' effort or their true cost of components — a monitoring problem — they design incentive-based contracts that enable employees (or contractors and subcontractors) to share in the rewards of a well-managed and fairly priced project. Because the usual arrangement is that the agent shares in the profits, and the agent therefore shares the profit-maximizing aim of the principal, the principal's monitoring costs may be much reduced.

That view of the principal-agent problem commonly leads to this extension: because an incentive-based contract exposes the agent to the risk of project failure, such contracts must generally offer more risk compensation to the agent (employee or subcontractor). In other words, because the heightened uncertainty makes it more expensive to use incentive-based compensation, where risk is high we should expect to find few incentive-based arrangements.

But risk and incentives do not appear to diverge as predicted; where the outcome is less certain, and the best way to achieve it less clear, principals are empirically *more* likely to use performance-based financial incentives to reward employees. This point is made by Prendergast (2002), who uses the following example. Consider a U.S. company comparing expansion options in Canada and in Armenia, where the latter presents significant political (approvals) uncertainty and commercial and legal risk; the standard approach would predict less use of incentives in the riskier environment. But that is not what happens: salary is more likely to dominate in Canada and performance bonuses in Armenia. The reason is that local managers (in Armenia) will know better than U.S. owners what methods are likely to work best, and the environment's foreignness would make monitoring expensive even if owners kept a tight grip on local management's tactics.

It is less costly to let local operators share in rewards, thus giving them a profit-maximizing management incentive, and the severity of the principal-agent problem is reduced.

## Other 407 Issues

*Number of Bidders:* The 407 project raised flags in the provincial auditor's 1996 report because of the low number of bidders. The fact that the RFP focused on ends rather than means made that problem bigger, because the bids were quite different and therefore hard to score against each other on a value-for-money criterion. More bids would have highlighted promising choices and associated costs and benefits; they would also have raised the cost to the province of assessing the proposals, a significant consideration.

*Safety:* Another issue that arose through the focus on ends rather than means was safety-oriented design and engineering features and standards. Examples are lighting, physical dividers in medians, on- and off-ramp lengths and the radius of

interchange inner-loop ramps.<sup>46</sup> This mattered in the partnership context because the RFP specified that “service levels shall at least equal applicable Ontario standards,”<sup>47</sup> the words “equal” and “applicable” leaving much room for subjective interpretation.

The result seems to have been the discovery that the construction standards that would apply, as a matter of course, to a conventional procurement project administered by the provincial transportation ministry did not necessarily apply in the partnership context. A conventional contractor or subcontractor to the ministry would have been expected to comply with a developed set of standards for design and construction; the private partner to the 407 project had to deliver a service equivalent to those standards. In the gap between the two concepts there was, in practice, room for much disagreement, as well as useful opportunities for improving highway procurement practices.

*Value:* The 407 RFP specifically addressed the question of “value engineering,” the phrase connoting a close examination of design features in a search for cost savings that do not unduly impinge on road-user safety.

It is not immediately clear that the phrase “value engineering” is rich with meaning. Tradeoffs between cost and safety are made daily in every walk of life and, in some cases, as in airline insurance, there is a quite explicit cost-per-statistical-life calculation that feeds into price setting. Value engineering could be thought of as the process where the prior design and safety tradeoffs implicit in current standards are reexamined to see if underlying safety assumptions were justified. If equivalent safety performance could be delivered at lower cost, provided that the cost-per-life estimate is reasonably accurate and the tradeoff is within accepted bounds, society would be better off by shifting the standard. While it is unlikely that any particular approach will simultaneously be better, faster and cheaper than the established method, design and managerial innovation might uncover new ways of meeting the goals underpinning the standard.

The 407 design process appears to have saved substantial provincial money in the initial construction phase, perhaps \$300 million.<sup>48</sup> Some of the savings were given back, however, when early reviews determined that changes would be needed before the highway opened to the public;<sup>49</sup> those changes were billed to the province because both parties agreed they were not part of the initial price-guaranteed contract. The full extent of any savings, however, has yet to be determined; for example, short entrances and short-radius ramps certainly cost less in land assembly and construction, but road safety data indicating their efficacy have yet to be compiled. It seems likely, however, that without the relative freedom of the 407 RFP process, the potential gains from the design experiment would be much farther from being realized than they now are.

<sup>46</sup> Longer ramps and wider turning radii are less demanding of drivers and arguably safer; ultimately these are matters of judgment and experience and the usual tradeoffs between cost and safety that must be made when designing highways.

<sup>47</sup> SG Hambros (1999), p. 74.

<sup>48</sup> SG Hambros (1999).

<sup>49</sup> SG Hambros (1999), F/P/T Working Group (1999).

*In the initial construction phase, the 407 design phase may have saved the province as much as \$300 million.*

### *Closing Thoughts on the 407 Arrangement*

Given the state of Ontario's finances in the early 1990s, it is a certainty that the 407 would not have progressed as extensively and as quickly as it did had it not been envisioned as a toll highway. Indeed, fiscal pressure was so great that the project might not have been launched — even with tolls — had it not been presented within and without government as a partnership model. In the end, however, the private partner took on only the business risk of a large fixed-price contract and the associated warranty costs. The province retained the finance risk of highway construction and only later sold off the operating franchise (toll collections) to a private operator; this order of events made the project more like a privatization of a public asset than an asset constructed in partnership.

Again, the reason the province took on the full financial risk of the highway was the potentially higher cost of finance if lenders could not have relied on a public debt guarantee. This is false logic from Ontario residents' point of view, because it makes no difference to them whether they paid for risk through a higher-priced partnership arrangement or through an assumption by the government of the same liability and risk. Recall the province's change of heart about relying fully on value engineering: the lately added costs that fell to the province would have fallen elsewhere, at least in part, under a partnership agreement. The risk of the project is about the same, regardless of financing responsibility, and provincial residents would be exposed to that risk either through higher tolls or through potentially higher taxes and the economic loss caused by taxation. The difference is that under the partnership arrangement it would only be residents who benefited from the highway who would have had to bear the cost. Furthermore, with financial risk lifted in part from the highway operator, the incentive to effectively manage costs moved farther away from the partner in the best position to do so.

There is one further aspect of the risk-finance argument that is significant. Most institutional lenders follow a set of rules about the type of investments to which they are prepared to allocate their clients' capital. For many lenders the rules do not have a continuous form — they may not necessarily lend to progressively riskier projects at progressively higher rates. Rather, they will invest only in projects that have achieved an investment-grade rating from a recognized rating agency.<sup>50</sup> As a result, qualifying an earlier comment, the question from the 407 point of view might not have been at what cost would financing be available, but whether, without a provincial guarantee, it would be available in sufficient quantity at any reasonable price.

### *Where Next?*

These issues will be back on the table as Ontario contemplates options for its next major highway proposal — a mid-peninsula expressway to lift pressure from the currently strained linkages between the metro Toronto area highway network and

<sup>50</sup> The reason is not only to let private pensioners sleep better: these rules are influenced by tax and regulatory considerations.

*The 407 would never have been built as quickly and extensively if it had not been a toll road.*

southwestern Ontario and to foster development in areas other than the high-quality farmland surrounding the current highways. The 407's apparent success as a toll highway paves the way for another tolled project, creating the opportunity for a partnership deal; will the same financing issues also block the creation of a true partnership model?

It may be necessary to expect that companies bring more equity to the table, reducing the influence of outside finance concerns, at the risk of lowering the number of potential private partners. But future similar projects could be much more attractive to private equity than was the 407 because the tolling technology has since been proven. Also, experience may have improved the ability of companies and their public partners to come up with contract structures with risk profiles that can attract outside financing.<sup>51</sup> Another private risk-reducing possibility is traffic guarantees, with the government responsible for ensuring some minimum monthly revenue to the operator. Because this involves government taking on an important part of the project risk, the minimum would have to be set carefully — as the BOVAR example illustrated — so that the return was the low-risk one on capital; the private partner must not be compensated for risk it did not take on.

## **The Business Transformation Project**

In the mid-1990s, the Ontario government took an unconventional approach to redesigning public-service delivery: it decided to overhaul a significant part of the provincial social services administration through a partnership model. A public-private partnership would rework the business processes and technologies underpinning the province's Family Benefit and General Welfare Assistance programs; the private partner would be paid out of the savings generated by the reforms.

This "Business Transformation Project," the BTP partnership, was part of the province's alternative-services delivery initiative, a methodical examination of government functions in a search for economical opportunities to move those functions outside conventional government delivery.<sup>52</sup> The alternative did not have to be a partnership: outright privatization was sometimes chosen, as was a more-or-less gentle shifting to contracting-out for services and sometimes the initiative generated changes in financing, such as adopting user fees, rather than substantive changes to the service delivered. In this case, the provincial Ministry of Community and Social Services (MCSS) decided to use a procurement partnership that would permit it to share the costs and benefits of administrative change with a for-profit partner.

The impetus for transformation was an extremely inefficient existing system that had insufficient capacity to accommodate accumulated change in the web of

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51 There are several international consortiums in the partnership business with a focus on highways.

52 No one should imagine that the initiative was simply managerial professionalism at work. There was a new government with an election mandate that included finding cost savings, as well as an advertised predisposition toward market solutions for public service delivery.

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provincial welfare services. The biggest single issue was the lack of control over information flowing from numerous regional offices that made it difficult or impossible to track clients across jurisdictions, leaving the system open to abuse. These concerns had been enumerated in several reports from the provincial auditor; systems managers couldn't say for sure whether a particular client was eligible for benefits, whether eligible clients were in fact receiving them, or whether the amounts received were correct. Change was required.

The change was controversial. Public and political reaction to the transformation project at times confused the process-oriented shifts that were part of the partnership initiative with provincial policy changes that were not. The BTP was about how assistance is administered, not about social assistance policy or program parameters. Because welfare reform in Ontario was not central to the BTP itself, the following sections deal with the process questions central to the partnership initiative, not the policy changes that were simultaneously underway.

### *Project Overview*

The transformation project began in earnest in October 1995 with the publication of a request for proposals to transform the Province of Ontario's two core general welfare programs into the Ontario Disability Support Program and the Ontario Works program. The BTP was to design and provide the technology and systems to manage welfare disbursement, including the claim-assessment phase, and to verify eligibility and reduce fraud.

The BTP proposal was the first major common-purpose procurement agreement negotiated under the guidelines of the provincial Management Board's directive permitting such accords. The common-purpose terminology was intended to convey several features, including a close and continuing relationship between the public and private partners and a feedback process that would shape the project's ultimate deliverables. As a result, the selection process was heavily weighted toward the potential project managers' fit with the departmental staff they would work with, as well as to other hard-to-measure features, such as an understanding of the project risks; cost was not a dominant factor in choosing the winning proposal. Seven proposals were submitted to the MCSS and Andersen Consulting (now known as Accenture) emerged with the contract.

The arrangement for the public and private partners was to bill their project-related investments and costs to a common account, a cost pool. Staff-time costs would be added to the pool at the standard published per-hour rate for the private partner and at actual pro-rated salary plus benefits plus 15 percent for ministry staff time. Accenture would also charge to the pool out-of-pocket expenses, subcontractor costs as invoiced to Accenture and license fees for Accenture-created software at standard published rates.<sup>53</sup> Interest costs would be charged to the pool 30 days after the inciting charge was added, permitting benefits that arrived later to follow the time path of each party's investments.

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<sup>53</sup> Ontario (1998), p. 44.

Another account, the benefits pool, was to be credited with the savings attributed to the BTP.<sup>54</sup> A portion of those savings would be paid to Accenture as they emerged; Accenture's share would equal the ratio of its contributions to the cost pool to the total in the pool. The aggregate payment was contractually capped at a maximum of \$180 million to Accenture. However, unplanned work performed for the MCSS (but related to the project) and purchases of computer hardware, third-party software and sundry support services would all be reimbursable. Accenture's costs for these items would not count against the fee cap, out-of-scope work performed by Accenture would be reimbursable and was permitted under the contract. This made it possible for the firm's actual receipts to exceed the cap.

The contract signed in January 1997 covered a four-year project with an option to extend for one additional year. The extension was conditional on both parties' agreement and had to be exercised by the end of the second year; it was. And, allowing for the contract extension, the project was completed on time and effectively — the result of the BTP is an integrated system for administering a large and complex set of provincial programs. The project's supporters at MCSS report a long list of successes, including better response times and fuller information for clients, with call centres handling millions of inquiries, a streamlined process for determining and validating eligibility,<sup>55</sup> better use of staff resources, reduced fraud and increased savings for taxpayers.<sup>56</sup> Reports from independent third parties commissioned by the MCSS to enumerate the extent of BTP savings have also listed impressive numbers,<sup>57</sup> and it seems that Ontarians do have a solid result from the process.

But the BTP was hardly uncontroversial. The provincial auditor criticized the BTP extensively and it attracted many difficult questions at hearings conducted by the provincial legislature's public accounts committee. Those criticisms focused on process and cost; criticism by media commentators appeared to be motivated by the prospect of government making a large investment in a system seemingly aimed at reducing welfare payouts.

It didn't help that the procedural concern was accompanied by hefty payments to the private partner, fueling more doubt about the project. As well, because much of the value of an arrangement to outsource business process design was embedded in the intellectual content of the arrangement itself — and therefore key features of the arrangement were never released to the public — it was difficult for outsiders to judge the net public benefit of the contract. In all, doubts about the merit of the BTP's partnership approach may have led to local skepticism about partnerships in general.

<sup>54</sup> How those savings were determined is beyond the scope of this *Commentary*; see Hickling Lewis Brod 1998 and 2002 for details. Enumerating savings is possible at least in principle; one conceptual problem with MCSS implementation is that savings arising through the use of performance metrics appear to be assigned to the development of those metrics. There has been disagreement over how much of that saving was directly attributable to the reform.

<sup>55</sup> There was not much of a process before, streamlined or not.

<sup>56</sup> Daniels and Ewart (2002).

<sup>57</sup> Hickling Lewis Brod Inc. (2002).

*The provincial auditor criticized the BTP extensively and it attracted many difficult questions.*

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## Analysis

One process-oriented issue raised by the provincial auditor was the procurement's focus on ends rather than means, making it harder to compare costs and ensure good public value for money.<sup>58</sup> This issue is no different from the 407 case: there is a tradeoff between giving contractors the freedom to make fundamental choices about implementation strategies at the proposal stage and the comfort level that comes with proposals that respond to a list of narrowly defined targets where the choice of bids focuses almost exclusively on cost. A key element of common purpose procurement, or of the partnership approach, is the drawing out of potential innovations from private partners with new incentives to innovate. If this innovation is imagined to be of sufficient value, it may justify the lack of certainty that the process brings to choosing the most cost-effective bid.

The provincial guidelines governing the BTP, or any common-purpose procurement, specified that there be an appropriate sharing of risks and benefits, that the desired results be well defined and measurable and that there be a demonstrated need to contract with one partner for the full project.<sup>59</sup> But they included more than this process-oriented checklist. The guidelines also required top ministerial executives to sign off on four points:<sup>60</sup>

- that senior management was willing to give up some control and power to achieve the project's goals;
- they were able to manage project risks, or could do so jointly with the private partner;
- they were willing to share decision making and responsibility with the private partner, and
- all project staff members were ready to work in peer-to-peer collaboration with the private partner.

These conditions are professionally difficult to agree on; they involve ceding authority in an area where that authority would otherwise be little challenged. And because the aim would be to gain from the expertise and innovation of the private partner's employees, the approach requires an added element of self-deprecation. Note that public discussion of proposed arrangements was not part of the core criteria.

These issues were raised by Whorley (2001) who asked whether departmental retrenchment and staff cuts had left the MCSS in a weakened position and unprepared to accept the ceding of power and the loss of managerial control that goes with it. This, he said, left the private partner with a great deal of influence over the contract negotiations and thereafter over decision making within the confines of the contract. On this view, MCSS was making decisions that properly required the very level of expertise that it did not have: it was hiring that expertise by way of the contract under negotiation.

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58 Ontario (1998).

59 Ontario (1998), p. 37.

60 As listed in Whorley, 2001.

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The point Whorley makes is an important one, though if accepted without qualification it implies that government agencies were never in a position to negotiate fair contracts for outsourcing and those processes would rarely be changed through the system innovations that motivated outsiders might bring to an institution. That seems to me an unnecessary loss of opportunity.

Consider the interaction of the BTP's cap on payouts, the treatment of excluded costs and the pay scales at which Accenture charged staff time to the project. From an outside perspective, the cap on payouts seems to imply that there was little incentive for Accenture to seek cost savings beyond the point where it was entitled to receive \$180 million. Second, the payout ratio was determined by the sticker prices of goods and services charged to the cost pool; Accenture's profits, on the other hand, would depend on its internal costs for delivering those services.

The latter issue is the important one because of the potential for reimbursements of some costs and not others. Management consultants' billed time is potentially a very high net-margin revenue stream, with a value to the consulting partnership that depends on the particular consultant's compensation arrangement and the cost of ancillary services and other overhead that the firm's cost accountants assign to the work. Now, if the net margin on straight staff time is higher than for in-house software development, the staff time will be more profitable to bill against the cap. This would be possible because the software, if indeed necessary, could be substituted through third-party procurement, managed by the private partner, which would be fully reimbursable and would not count against the payment cap. It is conceivable that as soon as Accenture suspected that the payment cap would turn out to be binding, an incentive was created to dominate the benefit pool as quickly as possible and charge to the cost pool the services having the highest in-house profitability.

*Management consultants' billed hours are potentially a very rich net-margin revenue stream.*

It is in this context that the billable rates emerge as an issue. The Public Accounts Committee and the provincial auditor raised questions about the rates, which in practice were substantially higher than envisaged in the firm's response to the request for proposals. The average actual charge to the cost pool in the first phase of the contract was \$283 dollars per hour for Accenture staff. While this was not at all out of line with typical consulting fees, it was in stark contrast to the \$51 per hour charged for MCSS staff.<sup>61</sup>

There is nothing odd about the private partners' billings being higher than those of the ministry. For one thing, outside staff is brought in precisely because it has skills and experience unavailable in-house and, as a result, the outsiders will be paid more. The hourly rate of a management consultant covers the full compensation cost for that employee and the overhead connected with running a business. What might be odd is the low number attached to MCSS staff members: it seems likely that the rate at which they were billed to the cost pool did not include a full allotment of ministry overhead because the agreement did not allow it to allocate any fixed costs for staff. The private partner's billings, on the other hand, would always cover the project's marginal costs and make a contribution to the firm's fixed costs.

<sup>61</sup> Ontario (1998), p. 46.

As I suggested, if Accenture could be reasonably confident that there would be payouts that would ultimately be bound by the cap, the firm may have had an incentive to quickly book costs so that the pool was dominated by its billings, rather than MCSS's. And in the early years of the contract, Accenture's ability to set the fee schedule and the MCSS's failure to charge full costs to the pool may have made this possible; by the end of 1997 the payout ratio was 90 percent for Accenture, reflecting the firm's booked costs to that point.<sup>62</sup> Furthermore, because MCSS staff members were salaried provincial employees they would not, despite their general responsibility for managing the public purse, have the same incentive to shrewdly manage their charges to the cost pool — and even if they could, they would not have directly benefited by making the effort.

Against all of these potential doubts about the BTP's partnership agreement, an analyst must count four critical facts.

First, as to incentives and the cost cap, the demands placed on the private partner under the terms of the agreement do matter. Out-of-cap work, mostly production support, was required and that was to be paid for out of program savings. At all times, work was to proceed under task orders approved by MCSS. Meanwhile, Accenture had performance requirements that had to be met and the costs of responding to those deliverables would not necessarily be payable by MCSS.

*Internal reporting needs can impose controls that are as constraining as those imposed externally.*

Second, internal reporting needs can impose controls that are as constraining as those coming from outside. Accenture had its own internal controls and budgeting requirements that, in practice, had to be met. Unsupportable accounting methods aimed at generating transient profits simply would not stand up to the light of day or the passage of time.

Third, steady input from the public partner mattered. Just as work required MCSS approval, so did third-party purchases, and MCSS had every incentive to monitor its partner's cost structure and make-versus-buy decisions.<sup>63</sup>

Fourth, for both contracting parties it makes sense to think of the BTP as one round of a multi-round game, which has enormous implications for incentives, particularly for the private partner. Accenture entered the agreement with the expectation of reaching more accords with the Government of Ontario and with other agencies elsewhere. The reputation effects of a failed project would be broad and long-lived, and this creates a powerful incentive not to engage in abusive behaviour; rather, the firm would seek to deliver a successful project.

I believe that the provincial government's difficulty giving up detailed control of a project, on the one hand, while retaining responsibility over financial performance, on the other, led to contract provisions that may have had the potential to create unexpected and unwanted incentives. For example, managers would have been criticized for irresponsibility if they had signed a contract without a maximum payment provision. However, the use of a cap arguably changed the private partner's incentives for managing total program costs. To the extent it existed, what made the problem worse was the separation of costs by

<sup>62</sup> Ontario (1998), p. 45.

<sup>63</sup> The make-or-buy decision is a common question for companies: will it cost more to produce a good or service internally, or to source from outside the company? An outside contract might pose monitoring costs, yet inside production might not be the most efficient use of resources; Coase's analysis of the boundary of the firm proves relevant again.

category, with some being charged to the cost pool and other reimbursable costs not counting against the payout cap. This may have affected the private partner's choice of contributions and its make-or-buy choices for software development.

It would have been better if the payment scheme had been indifferent to the partner's choice of methods and technologies — an even more hands-off approach — because that would have better aligned the firm's profit-maximizing goal with the public's interest in cost effectiveness.<sup>64</sup> That approach also would have made clearer the public partner's monitoring job, by allowing MCSS to focus more on the delivered result and less on how it was produced.

This conclusion amounts to a reiteration of the premises of a sound public-private partnership. A PPP must have a clearly defined set of measurable goals, though success on that score will be undone if the agreement does not properly assign risks and rewards and create incentives that are aligned with those risks. The partnership approach remains a reasonable way to improve public service delivery by using incentives to draw on private-market skills and innovation. An optimal outcome is achievable if the risks associated with design choices and input choices accrue in direct proportion to the partners' abilities to benefit from them. Giving up control over these choices is not easy for the public partner, especially when traditional standards for accountability demand that public managers retain control over details, but it is a necessary part of the project. This introduces the question of whether the usual value-for-money auditing approach is well-suited to nascent partnership models. If the precise aim is to give up some control over methods in pursuit of the efficiency gains that come from innovative approaches, it is inappropriate to chastise the public partner for giving up that control.

Finding the will to loosen management's grip is ultimately a matter of political risk-taking; doing it successfully will depend on sound contract design.

## Where Next for PPPs?

The issues I have discussed will reassert themselves in coming years. Much municipal infrastructure is due for overhaul and recent federal budgets point to fresh cost-shared money, including for housing. Provinces are under great pressure to improve health-care delivery and new federal money is on offer for that, as well. The intriguing role for partnerships may be to help tune priorities to local needs and help free local decision-making from the influence of federal-provincial relations. This is critical because if local or provincial governments set spending priorities for areas within their constitutional jurisdictions, it is easier for voters to hold them accountable for results.

If municipalities and provinces could do more to tap private finances for their drinking water and sewage-treatment projects, for example, they would be less beholden to the schedules and priorities of other regions and other levels of government. It is strangely little known that water projects have been developed privately in many countries around the world, including Canada. Drinking-water supplies and sewage treatment are obvious candidates for privatization because of

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<sup>64</sup> And it would have exposed MCSS to more criticism, from the auditors for example, over lax cost controls.

their relatively easily defined costs and the existence of billing mechanisms to charge for them. But where the costs and benefits are not so easily defined and assigned — as may be the case with road improvements, where there are public-good characteristics — partnership approaches will be more appealing.

I mentioned one obvious partnership candidate: a mid-peninsula expressway for Ontario. Whether that proves realistic will depend on the lessons that the Ontario government and the public have learned from the 407 experience. A toll highway is the obvious choice, owing to the economic benefit of recovering costs from direct beneficiaries and the fact that the design risk, given an already functioning 407 toll collection system, would be quite low. Whether a toll and partnership model will be adopted will, therefore, depend in large part on political and public sentiment which, in turn, will depend on policymakers' estimates of their abilities to design sound risk-sharing contracts and convince the public that they can do so. There are other considerations as well: it is possible that the public-good characteristic of an expressway may justify limiting the private downside financial risk, thereby permitting more extensive — and cheaper — private participation. In subsidizing risk, however, public partners must remember that they are sharing risk with the broader pool of taxpayers, including non-beneficiaries of the project; this should give them pause when deciding whether to do so.

*PPPs could help create multi-use, health-oriented facilities to generate private revenue.*

Education is another active front and Alberta has been moving in the partnership direction. Education holds a special appeal because the obvious private function — building and maintaining schools — is relatively clear-cut and, in theory, uncontroversial for that reason. Britain has moved farthest on this front; the experience there has not always been encouraging because speed of delivery in the early projects brought sacrifices to construction quality. That said, the government of Prime Minister Tony Blair's stated long-term plan was to learn from the successes and failures of the early set of partnership agreements and to revise guidelines as results came in and that, says the government, is exactly what has been happening.

The next area into which PPPs are extending is health care. Alberta, British Columbia and Ontario are already developing partnership initiatives to bring new facilities into service; one proposed approach is to create multi-use, health-oriented facilities to generate private revenue streams that will help finance initial capital costs. This is a very simple and readily achievable goal, not least because it will have no bearing on the delivery of public health services themselves and no impact on the financial incentives that patients or doctors will face. To the extent that these early initiatives do bring in private financing, as in the case of municipal infrastructure, provinces will be able to free themselves from federal choices on spending priorities and presumably do a better job of meeting their constituents' wishes.

Early success with facilities may lay the groundwork for more partnerships in other stages of health-care delivery. However, it seems likely that Canadian history and politics will, for the readily foreseeable future, ensure that most health services will be delivered without charge to clients. This means that the revenue model might look more like the BTP than like the 407 arrangement. And making it off the drawing board with this or other variations will require the contracting parties to

very clearly enumerate the expected benefits to provincial residents and show that the costs and benefits accruing to the partners are reasonable and in proper proportion to the risks they take on.

### **Concluding Thoughts**

Public-private partnerships have a long history, but they recently have come to the fore as a way to make projects happen sooner and more cost-effectively than they would if managed by the public sector alone.

This *Commentary's* message has from the outset been the importance of properly allocating risk and reward in the design of public-procurement arrangements. If risk is not shared out appropriately, the managerial incentives that are otherwise assumed to govern partners' behaviour readily fall by the wayside. This requires attention to the fine details of an arrangement, which is not surprising. What is worth emphasis is that the controls suggested by traditional managerial finance as applied within public agencies might not be appropriate when incentives are meant to be shifted from one party to another.

Drawing out innovative approaches and keeping cost-management incentives in the hands of the private partner may require ceding control beyond what managers are accustomed to doing when they contract out. Put another way, a successful plan will require political willpower to manage the shift in control, but expending that political capital is only worthwhile for well-designed contracts that effectively balance risks and returns. And in a multi-round series of contractual engagements, successful future projects will depend on good-faith participation and results in early rounds to avoid the danger that political capital will dissipate.

Even where incentives are properly aligned, there must be public acceptance of the role of private delivery. Public services delivered on a for-profit basis are often political targets and the public needs to be reassured that the net benefits they receive are commensurate with the returns paid to the private partner. To that end, contractual agreements must be available for scrutiny wherever possible and private rewards readily attributable to success in achieving the goals laid out in those contracts. In sum, a public partnership needs to be more than well designed — it must be seen by an informed public to be a cost-effective arrangement. Otherwise, public opposition will sideline public-private initiatives in the future — with the loss of potentially great opportunities for social gain.

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