

Octobre 2014

Socioeconomic brief

Should the Quebec government buy back the CHUM and MUHC P3s?

Public-private partnerships (P3s) have regularly made headlines since Québec imported this model to finance and manage public infrastructure projects. The high costs of this approach are among the main reasons that P3s draw regular criticism. In this socioeconomic brief, IRIS estimates the costs of buying back the P3 contracts for Montréal's two university health centres in order to determine, from a public finance standpoint, whether it would be in the Québec government's best interest to buy back the P3 contracts.

First, we review the definition of a P3 within the sociopolitical context in which this model was developed. Then, based on examples observed elsewhere in the world, we will evaluate the costs of buying back the contracts for the Centre hospitalier de l'Université de Montréal (CHUM) and the McGill University Health Centre (MUHC).

The British origins of P3s

P3s — known in United Kingdom as the Private Finance Initiative¹ (PFI) — officially began appearing in 1992 under John Major's Conservative government. This new management model was adopted after a wave of British crown corporations were privatized, including British Telecom, British Gas and British Airways. At the time, P3s were presented as a new way of providing Britain's population with goods and services that the state claimed it could not provide directly. From then on, under this process, the private sector would also finance the construction of infrastructure such as hospitals, schools, roads and prisons. The private sector would also manage these infrastructure assets and any support staff (such as janitors or electricians). However, public authorities would maintain responsibility for

specialized personnel. For example, in the case of hospitals, the medical, nursing and technical staff would continue to be paid by the state. In most cases, contracts binding public and private partners typically span anywhere from 20 to 40 years. In return for services provided by the private partner, the state agrees to pay a yearly "unitary payment," which is a form of rent. Consequently, some of the functions previously handled by the state (such as maintenance and management) are subcontracted to private partners for a specific period. When the contract expires the state becomes the owner of the infrastructure on an as-is basis, and the private partner exits the scene. In principle, over the duration of the partnership, the financial risks associated with the infrastructure are transferred from the public partner to the private partner. In this type of arrangement, the rent payments made by the state are not accounted for in the public debt, contrary to an investment requiring up-front public capital.

Upon closer examination, P3s are a model to involve private partners in the delivery of public services that cannot be privatized for either political reasons (for example, people are generally opposed to the privatization of schools) or financial reasons (certain services — if considered fully — would not generate high enough returns for a for-profit partner)². In this way, P3s are not a middle ground between public and private management; instead, they serve to drive the dynamics of privatization.

In 1997, Tony Blair and his newly-elected Labour Party chose to double down on P3s, despite his strong criticism of the model as opposition leader. The Blair government adopted a law requiring the public debt to be kept below 40% of the country's Gross Domestic Product. In doing so, his government contributed to making P3s an attractive option to build new infrastructure without adding to the public debt.

In England, numerous P3 contracts were inked to build hospital infrastructure. In fact, having built over 100 hospitals as P3s, England's experience is a valuable reference. Interestingly, there are also direct links to be made between two corporations involved in English P3s and a number of companies involved in the Québec consortia involved in the CHUM and MUHC contracts. The Innisfree Group, which manages 28 hospitals, 269 schools as well as a Scottish highway and a Welsh prison³ as P3s in the United Kingdom, is also a party to the financing package of the CHUM and MUHC projects⁴. Meanwhile, Dalkia holds a large number of P3 energy contracts throughout the world, which include managing the electrical system for a Welsh school, Australia's Prince Charles Hospital and the CHUM.

Britain's experience with hospitals illustrates the differences between P3 and public management. It is worth recalling that the United Kingdom's National Health Service

(NHS), the oldest and largest single-payer health care system, was founded on four principles: 1) health care services are free for users when they require them; 2) services must be universal, i.e., they must be accessible to all citizens under the same terms and conditions; 3) services must be publicly financed; and 4) they must meet the general population's needs⁵. The first hospital that opened its doors under this new public service paradigm was Manchester's Park Hospital in 1948. Fifty years later, Britain's Labour Party announced the creation of NHS foundation trusts. These trusts are independent agencies in charge of managing hospitals at arm's length from the central government and, in the case of P3s, managing the public funds allocated to health care establishments and making unitary payments to the private partner. P3 management reproduces market dynamics in which the government is a partner among others, and is therefore contrary to the overall NHS vision which conferred on public authorities the responsibility of administrative planning and operations.

The Drawbacks of P3s

Britain's experience highlights many problems stemming from P3s for both public authorities and the public purse.

First, P3 contracts are incredibly rigid. For instance, governments must pay for building renovations and maintenance as prescribed by the contract. In one infamous case in England, the state was required to repay the private partner the equivalent of \$500⁶ to change a lightbulb.⁷ In 2008, the National Audit Office (NAO) took a closer look at various fees in P3 contracts. The NAO concluded that although many private partners were invoicing fairly in terms of reasonable costs for building maintenance, others were charging outlandish amounts for inexpensive items. Some examples include \$91 for a key replacement, \$590 for an electrical socket replacement, and \$948 for a new door lock. The more changes that are needed, the more expensive it becomes. For example, the private partner under a P3 contract with the Home Office charged \$585,000 for the delivery of 300 work stations⁸. In order to minimize risks over a 20 to 30-year term, the private partner negotiates to include these types of fees in P3 contracts. In short, once the contract has been signed, the public partner has very little leeway to challenge costs and fees that it considers to be too high. The public partner's hands are tied under the contract and it has no choice other than to pay the fees. This inflexible contractual environment causes even more problems when the P3 involves a hospital — especially a university health centre — where changes may involve highly specialized equipment.

The inflexibility of these contracts also leads to increasingly complex P3 contracts, as private partners seek to protect themselves from any and all foreseeable outcomes and events. In a way, for any given project, the P3 contract adds an extra

layer of complications to the routine management of staff because everything is dictated by an excessively complex contract⁹. The English equivalent of the Professional Order of Chartered Accountants recommended amending P3 contracts to provide greater flexibility, especially when it comes to staffing matters¹⁰.

The main argument put forward by P3 proponents is savings. In their opinion, the P3 model makes it possible to provide new facilities to the population without significantly impacting state budgets. Unfortunately, it is difficult to thoroughly examine this argument since P3s are business contracts between two partners, with the private partner protected by commercial confidentiality. Therefore, contracts are not open to public scrutiny. This principle was condemned by a committee of the British House of Commons in 2011,¹¹ since even government ministers could not gain access to contracts. Such confidentiality hinders accountability and can be used to cover up possible managerial or financial errors.

Under a P3, the private partner should, theoretically, take on all the risks which would otherwise be assumed by the state. However, transferring risk onto the private partner depends on the public partner's capacity to impose penalties in cases where the contract conditions are not met. For instance, trusts that manage hospitals often fail to impose sanctions against contractors at fault because supervising the private partner's work would require additional resources. In other words, contracts create antagonistic relationships between contractors and trusts. In other words, monitoring and supervising private partners requires resources that hospital trusts do not necessarily have or deem a priority.

There are currently 719 active P3 contracts in England and at least 39 others are on the verge of being signed. Once fully paid, in approximately 40 years, these P3s will have cost England a total of £301 billion (\$473 billion).¹² To put this in perspective, England's total budget for 2014 was £732 billion (\$1,344 billion).¹³ Figure 1 shows the annual total of unitary payments for all P3s. Note that between 2012 and 2030, England will be making yearly payments of about £10 billion (\$15.7 billion), which means that the unitary payments are the equivalent of approximately 0.63% of the UK's GDP in 2014 and 1.16% of that same year's national budget.¹⁴

Even when looking at just the unitary payments made for the NHS's projects, these annual payments remain significant. As illustrated in Figure 2, in 2001-2002, these payments totaled £196 million (\$441 million). This amount had more than doubled by 2005-2006 to £542 million (\$1.098 billion) and is forecast to reach £2.596 billion (\$4.767 billion) by 2029-2030.

In Québec, the auditor general strongly criticized the private partner responsible for highway service areas under a P3 contract. [TRANSLATION] "A comparative analysis of the P3 and conventional models for the seven service areas conducted by a firm assesses the value for money of the P3 model at \$19.3

million (though this amount was lowered to \$17 million when the contract was finalized in 2008).¹⁵ It was shown that the firm that prepared the business case had overestimated the cost of conventional financing by \$5 million and had evaluated without justification a risk incurred by the government at \$10 million.¹⁶ The same situation occurred with the CHUM when the initial business case took into account a discount rate that was too high; this heavily favoured P3 financing compared to the conventional method.

This is not an anecdotal example; it instead points to a structural problem with the P3 model. In France, the *Inspection Générale des Finances* (IGF) — the French equivalent of the Auditor General — led a thorough audit of costs related to P3s in various ministries and concluded that the cost of carrying out projects as P3s is on average 25% higher than other “design-build” methods¹⁷: [TRANSLATION] “The final costs are often much higher than initially forecasted. For example, in the case of “major cultural projects”: 48% higher for the *Aile Sully du Louvre*, 39% higher for the *Musée Picasso*, 51% higher for the *École d’architecture de Belleville*, 84% higher for the *Cité de l’architecture et du patrimoine* and *Philharmonie de Paris*, at Villette, which should end up costing €417.2 million (C\$597 million)¹⁸ instead of the €173 million (C\$247 million) initially budgeted.”¹⁹ In short, even if P3s are promoted at the tendering stage as more advantageous than conventional financing, in reality they end up costing the government more.

TABLE 1 Comparative analysis of the interest rates of P3 financing and conventional financing for a hospital with an initial capital cost of £100 million (\$184 million) over a 39-year period

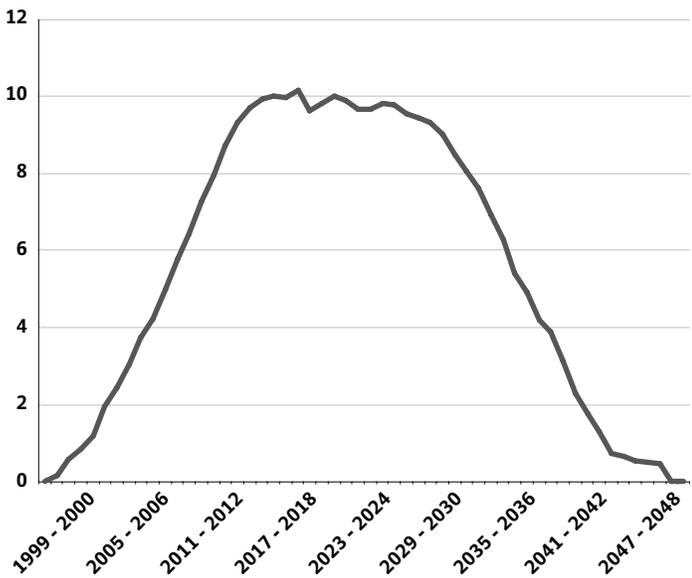
	Public sector comparator (conventionnal)	P3 financing
Interest rate	4.3%	10%
Annual payment	£5.3M (\$9.7M)	£10.25M (\$18.8M)
Total des paiements sur 39 ans actualisés à 3,5%	£88M (\$161.6M)	£168.9M (\$310.25M)

Source: Chris EDWARDS. *Private Gain and Public Loss; the Private Finance Initiative (PFI) and the Norfolk and Norwich University Hospital (NNUH); a Case Study*. June 2009, p. 36.

For British economist Chris Edwards of the University of East Anglia, P3 costs are excessive. In his opinion, purchasing a building under a PFI contract is the equivalent of financing the purchase of a house with a credit card rather than a mortgage.²⁰ According to Edwards’ analysis, the annual cost of privately-financed capital is 10% whereas public financing costs 4.3% (see Table 1). Faced with the weight of their annual payments, some NHS trusts are already running deficits²¹.

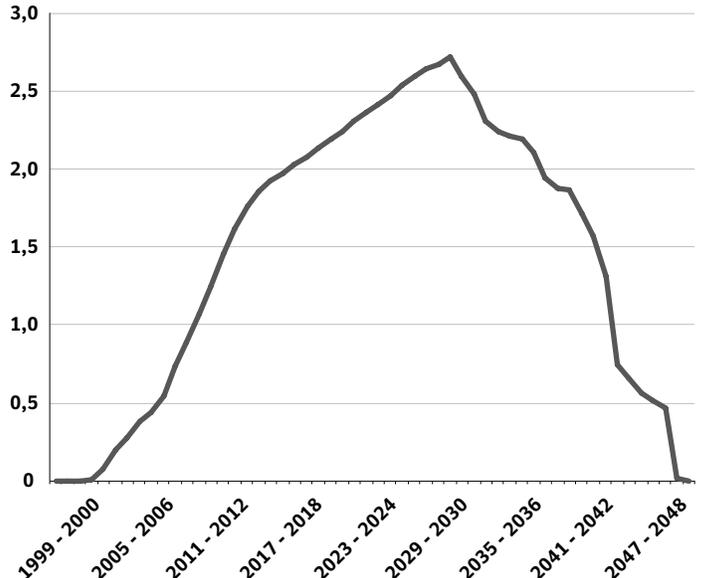
These multiple problems related to transparency, inflexible contracts, risk transfer and high costs have led to the buyback

FIGURE 1 Total unitary payments, in millions of pounds, for all P3 projects in the United Kingdom from 1992 to 2050



Source: Simon ROGERS and James BALL. “PFI: The Full List” in *The Guardian*, July 5, 2012 (www.theguardian.com/news/datablog/2012/jul/05/pfi-contracts-list).

FIGURE 2 Total unitary payments, in millions of pounds, for all P3 healthcare projects in the United Kingdom from 1992 to 2050



Source: ROGERS and BALL, *op. cit.*

of P3 contracts in the United Kingdom. That is the focus of the next section of this document.

OVERVIEW OF CASES INVOLVING THE BUY-BACK OF P3 CONTRACTS

West Park Hospital is a psychiatric institution founded in 2004 in Darlington, in the north-east of England. To complete this project, the public trust (the Tees, Esk and Wear Valleys Mental Health Trust Foundation) responsible for the hospital entered into a 32-year contract with a private partner, the Norwich Union Public Private Partnership Fund, for the construction of a 116-bed psychiatric hospital, which was completed in 2004.

The private partner's investment cost was set at \$39.1 million and the trust was to make a yearly unitary payment to the private partner of \$4.9 million, which represented \$3.43 million in interest and \$1.47 million in repayment of the investment and building maintenance costs. As noted above, these amounts excluded clinical staff costs which were paid directly from the trust's regular budget.

In 2009, the trust realized that it would benefit from exercising a P3 buyback clause, at a cost of \$44 million. The P3 was bought back and the trust assumed ownership of the hospital, thereby saving \$34.3 million over the long term.²² The West Park Hospital case created a precedent. It was the first time a public partner used a buyback clause under a P3 contract.

Another example is London Underground UK, a public corporation that manages London's underground public transit system. In 1998, the corporation signed a 30-year P3 contract with Powerlink for the construction and maintenance of a high-voltage electrical system to power the subway system.

In August 2012, 15 years after the beginning of the partnership, London Underground UK made use of a clause enabling it to end the agreement midway through the contract. The buyback cost the public corporation \$255.3 million, which was paid to Powerlink's shareholders. According to calculations made by the management of London Underground UK, buying back the contract will allow the corporation to save \$359.1 million over the next 15 years²³.

In the spring of 2014, the French government decided to end a P3 contract with Eiffage Group for the management of the *Centre Hospitalier Sud Francilien*, situated between the municipalities of Corbeil-Essonne and Évry. The parties reached an amicable buyback agreement. The contract had been signed in 2006 and would have expired in 2041.

The private partner's initial capital costs were \$482 million, while the public partner paid \$67.3 million in annual unitary costs. After having paid the private partner \$67.3 million a year for seven years, the public partner bought back the contract for \$112.2 million. The hospital will be entirely managed by the public sector as of 2015. The French government

estimates it will save between \$842.1 million and \$982.4 million.²⁴

In the summer of 2014, two other P3 contracts were bought back in the United Kingdom. In the first case, the Northumbria Healthcare NHS Foundation Trust (a public trust responsible for the Hexham General Hospital) borrowed \$204.6 million to buy back the contract from the private partner. This buyback will allow the public trust to save \$6.2 million per year over the next 19 years. The private partner had invested \$96.9 million in this P3, which meant that it made a considerable profit when the contract was bought back — and would have made even more money had it not been bought back.²⁵ In the second case, both the Lancashire and Blackpool Borough county councils decided to buy back dumping grounds and landfill sites that were under P3 contracts. The cost of buying back these contracts remains unknown because of the commercial confidentiality surrounding the transaction, but the counties claim that they will be saving \$21.5 million a year over the next 22 years²⁶.

In the five cases above, the public partners decided to buy back the contracts even though the private partners had the capacity to deliver the services they had committed to providing. In each case, the decision to end the contract can be explained by a significant advantage from a public finance standpoint. The fact that these contracts were terminated leads one to wonder why they went ahead as P3s in the first place.

Certain P3 contracts have also been terminated because the private partner was unable to provide the planned infrastructure or services. The National Physical Laboratory in Teddington, on the outskirts of London, is a perfect example. This laboratory was expected to become a model for physics research. Laser, a consortium of private companies hired for this project, decided to terminate the P3 contract for the construction of the laboratory's infrastructure — valued at \$246.5 million²⁷ in 2006 — because the private partner proved unable to meet the complex requirements demanded by the engineers and physicists who were to work in the laboratory. For example, the contractor was unable to install an air conditioning system that was vibration-free. According to a National Audit Office report,²⁸ the consortium lost \$160.8 million and was ultimately forced to surrender the contract to the Department of Trade and Industry, which completed the laboratory six years behind schedule.

We have already seen how London Underground UK made use of a contractual exit clause to buy back its electrical system from Powerlink in 2012. The public corporation may have been convinced to make this decision by previous problems with P3s in the London underground, namely the Metronet fiasco.

The P3 binding London Underground UK and Metronet was particularly complex. The public corporation was to operate the trains while three private consortia (Powerlink, Metronet and Tube Lines) were to manage and maintain London's underground transit infrastructure.

Metronet and Tube Lines were responsible for the maintenance, replacement and modernization of the cars, locomotives and infrastructure over a 30-year period. As mentioned above, Powerlink was responsible for providing the electricity to power the trains. The P3 contracts were to be re-evaluated every seven-and-a-half years based on the “performance” of the private partners.

In 2008, numerous problems led Metronet to the point where it could no longer provide the necessary spending to maintain the infrastructure. London Underground UK was forced to buy back the contract and pay off 95% of Metronet’s private-sector debts in one lump sum, rather than spreading the payments over a 30-year period with annual unitary payments. The Department of Transport allocated \$3.42 billion to enable London Underground UK to finance this operation.

In 2010, the Tube Lines consortium demanded \$10.5 billion to renovate two rail lines. The case went to arbitration and the consortium finally obtained \$6.8 billion. This amount was insufficient, leading to Tube Lines’ bankruptcy. Once again, the public corporation London Underground UK was forced to buy back the consortium’s shares for \$478 million. Now, London Underground UK has taken over from the private consortia and manages the entire underground network. The administrative costs are lower with the public sector than they were under the P3 with the three private partners²⁹.

These examples show there are at least two situations where P3s became so expensive it was cheaper to buy back the contracts. In certain cases, the P3 was ended because it was deemed more advantageous to immediately terminate the contract rather than paying a huge amount to the private partner on a yearly basis. In other cases, the termination was due to the private partner’s failure to meet requirements, either because of bankruptcy or an underestimation of the complexity of the required infrastructure. In each case, infrastructure management was returned to the government several years before the scheduled date, and at great expense.

OTHER CONSIDERATIONS FOR BUYING BACK P3 CONTRACTS

A more rigorous examination of P3s across the world reveals many other instances where the contracts were bought back. In Portugal, for example, some 40 P3 projects have been implemented over the past 15 years. Most of these projects involve transportation management, mostly related to roads, though the government has recently introduced the model in the health care sector. The unitary payments for all P3 projects in Portugal are spread out until 2030. Between 2014 and 2020, these payments will account for 1% of the country’s GDP.

Researchers have demonstrated the growing burden that P3 contracts represent for Portugal’s public finances, and have proposed buying back all roads managed as P3s. Both

the public partner and private partners would benefit from this decision. The Portuguese government would pay 6% in interest to the banks to pay back the cost of the roads, which is lower than the 16% private partners are paying to the banks. The Portuguese government would save approximately 50% in costs if it bought back the contracts. The private partners, which are often highly indebted, would obtain much needed liquidity. In 2013 (the year the calculations were made), annual savings of buying back the P3 highway contracts were estimated at \$572.4 million. These savings would later increase to \$1.144 billion per year until 2030³⁰.

Potential savings in the case of hospital projects also appear to be considerable. A good example is the P3 between an English public trust and the Octagon Healthcare consortium for the Norfolk and Norwich University Hospital (NNUH). Before entering into this P3, which was to build a new facility to replace the aging facilities, the NNUH was already paying rent to the Department of Health for the use of current facilities.

Economist Chris Edwards determined that the rent charged to the NNUH trust doubled under the P3 regime. This high rent can be attributed to borrowing costs, since the loans Octagon secured had significantly higher interest rates than if the government had borrowed itself to finance construction. Given the high rent, for the P3 model to have actually saved public funds, the construction costs would have had to be 48% lower than via the conventional, fully-public financed construction. To cover its expenses and make a profit, the consortium invoices a relatively high amount. On top of this, the consortium charges for the costs of building maintenance - costs that can total a further \$7.2 million per year. One finally notes that the new hospital centre has a total of 987 beds while the two hospitals it replaced had a total of over 1,200 beds³¹.

The high costs of the new hospital project were nevertheless welcomed by some. For instance, Octagon’s shareholders received an annual return of 100%³². Interestingly, a quarter of Octagon’s shares are held by Innisfree Group Ltd.— a company that is also a party to P3 university health centre projects in Québec. Innisfree’s shareholders returns jump up to 200% when we include salaries for the companies’ directors³³. In short, for Edwards, it is quite clear that using P3s in the healthcare sector is disproportionately profitable for the private partner.

Given that the NNUH cost more with a P3 than if it had been publicly financed, there was a strong case to consider buying back the contract. When economist Chris Edwards published a study recommending the buyback of this P3, the contract had been operational for seven years and the public had already paid \$402 million to the private partner. At the time, buying back the contract would have cost \$603 million, even though construction had only cost \$318 million. In sum, were the contract to be bought back, the state would have already paid \$1.005 billion for a building that had cost

\$318 million, under a contract not scheduled to expire for 28 years³⁴.

Despite these enormous amounts, there would still be an advantage to buying back the contract. Since the contract required the state to pay a total of \$1.609 billion to the private partner, termination appeared to be the most cost-effective option.

However, in order to arrive at this conclusion with certainty, it is important to measure how the value of the capital and further investments changes over time. Financial forecasts involving such sums over several decades must take into consideration various factors such as the value of the building under the terms and conditions of the P3, inflation and other general risks. That is why the future value of an infrastructure asset and its cost must be discounted to present value (made current) to determine whether it is advantageous to spend one big amount of public funds today, or to keep spreading it out over the next few decades.

In the case of the NNUH, once a discount rate of 3.5% — the discount rate used by the HM Treasury — is applied to the \$1.609 billion in potential savings, possible savings amount to \$1.04 billion. The discounted present value of this amount, minus the cost of buying back the contract and the unitary payments already made to Octagon, would nevertheless result in \$437 million in savings for the public trust that manages the NNUH.

At this stage, we can essentially say that the P3 for the NNUH squandered public funds.

Shortly after Chris Edwards unveiled his conclusions to the public, Britain's National Audit Office responded, saying that a clause in the NNUH P3 guaranteed the private partner would receive its anticipated profits over the 35-year period if the P3 was terminated, therefore eliminating the buy-back as an option. The NAO did not, however, question the researcher's conclusion that public funds were wasted under these P3 contracts.

Given that all P3 contracts are different and protected by commercial confidentiality, it is difficult to make comparisons. However, it remains true that following the conclusions based on less-recent English experiences and contract buybacks throughout Europe, proposals to terminate P3 contracts must be taken seriously. Such observations make it possible to assess the pros and cons of eventually buying back the P3 contracts that the Québec government has signed for the CHUM and MUHC.

Should the Québec government buy back the CHUM and MUHC P3s?

The purpose of the second half of this document is to evaluate whether the buyback of the CHUM and MUHC P3s by the state, along with conventional public management, would result in substantial savings for the public. To do so, we have taken a framework used to examine Britain's public-private

partnerships in the health care sector and have applied it to the Québec example. The parameters of all P3 projects in England have been publicly available since December 2013.

This comparison is made that much more interesting because Québec's P3 model in the health care sector was imported from the UK. For the time being, this comparative approach represents the only method to estimate P3 costs, since there is still very little information about the financial impact of these large-scale projects on public finances. This lack of information is illustrated in Diagram 1 and includes both investments costs and unitary costs that the government will be paying to the private consortia.

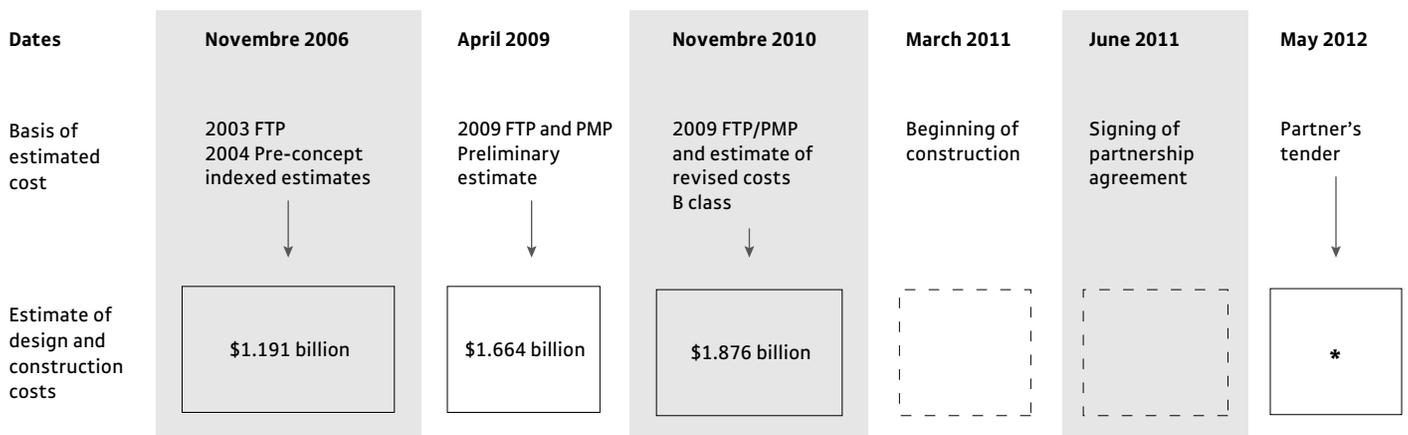
The projected costs of buying back the P3 contracts for Québec's university health centres are based on the detailed model of UK P3s for which the Department of Health is solely responsible. There are 118 projects in total, representing a total investment cost of \$180.1 million. Once all of these projects have been completed, annual unitary payments will total \$148,423 million (at nominal value).

As noted above, the projections were discounted to present value using a rate that may have a significant impact on the results of our calculations. Bear in mind that discounting to present value is a calculation that makes it possible to compare financial flows at different dates which cannot be compared directly. In the UK, projects of 30 years or less in duration are calculated at a discount rate of 3.5% whereas a discount rate of 3%³⁵ is applied to projects lasting from 31 to 75 years. In Québec, in 2006–2007, the Public-Private Partnership Agency used a discount rate of 8% to evaluate the CR-CHUM (Centre de recherche du CHUM) project³⁶. In 2007, the agency instead opted for a rate of 6.5% to evaluate the Autoroute 25 project³⁷.

So which rate should apply? The choice of a discount rate actually comes down to ideological preference. We will make sure to look at different rates to show how the results can vary. Keep in mind that [TRANSLATION] “the higher the discount rate, the more the sum paid [in the future] appears to be small and the more the amount to be paid at the beginning of the period appears to be large”³⁸. Conversely, the lower the discount rate, the “more weight” the future is given in projections, and it becomes less appealing to pay the same large sum up front. Present value discrepancies evolve over time, as illustrated in Figure 3. The higher the discount rate, the more the present value of a unitary payment seems to decrease rapidly. The curves end up crossing paths at the end of 80 to 100 years. However, during the first decades, an expense's appraisal fluctuates a great deal depending on the discount rate that is used.

How much would it cost to terminate all of the P3s in England? Because of the confidential nature of the contracts, it is impossible to determine each contract's buyback cost. Nevertheless, based on the costs of contracts that have already been bought back and for which data is available (Scotland's Skye Bridge, the Inverness airport terminal, the West Lothian

DIAGRAM 1 Cost evaluations for the CHUM



* This information is confidential. It is important to note that the private partner's proposal met the affordability threshold set for the project. (PMP: Property master plan; FTP: Functional and technical planning).

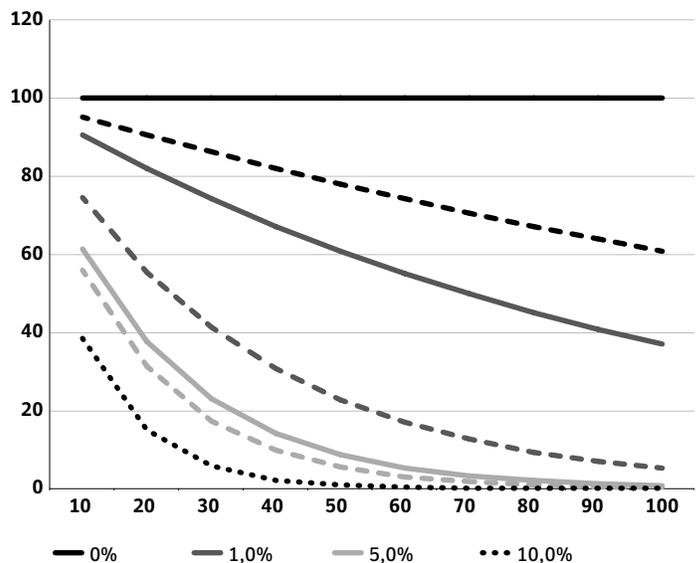
Source: KPMG-SECOR, *Étude sur la gestion actuelle du plan québécois des infrastructures et sur le processus de planification des projets – Document principal – Présenté à Infrastructure Québec*, www.tresor.gouv.qc.ca/fileadmin/PDF/publications/e/Etude/Etude_SECOR-KPMG.pdf.

College and the West Park Psychiatric Hospital),³⁹ we estimate the cost of buying back a contract at 80% of the initial investment. Since the costs of these buybacks vary, we have set this ratio at 110% (i.e., the total investment cost plus a 10% penalty paid to the private partner) in order to remain more conservative in our calculations. In other words, buying back a contract at 110% of the investment cost enables the partner to recuperate its full investment, to receive a 10% penalty and to keep all annual payments it has already received. We have also calculated a scenario where a penalty of only 5% is paid to the private partner as well as a scenario where an amicable agreement is reached (i.e., no penalty). Essentially, we proceeded with an evaluation of several ranges to examine the effects of several scenarios.

Calculations made to determine the relevance of terminating a P3 must also factor in the amount paid in annual unitary payments. In principle, the amounts paid by the government or a health centre should be available to the public since public funds are used to pay the consortia. Under access-to-information laws, we tried — in vain — to obtain the exact amounts of these unitary payments.⁴⁰ We therefore had no option other than to estimate these costs based on a range of current scenarios in the United Kingdom. The HM Treasury estimates that the average unitary payment for all health care P3s is 20% of the initial investment cost. This means, for example, that a project that required a \$100 million investment will provide the partner with an annual payment of \$20 million over the life of the contract. To arrive at a more conservative estimate, our analysis is based on the average of unitary payments made until 2013, which is 12% of the initial investment.⁴¹

Based on this data, buying back health care P3s in England would be financially advantageous for the state for 104 out of the 118 contracts that will expire in the 2030s or 2040s. Only 11 of the contracts would be too expensive to buy back. The cost of buying back the remaining three could not be calculated because their unitary payments remain unknown for the time being.

FIGURE 3 Present value of a \$100 expenditure over a 100 year period with different discount rates



Source: www.lyc-aronval-brive.ac-limoges.fr/jp-simonnet/spip.php?article60

Once discounted to present value, the savings would amount to \$18.5 billion. According to a less conservative calculation of the unitary payments in question (i.e. 20% of the initial investment, as suggested by the HM Treasury itself), England would save \$49.8 billion (a sum discounted to present value at a rate of 3.5%) over the next 30 years were it to buy back all P3 contracts in the health care sector.

Here in Québec, we can apply these calculations to the CHUM and MUHC. For this purpose, we must determine the initial investment cost, estimate the unitary payment and select a discount rate.

To determine the investment cost, we used the amounts made public by the CHUM and MUHC themselves. It must be noted that, contrary to UK P3s, in Québec the private partner does not assume all initial investment costs. This twists the logic of P3s, which assume that the burden of the investment and risk is transferred to the private partner.⁴² The investments needed to build the CHUM and the MUHC were established at \$2.5 billion and \$2.4 billion respectively, and the government footed 45% of the bill.⁴³

The annual unitary payment⁴⁴ is another decisive factor when determining whether a P3 is profitable or not. This payment must be estimated as a proportion of the private partner's initial investment. The higher this proportion, the more advantageous the conventional public sector model appears. An annual unitary payment equal to 20% of the private partner's initial investment would be appropriate, given it corresponds to the HM Treasury's average for all P3s in the country. However, to produce a more conservative estimate, we based our calculations on a unitary payment equal to 12% of the private partner's initial investment. The difference is significant, but 12% corresponds to the average of P3 payments made from 1992 to 2013.

These different combinations of discount rates and unitary payment levels produced various results, presented in Tables 2 to 5.

In most of these scenarios, buying back the P3 contracts would be worthwhile from a public finance standpoint. The only cases where it is cheaper to maintain the P3s are those where projections are based on a high discount rate (8%) and where unitary payments (which would be cancelled by the buyback) are relatively low (12% of the initial investment). Foreseeable losses would then total between \$318 million and \$584 million for both the CHUM and the MUHC. However, it is worth noting that a discount rate of 8% is not very realistic and the fact that the Public-Private Partnership Agency based its calculation on this rate was highly criticized by Québec's Auditor general⁴⁵. Moreover, it was the only agency to use this rate to assess the government's projects. According to the auditor general, the discount rate of 8% quoted by the Public-Private Partnership Agency in its first business case was revised to 6% in the interim business case.

There is only one scenario — the one involving a high penalty (10% of the initial investment cost) — where a discount rate of 6% cancels any potential savings resulting from a buyback of the university health centre P3s (losses totaling \$10 million).⁴⁶ Under this scenario, the financial decision to maintain the P3 could only be explained by the state's generosity toward the private partner at the time the contracts were signed. It must also be noted that under this scenario, as with all others, we calculated the unitary payments that were avoided while factoring in the cost of the governments paying the salaries of the support staff members that the consortium would have managed under the P3 contract.

In all other scenarios, Québec authorities should consider the buyback option. In the case where the unitary payment is calculated based on the estimates of the HM Treasury (20% of the initial investment cost), buying back the P3s turns out to be a highly favorable option from a public finance standpoint.

If the discount rate is brought down to 4.5%, as P3 expert Pierre J. Hamel of the *Institut national de la recherche scientifique* (INRS) recommends, savings total between \$500 million and \$1 billion given a unitary payment of 12% of the investment cost, and approximately \$3 billion in the case of a unitary payment of 20%. Based on a discount rate of 3.5% — the rate used by British authorities, which in our opinion represents the rate that most accurately reflects the risks incurred — savings could reach close to \$4 billion⁴⁸. In short, the most probable scenario leads to one conclusion: buying back the Québec superhospital P3s makes the most sense for the province's finances.

Conclusion

This socioeconomic brief provided provides a glimpse into how the public-private partnership (P3) model is applied to infrastructure construction and management projects. We drew on hundreds of examples in the United Kingdom and elsewhere to try to evaluate the impact of this form of privatization in Quebec. Some P3s have been bought back by public authorities. These buybacks were justified by the inadequate services the private partner delivered, or the prohibitively high costs of maintaining the contracts. Even though P3s and P3 buybacks are highly lucrative for the private partners and guarantee a certain level of profitability, in most cases it is in governments' greater interest to terminate these contracts.

Our evaluation of the CHUM and MUHC situations in Montréal leads us to conclude that the Québec government should terminate the P3 contracts for the management of these establishments. Our most conservative assumptions suggest that terminating these contracts would lead to savings totaling hundreds of millions of dollars, whereas the most realistic assumptions lead us to predict savings as high as \$4 billion.

TABLE 2 Amount saved with the buyback of the CHUM and MUHC P3s (discount rate of 3.5%)

Project	Unitary payment calculated at 12% of the investment cost			Unitary payment calculated at 20% of the investment cost		
	Buyback at 100% of the investment cost	Buyback at 105% of the investment cost	Buyback at 110% of the investment cost	Buyback at 100% of the investment cost	Buyback at 105% of the investment cost	Buyback at 110% of the investment cost
CHUM	\$680 million	\$613 million	\$545 million	\$2.025 billion	\$1.957 billion	\$1.889 billion
MUHC	\$648 million	\$583 million	\$518 million	\$1.927 billion	\$1.862 billion	\$1.797 billion
Total CHUM/ MUHC	\$1.328 billion	\$1.196 billion	\$1.063 billion	\$3.952 billion	\$3.819 billion	\$3.686 billion

TABLE 3 Amount saved with the buyback of the CHUM and MUHC P3s (discount rate of 4.5%)

Project	Unitary payment calculated at 12% of the investment cost			Unitary payment calculated at 20% of the investment cost		
	Buyback at 100% of the investment cost	Buyback at 105% of the investment cost	Buyback at 110% of the investment cost	Buyback at 100% of the investment cost	Buyback at 105% of the investment cost	Buyback at 110% of the investment cost
CHUM	\$510 million	\$442 million	\$374 million	\$1.743 billion	\$1.675 billion	\$1.606 billion
MUHC	\$486 million	\$421 million	\$356 million	\$1.658 billion	\$1.593 billion	\$1.529 billion
Total CHUM/ MUHC	\$996 million	\$863 million	\$730 million	\$3.401 billion	\$3.268 billion	\$3.135 billion

TABLE 4 Amount saved with the buyback of the CHUM and MUHC P3s (discount rate of 6%)

Project	Unitary payment calculated at 12% of the investment cost			Unitary payment calculated at 20% of the investment cost		
	Buyback at 100% of the investment cost	Buyback at 105% of the investment cost	Buyback at 110% of the investment cost	Buyback at 100% of the investment cost	Buyback at 105% of the investment cost	Buyback at 110% of the investment cost
CHUM	\$131 million	\$63 million	-\$5 million	\$1.113 billion	\$1.045 billion	\$977 million
MUHC	\$124 million	\$60 million	-\$5 million	\$1.060 billion	\$995 million	\$930 million
Total CHUM/ MUHC	\$255 million	\$123 million	-\$10 million	\$2.173 billion	\$2.040 billion	\$1.907 billion

TABLE 5 Amount saved with the buyback of the CHUM and MUHC P3s (capitalization discount rate of 8%)

Project	Unitary payment calculated at 12% of the investment cost			Unitary payment calculated at 20% of the investment cost		
	Buyback at 100% of the investment cost	Buyback at 105% of the investment cost	Buyback at 110% of the investment cost	Buyback at 100% of the investment cost	Buyback at 105% of the investment cost	Buyback at 110% of the investment cost
CHUM	-\$163 million	-\$231 million	-\$299 million	\$625 million	\$557 million	\$489 million
MUHC	-\$155 million	-\$220 million	-\$285 million	\$595 million	\$530 million	\$465 million
Total CHUM/ MUHC	-\$318 million	-\$451 million	-\$584 million	\$1.220 billion	\$1.087 billion	\$954 million

* Following the buy back of the P3s, the government would pay support staff salaries and building maintenance costs in full. These costs are accounted for in our calculations for all tables.

Of course, we know nothing of the terms and conditions of the contracts that would apply if the government were to terminate the University Health Centre P3s in Montréal. All contracts are different and P3s are very opaque. Because of this lack of information, our calculations were based on overseas examples. Despite the conservative analyses and projections justifying a buyback, if the contracts contain clauses that make a buyback prohibitively expensive (as in the case of the Norfolk and Norwich University Hospital in England), the government would have to explain how public bodies got involved in what appears to be nothing more than a squandering of public funds.

Minh Nguyen, associate researcher with IRIS

Guillaume Hébert, researcher with IRIS

with the collaboration of Philippe Hurteau, researcher with IRIS

Notes

- 1 In Canada and the United States, both PPP (*public-private partnership*) and P3 are used.
- 2 Jean SHAOUL, “The Political Economy of the Private Finance Initiative” in *Critical Essays on the Privatisation Experience*, New York, Palgrave Macmillan, 2009, p. 1-38, www.palgrave.com/PDFs/0230222528.pdf.
- 3 Andrew GILLIGAN, “David Metter: Skiing in the Alps, the King of PFIs who owns 28 hospitals and a motorway” in *The Telegraph*, January 27, 2011, www.telegraph.co.uk/journalists/andrew-gilligan/8287337/David-Metter-Skiing-in-the-Alps-the-King-of-the-PFIs-who-owns-28-hospitals-and-a-motorway.html.
- 4 Éric Yvan LEMAY, “Les Anglais impliqués dans les PPP au Québec” in *Journal de Montréal*, March 31, 2014, www.journaldemontreal.com/2014/03/31/les-anglais-impliques-dans-les-ppp-au-quebec.
- 5 Chris EDWARDS, “The Private Finance Initiative and the National Health Service – time to buy out the contracts?” in *Compass* 45, February 2009, p. 1, www.compassonline.org.uk/wp-content/uploads/2013/05/CTP45EdwardsPrivateFinancesmallpdf.com1_.pdf.
- 6 A conversion was made here. The initial amount was £333 (value in 2011). We used the Bank of Canada’s currency converter to convert the amounts in Canadian currency. For the purpose of this note, all amounts in pounds sterling are converted into Canadian dollars using this tool according to the date involving the amount mentioned. <http://www.bankofcanada.ca/rates/exchange/10-year-converter/> for past sums and <http://www.bankofcanada.ca/rates/exchange/daily-converter/> for current sums.
- 7 “Treasury crackdown on wasteful PFI firms given ‘gold-plated contracts’ by Labour to run our hospitals” in *The Daily Mail*, February 16, 2011, www.dailymail.co.uk/news/article-1357616/George-Osborne-crackdown-PFI-firms-given-gold-plated-contracts-Labour.html.
- 8 David HENCKE, “Private contractors take taxpayers for a multimillion pound ride” in *The Guardian*, January 17, 2008, www.theguardian.com/politics/2008/jan/17/uk.Whitehall.
- 9 Philippe COSSALTER, “20 ans de PFI: l’heure du bilan” in *Revue Générale du Droit*, 2012, p. 6, www.revuegeneraledudroit.eu/wp-content/uploads/RGD_2012_cossal_A1.pdf.
- 10 “PFI schemes need greater flexibility” in *ICAEW*, January 2011, www.icaew.com/en/archive/about-icaew/newsroom/press-releases/2012-press-releases/public-accounts-committee-right-to-call-for-greater-flexibility-in-pfi-schemes-says-icaew.
- 11 HOUSE OF COMMONS COMMITTEE OF PUBLIC ACCOUNTS, *Lessons of PFI and other projects*, Forty-fourth report of Session 2010-12, House of Commons, July 2011, www.publications.parliament.uk/pa/cm201012/cmselect/cmpubacc/1201/1201.pdf.
- 12 Simon ROGERS and James BALL, “PFI: The Full List” in *The Guardian*, July 5, 2012, www.theguardian.com/news/datablog/2012/jul/05/pfi-contracts-list.
- 13 HM TREASURY, *Budget 2014*, House of Commons, March 2014, www.gov.uk/government/uploads/system/uploads/attachment_data/file/293759/37630_Budget_2014_Web_Accessible.pdf.
- 14 Authors’ calculations based on the International Monetary Fund’s database. In 2014, the United Kingdom’s GDP is estimated at £1576 billion. “World Economic Outlook Database, April 2014” in *International Monetary Fund*, www.imf.org/external/pubs/ft/weo/2014/01/weodata/weoselgr.aspx (consulted on May 1, 2014).
- 15 AUDITOR GENERAL, *Annual Report of the Auditor General of Québec to the National Assembly for 2014–2015*, Government of Québec, p. 14.
- 16 *Ibid.*, p. 15.
- 17 Irène INCHAUSPÉ, “Partenariat publics-privé: le rapport secret au vitriol de l’Inspection des finances” in *L’Opinion*, July 10, 2014, www.lopinion.fr/10-juillet-2014-partenariats-public-privé-rapport-secret-vitriol-l-inspection-finances-14301.
- 18 Currency conversions made by the authors on the Bank of Canada’s webpage.
- 19 INCHAUSPÉ, *op. cit.*
- 20 EDWARDS, *op. cit.*, p. 1-9.
- 21 Branwen JEFFREYS, “More NHS Trusts sliding into the red” in *BBC News*, January 31, 2014, www.bbc.com/news/health-25981936.
- 22 Martin BECKFORD, “Hospital saves £14m by getting out of PFI deal” in *The Telegraph*, February 2, 2011, www.telegraph.co.uk/health/healthnews/8296685/Hospital-saves-14m-by-getting-out-of-PFI-deal.html.
- 23 “London Underground pulls the plug on Powerlink PFI” in *The Railway Gazette*, August 16, 2012, www.railwaygazette.com/news/urban/single-view/view/london-underground-pulls-the-plug-on-powerlink-pfi.html.
- 24 Bertrand BISSUEL and Laetitia CLAVREUL, “Eiffage et l’hôpital sud-francilien: récit d’un divorce” in *Le Monde*, March 31, 2014, www.lemonde.fr/societe/article/2014/03/31/eiffage-et-l-hopital-sud-francilien-recit-d-undivorce_4392867_3224.html.
- 25 Jim ARMITAGE, “Northumbria NHS trust saves £67m by freeing itself from PFI deal” in *The Independent*, June 9, 2014, www.independent.co.uk/life-style/health-and-families/health-news/northumbria-nhs-trust-saves-67m-by-freeing-itself-from-pfi-deal-9517844.html.

- 26 Annie REECE, “Lancashire county council terminates PFI contract” in *Resource*, August 12, 2014, <http://resource.co/government/article/lancashire-county-council-terminates-pfi-contract-3194>.
- 27 David HENCKE, “Firms ran up £100m loss on PFI laboratory scheme” in *The Guardian*, May 10, 2006, www.theguardian.com/business/2006/may/10/highereducation.businessofresearch.
- 28 COMPTROLLER AND AUDITOR GENERAL, *The Termination of the PFI Contract for the National Physical Laboratory*, National Audit Office, May 10, 2006, p. 52, <http://www.nao.org.uk/report/the-termination-of-the-pfi-contract-for-the-national-physical-laboratory/>.
- 29 Trefor WILLIAMS, *Analysis of the London Underground PPP failure*, The Engineering Project Organization Conference 2010, November 2010, http://academiceventplanner.com/EPOC2010/Papers/EPOC_2010_Williams.pdf.
- 30 Joaquim Miranda SARMENTO and Ricardo Ferreira REIS, “Buy back PPPs: An arbitrage opportunity” in *OECD Journal on Budgeting*, vol. 2012-3, www.clsbe.lisboa.ucp.pt/resources/Documents/PROFESSORES/CEA/Estudos%20Recentes/OCDE%20Journal%20on%20Budgeting.pdf.
- 31 Chris EDWARDS, *Private Gain and Public Loss; the Private Finance Initiative (PFI) and the Norfolk and Norwich University Hospital (NNUH); a Case Study*, June 2009, p. 12 www.uea.ac.uk/polopoly_fs/1.116274/Private%20Gain%20and%20Public%20Loss%20-%20June%202009.pdf.
- 32 *Ibid.*, p. 74.
- 33 *Ibid.*
- 34 Chris EDWARDS, “The Private Finance Initiative and the National Health Service – time to buy out the contracts?” in *Compass* 45, February 2009, p. 1-9, www.compassonline.org.uk/wp-content/uploads/2013/05/CTP45EdwardsPrivateFinancesmallpdf.com1_.pdf.
- 35 “Discount rates and net present value”, Centre for Social Impact Bonds, April 22, 2013, http://data.gov.uk/sib_knowledge_box/discountrates-and-net-present-value.
- 36 Public-Private Partnership Agency, *Projets de modernisation du CHUM et du CUSM: Dossier d'affaires initial et processus d'appel d'offres composantes PPP*, Government du Québec, June 2007, p. 28, <http://collections.banq.qc.ca/ark:/52327/bs1570244>.
- 37 PUBLIC-PRIVATE PARTNERSHIP AGENCY, MINISTÈRE DES TRANSPORTS and PRICEWATERHOUSECOOPERS, *Rapport d'analyse de la valeur ajoutée: pour la conception, la construction, le financement, l'exploitation et l'entretien de l'autoroute 25*, Government of Québec, p. 3, www.mtq.gouv.qc.ca/portal/page/portal/Librairie/Publications/fr/grands_projets/a_25/a25_rap_ana_valeuro71116.pdf.
- 38 Pierre J. HAMEL, “CHUM et CRCHUM: partenariat public-privé (PPP) ou mode conventionnel” in *Centre Urbanisation Culture Société de l'INRS*, 2013, p. 25, www.inrs.ca/sites/default/files/centre_ucs/pdf/CHUMCRCHUM-PPP.pdf.
- 39 Dexter WHITFIELD, “PPP Wealth Machine: UK and Global trends in trading project ownership” in *European Services Strategy Unit Research Report 6* December 2012, p. 68, www.european-services-strategy.org.uk/news/2012/ppp-wealth-machine-uk-and-global-trends-in-trading-project-ownership-final.pdf and particularly www.europeanservices-strategy.org.uk/ppp-database/ppp-equity-database/appendix-4-terminated-uk-ppp-projects.pdf. We did not include the Tube Lines/ Metronet case because the discrepancy with the other cases was too high (and unduly advantaged our working theory). However, we included the *Hôpital Sud Francilien* and *Powerlink* cases.
- 40 We sent access to information requests to both the CHUM and the MUHC. In both cases, we received nothing more than an acknowledgment of receipt. Thereafter, the CHUM assured us that our request was being processed, even though the timeframe provided under the *Access to Information Act* had not been respected. At the time of writing this brief, the CHUM had not yet provided us with the requested information. As for the MUHC, we repeatedly attempted to contact the attorney responsible for providing the requested information, but he never returned our calls or answered our emails after having acknowledged receipt of our request.
- 41 Calculations based on the figures provided by the UK government. HM TREASURY and INFRASTRUCTURE UK, *Private Finance Initiative Projects: 2013 Summary Data*, December 2013, www.gov.uk/government/publications/private-finance-initiative-projects-2013-summary-data.
- 42 This perversion of the P3 model was absurdly exaggerated in the case of the construction of the Îlot Voyageur by the Université du Québec à Montréal. In this case, the public partner even remained fully responsible for operational risks under an accounting transaction aimed simply at allowing the establishment to keep the debt off the books (c.f. IRIS study, Breton et al.).
- 43 The investment costs for the CHUM and the MUHC are not clear. We quoted the costs published by the CHUM and the MUHC on their respective websites. In the case of the CHUM, the investment cost quoted appears on the CHUM's official webpage: www.nouveauchum.com/index.php?option=com_content&view=article&id=130&Itemid=579. For the MUHC, we quoted the investment cost published on the hospital's official webpage: <http://cusm.ca/new-muhc/feature/new-muhc/faq>. It must be noted that in the case of the CHUM's total investment cost, we combined the CHUM's investment cost with the investment cost of the CHUM Research Centre. Our calculations are based on the assumption that the contracts will be bought back during the first year of operations. Accordingly, if the state buys back the CHUM and the CRCHUM once the CHUM is operational, it will already have made several unitary payments for the CRCHUM. It goes without saying that the more time passes, the less the government will save when it buys back these P3 contracts.
- 44 It is important to understand that a unitary payment is comprised of two portions: the base (fixed) portion and the variable portion. The payment's fixed portion is determined under the contract and generally includes the interests, profits and reimbursement of the initial investment cost. The variable portion includes the costs that must be indexed to inflation such as payroll, maintenance costs, materials, etc. Based on what we have observed in British contracts, the fixed portion represents approximately 70% of the unitary payment and the variable portion, approximately 30%. The amount of the variable portion fluctuates on a yearly basis. That being said, the percentage we used here — as a scale of proportions — is based on the British model. In general, there are discrepancies in terms of cost of living, salaries and material costs between England, Europe, Québec and North America.
- 45 AUDITOR GENERAL, *Special report dealing with the watch over the projects to modernize Montréal's University Health Centers*, Government of Québec, June 2010, http://www.vgq.gouv.qc.ca/en/en_publications/en_rapport-annuel/en_fichiers/en_Rapport2010-2011-CHU.pdf
- 46 Claude MONTMARQUETTE et Iain SCOTT, *Taux d'actualisation pour des investissements publics au Québec*, Rapport de recherche, Centre Interuniversitaire de Recherche en Analyse des Organisations, www.cirano.qc.ca/pdf/publication/2007RP-02.pdf.

47 Pierre J. HAMEL, *op. cit.*

48 Without applying a discount rate, savings would total \$8.5 billion, but it must be kept in mind that discounting is required to compare dollar amounts over different moments in time.

The logo for IRIS, consisting of the letters "IRIS" in a bold, white, sans-serif font, centered within a solid black rectangular background.

IRIS

**Institut de recherche
et d'informations
socio-économiques**

The Institut de recherche et d'informations socio-économiques (IRIS) is an independent and progressive research institute founded in the fall of 2000. Its team of researchers issues opinions on important contemporary socio-economic issues and offers its services to community groups and labour unions as part of specific research projects.

Institut de recherche et d'informations socio-économiques
1710, rue Beaudry, bureau 3.4, Montréal (Québec) H2L 3E7
514 789 2409 · www.iris-recherche.qc.ca

ISBN 978-2-923011-59-2