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IS THERE A PROBLEM WITH PUBLIC-PRIVATE “PARTNERSHIPS”?

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Among the many questions that shape this series are how leaders at various levels of government immersed in different policy files have reacted to the challenges, pressures, and opportunities that come with elected office. What lessons can we learn from what went right, and at times, what went horribly wrong? This series aims to identify and illuminate what students of public policy and administration need to consider in evaluating the success or failure of various policy decisions.

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Dr. MacDonnell’s scholarship concerns the application of real options withing public-private partnership (P3) projects. Their research interests surround real options, P3, and investment decisions under conditions of conditions of uncertainty, with a view of pursuing economic development, wealth creation, and enhancing the public sector’s value proposition.



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INTRODUCTION

Background: What Are Private-Public Partnerships and Why Pursue Them?

Public-private partnerships (P3s), known as public financial initiatives (PFIs) in the United Kingdom (UK), were originally developed as a method to increase public investment in new infrastructure without increasing public borrowings (Dixon, Pottinger, & Jordan, 2005; Smyth & Edkins, 2007). Their origins are associated with the Thatcher Conservative government, whose decisions and activities were in pursuit of “small government.” Associated with that goal was a trend of financial reorganization by means of outsourcing, deregulation, and privatization (PartnershipsUK, 2007).

P3 and PFI projects are commissioned by the public sector and represent a method of procuring new infrastructure or services through the private sector (PartnershipsUK, 2007). Involvement of the private sector allows project resources and uncertainties to be shared such that overall project risk is reduced (deNeufville & Scholtes, 2006; Iyer & Sagheer, 2006; Li et al., 2005; Smyth & Edkins, 2007). These project arrangements frequently externalize the project management (build component) and a facility’s operation component (including its maintenance). Consequently, the interim control of a government asset may be in the hands of a non-government entity until the public sector assumes final control of the asset at the eventual transfer from the operator (private sector) to the “owner” (public sector) at the conclusion of a project’s concession period (Padiyar & Shankar, 2006). Dixon, Pottinger, and Jordan (2005) observed that infrastructure commonly produced by P3 and PFI projects include the following:

- roads
- bridges
- offices
- waste incinerators
- hospitals
- schools
- prisons
- sewage treatment plants

Smyth and Edkins (2007) noted that involving the private sector allows part of a project's risk to be transferred to them which lowers the overall risk associated with a project. They further argued that this allows projects to be evaluated using a lower discount factor to reflect the lower level of risk the public sector is accepting.

Specialists (deNeufville et al., 2007; Dixon, Pottinger, & Jordan, 2005; Iyer & Sagheer, 2006) noted that the primary purpose of P3 projects is to leverage private sector know-how, efficiency, technical expertise, management skills, and capital to procure infrastructure and services to satisfy a public sector need. P3 projects are rooted in the principle of risk transference between participant sectors (Dixon, Pottinger, & Jordan, 2005). It is believed that the quality of services and infrastructure is superior to what would exist if the public sector managed its projects alone (Dixon, Pottinger, & Jordan, 2005; Iyer & Sagheer, 2006; Padiyar & Sharkar, 2006). However, and somewhat cynically, Nordtveit (2006) noted that the private sector can be held accountable for its actions, whereas it is often difficult to hold a government accountable for its actions.

FUNCTIONALITY OF P3 PROJECTS

P3s are complicated arrangements. They involve two primary participants: the public sector client and the private sector special purpose vehicle (SPV). The SPV is the private sector entity that undertakes the P3 project; it is considered a single, stand-alone business, but it is not necessarily a single company. Often, it is a consortium and may therefore be composed of several member companies (Alonso-Conde, Brown, & Rojo-Suarez, 2007; Smyth & Edkins, 2007). Once participants are established, a contract governing their behaviour (read: expectations, i.e., giving and getting) for a project's duration is drawn up. This contract is called the "concession agreement," and the project duration is called the "concession period." The concession period tends to be long and is typically in operation for 20-to-40 years (Alonso-Conde, Brown, & Rojo-Suarez, 2007; Iyer & Sagheer, 2006; Smyth & Edkins, 2007).

It is not uncommon for a minimum profitability level to be established for the SPV via a set of contractual guarantees underwritten by the public sector. When cash inflows related to the P3 do not match annual projections, often the public sector will subsidize the private sector. These contractual terms effectively transfer some of the risk back to the public sector from the SPV (Dixon, Pottinger, & Jordan, 2005). However, providing financial incentives encourages investment by private sector participants to create the SPV because the promise of long-term concessions by the client are attractive (Alonso-Conde, Brown, & Rojo-Suarez,



2007; Dixon Pottinger, & Jordan, 2005; Iyer & Sagheer, 2006; Smyth & Edkins, 2007). Oftentimes, this is a mandatory requirement to ensure that a project receives private sector financing. Without such concessions, these projects might not function because they risk being placed in the “non-starter” category. The result of which is that the sought infrastructure may remain unobtainable and unachievable by the public sector when the public sector is acting in isolation. Private sector participants are aware of this and can exploit this reality for their own (as compared against mutual, i.e., shared with the public sector) gain and benefit.

One of the main characteristics of the P3 delivery system is that all the work is ordered as one project on a long-term comprehensive contract (Smyth & Edkins, 2007). This allows for a project’s design, building, operation, and maintenance to be undertaken by one entity. This method is believed to manage risks more efficiently and concomitantly reduce the likelihood of a project experiencing a financial or social loss.

Variations in P3 project descriptions exist due to the distribution of risk and responsibility between participants. A popular incarnation is the build-own-operate-transfer (BOOT) model. Here the SPV finances, builds, operates, and maintains a facility during its concession period (Ng & Loosemore, 2007). The SPV’s cash inflows are limited to the concession period and typically come in two guises. The first is user fees borne by individual citizens such as in the case of toll roads or bridges. The second is rent payments made by the client to the SPV such as in the case of schools. During a BOOT P3 projects’ concession period, the client leases facilities from the SPV creating a series of cash inflows. These rental payments are paid throughout the concession period, and as they are paid by the public sector client, they are paid with government funds (Alonso-Conde, Brown, & Rojo-Suarez, 2007; Ball, Heafy, & King, 2002; Iyer & Sagheer, 2006; Smyth & Edkins, 2007). However, the long-term time scale of these projects potentially creates a major liability for governments, particularly as it relates to off-balance sheet (OBS) items. OBS items are contingent claims that cause a liability in response to a future event that may (or may not) transpire.

BENEFITS OF P3 PROJECTS

One of the dominant reasons for involving the private sector in the provision of public sector infrastructure and services (i.e., associated maintenance) is because private sector firms tend to exist within a competitive environment and the public sector is a de facto monopoly (deNeufville, Lee, & Scholtes, 2007; Dixon, Pottinger, & Jordan, 2005; Padiyar & Shankar, 2006; Savas, 2000). Competition is argued to create an incentive to innovate and is underscored by a wider skill set and a presumed superior understanding of capital expenditure and its management. The private sector is also considered more disciplined with respect to project performance and issues of delivering projects on time and within budget.



The notion of value for money is significant in P3 projects. DeNeufville, Lee, and Scholtes (2007) identified construction costs, operation and maintenance costs, and operation revenues as the components for a project's value proposition. The applied concept of value for money in P3 projects is to pursue an economical and efficient use of government funds (Takim et al., 2009). As private money is used to finance P3 projects, the value proposition must therefore come via reduced costs or enhanced service quality (Dixon, Pottinger, & Jordan, 2005).

RISKS ASSOCIATED WITH P3 PROJECTS

External risks relate to PESTEL (political, economical, social, technological, environmental, legal) factors and the relationship amongst project participants. Internal risks involve the planning, design, construction, and operation stages of a project. These risks can involve problems related to the development, construction completion, operation of the infrastructure, and forecasting demand (in the case of user tolls) for its use (Iyer & Sagheer, 2006).

The least significant risks in P3 projects tend to relate to land acquisition, debt risk, bankers' risk, and political risks because these tend to be borne by the client. More significant risk factors include those related to design, construction cost, performance, delay, cost overrun, facility commission, volume (i.e., user demand and its accurate estimation), operation, maintenance, payment, and tendering costs (Akintoye & MacLeod, 1997).

Good P3 projects are thought to be those where a balance can be found between the cost of infrastructure and the cost of its subsequent maintenance (again, because the typical public sector objective of P3 projects is infrastructure acquisition and its regular maintenance). As noted by deNeufville, Lee, and Scholtes (2007), the concession agreement transfers two key risks from the public to the private sector: that of excessive construction costs and time to completion (addressing the issues of a project being on time and on budget), and the risk of excessive running costs (mostly, but not exclusively, maintenance) afterwards.



CRITICISMS OF P3 PROJECTS—FROM THE LITERATURE

The following paragraphs summarize the dominant criticisms of P3 project arrangements from leading specialists in the field.

Valuation Methodology

Several specialists (Alonso-Conde, Brown, & Rojo-Suarez, 2007; deNeufville, Lee, & Scholtes, 2007; Dixon, Pottinger, & Jordan, 2005; Iyer & Sagheer, 2006) criticize the method used to evaluate P3 projects. P3 projects tend to be evaluated using discounted cashflow (DCF) analysis wherein the use of a singular, static discount rate is applied to a project. In the case of construction projects, as there are distinct phases that may span several years, risks are not necessarily singular and static (deNeufville, Lee, & Scholtes, 2007). This means the use of DCF may not convey a project's true value.

Expensive and the Need to Attract the Private Sector

P3 projects have higher than average procurement costs resulting from legal and advisory fees associated with initiating these projects; higher transaction costs can result from the complexity of the P3 process (Dixon, Pottinger, & Jordan, 2005; Ratcliffe, 2004). Dixon, Pottinger, and Jordan (2005) noted that the large scale and long operating period can act as a deterrent in attracting the private sector participation necessary to undertake P3 projects. Alonso-Conde, Brown, and Rojo-Suarez (2007) noted that in an attempt to overcome participation deterrents the public sector will often make generous concessions in the form of tax incentives, favourable interest rate policies, control of Crown Land, or financial commitments to guarantee a minimum level of operating income for a project or to contribute to maintenance expenses under some circumstances. In the case of financial guarantees, a minimum revenue level is established regardless of the accuracy of forecasted demand. P3 projects, therefore, represent a long-term liability for the government, and in the case of low actual demand, do not necessarily represent value for money because funds must be diverted from other government programs and projects in order to satisfy the liability (financial guarantees) to the SPV.

Specialists (Alonso-Conde, Brown, & Rojo-Suarez, 2007; deNeufville, Lee, & Scholtes, 2007; Dixon, Pottinger, & Jordan, 2005; Iyer & Sagheer, 2006) have criticized the short-term focus of cost containment that applauds delivering projects on time and on budget. They suggest that without long-term consideration of end-user value, which would allow the public sector to participate in created benefits beyond the initial infrastructure, that P3 projects will be insufficient in both communicating and capturing the full extent of an integrated value



proposition. Consequently, realizing the (incomplete and therefore limited) value created by a project appears to only be possible by increasing the cost to the public sector by restricting the benefits available to the public partner while enhancing the benefits received by the private partner.

Concession Agreement Structuring

Typical structuring that regulates the concession agreement does not easily permit for changes to be adapted later in a project's complete life cycle. As Iyer and Sagheer (2006) noted, the parties are bound by the provisions of a rigid concession agreement prior to the commitment of large amounts of capital. Incorrect decisions made at the early stages can have a large impact on the future outcome of a project.

Because projects are constrained by the concession agreement their life-time operation is inflexible. DeNeufville, Lee, and Scholtes (2007) suggested that the existing P3 framework is essentially one in which the public sector outsources the infrastructure development, operation, and maintenance and is therefore more like a "fee for service" arrangement rather than a true partnership. They further suggest that, as flexible design is nothing more than contingency planning, it should not be a large leap for project participants to actually engage a project over its complete lifetime via a joint operation that pursues a genuine partnership.

Lack of Trust Between Participants

Nordtveit (2006) noted that the client is often concerned about contract compliance by the SPV. Thus, the client often pursues costly monitoring and evaluation systems to ensure compliance. His observation highlights a general lack of trust that can exist between project participants.

Profit Sharing in P3 Projects

Generally, profit sharing in P3 projects is non-existent. The closest example of profit-sharing (and calling it profit-sharing is a stretch) is the Dartford Crossing project in the UK. This project is noted as an example of public intervention in response to supernormal profits realized as a result of poor demand forecasting (resultant due to a massive underestimation of user demand for the bridge by the SPV). In 2002, six years before the end of the 10-year concession period, the UK home secretary determined that the government's financial obligation to the SPV had been met and seized control of the property. This action allowed the government access to the tolls the SPV had previously been receiving (Highways UK, 2005).



Instead of providing incentives to attract project participation and taking ownership of an asset early because of public perception of private sector project exploitation, Alonso, Brown, and Rojo-Suarez (2007) suggested the public sector client seek clear profit-sharing arrangements from the SPV.

DISCUSSION: IS THERE A PROBLEM WITH P3S?

The discounted cashflow criticism presented by specialists is suggestive of improper project valuation, meaning P3 applications have been somewhat incomplete on at least one front (the presumption of static risk over a very long operating period). It is suggested here, too, that P3 applications remain incomplete because they ignore positive risk, hidden assets, and the benefit of government intervention.

P3 projects are supposed to transfer risk, specifically negative risk (the kind that costs money) to the private sector. P3 projects are touted as creating benefit for the public sector, but given the concessions offered to most SPVs by a public sector client, the question as to what benefits beyond the infrastructure (whose actual long-term cost is “flexible” given revenue and maintenance top-up provisions in concession agreements) is prompted.

If cost reduction is minimal and maintenance obligations experience limited improvement beyond the public sector’s usual timeline, then the value created for the public sector becomes questionable. Increased exposure to negative risk (due to concessions required by the concession agreement) coupled with being excluded from potential positive risk (again, due to covenants in a project’s concession agreement) further work to erode the value proposition to the public sector.

An SPV operator will typically include asset maintenance in the concession agreement, effectively bypassing the government request for proposal (RFP) requirements and creating a long-term fee-for-service arrangement with the SPV. It follows, therefore, that such arrangements are long-term “relationships.” But is a relationship of this manner necessarily a “partnership”?

Because P3 projects create a long-term fee for service arrangement, P3 projects therefore represent a long-term liability for a public sector client. In instances when demand forecasting is less than robust and results are inaccurate, concession agreements require the public sector to subsidize the private sector for its weak demand forecasting. In this regard, P3 projects cannot be purported to represent value for money because funds must be diverted from other government programs and projects in order to satisfy the liability to the SPV.



Nevertheless, the real issue is not necessarily whether P3 projects offer value for money, although it is true that properly and accurately assessing their value for money is a major issue. However, it remains the author's opinion that other issues are more pressing. Indeed, a major issue is perhaps how that value is quantified and whether electors can be supportive of projects that seemingly offer benefit to the public sector that does not appear to match the benefit received by private sector participants. This unbalanced distribution of benefit from a projects operation, which itself can be exacerbated by a concession agreement that can impose additional cost on the public sector (thereby negating the argument of risk transference to the private sector) results in a situation wherein public-private partnerships are not necessarily "partnerships." Instead, these arrangements appear to be extended fee-for-service contracts that effectively remove the requirement for the public sector to regularly participate in the RFP process to ensure that necessary maintenance on government assets is performed. The author contends that, if sufficiently addressed, correction of these other issues will work to address the value for money issue.

The unbalanced benefit creation and distribution associated with the present use of P3 projects can prompt hesitance to pursue their use. Nordtveit (2006) noted that the client is often concerned about the SPV's contract compliance. Thus, the client often pursues costly monitoring and evaluation systems to ensure compliance. Nordtveit's observation highlights a general lack of trust that can exist between project participants. To an extent, this limited oversight can be remedied with the public sector client occupying a seat on the SPV's board of directors because such a position would reduce the cost of oversight and likely increase trust (or at least transparency) amongst participants. Indeed, such an arrangement creates opportunity for the public sector client to have a more fulsome understanding of the value at risk associated with OBS items. Concomitantly, this understanding better informs government expectation of its liability exposure and associated responsibilities related to OBS items.

The notion of having a seat on a board to gain information and exert influence (because the board of directors, with input from senior leaders (CEO, CFO, COO), is responsible for establishing an operation's strategy) is not without its own challenge. Specifically, board seats can generally be attained when one owns approximately 20 per cent of a company's equity (this tends to hold true for both publicly traded and privately held companies, and SPVs represent privately held companies). In the BOOT P3 model, the public sector has no ownership until the transfer takes place at the end of the concession period. In this sense, despite the public sector regaining control of its assets at the conclusion of a concession period, during the interim, those assets are, effectively, privatized. A seat at its board would ensure that information is received directly and unfiltered by senior SPV company leaders. This, in turn, should reduce the cost of monitoring and evaluating the SPV to ensure compliance.



SUMMARY AND CONCLUSION

From a public sector value for money perspective, the present P3 project paradigm focuses on reducing procurement costs or enhancing service quality (i.e., keeping a regular maintenance schedule). The prevailing literature does not consider operational benefits or the creation of additional public sector benefits as forming a critical part of a P3 projects' value proposition.

Complete privatization of government assets (regardless of whether the assets are divested to the private sector or operated exclusively by the private sector prior to transfer to the public sector) forfeits flexibility and ignores positive risk. A seat in the boardroom provides space for direct government oversight concerning maintenance of the public sector's (future) asset that is supposed to be in accordance with the concession agreement. As the cost of future asset maintenance can be grounds for government asset divestment or P3 projects, it follows that any government would want infrastructure assets intended for use by the public sector to support increasing demand over time (because populations can grow).

With a government seat at the SPV board table, it becomes possible to have a more fulsome understanding of the value at risk associated with OBS items. Concomitantly, this understanding informs government expectation of its liability exposure and associated responsibilities related to OBS items. Uncertainty surrounding the possible liability of OBS items, particularly maintenance expenses for aging infrastructure, creates an issue for the public sector because the valuation of the OBS items is the responsibility of the private sector partner. In short, how much trust can be allotted to an SPV operator to accurately estimate the impact of an OBS liability (within an acceptable margin of error) given that these same operators face no repercussions for poor demand forecasting? Basically, if the SPV is weak at forecasting usage demand, why would a rational individual believe that the SPV's forecasting ability is sufficient to estimate the cost of contingent claims for which it will not be 100 per cent responsible?

An additional issue is that P3 projects, in their present form, are incomplete. They focus, more or less, exclusively on infrastructure attainment and service provision, e.g., construction and regular maintenance of tangible assets such as roads, bridges, and buildings. From a business model perspective, P3 focuses on goods only while entirely ignoring services (meaning the services industry).

The COVID-19 pandemic has prompted talk about what form a "new economy" might take to promote recovery from two years of reduced economic activity and inflationary pressures not seen in the past 30 years. Government support at the national and sub-national level throughout the pandemic has grown debt beyond a (long-term) serviceable level if nothing else changes with respect to revenue generation. Government revenue generation typically takes the form of corporate and personal income taxes. It perhaps follows, therefore, that a



new recovery cannot rely on traditional methods of infrastructure investment and development for two dominant reasons:

1. Government has been pursuing infrastructure development via P3 projects and public support for these projects—due to the inequitable benefit structure—is not always present or consistent.
2. The nature of infrastructure development is on a project-by-project basis, and they tend to be restricted in time. This means that if it takes five years to build the new infrastructure, then the economic development is limited both to the time period of investment (it will generally not exceed five years) and the specific location of that investment.

This is to say that infrastructure-based economic development is not necessarily sustainable because it will not continue as a going concern because it has a finite time period that is restricted by its construction period. Additionally, the specific economic development associated with an infrastructure-based P3 project is not transferrable to other regions or locations due to the specificity of infrastructure development as a, more or less, one-off exercise in a limited or restricted location. The result of these observations is that any recovery pursued via traditional P3 projects is likely to demonstrate these shortcomings.

If it is accepted that economic recovery, to create the greatest utility for residents of a given region, ought to be sustainable, then, by extension, it is rational to suggest that traditional economic development activities such as infrastructure investment (known to lack sustainability) supported by P3 agreements will be insufficient to fund a national or sub-national government's recovery efforts.

Modifying P3 projects to incorporate real options is a possible solution hitherto overlooked by both P3 and real options researchers and practitioners. Incorporating real options thinking and real options analysis into P3 projects to create a new model of economic development that more closely aligns with the ethos of "partnership," and the economic concept of utility may result in sustainable economic development that is not limited to a single location and which directly addresses the discussed shortcomings of P3 projects.

With a real options lens, operational benefits involve looking beyond maintenance for opportunities to add value. Additional benefits would be the creation of new revenue streams for the public sector which, in turn, would address the earlier issue of sustainability of project value. This would mitigate noted shortcomings of the present P3 paradigm while creating the opportunity for a public sector client to participate in positive risk (the kind that gives money) to expand the P3 model beyond its present limitations that result from an isolated focus on infrastructure procurement and its subsequent maintenance.



Real options add value through the identification and productive use of hidden assets. “Services” are not the same as “services industry,” but they are related. It is the author’s contention that unaddressed hidden assets present in the public sector, particularly at the municipal unit level, provide scope and opportunity for wealth to be pursued and shared between participants from the public and private sectors. Policy implications related to this research concern P3 projects and also the privatization of government assets in general, and, therefore, there are potential implications for any government wishing to pursue a policy of “small government.”

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