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The perceived efficacy of public-private partnerships: A study from Canada

Michael Opara [a,*], Paul Rouse [b]

[a] College of Business, Texas A & M University, 2600 South Neal Street, Commerce, TX 75428, USA
[b] Department of Accounting and Finance, The University of Auckland Business School, Owen G Glenn Building, 12 Grafton Road, Private Bag 92019, Auckland 1142, New Zealand

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ABSTRACT

Since the 1990s, Public–Private Partnerships (P3s) have become a widely used public infrastructure financing policy tool. However, there is a vast body of evidence suggesting that they do not consistently deliver superior Value-for-Money (VfM), a central argument for engaging private industry partners. In response to the call by Andon (2012), we investigate the rationale behind governments' continuing deployment of P3s, focusing on the factors affecting the nature and performance of P3s. We draw on contemporary institutional theory to explain the Alberta government's deployment of P3s as a legitimate infrastructure delivery mechanism. While the P3 model has been beset by numerous problems, governments persist with P3 deployment. This practice is traced to institutional environmental forces that are set in motion to implement, sustain and institutionalize P3s as a 'take it or no asset' policy. Furthermore, we identify motivations tied to a new understanding of *macro (group)* and *micro (private)* interests that enact, sustain and institutionalize 'preferred' policy measures cloaked as 'public interest'. Consistent with the current view of P3s as complex hybrid organizations that confront pluralistic circumstances, we argue that there is an absence of a reflective consideration among the invested local actors in balancing the competing stakeholder interests impacted by P3 policy. Furthermore, we outline the implications for the accounting industry as knowledge carriers in guiding the situated jurisdictional evolution of P3s, especially in recognition of the dual nature of P3s that are presented as objective decision models, but are context-driven and socially constructed as part of P3 policy adoption and implementation. Consequently, given the shifting political dynamics regarding the efficacy – and sustainability – of P3s, whether the end could be near for Alberta's P3 experiment or a temporary hiatus is an open question that this paper will attempt to address.

1. Introduction

During the last 25 years, Public–Private Partnerships (P3s) have become a popular method for major infrastructure delivery worldwide (Andon, 2012; Boardman, Siemiatycki, & Vining, 2016; Hodge & Greve, 2017; Opara, Elloumi, Okafor, & Warsame, 2017). With the growing P3 deployment by governments, and the contested financial value of P3s, Andon

* Corresponding author.
E-mail address: Michael.opara@tamuc.edu (M. Opara).

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(2012) calls for research that questions the *nature and functioning of P3s*, including the complexities of P3s as a policy tool. Andon (2012, p. 877–8) reviews and critiques extant accounting research in five major areas, including: the underlying nature and rationale of P3s; the processes and procedures aiding decisions to undertake P3s; processes and procedures for *ex-post* P3 evaluations; the merit and worth of P3s; and, P3 regulation and guidance. As an understudied area, we embrace Andon's (2012) call to "extend our understandings of the motivations of and rationale for P3 schemes beyond the prevailing critical explanations offered in the literature" as a way to understand the growing adoption of P3s despite contrary evidence (p. 907).

Specifically, Andon (2012) suggests investigation into the "conditions and elements" related to the motivations and rationales for P3 adoption (p. 907). Furthermore, Caperchione, Demirag, and Grossi (2017) invite critical research in the context of P3s as part of public sector reforms. In response to both Andon (2012) and Caperchione et al. (2017), this paper adopts a critical perspective and aligns with Shaoul (2005, p. 441) in questioning the "rationality and distributive implications of using private finance," which studies suggest is more expensive than public borrowing (Boardman et al., 2016).

Therefore, the suspension of the Alberta P3 program is an invitation to re-engage in the critical evaluation of P3s (Shaoul, 2005). Using the National Health Services (NHS) hospital P3s, Shaoul (2005) examined the process, financial methodology and assumptions made by NHS Trust hospitals arguing that their decisions during project planning and execution were based on ambiguous concepts of risk transfer and Value-for-Money (VfM), that were neither objective, value-free nor ensured distributive equity for all stakeholders. By revisiting the tools the government has hitherto employed to evaluate P3 projects (discounted cashflow/NPV, PSC, VfM, etc.), rethinking the concept and practice of risk transfer, and questioning the rationale behind the assessments leading to project approval, we demonstrate that a similar critical appraisal of P3 policy, including methodology adopted, can be effective even in other P3 domains. This approach may yield the best answer to the potential senescence of the P3 program in Alberta while also, perhaps, providing some nascent predictions as to the shape of what infrastructure assessment protocols will replace it.

By adopting the New Public Management (NPM) philosophy (Broadbent, Gill, & Laughlin, 2003; Caperchione et al., 2017; Shaoul, Stafford, & Stapleton, 2012), governments are implementing a range of market-based reforms to improve the quantity and quality of public service delivery. Reforms of this nature are proclaimed as part of a public service "innovation" or "modernization" program (Caperchione et al., 2017; Pollitt & Bouckaert, 2011). Furthermore, NPM and its emergent hybrid variant, New Public Governance (NPG), envisages operating the government more like a business via savings in public expenditure and improving the quality of public services–especially the "marketization" and "accountingization" concepts (Caperchione et al., 2017, p. 2). Such an operational environment, advocates claim, would make the government more efficient while ensuring effective policy implementation (Pollitt & Bouckaert, 2011). Overall, NPM(G) seeks to improve public sector planning, outcomes and accountability. Public-private partnerships have come to be considered part of the NPM(G) reforms (Caperchione et al., 2017; Connolly, Reeves, & Wall, 2009). As the implementation of NPM(G) has proceeded, it has come into contact with existing public sector governance structures, leading to the emergence of hybrid organizations (Miller, Kurunmaki, & O'Leary, 2008; Shaoul et al., 2012) complete with resulting tensions between the private and public sector governance models. P3s are now recognized as an important form of hybrid organizations (Villani, Greco, & Phillips, 2017). Hybrid organizations pose particular challenges for public sector governance and accountability, as they are not accustomed to or respectful of public accountability (Shaoul et al., 2012; Stafford & Stapleton, 2017). Situated in accounting and accountability, a governance consequence of these hybrids is the need to produce and audit new financial and performance reporting that meets required standards of public accountability (Caperchione et al., 2017).

P3 research has significantly advanced in several multi-disciplinary directions since the early beginnings in the mid-1990s. For instance, from a political economy perspective, Boardman et al. (2016, p. 11) note that P3s tend to deliver projects on-time and on-budget for reasons that include: the construction phase begins only after extensive negotiations are completed, the strong incentive mechanisms attached, and the inflexible nature of the P3 contracts. P3 literature documents that VfM (though socially constructed) remains the dominant organizing and perceived 'objective' model for the decision to proceed with P3s that is publicly disclosed (Khadaroo, 2014). Furthermore, research has shown that P3s are implemented differently in different jurisdictions, perhaps unsurprising given differences in environmental and institutional arrangements, even when there are similarities in context (Jooste, Levitt, & Scott, 2011). Another stream of research documents the several critical success factors in P3 implementation (Grimsey & Lewis, 2004; Koppenjan, 2005; Kwak, Chih, & Ibbs, 2009; Zhang, 2005). Importantly, literature documents several cases of failed P3 projects (Soomro & Zhang, 2015, 2016). In addition, reviews conducted by auditors-general in many countries have concluded that P3s are more expensive than traditional infrastructure procurements (TIPs), mainly because of the higher cost of private borrowing and higher transaction costs associated with private sector financing of public infrastructure. These are not necessarily offset by savings elsewhere or VfM created via risk transfer to the private sector (Boers, Hoek, Monfort, & Wieles, 2013). There is also a growing number of studies demonstrating that P3s face substantial governance issues arising from their hybrid nature (Shaoul, 2005; Shaoul et al., 2012), are unable to transfer risk effectively (Demirag, Khadaroo, Stapleton, & Stevenson, 2012), do not consistently deliver superior VfM when compared to TIP (Boers et al., 2013) and demonstrate overall inferior performance in terms of distributive justice (Shaoul, 2005). Little is known, from a theoretical perspective, on why governments continue with the adoption and implementation of P3s around the world.

Therefore, the central objective of this paper is to investigate the rationale behind governments' continuing deployment of P3s as an infrastructure delivery policy (using the Alberta experience), especially given that the model has confronted mounting scepticism/criticism both about its performance and a vast body of evidence challenging the notion that the P3

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model delivers better Value-for-Money (VfM) compared to TIP. Put differently: how can we explain Alberta's P3 policy persistence? Consequently, we investigate the following research questions: a) do P3s deliver enhanced VfM over the TIP model?; and b) why have P3s remained attractive to the Alberta government despite uncertainty about their overall performance?

Adopting a dual critical and interpretivist/constructivist perspective (Ahrens et al., 2008; Baker & Bettner, 1997; Baxter, Boedker, & Chua, 2008; Lukka & Modell, 2017) to address our research questions, this investigation was conducted by reviewing and analyzing various official reports issued by the Alberta Auditor-General from 2002 to 2016, the 10 VfM reports issued by the Government of Alberta (GoA) from 2002 to 2016, and several government publications issued in the same period (e.g., The 20-Year Strategic Capital Plan Report, 2010). This was supplemented by a field study consisting of in-depth, semi-structured interviews of 35 key stakeholders involved with various Alberta P3 projects. These interviews were used to inform and refine our understanding of the context within which P3 projects are planned and implemented in Alberta. The combination of detailed document reviews and interviews was used to provide an explanation of why P3 deployment persists in Alberta, and potentially help understand why it is growing in other jurisdictions despite mounting evidence doubtful of their performance.

We note that while there are institutional and environmental differences (Jooste et al., 2011) on the detailed implementation of P3s across jurisdictions, there are substantial similarities regarding the nature and conceptualization of P3s to warrant applicability of their mode of adoption, operation and institutionalization in other regions. Alberta represents a location that has several institutional and operational attributes similar to other major P3-implementating jurisdictions and, while the results of this case study may not be wholly generalizable to other locations, the accumulation, analysis and documentation of Alberta's experience together with auditors-general recommendations from several P3-adopting countries merit a re-evaluation of the current P3 policies, accounting and accountability trajectory.

We selected our research location for a variety of reasons. First, Alberta presents a unique political-institutional environment within Canada, with a sole-party conservative government for nearly 45 years (until mid-2015). With a strongly conservative political orientation, a business-friendly environment, and an ineffective political opposition at the time, Alberta was expected to be an early adopter of the P3 model. However, it was a late entrant into the P3 market in Canada, behind liberal-leaning provinces such as British Columbia, Quebec and Ontario. Second, the nature of Alberta's economy especially its close integration with the global energy market, makes it prone to substantial fiscal volatility. This compels Alberta governments to frequently design and amend fiscal rules. This we speculated would have made Alberta an early participant in the P3 market, at least to hedge itself against volatile energy revenues. This was not the case either. Kneebone (2006) argues that the institutional design of Alberta's fiscal rules is part of a governing arrangement. He notes that, the "evolution of its fiscal rules has been guided by a single conservative government" and "the evolutionary process of the fiscal rules has not been affected by changes in the governing political party or changes in political or economic ideology" (p. 659). Kneebone's (2006) observations appear confirmed given the electoral change in 2015, and given the political platform of the governing party, we speculated that P3s would be terminated immediately. Again, this did not happen. Rather, what we observe is a temporary hiatus on new P3s, enacted after advancing on-going P3 projects. Overall, Alberta represents a curious case of having all the right ingredients for early P3 participation, yet it never implemented P3s in their classical form. For instance, it shied away from implementing tolls on its P3 roads. Furthermore, we found it curious that if Alberta was never fully convinced about implementing P3s initially (reluctant adopter), why is Alberta still implementing P3s when there is an opportunity to revisit the policy in view of the change in political and institutional dynamics that favour this new direction. Finally, we identified rather little research interest in Alberta's P3 program. Compared to Australia, UK and the US, with which it shares similar political, linguistic and institutional environment elements, Alberta's P3 program appears forgotten, having attracted limited research interest since inception in 2002 (Opara et al., 2017).

This study contributes to P3 accounting literature and theory in several ways. First, by considering and focusing on the *macro (group)* and *micro (individual)* motivations behind Alberta's P3 program, we contribute to and advance P3 accounting literature by arguing that P3 implementation is adapted to fit the contextual institutional environment in visible areas (e.g., political-organizational environment, VfM, risk transfer), but replicated without adaptation in the non-visible areas (e.g., rationality, distributive impacts, future costs). This critical investigation into the $7.8b program explores how these models are interpreted and deployed in practice, emphasizing that in addition to the institutional/environmental forces in play, there are *underlying actor-motivated interests that are cloaked and presented as public policy.* This final clause is emphasized because it is important to recognize that this paper uses the terms 'macro' and 'micro' differently than those terms are normally discussed in economics and political theory. We leverage these terms in a specific sense that refers to the underlying political interests of the governing political entity, working as a group (macro), and the private goals of individual political actors associated with political leadership of the government at the time of this study (micro). In other words, this article will use macro to refer to the interests of the larger governmental group, and micro for considering the often personally motivated actors involved in particular government decision-making, even when these decisions are presented as the result of deliberative, impersonal representative public policy. Second, informed by institutional theory, this study provides a plausible explanation for behaviour exhibited by governmental organizations, arguing that these behaviours are devoid of empirical support yet remain somehow popular due, in part, to institutional (environmental) forces/pressures. Institutional theory views "rational action" as socially constructed and suggests that the search for and maintenance of legitimacy is a crucial motivational factor of organizational behaviour. We align with Khadaroo (2014) in arguing that certain aspects of the P3 model that are "objectified" as transparent/objective decision-drivers (e.g., risk transfer, PSC, and Value-for-Money

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calculations), are not objective, but biased assessment criteria that are *socially constructed* in the attempt to apply abstract concepts in a practical way. Third, we contribute to institutional theory by identifying and highlighting how strategically located actors can draw on and deploy alternative logics to advance their interests. While prior studies have focused on powerful actors (the state, groups of actors) (Lounsbury, 2007), this study is anchored on an actor straddling both political and organizational arenas that are intricately interwoven. Furthermore, and relatedly, we extend P3 literature by deepening our understanding of how political support for P3 emergence and sustenance is orchestrated by the close interactions between alternative logics and, motivated and strategically located actors. Fourth, in responding to Andon's (2012) call to investigate the *nature and functioning* of P3s, drawing on national/sub-national audit reports/recommendations from several jurisdictions, and situating this study within both critical and interpretivist/constructivist perspectives, we bring new frames to P3 research by assembling in a coherent manner the extensive and accumulating accounting literature that advocates an evidence-based approach to P3 policy development, planning and implementation. This provides an additional resource for accounting researchers, government policy managers, political leaders and analysts seeking a balanced view of P3s as a policy tool for public infrastructure delivery.

The paper begins by reviewing prior P3 research and examining the policy arguments advanced by advocates and critics of P3s in section two. It reviews P3 performance record and asks why the P3 model remains attractive to governments and public policy makers, despite mounting evidence suggesting its lack of efficacy. The paper draws on elements of contemporary institutional theory discussed in section three to engage this question using P3 projects in the transportation and education sectors in Alberta, Canada. We employ a field-based case study methodology (Yin, 2018), explained in section four, to examine the project assessment methods and VfM approaches in Alberta's transportation and education sectors in section five. Section six discusses and concludes the investigation by reviewing the deployment of P3s in Alberta, outlining the broader implications of this study for P3 deployments, especially its relevance to the accounting industry, and proposing the initial outlines of an alternative infrastructure delivery policy.

2. Literature review and policy debate

There is historical precedence to the inclusion of the private sector in the delivery of public infrastructure (Grimsey & Lewis, 2004; Sclar, 2015). While the state has traditionally led the processes of infrastructure delivery, the current effort has seen a greater involvement of non-state actors, especially a diverse consortium of private sector players with a different array of motivations from that of the public state actor, including banks, institutional investors, and construction companies, constituting the special purpose vehicle (SPV) that executes P3 projects. The nature and functioning of these hybrid arrangements thus represents a transformation of the role of the state and its relationship with relevant stakeholders (Verma, 2016). For instance, the motivations of these multiple players in a state-directed endeavour could lead to uncertain outcomes, marginalize under-represented and vulnerable segments of the population and result in state capture by powerful entities (Verma, 2016). Given the motivational mis-alignment, an important policy question arises: to what extent should we engage the private sector in the delivery of public infrastructure – minimally, extensively or not at all (Sclar, 2015)?

A holistic understanding of the P3 phenomenon requires a deeper (re)examination of its embedded characteristics that are often invisible to the public. First, it represents a fundamental social and political paradigm shift in the way governments work and interact with their citizens. One part of this change refers to how governments, via the tools of democratic arrangements, engage with and meet the service needs of the citizens; another refers to how citizens expect their elected officials to relate to them. Second, the structures of governance are fluid and uncertain. Here, we refer to the emerging accountability frameworks, policies, and schemas, including the rhetoric that the government adopts in justifying and rationalizing its actions and especially how this compares with reality, in the face of unstated assumptions and biases. With P3s, there is a clear expansion of investment opportunities for the private sector, at the expense of other stakeholders (Sclar, 2015; Whiteside, 2015). The state is restructured to minimize its footprints in society and its role is re-conceptualized with public sector decision making re-imagined as business-friendly (Whiteside, 2015).

P3s are now globally deployed as governments increasingly partner with the private sector to deliver infrastructure services to citizens (Andon, 2012; Hodge, Greve, & Boardman, 2017; Klijn & Teisman, 2003; Opara et al., 2017; Shaoul, 2005; Shaoul et al., 2012). However, P3s do not have a generally accepted and consistent definition in every jurisdiction. The concept has been generously applied to any spectrum of public and private sector collaboration, ranging from building roads, schools and hospitals to operating prison facilities and catering services (HM Treasury, 2013; HM Treasury, 2016). Under a P3, a private consortium is engaged to design, build, finance, operate and/or maintain (DBFOM) a public asset such as a road, school, hospital, water or waste management facility. From a project finance perspective, a special purpose vehicle (SPV) is formed comprising the building contractor, the financing institution and the operator, solely for delivering a P3 project (Grimsey & Lewis, 2004; Hodge & Greve, 2007).

2.1. Prior P3 research

There is a vast multi-disciplinary P3 knowledge currently accumulating from public policy, economics, engineering and accounting (Andon, 2012; Hodge et al., 2017; Wang, Xiong, Wu, & Zhu, 2017). Concurrent with this extensive body of work, and the diverse research approaches applied, is the perception of the legitimacy of P3s and its evolution. Hodge et al. (2017)

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suggest that "The P3 narrative and its portfolio of techniques have evolved to be acknowledged as a legitimate part of a wider, global conversation on infrastructure and infrastructure governance" (p. 274). Essentially, the emergence and adoption rate of P3s as a mode of infrastructure delivery is approaching the point of potential institutionalization as more governments adopt P3s and its variant forms. By extension, the focus is shifting from P3s as a method of infrastructure development to the growth in infrastructure and the routinization of its delivery (Hodge et al., 2017). However, this growing P3 adoption needs to be re-evaluated in the light of all the issues that are conveniently avoided in the rush to deliver infrastructure without careful consideration of the issues now widely documented in the literature. We therefore review the state of knowledge on P3s so far, beginning with the critical and enabling institutional environment factors.

2.1.1. Critical and enabling institutional environment factors

Researchers have investigated critical success factors (CSFs) closely associated with P3 emergence, sustenance and intensification (Chou & Pramudawardhani, 2015; Grimsey & Lewis, 2004; Jooste et al., 2011; Koppenjan, 2005; Kwak et al., 2009; Matos-Castano, Mahalingam, & Dewulf, 2014; Zhang, 2005). Operational factors such as: supporting environment; project economic viability; a technically competent consortium (Zhang, 2005); public sector capacity to select an appropriate partner; and proper risk allocation fairly between the partners (Kwak et al., 2009) have been documented in the literature. Chou and Pramudawardhani (2015) further identify stable macroeconomic environment, shared responsibility between public and private sectors, transparent and efficient procurement process, stable political and social environment, and judicious government control as critical success factors that shape P3 projects. A rather limited number of studies is starting to move away from this operational focus and identify how and what impact the institutional environment is having on P3 emergence and sustenance. Specifically, Matos-Castano et al. (2014) in a study of the P3 institutional environment in The Netherlands and India, identifies political legitimacy, organizational capacity and trust as critical institutional environment capabilities that enable P3 environments to emerge and stabilize towards maturity.

Furthermore, Opara et al. (2017) find that Alberta's institutional environment prior to 2015 was characterized by strong political support, enabling (business) policy stance, and public sector organizational capacity as dominant attributes of the institutional environment. The institutional environment for P3 projects is defined as "as the mix of formal and informal rules and regulations that enable or constrain the behaviour of actors within ... [an] operating environment" (Opara et al., 2017, p. 82). For instance, in Alberta, these actors include the political leadership of the province, the organizational actors in the Ministry of Transportation and Infrastructure, private construction industry, Labour unions, and citizen taxpayers. Jooste et al. (2011) points to the adaptation of the P3 model to the local setting, noting that the P3 institutional environment varies from one jurisdiction to another and that the P3 implementation approach tends to vary accordingly, even when the contexts may be similar. Overall, where this 'tripod' support (political, policy and organizational) is lacking, the motivation for P3 project success is significantly compromised. A limitation of extant research (see Jooste et al., 2011; Matos-Castano et al., 2014) is the focus on the enabling factors constitutive of the institutional environment and organizational field in support of P3s. Furthermore, while Opara et al. (2017) traced the institutional emergence of Alberta's P3s, their analysis lacked a critical stance on the process of adoption or the basis for the deployment of contested measures (such as VfM and NPV) and, most importantly, ignored any discussion related to distributive justice. This study therefore attempts to bring a critical lens to some of the taken-for-granted elements or visible aspects of P3s. Against the current dynamic, the unique Alberta institutional setting and building on the jurisdictional findings and representations of the institutional environment from other extant studies, we approached the research field to identify why there is policy persistence despite a changed institutional landscape and mounting evidence to the contrary. The suspension of the Alberta P3 program is a signal that the policy and political support for P3s are no longer guaranteed (given recent changes in the political dynamics of the province) and may be the invitation for a critical and previously absent re-evaluation of the Alberta P3 program.

In addition to studying the institutional environment enablers of P3 creation, researchers have looked at other processes of formation leading to the emergence, stagnation or failed emergence of P3s. For instance, Koppenjan (2005, p. 136) looked at the Dutch P3 formation processes and noted mediation by patterns of interaction that were "consciously and systematically managed and arranged". The three most prevalent patterns identified were (p. 147–8): a quick take-off; early private involvement supported by interactive decision-making techniques; and hesitant and risk-avoiding behaviour. Koppenjan (2005, p. 148, 153) observe that each project has its "unique set of actors", and concludes that project characteristics, perceptions of project profitability and feasibility, the multi-faceted and capricious nature of the public sector, lack of interaction and extent of embedding within the decision context all play a role in the emergence, stagnation or failed emergence of P3s.

2.1.2. P3 project drivers/value-for-money

Value-for-Money is defined as a measure of the cost savings achieved in a P3 delivery compared to the TIP model (Grimsey & Lewis, 2004). A major justification for P3s is that they deliver improved infrastructure and services over those provided by the public sector at a lower cost (Grimsey & Lewis, 2004; Vining & Boardman, 2008; Vining, Boardman, & Poschmann, 2004). Morallos, Amekudzi, Ross & Meyer (2009) identify six drivers of VfM, including: risk transfer, long-term nature of contracts, competition, performance measurement and the use of an output specification, performance measurement and incentives, and the private party's management skills. Grimsey and Lewis (2005) consider risk transfer and competition to be the most important determinants. Similarly, according to OECD (2008), for P3s to deliver VfM, risk transfer

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and competition are key determinants. Thus, for a P3 to deliver VfM, sufficient risk must be transferred to the private partner (Burger & Hawkesworth, 2011; Grimsey & Lewis 2004; Grimsey & Lewis 2005).

In many jurisdictions, it is mandatory for P3s to employ the public sector comparator (PSC) to demonstrate VfM. However, there are suggestions that VfM is prone to manipulation to skew decisions in favour of the P3 model (Heald, 2003; Hodge & Greve, 2007), thus contesting the adoption of this assessment model as a valid measure of VfM. Some accounting researchers argue that P3s are advocated on the premise that they offer increased VfM by providing more efficient, bundled lower cost, and reliable infrastructure services than the TIP model, by transferring risk to the SPV (Burke & Demirag, 2017; Grimsey & Lewis, 2004, 2005). However, others, including Khadaroo (2014), adopt a cautious and more nuanced view, contending that there are "inherent complexities and subjective judgements involved in valuing risks and achieving optimal risk transfer" (p. 154). Shaoul (2005) argues that while VfM represents an effort to introduce formal decision making, ensure minimal managerial interference, and allocate resources on a more rational basis, what is not disclosed is the fact that VfM and risk transfer have "little objective content" (p. 464). Put differently, these concepts are not value-free, "as the business cases simply asserted what they were supposed to prove" (p. 464).

To date, a vast body of research literature extensively debates the nature, method and merits of the *ex-ante* VfM methodology in academic and public policy circles (see Boardman, Greve, & Hodge, 2015; Boardman & Hellowell, 2016; Loxley & Loxley, 2010). Essentially, technical issues have been raised regarding the details and assumptions of this model (Boardman, Greve, & Hodge, 2015; Boardman & Hellowell, 2016; Hodge & Greve, 2010). Realization of VfM remains a central aspect of determining P3 success both pre- and post-project implementation. A post-implementation study of Spanish P3 projects is instructive in this matter. According to Ortega, Baeza, and Vassallo (2016), the decision of the Spanish government to deploy P3s to avoid budgetary limits rather than pursue efficiency considerations was ill-advised and led to several undesired outcomes, including excess and under-utilized infrastructure. Their study noted that basic assessment tools such as cost benefit analysis (CBA) and VfM were not used to evaluate project feasibility. The report notes that risk allocations in Spanish P3 contracts were inadequate, leading to difficulties encountered by the private partner, for instance in securing right of way. This resulted in numerous renegotiations that were ultimately paid for by taxpayers. According to Button (2016), "P3s have superficial attractions, and in particular they are often seen to increase the potential sources of funding to accelerate infrastructure investment and operations and, perhaps less intellectually convincingly, to spread the risks involved" (p. 155). Furthermore, Demirag and Khadaroo (2010) studied the impact of project size on VfM in UK schools, and noted that there was higher user satisfaction in small school projects while the opposite is true with large projects, wondering why governments prefer the scaled up P3 projects. Overall, finding little evidence in support of school VfM, they suggest that VfM is both a complex and multifaceted issue that is difficult to measure in practice.

2.1.3. Complexity

Sagalyn (2011) documents the complexity of P3 projects noting that the P3 process is complicated by detailed technical specifications, and overly demanding in terms of public policy ambitions and financial feasibility. Klijn (2009, p. 30) calls P3s "a complex phenomenon", where each side is populated with several players, including multiple actors on the public sector side that may lack coordination, and a special purpose vehicle (SPV) on the private sector side that could be considered temporary marriages of convenience, it is not hard to imagine why P3s are complex to negotiate, organize seamlessly and implement successfully. Moreso, each actor has an individualized conception of the nature of the problem and arrive complete with a preferred solution. Furthermore, Heald (2003) documents the complexity of the accounting treatment of P3s and related VfM issues, drawing attention to the need to clearly distinguish between total risks (which may be sensitive to the mode of delivery), and the accounting rules that emphasize risk sharing (p. 363). Heald (2003) also notes the restricted access of academic researchers to P3 data, suggesting that with the enhanced access statutorily granted Auditor Generals (AGs) to this data, only AGs are in a position to make a pronouncement on the performance of P3s after a comprehensive assessment. For these reasons, this study has placed substantial reliance on the recommendations by AGs from several jurisdictions (Boers et al., 2013).

Further arguments that point to the complexity of the contractual governance of P3s have also been advanced (Boardman et al., 2016). Recent research suggest that P3 complexity is worsened by misalignment of the interests of the market actors (investors, private equity financiers, etc.) interested in the growth/preservation of their investment and earnings, and those of state actors (politicians, policy managers, Labour Unions) who are interested in the enhanced social value and social equity from P3s (Sclar, 2015). According to Sclar (2015), we need to restrict the use of P3s considering the limitations imposed by the use of the contracting tool to administer contingencies that are very far into the future (incomplete contracts), and high transaction costs that are intently minimized to advance P3s given the assumption that the public sector is an incompetent supplier of public good. This is consistent with the arguments advanced by Shaoul et al. (2012) and other accounting researchers who have challenged the value in the perceived convergence of private interests and the public social value. We argue that the convergence of these two different and diverse interests poses difficulties in a hybrid organization that is struggling to meet both private corporate interests and the public accountability needs of the citizens.

2.1.4. Hybridization, accountability and corporate governance

Wiesel and Modell (2014) define hybridization "as the process through which elements of diverse governance logics are integrated into context-specific configurations of governance practices" (p. 177). The implementation of the P3 model with its incentive structure, management approach and different goals have enabled the convergence of private and public sector objectives, organizational structures and operational modalities and given rise to hybrid organizations (Caldwell, Roehrich, &

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George, 2017; Shaoul et al., 2012). Recent P3 research is now focused on the hybridized nature of these arrangements, especially with respect to the governance and accountability frameworks that must be instituted and implemented (Caperchione et al., 2017). Shaoul et al. (2012) develops a reporting framework that considers the nature of P3s as situated and "operate at the interface of public and private sector" approaches to governance (p. 213). The authors suggest that P3s be conceptualized as "regulated hybrid organizational forms" (p. 213). This implies that P3s need to be evaluated under a different and more applicable form of governance, not the current private sector model that targets shareholders and financiers who rely on such reports for their individualized choices. Shaoul et al. (2012) therefore, reinforces the "need for more and different reporting than is the norm under the private sector's decision-useful reporting framework" (p. 213). For instance, directors/-management in a private sector corporation are bound to protect the interests of shareholders, while managers in the public sector are expected to protect the public interest. Relatedly, therefore, a private entity engaging with a public agency in P3s must contend with and balance its shareholder interest/profitability needs with the public sector requirement for public accountability, enhanced disclosures and transparency than is typically obtainable in the private sector.

Ultimately, given that partnerships and associated reporting relationships are generally horizontal in nature, and coupled with the fact that the private and public sectors become joint custodians of public money, the private sector must therefore structure its corporate governance and accountability (reporting) model to respond to the needs of public accountability (Shaoul et al., 2012). Furthermore, Stafford and Stapleton (2017) argue that the corporate governance model of the private sector misjudges or misunderstands the level and nature of "probity and stewardship" that is expected of organizations engaged in public service delivery (p. 378). The authors conclude that the way these governance mechanisms are structured, outside or without public control, makes public accountability ineffective. Demirag, Khadaroo, Stapleton, and Stevenson (2011, p. 272) examined the relationships between accountability and VFM and notes that despite the complexity associated with assessing or measuring performance, accountability is often perceived as a tool for enhancing the public sector's ability to deliver public goods and services. Furthermore, Caperchione et al. (2017) note the ambiguities of hybrids and the need for interdisciplinary and critical research within the context of P3s, and invite studies that consider the "hybrid organizational forms and complexity of accounting and accountability reforms" (p. 1).

Accounting as a tool for legitimation (Horvat & Korosec, 2015; Whittle, Mueller, & Carter, 2016) must become part of the solution. Accounting must welcome the opportunity to confront the challenging accountability issues faced by P3s (Burke & Demirag, 2017). While it may be difficult to satisfy the array of stakeholders involved in P3s, we note that a starting point is their accommodation in the risk allocation process. And so, the expansion of transparency and minimizing opaqueness would enhance the trust and confidence that taxpayers have in the legitimacy of P3s as a policy tool, a process of asset delivery and a governance mechanism.

While corporate governance and accountability has been an issue for accounting researchers, it is equally important to pay attention to the structure of the governance arrangements, especially the nature of the relationships between the procuring agency and the major stakeholders, while focusing on the private sector SPV itself. This issue was recently investigated in Irish road P3s by Burke and Demirag (2017). They note that the Irish procuring agency adopted a proactively accommodating approach in its relationship with the SPV. This is exemplified by a temporary assumption of *demand risk* that threatened one of the projects. Further, they find that a host of public sector stakeholders have rather conflicting objectives. These, in our view, further add to the documented challenges/complexity associated with P3 implementation in several jurisdictions.

While the popularity of the P3 model continues to grow, the evidence of the model's performance and effectiveness is scarce (Boardman et al., 2016) or mixed at best (McQuaid & Scherrer, 2010) despite a section of the literature appearing to celebrate the success of the P3 model. There are a number of reasons to suggest why there was a rush to celebrate the perceived early success of P3s. Noting the mixed performance for P3s, Sagalyn (2011, p. 193), points out that, first, P3s take a long time, pre- and post-project implementation, before valid and objective data can be assembled to truly evaluate P3 performance. Second, P3 advocates (from politicians to policy makers) do not have any incentive or motivation to undertake a rigorous post-implementation evaluation that might contradict their initial justifications for selecting the P3 model. Even where a P3 mistake/error is noticed, it leads to an escalation of commitment to avoid adverse political consequences. This manifests as project re-acquisition or bailout to save the political authorities. Third, the categorization of relevant P3 decision information is conveniently classified as 'confidential', even when there is no apparent need to do so, and government can use such information to build its own case for legitimacy, transparency and due process. Finally, given the near unique set of institutional and environmental complexities surrounding each project, generalizable lessons are hard to articulate and globalize.

Therefore, with these documented issues around governance and accountability of hybrid organizations, complexity of the P3 process, doubts about the ability to actually transfer risk and difficulties in realizing VfM, we are concerned that governments continue to pursue P3 schemes in total disregard of this body of works that casts doubts on its ability to deliver better value than TIPs, the traditional alternative. These factors provide the impetus for this study: attempting to identify the rationale for continuing deployment of P3 schemes despite these challenges, uncertainty and doubts.

2.2. Policy debate: shifting rationalizations, contested claims and the role of accounting

Various reasons have been advanced for implementing P3s. Even though these have changed over time - from the prospect of attracting private financing, to securing infrastructure investment without recourse to public sector borrowing, to keeping public spending within budget, the main reasons for adopting P3s revolve around VfM and risk management (Andon, 2012; Boardman et al., 2016; Siemiatycki, 2015).

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Risk transfer is central to P3 contract pricing. A key argument advanced by P3 advocates is that P3s enable the transfer of project-related risks to the private partner, which is best able to deal with them (Chung & Hensher, 2015; Grimsey & Lewis, 2004, 2005). Therefore, P3s motivate projects to be delivered within budget and on time. Coupled with the tie-into the payment structure, the contractor is incentivized to perform as agreed, knowing that payments will not begin until the project becomes operational. Thus, by transferring project risks from the public sector to the private partner, successful P3s are supposed to provide quantifiable and tangible cost savings (Grimsey & Lewis, 2005). Furthermore, P3 advocates insist that bundling of P3 project components, including design, construction and maintenance, substantially encompasses a significant portion of the risks in a project. Thus, the bundling of projects ensures that the private partner is saddled with most project-related risks. Project performance is enhanced when financial rewards and project outcomes are closely linked, deepening the level of engagement and commitment from the private partner (Grimsey & Lewis, 2004; Yescombe, 2007).

However, P3 critics equally argue that expected risk transfer to the private sector never materializes as the public sector ultimately assume all risks either directly (e.g., in the event of project failure) or indirectly through other means, such as provision of guarantees to the private partner (Boardman & Vining, 2007; Heald, 2003; Hodge & Greve, 2007; Loxley & Loxley, 2010). Broadbent, Gill, and Laughlin (2008) examined P3 decision-making and legitimation processes in the UK hospital sector, and pointed out that risk transfer is important as the value attached to risks can shift the balance in favour of either TIP or P3 procurement. Meanwhile, Demirag et al. (2011) find that financiers would rather have some other party carry the risks inherent in P3 projects, while insisting on working with familiar partners, which may raise the barriers to entry and undermine the P3 competitive attributes.

This risk avoidance strategy by the private partners manifests in two ways: higher cost of P3 projects as the cost of risk is priced into the projects (Boardman et al., 2016; Loxley & Loxley, 2010) and backing the government into a corner where it is compelled to bail out the private sector or provide guarantees when projects are threatened as observed during the recent global financial crisis of 2008–09 (Shaoul et al., 2012; Boardman et al., 2016). According to Shaoul et al. (2012), the assumption of risks arising from the introduction of private finance, leads to the private sector determining the "characteristics, content, and payment mechanisms of projects in order to meet their expectations" (p. 218). Demirag et al. (2012) suggests that the risk aversion of the private partners, leads them to adopt various mechanisms of contractual risk diffusion (including insurance, performance support guarantees, interest rate swaps and inflation hedges) by the debt and equity financiers. Correspondingly, the complex nature of these arrangements compels the public sector to seek professional advice, in turn leading to higher project cost and thus negating the argument that P3s are a mechanism for risk transfer to the private sector.

P3 proponents, mainly using *ex-ante* calculations, insist that detailed contract terms and their enforcement characteristics ensure that risk is transferred effectively. However, the true confirmation of benefits is best determined at the end of the P3 project. To date very few P3 projects have reached the end of their contractual life and thus very limited studies exist for post concession P3s (Chung, 2016). Chung (2016) examined the challenges surrounding P3s at the end of the contract period using the M4 motorway in Australia, and agree that the reintegration risks at the end of project life demonstrates the limits of contracts as tools for the resolution of coordination problems. In the end, the partners worked towards amicable resolution of uncertainties/risk transfer. Specifically, the M4 project's attempts to respond to the question on whether P3s really do transfer risk, deliver cost efficiencies and ultimately ensure VfM can only be known upon a detailed post-project review (Andon, 2012; Boardman et al., 2016) and the accumulation of sufficient evidence with a critical number of projects reaching end-of-life in several jurisdictions. Meanwhile, a global study by Boers et al. (2013) documents the findings of 38 (out of 48 reviewed) P3 audits reports of various regional and national government audit offices from 2000 to 2010. They conclude that there is a paucity of hard evidence of VfM generated by P3s, with no clear evidence that a DBFOM project is more efficient than a TIP. Furthermore, they note that "Both the costs and risks are kept off balance sheet; cost calculations are incomplete; alternative options are not examined on an equivalent basis; and the government still bears an excessive proportion of the risks involved and hence all too frequently ends up footing too much of the bill" (p. 464). Notably, once P3 projects are launched, governments get into an escalation of commitment and projects are hard to terminate, often due to potentially high litigation costs (Hencke, 2003) and bad publicity for the sitting government. With terminated P3s, the burden ultimately rests on taxpayers and service users. A recent example being the estimated £2b increase in taxpayer burden when the holding company of the private consortium engaged to rebuild the London Underground declared bankruptcy (Glaister & Travers, 2007; Sheikh, Asher, & Ramakrishnan, 2015).

Given these documented reviews and jurisdictional experiences, it is becoming more difficult to prove that P3s deliver superior VfM compared to the TIP model. Essentially, the VfM estimate of the PSC and the P3 is anchored on the net present value (NPV) assessment of expected life cycle costs (Morallos et al., 2009), and factors in costs and benefits related to risks allocated to the public sector (HM Treasury, 2006). While cumbersome, developing a PSC and predicting its value is generally considered a more practical and cost-efficient way of evaluating the merit of pursing a P3 option. A P3 model that efficiently and optimally allocates risk while offering a lower cost compared to the PSC results in a positive VfM (Infrastructure Australia, 2008). Regardless, selecting the alternative with the highest VfM, whether it is the PSC or a P3, should be the ultimate goal of government organizations.

With the long-term nature of P3s, VfM estimates are restricted to the *ex-ante* evaluation stage, as noted earlier, which estimates the cost of TIP (represented by the public sector comparator [PSC] model) in comparison with a hypothetical P3 project. In practice, up-front TIP cash flows are compared with discounted P3 model cash flows. However, it is easy to demonstrate that the P3 option delivers better VfM by adjusting or manipulating the discount rate by a small amount, such as one per cent, to 'prove' the traditional model would be more expensive than the P3 option (Froud, 2003; Pollock, Shaoul, &

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Vickers, 2002). One explanation for this behaviour could be the perception by government managers that there are no viable options outside a P3 model and thus signal to the project consultants that the P3 bid should be lower. According to Boardman et al. (2016), several problems surround the application of PSC in project evaluations. These include: the potential for underestimating transaction costs; the inability to compare "like with like" that may not account for quality differences between the P3 and the PSC; the use of inappropriate discount rates; inappropriately treating risk transfer as a financial benefit or measure it poorly; and, over-correcting for optimism bias.

Shaoul (2005) considers, among others, first, the unsuitability of discounted cash flow techniques as adopted in the PSC calculation, insisting that it is fraught with difficulties by attaching a financial value to both tangible and intangible costs and benefits; and second, the choice of discount rate applied is equally controversial as the choice of discount rate should reflect the Social Time Preference (STP) value of money. These issues are still unresolved, but reflect conscious politically-motivated choices made on the public's behalf without discussion. In other words, just like Alberta, these choices are made on behalf of taxpayers by government officials to advance policy choices.

While many P3s have been successfully implemented, there are several reports by Auditors-General (AG), researchers and media commentary highlighting the downsides – both potential and actual (Wettenhall, 2007). Take the Auditors General's reports from the two Canadian provinces of Ontario and British Columbia as examples.

Ontario's Auditor General (2014) reviewed 74 P3 projects, noting that they cost $8 billion more than if delivered by TIP. Questioning the claim that P3s transferred risk to the private sector, the Auditor General observed that the P3 projects assumed unreasonably high-risk transfer, averaging 50% of the capital costs. The Auditor General concluded that "there is no empirical data supporting the key assumptions used by Infrastructure Ontario to assign costs to specific risks" (p. 197). For instance, the Auditor General determined that Ontario's William Osler Centre (a P3 hospital) could have cost $200 million less using TIP, noting that the cost of the TIP model was overstated by more than $600 million. Further, the Auditor General was of the view that the $34 million spent on advisors and consultants was higher than would have been expected under a TIP model.

Auditor General of British Columbia (2014) reviewed 16 P3 projects and expressed major concerns about the high debt cost incurred on the P3 projects. The Auditor General wrote: "The interest rates on this $2.3 billion of P3 debt range from 4.42% to 14.79%, and have a weighted average interest rate of 7.5%. Over the last two years, government had a weighted average interest rate on its taxpayer-supported debt of about 4.0%" (p. 18). The AG's review shows that P3 projects are not only saddling the province with higher debt levels than if the project had used TIP, as interest rates are almost double with P3s, but also higher overall project cost.

While the AG has a statutory role to review P3 performance post implementation, the task of producing and validating the numbers that are used for P3 decisions prior to implementation must come from accounting departments and accountants. This brings us to the role that accounting must play as part of P3 policy development and adoption. First, accounting needs to be part of the decision process leading to the adoption of any model of asset delivery. Being part of the process invests accounting with the knowledge and responsibility to come to the table with a clear understanding of not just the numbers that are needed for decision making, but their limitations, how they are derived, constituted, interpreted and/or could be misinterpreted. Accounting must understand the "social construction" (Khadaroo, 2014) of these numbers and how they are deployed to justify visible and invisible policy actions. On the visible level, accounting's role includes assessing and validating, both *ex-ante* and *ex-post* (via the audit process), the nature and extent of risk transfer and eventually the extent of project VfM. This includes identifying, quantifying and assessing how and when it is most efficient to transfer risk and at what cost. Since these items are contract stage discussions, accountants need to be part of the contract negotiation process to play a meaningful part in this assessment.

Second, accountants with budget and fiscal policy responsibility must take the front seat and assume a steering role in assessing the extent to which government budgeted programs could become constrained by the projected payouts for P3 projects, both medium and long term, and thus provide valuable advice to political leadership and policy makers on the deployment of scarce financial resources. A fiscally constrained public sector is unable to exercise the necessary flexibility in response to changing service levels that benefits taxpayers, especially arising from demographic changes, that might involve seniors or from changes arising from climate change. Furthermore, proper verification of the cost of the PSC elements requires the technical expertise of accountants in setting up and validating the elements of the model, including the net present value (NPV) of the associated cash flows and how this flows into the VfM decision to proceed as a P3. Importantly, accountants must become aware of the socially constructed nature of these tools and the scope/range of interpretive power they represent to policy makers, especially in the face of pliable (or lack of) regulatory guidance (Horvat & Korosec, 2015).

The P3 literature documents several high profile failed P3s, and given the documented difficulties and contested evidence of success (Boardman et al., 2016; Soomro & Zhang, 2015, 2016), why then do governments persist with P3 policy implementation? Institutional theory may offer helpful insights for this observed trend.

3. Conceptual framework

3.1. Institutional theory

Institutional theory was considered as the most appropriate theoretical framework for this study. First, it fits the overall orientation of the study. In addition to a critical perspective, this study was undertaken from an interpretivist/constructivist

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perspective. Ontologically, institutional theory is grounded in a social constructivist view of the world (Modell, Vinnari, & Lukka, 2017). From its early beginnings, institutional theory has typically considered institutions as social constructions (DiMaggio & Powell, 1983). Similarly, we see the policy measures, practices and implementation approach of P3s as socially constructed (Khadaroo, 2014). Secondly, modern institutional theory continues to place increasing emphasis on the role of agency/social actors in the creation, sustenance and demise of institutions in organizational life (DiMaggio & Powell, 1983; Lawrence & Suddaby, 2006). We observe the role of then Minister of Transportation and Infrastructure (later Premier Ed Stelmach) in leading the processes of emergence and growth of P3s in Alberta. As the champion of this new process, the minister's role reinforces the import of human agents in the implementation of change in established institutional practices. Third, institutional theory incorporates the concepts of both hybrid organizations (which P3s are now recognized to be) and institutional logics. Overall, institutional theory is helpful for our study on the formation, deployment and institutionalization of P3s, as it goes beyond the explicit, intendedly rational aspects of P3 construction to incorporate elements of the political/institutional environment, and social contexts in which these policies are constructed, interpreted and implemented. This is consistent with Scott (2014) who notes that institutions are socially constructed frameworks of symbols/artefacts and resources that both enable and constrain social action.

Contemporary institutional theory posits that external environmental pressure affects organizations, such as public sector entities (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). For public sector organizations, external pressures could arise from enacted legislations or from parliamentary reviews (such as the Public Accounts Committee) aimed at improving public sector accountability. In an attempt to avoid adverse publicity, public sector entities must implement laws, strive to address audit recommendations or Parliamentary Committee's criticisms (Mulgan, 1997), in order to maintain their legitimacy. Scott (2014, p. 56) describes three kinds of institutional environment pillars that serve as guides for how organizations are expected to behave, namely: "regulative, normative and cultural-cognitive guides". Regulative guides refer to established understandings of public policy, procedures, laws and formal mechanisms. Normative guides prescribe values and norms which determine what is acceptable in a given situation. Cultural-cognitive elements identify broader belief systems and cultural frames that could be adopted by organizations. In essence, institutional theory incorporates elements of both formal and informal norms and systems dominant in an environment. Accordingly, laws that enact mandatory compliance, normative influence from professionals (such as auditors) together with policies that follow 'best practices' in public asset delivery are supportive of the legitimacy acquisition and maintenance needs of public sector organizations. Legitimacy matters because as Deephouse, Bundy, Tost, and Suchman (2017, p. 12) put it, "it has consequences for organizations. Primary among these consequences [...] is that legitimacy has a clear effect on social and economic exchange: most stakeholders will only engage with legitimate organizations".

Recent developments within institutional theory have focused on an understanding of the role of agency in organizational change. For instance, institutional work defined as "the purposive action of agents (individuals and organizations) aimed at creating, maintaining and disrupting institutions" (Lawrence & Suddaby, 2006, p. 215; see also Lawrence, Suddaby, & Leca, 2009) is gaining ground within institutional theory. The actions of organization transforming agents (actors) draws on institutional theory's concept of institutional logics advanced by Thornton, Ocasio, and Lounsbury (2012) and Thornton and Ocasio (2008).

Institutionalizing a new P3 logic – Thornton and Ocasio (2008) define institutional logics as "the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social realities" (p. 101). Importantly, institutional logics are implicated in shaping how specific social actors (groups and individuals) construct their existence. More so, it recognizes the role of human agents, and provides them with diverse logics they can mobilize to advance their actions in a meaningful and impactful way. The idea that governments are responsible for the provision of infrastructure has been well documented and accepted in Western democracies (Sclar, 2015). The trend where demands by citizens are ever increasing and tax revenue is not growing commensurably emboldens governments to activate an alternative infrastructure delivery logic. Governments, in arguing for and implementing P3s, are presenting the alternative logic of shared/joint responsibility with the private sector, and the notion that citizens simply want infrastructure and are not concerned with how it is procured or delivered. This is a competing logic to the idea of sole governmental infrastructure provision. The Alberta government, in providing a rationale for its P3, intendedly advanced a competing logic as an organizing framework for P3 deployment. Essentially, governments are starting to challenge the idea that they retain the sole responsibility for infrastructure provision (Grimsey & Lewis, 2004), and that P3s are just one tool in their toolbox. Meanwhile, this new (shared/joint responsibility) logic in infrastructure provision is behind the formation of hybrid organizations that must respond to both the needs of private corporate investors and the requirements of public sector accountability.

Hybrid Organizations – Institutional logics raises the issue of how organizations cope with institutional pluralism (Kraazt & Block, 2017), referred to as hybrids. Institutional theory elaborates on the concept of hybrid organizations in recognition that organizations may face more than one set of institutional pressures and potentially from multiple directions in the environment. Battilana and Dorado (2010) note that while hybrids combine commercial and non-commercial interests, understanding how this is achieved in combination with multiple logics is a work in progress. This is similar to the hybrid organizations that are typified by special purpose vehicles (SPVs) and procuring authority (Burke & Demirag, 2017) in P3s – that consist of both members and structures of governance from both the private and public sectors in an attempt to deliver a P3 project (Shaoul et al., 2012).

Having set out our conceptual framework, we next turn to the research setting.

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4. Research methodology

4.1. Research setting

Canada is a constitutional democracy with governing powers shared between the national government and sub-national (provincial/territorial) governments. Similar to the inter-governmental relations between Australian national and state governments, Canada's provincial governments enjoy significant autonomy in service areas such as Health, Education and Transportation. While there are periodic interventions by the national government in these service areas, provincial governments retain control over the nature and extent of spending and management decisions in these service areas. Meanwhile, fiscal relations between Canadian governments are actualized through equalization payments/transfers that aim to achieve similar service and living standards throughout Canada.

Alberta was selected for this study for several reasons. First, the mode of P3 adoption presented an attractive subject of investigation given the unique attributes of Alberta's institutional environment, specifically its political context, economic structure, and democratic infrastructure (Biesenthal, Clegg, Mahalingam, & Sankaran, 2018; Opara et al., 2017). For instance, at the time of this study in 2015, Alberta had been governed by one political party for almost 45 years. Considering that Alberta was a reluctant P3 adopter, and with the recent changes in its political and institutional dynamics, it appears to present attributes indicative of P3 policy discontinuity, however we observe indicators of policy persistence. Second, the scale of Alberta's P3 program is significant at $7.8b, covering the transportation, education, and waste and waste water sectors. With a total annual revenue of $45b, this represents 18% of the 2017 provincial budget. Finally, we note that there has been very little study of this program over the nearly 15 years since its inception (Opara et al., 2017) with these projects now operational, excepting the $1.42b Calgary South West P3 currently under construction.

4.2. Research methodology

This study adopts a qualitative case study methodology (Yin, 2018), using a combination of archival data and field-based interviews (Lee & Humphrey, 2017), to collect and analyze data related to the implementation of P3s in Alberta. Consistent with the literature, and given the critical role of VfM in P3 contract structuring and pricing (Heald, 2003), this study reviewed how Alberta considers its *ex-ante* P3 evaluations as part of transferring risk to the private partner, and ultimately made the decision to proceed as a P3.

Our study was conducted in three stages, relying on both primary and secondary data sources. First, we used content analysis to conduct archival (secondary) data review of the 10 VfM reports and the P3 contracts signed by the Government of Alberta. Furthermore, we analyzed the Alberta Auditor-General's P3 reports between 2002 and 2016. In addition, we analyzed other publicly available documents from the Government of Alberta (e.g., the 20-Year Strategic Capital Plan Report, the FMC Report, Ministry of Transportation and Infrastructure news releases), industry partners (annual reports, corporate newsletters, and bulletins), media reports and other independent research publications (e.g., Parkland Institute, Conference Board of Canada, and CanadaWest Foundation). Appendix 1 details Alberta's P3 projects since implementation from 2002 to 2016 by sector and project contract price. Given that the transportation and education sectors were the initial focus of the GoA and constitute a majority of P3 projects; we focused on these two sectors as a reflection of their significance in the evolution of P3s in Alberta.

Each VfM report covers a project that has been approved and undertaken between 2002 and 2016. Overall, the sample includes 6 road projects, 40 school projects and 1 water and waste management project. All the projects were completed as a design-build-finance-maintain/operate (DBFOM) contract that bundles facility maintenance costs into the contract price. Second, in addition to the VfM analysis and the review of archival data, we conducted 35 in-depth, one-on-one semi-structured interviews with key P3 stakeholders (primary data). Each interview lasted about one hour in duration. These stakeholders were involved with various P3 projects and included retired Premier Ed Stelmach, who was the Minister of Infrastructure and Transportation when P3s were introduced and later Premier. Interviewees included senior public sector officials (n = 9), industry executives (n = 12), consultants/advisors (n = 4), policy analysts, community activists and journalists (n = 6), Labour union leaders (n = 3), and an Assistant Auditor-General. Subsequently, we transcribed and analyzed the interview data (using Excel software), to isolate major themes (such as VfM, risk transfer, P3 contract transparency, motivations for P3s, stakeholder engagement/considerations, institutional environment and public accountability) and compared them to current P3 literature and other themes that emerged during fieldwork. Further, these themes were discussed and refined by the authors and re-confirmed with the interview transcript. These interviews were used to inform and refine our understanding of the context within which P3 projects are planned and executed in Alberta, leading to the calculation of VfM, PSC and contract awards. Finally, we used data triangulation to ensure the consistency of our data sources, reconciled any differences between them, and ultimately revalidated our data.

Proceeding from a combined critical and interpretivist/constructivist perspective (Ahrens et al., 2008; Baker & Bettner, 1997; Baxter et al., 2008; Lukka & Modell, 2017), our overall focus was on the impact of the VfM evaluations in providing the best possible outcomes that serves the public interest. The reason for the attention on the nature of Alberta's partnerships and evaluating VfM is mainly because Alberta, unlike some Canadian jurisdictions, does not have a formal dedicated P3 agency (in the mould of BC Partnerships or Infrastructure Ontario) for centrally evaluating P3 projects. The absence of a

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dedicated P3 agency, in our view, could result in fragmented and uncoordinated analyzes being done in various departments, leading to poor project appraisal. A formal dedicated P3 agency is a repository of knowledge and expertise suggestive of the strength of and commitment to the P3 program, especially in the appraisal and negotiation processes prior to contract award.

5. Findings: Alberta's P3 projects

5.1. Transportation

Facing a severe infrastructure gap from cuts made in the 1990s and a diminishing fiscal budget due to the recession that started around 2000 (and intensified post 9/11), the Government of Alberta (GoA) was poised to consider alternative infrastructure financing options. The government established a fiscal review commission – the Financial Management Commission (FMC, 2002). The FMC was given a broad mandate to review the province's finances and recommend improvements regarding efficiency, effectiveness and fiscal sustainability.

The first P3 policy intervention was via the Cabinet acceptance and approval of the FMC's recommendation that the GoA introduce P3s. This marked the formal beginning of P3s in Alberta. With this policy shift, formalization via enactment/amendment of relevant legislation was required. Thus, the GoA took the next step by amending the *Fiscal Responsibility Act, 2003,* to allow alternative financing of government-owned capital assets. This was significant because it provided the legal basis for the government to enter into P3 contracts with the private sector. It also allowed the private sector to mobilize resources assured that the government was committed to deploying P3s now that all legal and policy obstacles had been cleared. The P3 literature documents that enabling legal framework, political support and other institutional environment factors are essential for the emergence and successful implementation of P3s (Chou & Pramudawardhani, 2015; Grimsey & Lewis, 2004; Jooste et al., 2011; Koppenjan, 2005; Kwak et al., 2009; Matos-Castano et al., 2014; Opara et al., 2017; Zhang, 2005). While these steps are designed to legitimize P3 creation, we argue that they also represent a mobilization of political resources to advance macro and micro interests (i.e., furthering the desires of both groups and individual, politically motivated actors, for example see our discussion on pp. 22–25 below) legitimized via an enabling legislation, thereby making it mandatory that public officials implement the law. In amending the *Fiscal Responsibility Act*, we argue that the P3 implementation was being customized to fit the local environment in *visible ways* (Jooste et al., 2011). Furthermore, in a recent elucidation of the political factor in project delivery, Hodge et al. (2017) suggests that infrastructure acquisition constitutes "part of defining what a modern state should look like" (p. 276). Alluding to current political developments that are inward looking/nativist, political support for such infrastructure is reinforced when it converges with the leadership aspirations of the day. These currents deliver a politically, economically and technically sublime force that enable the delivery of infrastructure.

With the new policy and legal cover in place, the main goal of the government at this stage (2004–2008), was to create an environment that would attract reputable global private sector partners to consider Alberta's P3 as a profitable business destination. The government identified tangible VfM as key to infrastructure delivery efficiency. The VfM theme has been presented as the "primary rationale", and consistent value proposition of several Canadian jurisdictions since the introduction of the second wave of Canadian P3 projects (Siemiatycki, 2015, p. 348). However, we could not locate any documentation where adverse distributive impact is noted as a limitation of P3s or even suggesting that it could have invisible distributive implications among various stakeholders (Shaoul, 2005). Once again, further evidence of the nature of discourse that surround P3s, such that certain aspects are interpreted/implemented as objective measures that make P3s legitimate, while making invisible the subjective aspects that entrench the advantages of some groups over others (private investors vs non-investor ordinary taxpayers).

In 2007, the government successfully delivered its first P3 road project (South East Anthony Henday Drive, SEAHD). Following the SEAHD, organizing structures and standardized practices started to emerge and consolidate the knowledge and experience of both the public and private sector partners. By this time, the government was confident that it could expand the scope and size of P3 projects in Alberta. Therefore, in 2008, it signed what was then the biggest contract in Alberta with the award of the North West Anthony Henday Drive (NWAHD) to Bilfinger International as the lead consortium. Also, in 2008, as a further sign of confidence, the GoA awarded the first non-road P3 contracts to BBPP Alberta Schools Limited for the construction of 18 new schools (K-9) in Edmonton and Calgary for delivery in 2010, thus expanding the use of P3s in Alberta. Table 1 shows details of Alberta's P3 projects in transportation since inception together with their current status and contract price. At a total price of $6.6b, these projects represent about 15% of the 2017 provincial budgeted revenue of $45b.

5.1.1. Value-for-money and risk transfer

The evidence from this study suggests that Alberta was partly successful in transferring project-related risk to the private sector and demonstrating VfM:

> Alberta Transportation's risk profile is reasonable and fair. The DBFM [Design-Build-Finance-Maintain] agreement – on the construction side is a drop-down from the concessionaire. The risks are distributed - in some ways they are fair and in some ways they are punitive, especially in dealing with Utility companies. The province has done a good job of helping out with utility relocation costs (say a pipeline that is underground). For all third party costs, the bidder has to carry a portion of it.
>
> [Senior construction industry executive]

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Table 1
Profile of Alberta Transportation P3 projects.

Project name	Type and duration	Contract award date	Current status and date	Contract price
Southeast Anthony Henday Drive – SEAHD	DBFOM – 30 years	January 25, 2005	Operational – October 23, 2007	493m
Northeast Anthony Henday Drive – NEAHD	DBFOM – 30 years	May 18, 2012	Operational – October 1, 2016	1.82b
Northwest Anthony Henday Drive – NWAHD	DBFOM – 30 years	July 29, 2008	Operational – November 1, 2011	1.42b
Northeast Stoney Trail Ring Road – NEST	DBFOM – 30 years	February 2, 2007	Operational – November 2, 2009	650m
Southeast Stoney Trail Ring Road – SEST	DBFOM – 30 years	March 30, 2010	Operational – November 22, 2013	770m
Southwest Stoney Trail Ring Road – SWST	DBFOM – 30 years	Sept. 13, 2016	Under Construction (until 2021)	1.42b
Total				**6.57b**

Source: Alberta Transportation. Accessed: March 30, 2017.

Another industry executive, while acknowledging the fairness of the Alberta risk allocation, hinted at the existence of some tension as part of the process of sharing risks between the partners:

> Yes, it is fair. There is always a bit of tension about some of them. But overall, it has been a realistic allocation. They have a very reasonable expectation about risk and responsibilities. We don't have any real problems with the risk allocations among the parties.
>
> [Senior construction industry executive]

Noting that tinkering and learning from experience has been part of improvement, a senior government official traced the evolution of the government's approach to risk allocation from its inception, and agreed with the P3 literature that industry dislikes risk assumption without adequate compensation (Boardman et al., 2016; Chung, 2016; Demirag & Khadaroo, 2008; Demirag et al., 2011; Loxley & Loxley, 2010):

> From the first P3 we have evolved. We've spent a lot of time on risks - measuring, ranking, allocating, etc. Industry pushes back too. They want fairness, and willing to pay to pass that risk and they always push back. And we say no
>
> [Senior government executive]

Further, the transfer of risk seems to be consistent with the principle of allocating it to the partner with the best capacity to deal with such risks (Chung & Hensher, 2015; Grimsey & Lewis, 2004):

> Alberta transfers all the risks to the private industry, but provides a significant amount of data about what is out there. No one has run into a huge surprise as to what is out there. Generally, those risks have been transferred to parties who are in the best position to bear them and make decisions about them. The risk process has worked fairly well. Yes, there are environmental concerns, utility lines buried, but they have been properly distributed.
>
> [Stantec Senior design consultant]

However, data on the actual performance of P3s and independent verification of these claims made by parties' intent on deal making are hard to find (Boardman et al., 2016). With the mandatory access granted to auditors, only the Auditor General's reports provide some unbiased assessment of the validity of the risk assessment, transfer and VfM claims made by governments (Heald, 2003). However, the Auditor General's Report, 2010 audit report recommendations were especially critical of the paucity of the government's internal capacity to perform an evidence-based assessment of risk and VfM after several years of implementing P3s. The AG wrote:

> We recommend that the Department of Treasury Board and Infrastructure improve processes, including sensitivity analysis, to challenge and support maintenance costs and risk valuations" (Auditor General's Report, 2010). The auditor noted "That the Alberta Schools Alternative Procurement (ASAP) 1 team did not retain evidence to support all significant assumptions and risk costs were based on anecdotal evidence" (p. 22). Continuing, the Auditor noted that "We did not find evidence that estimated risk costs were, in total, validated against actual experience from prior school construction projects. Historical project cost information would provide additional validation of estimated risk costs, or serve as a means to refine those estimates" (p. 23). The Auditor concludes, "that failure to validate key cost assumptions may result in the development of inaccurate cost comparisons" p. 24.
>
> [Auditor General's Report, 2010, p. 22–24]

At this point, it remains unclear to what extent these issues identified by the AG (such as lack of internal capacity to perform VfM and poor risk assessment) have been addressed by the government. We emphasize the need to have the capacity and processes in place that support the development, assessment and objective valuation and allocation of risks between the PSC and P3 models that ensures a VfM assessment that is reasonable and realizable.

To further obscure matters, Alberta does not provide a detailed breakdown of its P3 contract price as some Canadian jurisdictions do (e.g., Ontario). While some steps have been taken towards making VfM disclosures in Alberta, such as publication of a summary VfM report showing aggregated numbers for VfM and the percentage of VfM created (GoA VfM Report, 2012, p. 5), they remain grossly inadequate when compared to Ontario. Ontario undertakes detailed VfM component disclosures showing base cost, transaction costs, retained risk, financing and ancillary costs (Siemiatycki & Farooqi, 2012). This breakdown makes possible independent verification of the VfM claims, while Alberta's lack of detail makes its P3 decisions prob-

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lematic at best. Demirag and Khadaroo (2008) document empirical studies in the UK on the potential limitations of accountability and VfM. Their findings suggest that "the actual PFI accountability and VfM benefits are much more obfuscated than those claimed in government publications" (p. 455).

The disclosed profile of risks (see Appendix 2), suggests that Alberta transfers a fair portion of risks to the concessionaire. However, the government does not disclose how it quantifies each of these risk elements. In other words, it is unclear if the risks currently classified as retained and/or transferred can be objectively quantified, or even validated. The absence of the quantification methodology for transferred and retained risks makes it difficult to determine the true financial impact of the VfM claim (Chung & Hensher, 2015; Opara, 2017). Furthermore, transaction costs typically higher in P3s versus the TIP model (Andon, 2012; Boardman et al., 2016) should be identified, quantified and disclosed. Therefore, decomposing the project cost structure of the PSC and the proposed bids into base costs, retained risk, transferred risk and transaction costs would enhance transparency and promote the public interest as part of the *ex-ante* VfM evaluations (Opara, 2017). Furthermore, it was not possible to identify any disclosures regarding how the government models the potential impacts of risks on P3 projects. The lumping or non-disclosure of transaction costs (in both PSC and contract price), as well as the lack of clarity in terms of the extent of risk transferred and retained, resulting in poor measurement of risk transfer, suggests that the literature finding on the uncertainty surrounding the realization of VfM in P3s may have some merit (Boardman et al., 2016; Chung, 2016; Chung & Hensher, 2015). When the global financial crisis hit, we expressed concern as to how the GoA would hedge itself against failing contractors/consortia. The government interviewees noted that they have adapted by decreasing financial close period from 90 to 30 days for the successful bidder. They also point out that the pre-existing availability payment method (GoA VfM Report, 2013, p. 11; GoA VfM Report, 2012, p. 10; Opara, 2017) practised by the GoA has worked to ensure that a contractor is only paid for work already completed and is penalized for late completion. This, they insist, has worked to Alberta's advantage by "keeping the contractor's skin in the game".

Even though the final VfM report includes a letter from an outside consultant confirming NPV evaluation and certifying that VfM has been realized, these show aggregated amounts and percentages, instead of full and fair disclosure of the project's VfM components. While the government-appointed outside consultant's certification is a welcome first step, it is inadequate as the report does not provide a detailed VfM calculation, and therefore does not satisfy current disclosure standards obtainable in other Canadian jurisdictions.

5.2. Education

In January 2007, the GoA announced that 18 new K-9 schools would be built as P3s, known as the Alberta Schools Alternative Procurement (ASAP 1). Several groups, including opposition politicians, the Canadian Union of Public Employees (AUPE), the Non-Academic Staff Association at the University of Alberta and the Alberta Federation of Labour (AFL) opposed the adoption of the P3 model for infrastructure delivery in the Alberta school system and publicly campaigned against it. These groups argued that the P3 model, as implemented in the province of Nova Scotia, was more expensive than the TIP model. In response to the government's claim that the P3 model made financial sense, these groups insisted that the improved fiscal health of the province made it easier to borrow at a lower rate and deliver the project using the TIP model. By mid-2007 the budget for the P3 schools more than doubled from $200 million to $512 million, confirming the fears of P3 critics that the P3 model would be costlier for Albertans. A 30-year contract to build the 18 ASAP 1 P3 schools was awarded to a subsidiary of the international investment firm Babcock and Brown. By the time the contract was awarded, costs had risen to $634 million – three times the original budget for the 18 schools.

A total of 40 K-9 schools were constructed in Alberta under the Alberta Schools Alternative Procurement (ASAP 1, 2 & 3) program. These schools were considered high priority, given the rapid provincial economic growth at the time with high inward migration. These schools were located in the two main cities (Edmonton and Calgary) where the majority of the population lives and where the needs were most urgent. As shown in Table 2, the total price of the 40 P3 schools was $1.18b. Each school DBFM contract is for 30 years.

5.2.1. Value-for-money and risk transfer

While the Auditor-General (AG) agrees that the government was right in awarding the P3 contract, the AG insisted that the government must do a better job of demonstrating that this procurement method provides VfM. The AG found that ASAP 1 generated savings, but not the $118 million reported by the government. He concluded that the suggested P3 savings were overstated by about $20 million. This was due to the fact that the PSC contained an estimate for the cost of furniture and equipment, but the P3 did not. Furthermore, the AG noted that while a fair and open procurement process was used, greater transparency was needed:

> However, transparency to Albertans could be improved. The ASAP 1 team did not publish a report to inform Albertans how Value-for-Money was achieved.
>
> [Alberta AG's Audit Report, 2010, p. 13]

Regarding engagement of key stakeholders, the provincial labour group, Alberta Union of Public Employees (AUPE), faulted the nature of consultation by government:

> This government has mastered the art of meaningless consultation. This was perfected during the Klein years and we have gone through the same motion, without any substance. There is no clear definition of choices outside the ones they

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Table 2
Profile of Alberta Education P3 projects.

Project name	Type and duration	Contract award date	Current status and date	Number of schools (K-9)	Contract price
Alberta Schools Alternative Procurement (ASAP 1)	DBFM – 30 years	September 10, 2008	Operational – June 30, 2010	18	634m
Alberta Schools Alternative Procurement (ASAP 2)	DBFM – 30 years	April 15, 2010	Operational – June 30, 2012	10	253m
Alberta Schools Alternative Procurement (ASAP 3)	DBFM – 30 years	September 15, 2012	Operational – June 30, 2014	12	289m
Total				**40**	**1.18b**

Source: Alberta Transportation. Accessed: November 30, 2016.

> bring to the table. The consultations are set up to get us to a predetermined conclusion. These are conclusions that have been reached by the government. Their engagement with stakeholders is simply to go through the motions.
>
> [Senior Policy Analyst, AUPE]

At the inception of P3s in Alberta, there were several studies and various credible independent reports criticizing the limited risk transfers, the high cost of such risk transfers and unrealized VfM associated with P3s, especially from auditors-general. One of the most prominent was from New Brunswick's Auditor-General (1998) who reviewed two P3 projects – Evergreen school and Wackenhut's Miarmichi Youth Facility. At the time, the government claimed that the P3 model offered the province a 7–15 percent overall cost savings, financing from the private partner at a cost similar to the government's borrowing rate and elimination of all repair costs. None of these claims proved to be true. The AG concluded that:

> The capital cost of the Evergreen School would have cost $774,576 less had the province done the work itself and that the Youth Facility cost the Province $700,000 more because of higher financing costs using the P3 model.
>
> [Auditor-General, New Brunswick, p. 186]

This type of outcome is not restricted to the education sector or to New Brunswick. The UK's health sector for instance has been criticized for a lack of VfM (Broadbent et al., 2003; Demirag & Khadaroo, 2008; Hodge, 2004). Despite the evidence, the use of P3s is now an institutionalized public policy in the UK government. With 716 signed projects valued at £59.4 billion as of 2016 (HM Treasury, 2016), the UK government regards its PFI program as a success. And this is despite many criticisms on technical matters such as poor VfM and loss of face over manipulated business cases (English & Walker, 2004; Hodge & Greve, 2017).

Another theme that resonated with several of our interviewees was P3 complexity (Heald, 2003; Klijn, 2009). Some of the comments we received noted the difficulty in communicating the nuts and bolts of P3s in an effort to explain and clarify. For instance:

> There is still a public perception that we are not doing enough to tell the public about what we are doing and how we are doing it. Maybe we need to do more public enlightenment, maybe it's because they [the public] don't understand NPV.
>
> [Senior government official]

An interviewee, while acknowledging political support for P3s attributed the perceived public support for P3s to ignorance due to its complexity: explaining the "*Alberta government has been very supportive, because not much is known about P3s by the citizens; it's hard for them* [the ordinary citizens]". (Edmonton-based journalist)

The government's consultants described P3 complexity as opportunity to educate the citizens, calling it 'the education effect'. In his words, "*education is key to building long term P3 support*". (PriceWaterhouse Consultant)

Despite these challenges, the GoA is committed to the use of P3s for infrastructure supply in the education sector. This is not withstanding that surrounding communities are concerned about restrictive rules in these new schools. The most serious complaint was that these new schools did not provide preschool or daycare facilities and even minor repairs must be done by the contractor. This was a concern to neighbourhoods in Calgary and Edmonton already facing a childcare shortage. By the spring of 2009, Babcock and Brown was bankrupt. Some work on the P3 schools had been completed, but the remainder of the contract was sold off to the other partners in the consortium. The Alberta government had no say when management of P3 schools changed hands in this way. Bankruptcy is problematic not only for investors, but for governments, as the adverse publicity compels the government to buy back the project or terminate the contract at significant costs to taxpayers (Boardman et al., 2016; Sheikh et al., 2015).

5.2.2. Sector differences

Sectorally, and consistent with our research questions, we note that while VfM was a dominant consideration in both the transportation and education P3s, there were subtle but noticeable differences between them. For instance, the nature of the discourse focused on how VfM, risk transfer and complexity are intricately connected and perceived as core P3 drivers in the transportation sector. The emphasis on these P3 elements, we opine, was related to the huge capital outlay for the transportation projects ($6.6b) compared to $1.2b in the education sector. The nature of the discourse in the transportation sector was firmly focused on the pre-operational phase of P3s. In contrast, the nature of the discourse in the education sector was

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more on the P3 operational phase, including impacts on student and learning outcomes. Thus, focusing the discourse on the P3 operational phase meant that technical details associated with VfM, NPV, complexity and risk were largely ignored. Furthermore, closely associated with the nature of discourse was the composition of stakeholders that were actively engaged in the discourse. While there were no visibly organized groups in the transportation sector, the education sector was populated by organized labour, especially, the Alberta Union of Public Employees (AUPE), teachers' unions, and non-academic unions, including the nurses' association. There was little or no engagement with the post implementation phase of P3s.

Overall, the infrastructure creation program of the Alberta government now covers projects in transportation, education and water and waste management valued at $7.8b (See Appendix 1). Initially, the stated motivation for the use of P3s in Alberta was to improve and accelerate the development of public infrastructure, while attracting private financing given the poor fiscal outlook of the province at the time (FMC, 2002). However, with substantial improvement in the fiscal position by 2006–07, we expected the scaling back of the P3 program. Instead, P3 deployment was ramped up in 2008, with the development of the NWAHD and the expansion of P3 use for the delivery of 18 new schools across the province. Although Alberta adopted P3s following years of under-spending on infrastructure due to other priorities (debt retirement, balancing the books), there was the desire to ensure that provincial infrastructure kept pace with the rapid economic and demographic growth at the time.

The nature of P3s is such that the total capitalized cost (including construction, maintenance and operation) of the asset is amortized over several years, and consistent with inter-generational equity, it could be argued that future taxpayers need to be part of the equation in defraying the cost of infrastructure they enjoy. However, similar to any financing arrangement that defers charges into the future, the eventual cost turns out higher than if paid for now. Boardman et al. (2016) calls it the "provide now and pay later" approach, simply "because voters tend to suffer from '*fiscal illusion*'" (p. 12). Essentially, P3s are attractive because governments can conveniently 'kick the can down the road' to future administrations, while appearing as a successful government to current voters. Granted that with learning and experience, several P3 processes have been fine-tuned, it remains a highly-contested policy issue whether P3s really achieve VfM (Andon, 2012; Boardman et al., 2016). This may take a long time to determine, given the long lives of most P3 contracts. Some confirmation of the recognition that P3s are more expensive (Boardman et al., 2016) was provided by Premier Stelmach:

> We knew as a government we could borrow money cheaper than the private sector. However, at the same time we have to ensure that the winning proponent must have enough 'skin-in-the-game' to prevent them from walking away any time during the concession period.

Continuing, he harped on the idea that there would be no ring roads except for the P3 program, indicative of the 'take it or no asset' approach to the deployment of P3s. In his words:

> Without P3s, I don't believe we will have Ring-roads in Edmonton and Calgary. People are aware that there will be no Ring-roads if it wasn't for P3s. People just want their infrastructure built and expect the GoA [Government of Alberta] to use the delivery method that would provide the best value and get the job done quickly.

In the next section we discuss Alberta's P3 experiences, especially the macro and micro motivations behind its P3 program. We also identify the broader implications of our study for the accounting industry, suggest areas for future research, and propose alternative infrastructure policy directions given the changing Alberta institutional context.

6. Discussion and conclusion

This paper explores the Alberta government's use of P3s as a policy tool in infrastructure delivery. Our main objective was to understand the basis of Alberta's P3 policy persistence, despite changing institutional dynamics that seems to suggest discontinuity. Within this context, we set out to understand why P3s have become an attractive government policy tool given the documented difficulties and contested evidence of consistent VfM (Boardman et al., 2016; Soomro & Zhang, 2015, 2016). The case research has provided evidence confirming some of the observations from the P3 literature viz., the private sector dislikes risk assumption without adequate compensation, and the uncertainty surrounding the realization of VfM in P3s. This paper also provides an interpretive explanation of the persistence of P3s using contemporary Institutional theory that can be used to investigate P3 adoption in other jurisdictions. Furthermore, we identified P3s as complex hybrid organizations that face a pluralistic context and must respond to the needs of private investors and the requirements of public governance and accountability.

Some interviewees agreed that the introduction of P3s in Alberta coincided with a period of rapid growth in population, coupled with neglected infrastructure, poor fiscal outlook and an impending general election. However, these interviewees noted the collective and individual interests of the governing conservative party and prominent politicians as motivations behind P3 adoption in Alberta. Put differently, the political leadership wanted to use P3s to deliver infrastructure quickly, given limited resources, and with the approaching general elections, they had to find ways to get it done. A senior project designer at Stantec was of the view that "because the politicians wanted P3s, it was made to happen". Continuing, he insisted that "The political support was such that the ministry officials had no choice but to find ways to make P3s work." This view was substantially validated by retired Premier Stelmach (while Minister of Transportation and Infrastructure), who acknowledged the pressures faced by the government during this period:

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> At the time, we under-estimated migration into Alberta, and so we needed infrastructure among other things. When we looked at the money available, there was little left for infrastructure, as more money went to social spending. It was a question of how do we package this on-budget and on-time. By presenting it as a P3, we will have a consistent amount available yearly. So, in comparison to the DB [Design-Build], it was better to use P3s for all these. We had a very good team, which was crucial. My DM [Deputy Minister] assembled an excellent team to get this policy implemented. So, that was the start of all these. Frankly, we did the first component and later the second component. And because of the success of the road program, we went to school P3s.

These comments dramatize the convergence of the macro and micro interests persisting at the time, and goes to reinforce the pressures the governing political party and its prominent individual politicians, most significantly Premier Stelmach, were facing as the November 2004 general elections approached. With a rapidly growing economy and no coordinated plan to manage growth, the government was in a hurry to attempt anything to appear to manage the influx (visible objective) and remain in power (invisible objective) at the same time. This partly accounts for the appointment of a rookie Minister to bring forward new ideas, a new face and new enthusiasm to policy making and implementation. However, there does not seem to have been a conscious effort to balance the several competing interests of the multiple stakeholders (Burke & Demirag, 2017) involved in the Alberta P3 program. The comments from the AUPE bear this out, as they were critical of the nature of the engagement and the preconceived notions that were advanced by the government.

When we probed key actors' reflections about the P3 program implementation (in terms of stakeholder considerations, lessons learned and what they would do differently) there was a sense of accomplishment without any consideration of the impacts of decisions on a composite of stakeholders (Andon, Baxter, & Chua, 2015). A preponderance of comments received were focused on getting the projects delivered and not on how it was delivered or recognition/consideration of distributive impacts (Shaoul, 2005; Andon et al., 2015). Furthermore, while there was some acknowledgement of the complexity of P3s, and the incorporation of the interests of the private sector, we could not identify any concerns for the hybrid nature/intricate relationship of SPV-Procuring agency and the governance issues associated with it, again suggestive of a consideration for only a limited range of stakeholders (Burke & Demirag, 2017; Sagalyn, 2011; Shaoul et al., 2012).

Upon further examination of the role of Premier Stelmach, we note that he signed all the P3 contracts (except the on-going last leg of the Calgary Ring-road) either as Minister and/or as Premier. Our interviewees confirmed that he was a lead actor and that his focused leadership in delivering the Edmonton and Calgary Ring-roads as P3s was instrumental to the perceived success of the Alberta P3 program. Widely regarded as the principal actor, institutional theory considers him a human agent playing a central role in shaping a new institutional logic – the logic of alternative private sector-led infrastructure delivery. What made him a unique actor was his dual role as both a prominent local politician (decision role) and a cabinet Minister of the important Transportation and Infrastructure Ministry (implementation role). Essentially, then Minister Stelmach was at the core of decision making as cabinet Minster where decisions are made to advance political interests and the head of a critical Ministry of Transportation and Infrastructure, a ministry central to the governments role in meeting its electoral promises. As Minister, he had the political motivation and resources of the Ministry to advance purposive actions. In this agentic role he tends to exemplify what Lawrence and Suddaby describe as "institutional work" – where the purposive actions of individuals aim to create, maintain and/or disrupt institutions (Lawrence & Suddaby, 2006, p. 215; Lawrence et al., 2009).

Several of our interviewees identified other notable actors (sub-agents) in the major categories of project design (Stantec), Construction (PCL Construction), and Organization/Management (Deputy Minister of Transportation and Infrastructure) as institutionalized actors in these segments that were motivated by institutional environment elements to drive the P3 program forward. In our view these actors working in concert and individually were mobilized to enact, sustain and institutionalize the P3 program. There was also evidence of localization of the P3 concept. The Alberta government framed it as 'An Alberta solution (P3s) to an Alberta problem (infrastructure shortage)'. The localization of the P3 implementation within the Alberta context is consistent with Jooste et al.'s (2011) position that P3s are implemented differently in different jurisdictions and contextualized or customized to fit the local environment. We argue that this contextualization leads to the re-interpretations that celebrates some P3 aspects that are made visible (e.g. VfM and on-time, on budget, etc.) while some aspects (e.g. rationality, distributive justice, future costs and governance challenges) are made invisible and conveniently hidden from the public arena.

We trace Alberta's P3 policy persistence to a combination of both *macro and micro interests* that are carefully organized to ensure political continuity but cloaked as public interest. As an established governing arrangement (Kneebone, 2006) we argue that Alberta's governing philosophy goes deeper than its visible structures and therefore transcends political orientation and alignment. Having agreed on a course of action, the governing structures are arranged to ensure legitimacy of the process and its implementation. Therefore, we turn to institutional theory for insights into how organizational policies, such as P3s, are introduced, managed and routinized, drawing on its strands to attempt to understand/explain the emergence and sustenance of P3s in Alberta, Canada.

Institutional theory emphasizes the legitimacy of actions that validate organizational actions as acceptable actions in response to institutional environmental pressures/forces. First, we noticed elements of a new logic that was advocated in the media, indicating that government alone cannot provide infrastructure and that the citizens only care about infrastructure and not how it was delivered. This new logic was communicated as 'An Alberta solution to an Alberta problem' and was deployed to advance an agreed policy direction. The AUPE was critical of how the government approached the rather limited

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consultations with these pre-conceived plans. Furthermore, against the background of other Canadian jurisdictions now implementing P3s, public officials see modeling what other provinces that have successfully implemented P3s as an acceptable validating practice that could be considered legitimate and operate as a cover for Alberta's P3. Our public sector interviewees indicated as much, that they considered the practices in other jurisdictions when they were setting up Alberta's P3 procedure and practices in 2002–2003 and continue to benchmark them. We are concerned that this could amount to a rote modeling of the P3 arrangements elsewhere. Considering the long term nature of P3 contractual arrangements, and coupled with its complexity, if P3s are not properly structured and managed, they could constrain current and future public sector flexibility in responding to future service needs that best serves the public interest (Opara, 2017). According to Ross and Yan (2015, p. 448) efficient project delivery today must consider the needs of tomorrow. In essence, we must find the right balance between "efficiency and flexibility".

There are several broad implications of this study. First, the impact on the accounting industry could be transformational, including a revision of the various advisory services now being offered by the big firms (PwC, Deloitte, Grant Thornton, KPMG and Ernst & Young) to incorporate the socially constructed nature of P3s. It is important to recognize that the perceived objective basis for P3 decision making is *not objective*, but socially constructed, and represents contextualized interpretations to facilitate P3 implementation. Therefore, P3 adoption and deployment should be carefully evaluated to account for distributive impact among stakeholders. Identifying the demarcation between the visible and invisible components is central to making the impacts clear to all stakeholders. The orchestration of the perceived objective basis of P3 decisions does not eviscerate the distributive injustices, but simply makes them opaque. Our job as accountants that serve and protect the public interest is to clarify all the elements that should be considered as part of a P3 decision making process – especially the perceived objective elements and how these become negotiated in context, including such artefacts as VfM, PSC and risk transfer. Essentially, and consistent with prior studies, the tools we rely on to make decisions about P3s are not absolutely objective tools – VfM, PSC, NPV, etc. – but are socially constructed and subject to possible manipulation. Therefore, reliance on them must take into consideration their interpretation as contextualized and negotiated (Horvat & Korosec, 2015; Khadaroo, 2014). Accountants will become more reliable business advisors, when they provide a complete picture of these aspects of P3 assessment that are open to contextualized interpretations and, treat and present them as such (Andon et al., 2015). Furthermore, evidence-based knowledge that there are also *macro and micro* motivations (dual nature) to the policy and structure of P3s, together with visible and invisible parts to the disclosures would make accountants a trusted ally in making P3 decisions transparent and knowledge-driven in order to provide the most value to taxpayers. Placing accountants within this attestation of the nuanced nature of P3s is the professional and positive way to face the future of P3 consulting.

Second, and related to the above, there is the potential for a re-shaping of the content of the professional advisory services provided by the UN agencies and their affiliates. These include the World Bank Group, (e.g., the International Finance Corporation, IFC) and the International Monetary Find (IMF), among others. A range of advisory services offered by the UN and its affiliated agencies on P3s is built on the purely technical and perceived objective basis of P3 policies and implementation, which focuses on providing technical knowledge around the world, especially in emerging economies. The reach and impact of the World Bank's resources (for instance, the World Bank Public-Private Partnership in Infrastructure Resource Center) is deep and extensive. Their advisory services could be significantly improved with a balanced view of the nature of the impacts of P3 policies - especially a recognition that P3s have diverse distributive impacts on various stakeholders and that equity demands that the interests of all stakeholders be considered to ensure balance and fairness in P3 implementation. In our view, these professional service groups represent knowledge carriers (Scott, 2014; Andon et al., 2015) that have contributed to the spread of P3s around the world (Hodge & Bowman, 2006). Overall, the P3 consulting industry, as presently constituted mainly resides in accounting firms and the UN affiliated agencies, and so there is an opportunity to focus on them in presenting a balanced view of P3s as part of informed discourse leading to policy adoption, planning and implementation.

The nature and focus of stakeholder discourse leads to an important area of future research- the post-implementation phase of P3s. For instance, how does the *ex-post* evaluation motivate or impact the decision to implement or not implement P3s (Andon, 2012). The absence of research in the post-implementation phase has been noticeable in prior studies (Andon, 2012; Sagalyn, 2011). Another promising area of enquiry is to understand the modality, structuring and management of P3 asset transition back to government. At the moment there is limited knowledge on the handback of P3 projects post the contractual phase (Chung, 2016), and how this could be a factor in the decision to pursue or not pursue P3 projects. With a number of P3s now approaching the end of their contractual period, this would add to and advance the stock of knowledge in the whole-of-life cycle and thus effectively close the loop. Finally, given the limits of the bundled programmatic nature of Alberta's P3s, an area that merits future enquiry is to assess the unbundled contextual nature of each P3 sector, especially in a jurisdiction that presents greater diversity of P3 projects, including P3 hospitals, prisons, water, waste management and housing developments. Insights provided by sectorally unbundled P3 projects would extend our understanding whether there are jurisdictional institutional differences that condition the performance of a certain sector versus another and why.

In conclusion, although there is no hard evidence that P3s consistently deliver VfM via risk allocation, governments have developed a culture of belief in this model (Boardman et al., 2016). It is, we argue, precisely this culture of belief and faith, buttressed by the absence in previous scholarship of the influence of *macro and micro motivations*, and not objective data or empirical evidence, that drives the accelerated deployment of P3s (Boers et al., 2013). According to Khadaroo (2014), "the accounting numbers used to value risks are not neutral or objective but are socially constructed and may be manipulated to justify the P3 decision" (p. 154). The risks associated with a policy that relies on subjective data seems too high considering the magnitude of these investments and the potential adverse impact on taxpayers and the fiscal health of the pro-

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vince. While this climate of subjective decision-making, unclear value delivery and uncertain outcome persists, governments take comfort in the awareness that taxpayers are simply happy to have infrastructure now while the costs will come later. What those costs will mean for future policy options remains to be seen. In declaring a moratorium on P3s in Alberta, the Transport and Infrastructure Minister stated: "I think there are real questions about the overall benefits that is received by P3s". "I have decided that we're not going to be proceeding with P3s in the meantime, until a final decision has been made" (Henton, 2016). Premier Rachel Notley commented that: "Often P3s are a process which reduce cost at the front end and increase costs down the road and are more expensive to taxpayers". "But that being said, we have an obligation to review all types of alternative financing arrangements to ensure that we're getting the best deal, both short-term and long-term, for taxpayers" (Henton, 2016). Therefore, with the growing doubts regarding P3 efficacy, not just by auditors and researchers, but by Alberta government leaders, the sun may be setting for Alberta's P3 program now that the sub-national government is no longer convinced in the value of using P3s. Given these shifting political dynamics, whether this could spell the end for Alberta's P3 experiment or a temporary retreat is an open question.

What we propose in this critical re-evaluation of P3 effectiveness is that the moratorium should be transformed into a complete dismissal of current P3 policy, and replaced by policy solutions focused on a detailed cost-benefit analysis of each project delivery option, anchored on a comprehensive assessment of project impacts on taxpayers, and an avoidance of a transfer of resources from the citizens to corporate organizations. We argue that there are sufficiently tested and adaptable operational and contractual structures under the P3 mechanism that can be deployed in a new infrastructure policy. For instance, bundling projects to achieve cost efficiency must be pursued; financing provided via government borrowing, if and when required, must be the norm; and the application of performance incentives such as availability payment that links the contractor's interest to the public interest must be strictly implemented to ensure the contractor has 'some skin in the game' which serves as motivation to deliver on budget, on schedule and to output-based specifications. We remain convinced that accounting must be seen, and perceived, as part of the solution in ensuring accountability by public officials while providing a platform that facilitates fair treatment of all stakeholders in a future infrastructure delivery policy.

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N/A.

Appendix

See Appendix Tables.

Appendix 1
Profile of Alberta's P3 projects.

Profile of Alberta P3 projects				
			Completion	
Project Name	Budgeted Cost	Contract Price	Planned	Actual
Anthony Henday Drive – Southeast	493m	493m	Fall 2007	Fall 2007
Anthony Henday Drive – Northeast	1.82b	1.82b	Fall 2016	Fall 2016
Anthony Henday Drive – Northwest	1.42b	1.42b	Fall 2011	Fall 2011
Northeast Stoney Trail Ring Road	650m	650m	Fall 2009	Fall 2009
Southeast Stoney Trail Ring Road	770m	770m	Fall 2013	Fall 2013
Southwest Stoney Trail Ring Road	1.42b	1.42b	Fall 2021	Fall 2021
Alberta Schools Alternative Procurement, Phase 1 (ASAP 1)	634m	634m	Summer 2010	Summer 2010
Alberta Schools Alternative Procurement, Phase 2 (ASAP 2)	253m	253m	Summer 2012	Summer 2012
Alberta Schools Alternative Procurement, Phase 3 (ASAP 3)	289m	289m	Summer 2014	Summer 2014
Evans-Thomas Water and Wastewater Treatment Facility	60m	60m	Summer 2014	Summer 2014
TOTAL		**7.8b**		

Source: Author's compilation, 2017.

Appendix 2
Sample risk allocation.

Sample of risk allocation between the Government of Alberta and P3 Contractor				
	Traditional (Conventional)		P3	
	GoA	Contractor	GoA	Contractor
Development, design and construction risks				
Concept approvals – environmental – Alberta Environmental Referral	✓		✓	
Concept approvals – environmental – Federal CEAA (assumes CSIF funding)	✓		✓	

(*continued on next page*)

Appendix 2 (*continued*)

Sample of risk allocation between the Government of Alberta and P3 Contractor	Traditional (Conventional)		P3	
	GoA	Contractor	GoA	Contractor
Bridge crossing and/or watercourse alteration				
Environmental permits	✓			✓
Environmental Contamination				
Environmental Contamination (known)	✓			✓
Environmental Contamination (unknown)	✓			
Archaeological				
Archaeological finds (known)	✓			✓
Archaeological finds (unknown)	✓		✓	
Land acquisition	✓		✓	✓
Delays by outside agencies (utilities and permitting)	✓		✓	✓
Delays by the Province	✓		✓	
Minimum insurance and bonding requirements	✓		✓	
Adequacy of insurance and bonding requirements	✓			✓
Confirmation of insurance and bonding		✓		✓
Sub-contractor insolvency		✓		✓
Design error	✓			✓
Changes in standards	✓			
Alberta Transportation supplied data – accuracy		✓		✓
Alberta Transportation supplied data – sufficiency	✓			✓
Alberta Transportation supplied data – interpretation		✓		✓
Traffic volume and vehicle mix	✓			✓
Patent infringement	✓	✓		✓
Weather	✓			✓
Labour disputes	✓			✓
Fire		✓		✓
Vandalism		✓		✓
Damage to works		✓		✓
Traffic accidents		✓		✓
Damage/injury to third parties		✓		✓
Damage/loss to utilities		✓		✓
Defective materials		✓		✓
Water/air/soil pollution – unknown pre-existing	✓		✓	✓
Water/air/soil pollution – known pre-existing or arising from work	✓	✓		✓
Quality assurance/quality control	✓	✓		✓
Quality audits	n/a	n/a	✓	✓
Public interface	✓	✓		✓
Workplace Health and Safety		✓		✓
Utilities	✓	✓	✓	✓
Facility expansion risk				
Traffic congestion due to signalization	✓			✓
Traffic growth	✓			✓
Future interchanges or additional lanes	✓		✓	
Operation and maintenance risks				
Changes in standards and legislation	✓		✓	
Weather	✓			✓
Labour disputes	✓			✓
Traffic – volume and vehicle mix	✓			✓
Traffic – deterioration	✓			✓
Actual maintenance costs higher than anticipated	✓			✓
Damage/injury to third parties		✓		✓
Damage to works	✓		✓	
Water/air/soil pollution		✓		✓
Vandalism	✓		✓	
Condition after 30 years	✓	n/a		✓
Performance	✓			✓
FINANCING RISKS				
Interest rates – before Agreement closure	✓		✓	
Interest rates – after closure	✓			✓
Inflation on Construction Agreement		✓		✓
Inflation on operation, maintenance, rehabilitation	✓		✓	✓

Source: Ministry of Transportation and Infrastructure, 2017.

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