DOES STANDARDIZED PROCUREMENT HINDER PPPS?

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ABSTRACT

Today, governments all over the world are coping with decreasing budgets and therefore are relying increasingly on private investments. Further, we see in public administration a clear shift from traditional top-down approaches to multi-stakeholder or network types of governance. In the last few decades, governments are relying heavily on the self-regulating capacity of the market and have reorganised various sectors to function under free-market principles. The emergence of PPP has to be seen in light of these developments. Despite the liberalisation tendencies and consequently a decreasing command and control system, we do see a growing number of institutional norms and procedures for reasons of legitimacy and accountability. Market rhetoric advocates that consistent or standard approaches will drive value as well as market confidence and stability. However, another school of thought suggests that standardized processes reduce the flexibility required to maximize innovation, which is dependent on tailoring solutions to meet specific project and jurisdictional needs.

With respect to PPPs, the external context is increasingly global, and certain factors are driving the marketplace towards common practices and a degree of normalization. Alternatively, project strategies from jurisdiction to jurisdiction are frequently different, which consequently results in distinctive project implementation approaches. In short, standardization enhances open markets while customization accounts for the variance in project objectives, conditions, and stakeholders.

The paradox has been a subject of debate in planning practice and literature where institutions are often perceived as rusty old fixtures, which usually hinder the solutions to planning problems (Demsky and Salet, 2010). Rules and procedures are then often seen as limitations to multi-stakeholder and interactive ways of planning. Rules can be very restricting and limit the opportunities to find creative solutions that meet the requirements of the specific situation. (Zonneveld et al. 2011) This is in line with 'adaptive governance' theory that stresses the importance of learning (in projects) and coproduction between stakeholders for designing solutions for today's problems. This requires flexibility or adaptability to specific circumstances. However, in legal literature, rules and procedures are often seen as ways to enforce legitimacy. With growing liberalisation and competition, various forms of supervision are introduced which serve to control and, as a rule, to enforce compliance with other behavioural standards than those laid down for the proper functioning of the markets (Prechal and van Rijswick, 2006).

This debate becomes prevalent in the PPP paradigm. With the emergence of PPPs we depict a growing set of procedures and call for standardised approaches. Many believe that the absence of a common comprehensive procurement legislation hampers the development of PPPs (Jooste et al. 2011). Moreover, standardised PPP arrangements "can introduce clear lines of

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accountability, transparency of outcomes and performance, clarity as to the roles and responsibilities of the contracting parties, an assessment of project risks, competition for the delivery of services, and the motivation to succeed" (Stone, 2006, p. 172). Others, however, stress the importance of aligning the PPP schemes with the situational characteristics (see e.g. Dewulf et al., 2012).

In this paper, we study the emergence of the PPPs in three different developed regions with varying maturity levels and contexts: Europe, Australia, and the US. In these three areas, we find a similar trend towards a central and comprehensive PPP archetype. These regions all face a similar challenge for PPP procurement: finding the balance between standardization, which is driven by market and socioeconomic forces, and customization, which is driven by end user expectations, local norms and objectives, and unique project characteristics. We explore the challenge of standardization and customization by first describing the motives to standardize PPP processes on the one hand and the need for customized solutions on the other hand. Subsequently, we explain the multi-national case study approach used to examine this issue in distinctive jurisdictions. Finally, the results of the case studies are compared and some basic conclusions are made. The comparative analysis generates insights on how national governments are coping with this balance.

Keywords: Infrastructure, public-private partnerships, procurement, standards

INTRODUCTION

Balancing between Standardization and Contextualization

The debate between standardization and contextualisation is not confined to PPPs. In urban planning and public administration literature, for instance, this tension has been the subject of discussion in many publications. The debate is often between government and governance. Government refers to regulation and hierarchical steering processes while governance is characterised by less regulation and network management. Hierarchical steering models are based on the idea of uniformity and stability in society while network models rely on variety and dynamics (De Bruijn and Ten Heuvelhof, 2008). Project management tools find their origin in the first philosophy while process management approaches are grounded in the latter. A similar distinction is made by Van Gunsteren (1994). He distinguishes between two governance styles: (1) analysis and instruction and (2) 'variety and selection'. The first refers to the central rule approach, which impedes learning potential, while the second one focuses on the analysis of the problem and tries to engage and stimulate actors to solve the problem. This is in line with Ostrom (1990) who stresses the importance of aligning organisational structures to local situations and the need to increase learning potential. Rules and regulations are often barriers for learning and adapting to local circumstances.

A similar debate can be found in systems engineering and more specifically between 'systematic' and 'systemic' approaches. Al-Salka et al. (1998) for instance state that a good decision support system should be domain independent and provide systematic guidance. Systematic design is prescriptive by nature and should define the process precisely. A systematic method emphasises a procedural approach (Love, 1998). A systematic approach is, however, not

⁴ Cited In M. Hajer (2011) De energieke samenleving; op zoek naar een sturingsfilosofie voor een schone economie, Planbureau voor de leefomgeving, The Hague

similar to a systemic approach. The first refers to an orderly, predictable and structured process while the second to the effects on the system (Kaufman and Watkins, 2000).

However, it is not simply a matter of choosing between the two philosophies with respect to PPPs. Rules, standard regulations and procedures are aiming to generate transparency and cost efficiency while contextualisation is needed to adapt to local circumstances

DRIVERS OF STANDARDIZATION

In the context of the above discussion, two major drivers generally are pushing the standardization of PPPs: market-based factors and socio-political factors. The market-based drivers are influenced by globalization, transaction costs and market precedents whereas the socio-political drivers are shaped by public and legislative scrutiny as well as procurement regulations.

Market Drivers

As the world becomes increasingly flat, large engineering and construction firms from many different regions of the world are quite active in the infrastructure project marketplace. Shortages in the labour market in both volume and specialization are also fuelling this development. Moreover, to enhance competition public sector clients have launched open tendering procedures enabling foreign companies to get more involved. The flow of capital made possible by the global financial markets further heightens opportunities for investors and financial intermediaries; not surprisingly, PPPs have become a popular target - despite the recent worldwide economic crisis. Today, the infrastructure market is, for the most part, an open global one, and normalized statutory requirements and regulatory procedures stimulate this open market system.⁵

Many argue (Grimsey and Lewis, 2004; Yescombe, 2007) that PPP projects have economies of scale. Projects need a specific volume (in terms of costs and contract period) to recover the transaction costs. Bidding costs are typically high, and certain procurement obligations such as security requirements like letters of credit can limit those qualified to participate. Consequently, the number of available bidders (or sponsors) is often low. In addition, the nature of PPP projects often requires the development and negotiation of new or modified contracts for each project; this is time consuming. Consequently, key stakeholders in such projects are pushing for standardized procurement processes and contracts to decrease transaction costs.

Socio-political Drivers

As the new public management paradigm has evolved and been liberalized so too has the scrutiny of government. Legislative bodies, governmental auditing offices, non-governmental organizations and the public in general have focused their attention particularly on the public-private interface. In general, this scrutiny has increased efforts to improve accountability and transparency. For instance, Buxbaum and Ortiz (2008) describe such issues as well as governmental responses in the US PPP market.

Shaoul et. al. (2009) identify two streams of accountability: (1) upward - macro accountability to the legislature and the public as taxpayer and electorate, and (2) downward - micro accountability to the public as service users. To safeguard the public interest or taxpayers'

⁵ This is not to imply that participants from the local markets are not key actors; rather, the participants such as sponsors, investors, and contractors are increasingly from Asia, Australia, Europe, and North America.

money, governments have implemented various central governance rules and procedures. These rules and procedures increase the transparency of the decision-making and the ease of accountability at the macro-level. In Europe, for instance, PPP concessions are subject to rules and principles resulting from the European Union (EU) Treaty: the principles of equal treatment, mutual recognition, proportionality and transparency. These principles are translated in the EU Directives for the coordination of procedures for the award of public contracts. The transparency principle, for example, safeguards the clarity of the contracting public authority's steps in all phases of the procurement procedure. Similarly, contract provisions and performance standards function in a similar way at the micro-level; these requirements compel PPP contractors to deliver user services as contractually defined.

The literature focused on accountability and transparency tends to take a pessimistic view of PPPs (see Froud, 2003 as an example). Interestingly, a few have considered a different perspective while focusing on the transparency and accountability issue. Grimsey and Lewis (2007) recognize that long-term arrangements potentially limit government flexibility; however, they contend that a conventional delivery (i.e. unbundled separate contracts) is executed in an "environment largely removed from the economic signals to which private entities are exposed... and the principals involved are often insulated from the consequences of their actions and decisions" (p. 172). Certainly, infrastructure decisions have consequences across generations, but as Stone (2006) indicated politicians and government officials making such decisions bear little personal responsibility for their consequences and so have little incentive to change their behaviour. Conversely, mature policy and standardised PPP arrangements "can introduce clear lines of accountability, transparency of outcomes and performance, clarity as to the roles and responsibilities of the contracting parties, an assessment of project risks, competition for the delivery of services, and the motivation to succeed" (p. 172).

DRIVERS OF CUSTOMIZATION

Shaoul et al. (2009) criticized the general governance guidance codes since they tend to favour the upward accountability stream despite the fact that many policy programs and executive agencies emphasize the interests of consumers and taxpayers. To some extent, infrastructure agencies (clients) have tilted the balance towards citizens and business enterprises - the users of infrastructure services - with recent initiatives. For instance, the UK Highways Agency's strategic focus on "safe roads, reliable journeys, and informed travellers" emphasizes the centrality of the motorways' users. Indeed, flexibility to delineate specific project requirements and service provisions is a necessity to satisfy the interests of the diverse users of infrastructure. Furthermore, motives for infrastructure programs and projects differ by country, region and situation; therefore, customized approaches are essential. For instance, a highway segment may be needed to either open a new mobility corridor or provide congestion relief. While each need can be satisfied physically with a new paved route, the conditions related to the demand, adjacent network, site, environment, surrounding communities, local ordinances, etc. are likely to differ significantly. Consequently, the delivery, funding, and management approach taken to meet each need must account for the alternative circumstances.

As the end users of infrastructure receive more attention, the means for doing so should evolve. This "bottom-up" perspective will balance the "top-down" policies and practices of the past. Davies et al. (2010) provide a lens to examine this transition adapted from the literature on business models; they contend that the utilization of PPPs represents an effort by clients, consultants and contractors to provide better value to infrastructure end users through the

implementation of different business models. A business model refers to how a firm, endowed with given technology, capabilities and assets successfully configures its organisational structure (Teece, 2010) and transactional relationships with external stakeholders (Amit & Zott, 2001). Further, it focuses on the way to deliver value for the customer and identifies both a firm's strategic choices and operational implications and profit potential, which can be analysed, tested and validated (Shafer et al., 2005). A business model should then be aligned to the specific circumstances of the project. Still, similar PPP arrangements are often implemented despite differing policy, economic and regional contexts across countries. Mostly, contracts are not tuned to project-specific needs and are copied from other projects and contexts (Blanken, 2008).

As the prior discussion highlights, the market-based and socio-political factors tend to force the PPP market toward common frameworks and processes in order to open markets, lower transaction costs and increase the transparency and legitimacy of transactions. At the same time, the importance of infrastructure users as well as the demand by clients for some project to project flexibility cultivates the need for customized or tailor-made arrangements; this has prompted implementation of various business models (i.e. differing configurations of the infrastructure value chain). These two prevailing trends are often at odds with one another. For instance, a heavily regulated procurement environment may oblige an infrastructure client to adopt a particular type of business model, which may or may not satisfy the wishes of the client or the end users. Without the right to use the business model to fit the circumstance, clients may be deprived of the ability to make a strategic decision that could enhance overall welfare and value.

RESEARCH METHOD

The drive toward standardization in PPPs is a result of both market and sociopolitical forces while the push for customization (or contextualization) is a consequence of the rising emphasis on end-users in infrastructure provision and services as well as the need to meet or fulfill, at least minimally, the expectations of the stakeholders involved in these complex arrangements. Accordingly, the investigation seeks to understand the degree of compatibility between these two divergent perspectives. The view taken is that these forces are indeed conflicting, but they are likely reconcilable. The method employed to examine the interplay between standardization and customization is a multi-national case study among Europe, Australia, and the United States. These settings provided opportunities to analyze the drivers for standardized market frameworks and the drivers for customized approaches and outcomes. With respect to standardization, the prevalence and strength of: (1) market-based forces such as procurement regulations and contractual precedents; and (2) socio-political forces such as macrolevel policies and principles and micro-level guidelines such as model contracts and performance standards; provide an indication of its impact. With respect to customization, the prevalence and strength of: (1) regionally-based drivers such as variance from inter-jurisdictional norms and the increased accommodation of local stakeholder interests; and (2) project-based drivers such as the implementation of varying business models; provide and indication of its impact. A similar approach was followed by Bechky and Okhuysen (2011) comparing responses of organisations to surprises in two different settings.

The case from each jurisdiction is considered along three broad dimensions: (1) national/regional environment, (2) programmatic environment, and (3) project environment. Within each dimension, more specific elements are examined. For instance, within the national/regional environment the effects of any federal guidelines or principles, legislative influences, and market forces were examined to assess the impacts of each on the overall

national setting as it relates to PPP policy and implementation. Once each case was developed, comparisons and observations between the jurisdictions were made.

CASE EUROPE

Europe can be seen as a collection of countries and cultures with a long and evolving history. In 1993, the Maastricht Treaty officially established the European Union (although antecedent unions of the various nations began as early 1958), and the Treaty of Lisbon in 2009 is the most recent amendment to its constitutional basis. The EU operates via supranational institutions such as the European Commission and intergovernmental agreements. Certainly, the EU and its relationship to its member states play an important role in procurement and PPPs. As a result, the PPP landscape in Europe emerged from a variety of national PPP policies to a more standard and unified PPP policy. In our analysis, we make a distinction between European and national rules and procedures. The role and responsibilities of the various institutional levels is illustrated by analyzing the case of the Netherlands and a recent projects the Second CoenTunnel. The case of the Netherlands illustrates a general European trend towards standardised national procurement routes and PPP approaches.

European/National Environment

Europe is a mix of cultures and each country has a different jurisdiction, market situation, and institutional setting. Not surprisingly, we depict major differences in the evolution of PPP policies among countries. PPP contracts boomed in the United Kingdom while in Austria and Sweden, for instance, PPPs did not progress beyond the pilot phase. We also observe major differences in the transition pathway from pilot phase towards a mature market (Dewulf et al. 2012). Despite these differences, the European Union has strict European regulations regarding the procurement of (large) projects stimulating an open market within Europe. Besides these European procurement regulations, individual countries have their own jurisdictional authority, PPP tools, and procedures. The national states are responsible for national infrastructure projects (defense, road, water and rail projects) while provinces and municipalities are responsible for provincial and local infrastructure. Historically, most of this infrastructure has been delivered by government enterprises such as, for instance, the UK's Highways Agency.

The emergence of concession concepts in most European countries can be seen as a reaction to government needs for funding. Public sector financing of large scale projects has become difficult in recent decades, and governments have been increasingly relying on private sources. This was the case with the emergence of the well-known Private Finance Initiative in the United Kingdom but took place in continental Europe as well. In the Netherlands, for instance, the first two PPP projects launched in the early nineties were the Wijkertunnel and Noordtunnel due to scarce public funding. However, it took almost a decade before new projects were initiated. In 1998, the liberal social democratic administration was confronted with insufficient public funds to meet the enormous investments needed for transport infrastructure. Consequently, private contributions were considered as a possible solution and privately financed projects were put on the political agenda (Koppenjan, 2005).

Most countries also have a national PPP unit. In the Netherlands, the government published guidelines in 2012 to identify PPP projects and ensure value for money through the Public Private Comparator (PPC) and the Public Sector Comparator (PSC). Further, the European Commission has been encouraging member states to launch PPP programs. For instance, the stimulus of PPPs has been an important element of large policy programs such as

the Trans-European Transport Network (Ten-T). An important milestone in the PPP policy development at the European level was the publication of the Green Paper in 2004 focussing on the public procurement of PPPs and in particular the selection of private partners. To increase transparency and public spending accountability, the Dutch government has developed a standardized procurement system and procedures. For instance, since 2005 the PPC is systematically used to assess all projects above 112.5 million euros (kenniscentrum, 2005). Based on previous pilot projects, procedures and documents are standardized. By doing so, the government attempted to reduce transaction costs and times of completion (kenniscentrum PPS, 2005). Further, the government introduced the concept of listed risks as a fair mechanism to discuss potential risks during the procurement phase (Bos, 2009) and in 2008 a handbook for DBFM was published by the government.

Programmatic Environment

Public Agencies

In most European member states, a PPP unit has been installed with clear and strict procedures enabling the emergence of PPPs. In the Netherlands, the PPP unit was installed in 1999, advising government agencies and providing private companies with general PPP information. Three years later, the PPP unit gained a more active role encouraging the use of PPPs and improving capacity of the public and private sectors. Some public agencies have significant authority to initiate and implement PPPs such as the Highways Agency in the United Kingdom, which implements the PFI for England's motorways on behalf of the Department for Transport and in accordance with the policies of Her Majesty's Treasury.

In the Netherlands, public agencies play a similar role. Like most European countries, the EU legislation and intent is adapted to fit the specific national conditions. In the late eighties, PPPs received much attention in the political debate but the major impulse came in 1998. The second liberal-social democratic administration led by Kok was confronted with insufficient public funds to meet the enormous investments needed in transport infrastructure. The rationale for PPPs is value for money but a major difference between the early and recent policy rationale has emerged. Financial motives ('money') were the driver of the first wave of projects in contrast to quality improvements ('value') for the second wave of projects. This change in motives is also reflected in the increasing role of the line departments in the procurement process. The decision to pursue a PPP project is no longer the sole responsibility of the Ministry of Finance (the PPP unit) but a joint responsibility of the line department and the Ministry of Finance.

Private Agencies

The Dutch and, in general, the European PPP policy is driven by issues such as transparency, legitimacy and fair competition. The need for open competition is recognized by the industry. The PPP policy is broadly accepted in society and the level of trust between the private and public sectors has grown (Dewulf et al. 2012).

Project Environment

Project Planning

Planning for economic infrastructure is a clear mandate of the national governments, not of Europe. The planning for social infrastructure is often done at the local level. Like many countries in the EU, the Netherlands uses the public-sector comparator technique to compare the net present value of the concessionaire's proposal with the traditional cost of design,

construction, maintenance, and operation in the traditional method. This instrument forms a crucial role in the decision-making. In the last decade, knowledge centres were established within the line departments illustrating the shift from the focus on saving public money towards a focus on service quality.

Project Procurement

The decision to procure a road project, for instance, through a DBFM contract is made by the Dutch Minister of Transport. Often the Competitive Dialogue (CD) procedure is applied because of the technical and financial complexities of such projects. The duration of an infrastructure contract is set at 30 years.

After prequalification, five consortia are invited to participate in the dialogue. Certain Critical Aspects, as identified by the contracting authority based on risk management (items such as the stability of the existing infrastructure, air quality and lane availability during the construction stage), forms the basis for some of the dialogue products which must be submitted by the candidates at the end of the dialogue stage. These dialogue products must meet a minimum quality level before the candidates are invited to bid. Four further Critical Aspects of an Action Scheme, plus the acceptance of Risks and Optional Requirements are part of the conversation during the Consultation stage. The Optional Requirements set by the contracting authority are additions to the project's scope, and candidates can choose whether or not to meet them. In a similar way, candidates could decide whether to accept risks, based on a pricing scheme, or leave these in the hands of the contracting agency.

An example of the CD procedure in practice is The Second Coen Tunnel in Amsterdam. This project is large (estimated value €300 million NPV) and complex, and involves the maintenance of an existing, forty-year old tunnel plus the construction of a second tunnel alongside the current one. The contract for the Coen Tunnel project was signed in 2008, and the maintenance of the existing tunnel was then transferred to the contractor. The construction stage for the new tunnel started in 2009. This concession project, the first to be procured using the CD procedure in the Netherlands, consists of widening approximately 14 kilometres of highways at the north and south entrances to the existing Coen Tunnel, and expanding the tunnel's capacity from two lanes to three in each direction plus two further reversible lanes, enabling five lanes of traffic in one direction during peak hours. This project followed the implementation process just described.

CASE AUSTRALIA

The Australian PPP market is dynamic and the type and style of projects undertaken using this form of delivery have varied with changing market conditions. Similar to Europe, early PPP projects were driven by the need for investment in a tight fiscal environment; bankability of projects was critical. As the PPP market matured, the impetus for projects changed to a focus on value for money and numerous economic and social projects were delivered. Post the global financial crisis, a number of road and tunnel projects have experienced distress as demand risks have materialized. Social PPP projects based on availability payments from government have continued to be an effective delivery form post the global financial crisis. With the introduction of national PPP guidelines occurring in December 2008 the New Royal Adelaide Hospital project has been selected as case example as it has been undertaken using these national guidelines.

National/Regional Environment

With a country having nine separate jurisdictions coming together under a federation, it is understandable that differences exist between jurisdictions, but similarly, for reasons of continuity of deals and productivity, areas of consistency in approach are sensible due to the relatively small market within a country with a population of only some twenty three million. Before analysing the Australian PPP approach, it is worth remembering that Australia has three tiers of government, Federal – generally responsibly for issues of national significance (like defence, interstate supply chain, and taxation); States and Territories – responsible for day to day provision of services (e.g. infrastructure, including hospitals, schools major roads); and Municipalities – responsible for local issues (e.g. planning compliance).

It is also worth noting that historically most Australian services have been delivered by state owned enterprises and it is from this basis that PPP projects have emerged. Projects initiated in the 1980s and 1990s were primarily based on full risk transfer agreements and the driving rationale for their use was a desire by governments to transfer risk to the private sector and to generate development without adversely affecting governments budgets. Since these early projects, the Australian PPP industry has matured and the driving influence for more recent projects has been the desire for enhanced value. Tracking the sources of project funds available from government provides a lens for understanding who is responsible for aspects of PPPs in Australia. General taxes and the Goods and Services Tax within Australia are collected by the Federal government. The Federal government distributes many of these funds by consensus with state and territory governments to provide the base budgets for the states. Some monies are held by the Federal government for its own areas of responsibility and this includes some grants that are linked to projects of national importance. The states and territories are responsible for the organizing and delivery of infrastructure. States funds come not only from their Federal government allocation but also from duties and local taxes. The states and territories are also directly responsible for any concessions granted to the private sector in a PPP arrangement.

The establishment of Infrastructure Australia in 2008 by the Federal government sought to prioritise projects, to create consistency across government for the procurement of major projects, and, in part, to assist with deal flow and resource management. One of the first outcomes of Infrastructure Australia was the development of national PPP guidelines as one of its first priorities. Prior to the release of these guidelines as endorsed by the Council of Australian Governments through the Federal Minister for Infrastructure and Transport, Australian PPPs followed individual State and Territory policies and procedures.

Federal guidelines or principles

The introduction of National PPP Guidelines was done somewhat to create consistency in the general approach adopted for PPP procurement, but these guidelines do not prevent subtle approaches and strengths in different sectors and jurisdictions from emerging. The extent of standardisation incorporated in the national guidelines provides a sound basis for the process by which PPPs will be considered as the procurement strategy and if deemed appropriate the process by which they will be procured.

The standardised approach confirms that PPP's will be used with a focus on value for money outcomes, and the clarity will be provided to the market by way of a detailed business assessment prior to replace or documentation to the market for bidding. The phases of PPP delivery have been standardised to include an expression of interest phase to the market generally followed by short listing (to say three bidders) and inviting these shortlisted bidders to respond to a request for proposal. The preferred bidder will in turn enter a negotiation phase in

advance of both contract and financial closure. Testing of the value for money proposition is done by comparison with the public sector comparator based on whole of life discounted costs. Within the national guidelines there are, however, a number of specific exclusions that allow individual jurisdictions to meet their specific legislative and governance requirements. These exclusions include the level of government approvals required, the timing of approvals, the method of conducting the public interest test, disclosure of information regarding the public sector comparator, specifics of the tendering process, probity, and the requirements for communication.

Consideration of what is not agreed for inclusion in the National guidelines is as informative as the specifics that are included. Not agreed include: commercial principles for economic infrastructure projects; standardised contracts; clarity on government's responsibility for approvals such as design and planning; and specific risks associated with important matters such as soil contamination, refinancing, or industrial relations.

In late 2011, Baker and McKenzie (2012) undertook a survey of some 104 senior business owners, lawyers, project managers and CEOs all of whom had had current experience on PPPs. Of relevance to this paper is that they asked the question 'Does Australia need a more centralized approach?' (to PPPs). Key responses to this question included:

- 83% of private sector interviewees sought a simplified procurement process but a list of return of all schedules.
- 60% of interviewees supported or strongly supported a centralized state government as approval mechanism for PPP projects.
- About 70% of interviewees were of the view that government should be more active in coordinating projects. This was a direct response to approval processes for the likes of design delays wheretimelines become threatened by the speed of the approvals from other agencies.
- Many were of the view that a government probity process is required.
- Consents that continuing best and final offer processes created additional cost to the private sector.

A sentiment commonly represented was "states run their own projects and the Commonwealth separately does its own things. It would be better to have a whole of Australia approach..." [a senior government official, Baker & McKenzie (2012)]

Separate to this guidance material on PPPs, Infrastructure Australia has developed regimes for establishing priority projects across the country and methods for achieving outcomes. This prioritization of projects became most important immediately post the global financial crisis in the allocation of stimulation funds. It should be noted that the project prioritization has been undertaken for projects seeking Federal funds in collaboration with state governments and the priorities established are independent of the mechanism ultimately adopted for financing the project. Further, some PPP projects are totally driven as State initiatives and these are commonly social infrastructure in nature. Interestingly, the Eastlink project was denied federal government funds on the basis that it was to be a toll road.

Legislative influences

States and Territories are the responsible government for implementation of infrastructure projects and therefore it is at this level where legislation, if required, is formed. The requirement of the states is that the option of a project being delivered as a PPP is a serious consideration in the business case. The federal government exerts its influence as a funder. PPP projects are subject to all normal project requirements for planning, heritage, environmental and work

approvals. Enabling legislation exists for projects to be designated of state significance and thus theoretically fast tracking some of these approval processes. Generally, such fast tracking is not undertaken and due process is followed to ensure full stakeholder engagement.

Project specific agreements, decisions and concessions are made by the jurisdiction responsible for the project. All three levels of government are involved in approvals and these can bring significant risk to a project. Early involvement of government's project team to arrange approvals is seen as good practice.

Market forces

Australia has an active PPP market and private participants strongly recognize the need to maintain a consistent flow of projects if a mature industry is to be maintained. The opportunity for governments to bring forward projects due to the cash flow arrangements within PPPs is an encouragement for governments to adopt a PPP approach along with the increasing evidence of value for money savings in capital expenditure (Raisbeck et. al. 2010).

Programmatic Environment

Public agencies

Specific advocates for PPPs from government are far less prevalent than specialist teams of project staff focusing on major infrastructure investments. These government agencies seek to identify the 'best' value from a range of alternative delivery mechanisms. The most recently formed such group is Infrastructure NSW which was established in July 2011 with the express purpose of developing a twenty year infrastructure strategy. One of the most successful governmental teams in Australia is the Partnerships Victoria group within the Department of Treasury and Finance, Victoria. This group oversees many PPP projects but does so, on the basis of professional insight and appropriate decisions rather than simply as an advocate. It would be fair to say that as specific teams have become more and more experienced the benefits from multiple PPPs in specific industry sectors have become apparent as is evidenced by the hospitals delivered as PPPs in Victoria.

The ability for standalone commercial PPPs to access asset depreciation in accordance with normal business practice creates the ability for efficiencies from a state perspective. This is not a driver for Federal government PPPs yet; still the efficiencies brought by private sector participation have been shown to add value.

Private agencies

Industry constantly seeks to improve and build business, and major infrastructure is no different as a sector. Infrastructure Partnerships Australia is the peak body representing industry and conducts itself on the basis of being a conduit for the latest information. It influences policy discussion and debate on the basis of informed research and dialogue. There is also a very strong culture within Australia for dealing fairly and transparently with the market, and the private sector reciprocates this professional approach. There have been no examples of non competitive PPPs. Value, either real or perceived, has been brought to PPP deals through technical innovation, financing creativity and commercial leverage within projects, e.g. land developments or third party commercial arrangements effectively giving the public a discount on its core infrastructure.

Project Environment

Project Planning

Planning for both economic and social infrastructure is a clear mandate of government in Australia. Until the introduction of Infrastructure Australia, there was some criticism that not enough long term planning of infrastructure was being undertaken but this is changing at all levels of government as evidenced by the Infrastructure NSW development.

Specific project planning is governed by the Infrastructure Australia PPP guidelines whereby an underlying philosophy is for government to be clear in what it requires and then engage the market through a competitive process to achieve a commercial outcome. Central to this approach is the planning and business case testing of specific projects. This process separates the so called capital investment decision from the procurement decision. The first step in the process is to demonstrate the service need for a project and then to demonstrate how best to deliver or solve this service need. It is in the way by which government plans its solution that a PPP may emerge as the preferred approach.

The project planning that occurs will explore all possible options and/or interventions to deliver the required service outcomes from the perspectives of technical, commercial, financial and public interest outcomes. This planning is all undertaken prior to formal engagement of the private sector in a procurement process. Assuming the project is state initiated these activities will be organized, managed and driven by the state and/or its agency. Federal government involvement would be limited except when it is a major contributor to funds in which case it would be represented as a key stakeholder in planning or steering committee meetings.

Key milestones would be project approval, funding approval, approval to invite expressions of interest, approval to issue a request for tender proposal, approval of preferred bidder and then approval to execute the contract.

An important lesson learnt by the Victorian project team was that process clarity and a clear commitment to proceed with projects in accordance with the established process increased the private sector's confidence and led to good project outcomes.

The New Royal Adelaide Hospital is a good example of the national policy in action. The project was originally estimated at \$1.7 billion in April 2008 but through the application of the detailed business case assessment component, as detailed in the national policy guide, the hospital scope was modified and budget refreshed accordingly to give a public sector comparator of \$2.33 billion.

Project Procurement

The procurement process is managed by the sponsoring agency of the relevant jurisdiction, e.g. for the New Royal Adelaide Hospital the process was managed by South Australia Health. The State of South Australia is contracting the concessionaire. Some early works were undertaken in February 2009 with government calling for expressions of interest for the design, construction, financing and operation of the new hospital in June 2009. In November 2009, two consortia were shortlisted and invited to respond to a request for proposal due in May 2010. In December 2010, a preferred bidder of the SAE Health Partnerships comprising a joint venture between Hansen Yuncken, Leighton Contractors, Hastings and Spotless was announced. Contracts were signed in May 2011, financial close June 2011 and construction commenced. The final deal bettered the public sector comparator and thus delivered value.

There is a clear differential between consistency in process and the level of specificity required on particular projects to specify the required outputs and to establish the necessary details, incentives and drivers for the management of long term contracts. A lingering concern

on the Adelaide Hospital was the time taken to complete the deal but many were of the view that further improvements would be possible by enhanced collaboration, comments supported by the Baker and McKenzie (2012) survey.

A key to PPPs in Australia is they are viewed and treated as contracts and thus managed as such. The phases of procurement at the start hinge around the decision to appoint a private sector participant to the agreement. The contracts are covered by standard contract law provisions and the risk allocation is clearly presented in a draft contract that is released with the request for a tender proposal. The procurement process is overseen by detailed probity management that incorporates a probity plan to ensure fairness in the engagement process. Discussion between the parties is done via an interactive tendering process. Again for Adelaide, there appears room for improvement in collaborative behavior and refinement of the probity process.

The long term success of the agreement often hinges on the relationships established as part of the contract administration process and in this respect the deals require ongoing management from all involved.

In summary, Australian PPPs appear to still have areas where greater standardization may assist in reducing bidding costs. Based on industry feedback in the Baker and McKenzie (2012) survey greater coordination from government and a centralized team of PPP experts would be of assistance.

CASE US

While the US used PPP-type arrangements prior to World War II, the nation's approach to procuring public works evolved to a segmented delivery and tax-based funding approach as a result of a sequence of changes in federal and subsequently state procurement laws. In the late 1980's like other regions of the world, specific states and municipalities in the US began to experiment with PPPs, with one of the most notable programs occurring in California as a result of the AB 680 legislation. Since then, the US landscape for PPPs has fluctuated, and it remains so to present day. The Capital Beltway Express (also known as the I-495 High-Occupancy Toll Lanes) project in Virginia is discussed as a case example to illustrate aspects of the US environment.

National/Regional Environment

Infrastructure in the US is delivered within a complex environment where public works projects are governed by prevailing federal, state, and local laws as well as the respective executive agency or jurisdictional regulations and procedures. Depending on the circumstances, the conditions associated with a project can vary dramatically. Coupled with these public laws and requirements are active private enterprises, professional societies, and non-governmental organizations that influence and affect both policies and projects.

Federal guidelines or principles

At the highest level, the Federal Acquisition Regulation (FAR) is a set of regulations issued by agencies of the US federal government that govern the acquisition (or purchase) of goods and services. Whenever a federal government agency issues a request for a proposal/bid or enters into a contract (or alternatively whenever a state or municipal agency using federal funds), it will typically stipulate which provisions of the FAR are applicable. Beyond the FAR, conditions or requirements from federal legislation or federal regulatory bodies can influence both infrastructure policy and projects. For instance, the statutory requirements of the National

Environmental Policy Act (NEPA) dictate how major projects with federal funding in the US proceed – these requirements are often referred to as the NEPA process. Many view the standards of this process as overly rigid, particularly with regard to PPPs since the process as it is currently designed presumes a conventional project delivery, i.e. one based on a single design, a completed set of plans and specifications, and award of a construction contract to a builder offering the most economically advantageous bid. In addition, the Federal Highway Administration (FHWA) acting on behalf of the US Department of Transportation oversees the national Interstate Highway System.

Unlike other countries, the US does not have a central PPP unit, and the majority of the PPP activity in the US has been confined to the transportation sector thus far. The closest proxy that the US has is the Office of Innovative Program Delivery, which was created in 2008 within FHWA to serve as a resource for state and local transportation agencies when implementing "innovative strategies to deliver programs and projects." This office has oversight of the US Department of Transportation's Transportation Infrastructure Finance & Investment Act (TIFIA) loan program. Established in 1998, TIFIA provides loans, credit assistance and loan guarantees for surface transportation projects of national and regional significance. By far, TIFIA loans have been the most popular tool; such loans have been used in multiple PPP projects to date. Besides TIFIA, tax-exempt Private Activity Bonds (PABs) have played a role in several PPP transactions. Established in 2006 as part of a federal demonstration program, project sponsors may request authorization to issue PABs for qualified projects.

Legislative influences

At the federal level, the governing legislation allows exceptions to the typical project delivery process for transportation projects through the submission of variance requests known as Special Experimental Projects (SEP); currently, all PPPs requiring federal involvement must receive designation as SEP-15 projects.

At the state level, each state has its own legislation governing project delivery and procurement. The majority of this legislation is focused on the transportation sector although legislation related to education facilities is also in place. For instance, Virginia's Public-Private Transportation Act (PPTA) of 1995 recognized that the "public need may not be wholly satisfied by existing ways in which transportation facilities are acquired, constructed or improved," so it authorized private entities to "acquire, construct, improve, maintain, and/or operate one or more transportation facilities" when doing so would "result in the availability of such transportation facilities to the public in a more timely or less costly fashion." This legislation established the PPP market in Virginia. Since then, twenty-three states and 1 territory have enacted legislation enabling PPP-type projects for transportation. The variance among the state legislation is substantial. In most states, the private sector is permitted to submit unsolicited proposals. In a few states, PPPs are limited to pilot or demonstration projects. As one traverses from state to state, the legislative and resulting implementation environment shifts markedly.

More indirectly, the issue of whether or not PPPs are in the public's "interest" has garnered the attention of federal, state and local legislators as well as many non-governmental organizations. To this extent, the impact of legislators has been significant. For instance, in the wake of the lease of the Chicago Skyway to a Macquarie-Cintra team, the U.S. House Transportation and Infrastructure Committee sent a letter to governors, state legislators, and state transportation officials in all US states and territories delineating its concerns about this deal.

Market forces

Given the diversity among the states, the "normalizing" forces within the PPP environment have come from investors; lending institutions; concessionaires; and financial, legal and technical advisors. The major players in the PPP market are somewhat limited, so frequently potential projects may have the same key organizations involved. Further, recent agreements have often looked to prior agreements for precedents with respect to risk allocation, contractual terms, etc. In short, the US PPP market is rather decentralized and standardization occurs incrementally through diffusion of "successful" practices.

Programmatic Environment

Public Agencies

At the most fundamental level, each state's Department of Transportation (DOT) manages the transportation modes under its jurisdiction, and each DOT also operates and manages its portion of the Interstate Highway System as well as all other state routes. With regard to PPPs, each DOT establishes the programmatic policies and implements the PPP program authorized by the respective legislation. PPP enabling units with the capacity and resources such as Partnerships Victoria in Australia do not exist currently in the US. Instead, existing divisions or special units within the Departments of Transportation are responsible for these programs. For instance, the Texas DOT has a "Nontraditional Projects" unit that handles PPPs. In 2011, the state of Virginia established the Office of Transportation Public-Private Partnerships (OTP3), which created a PPP unit that reports directly to the state's Secretary of Transportation. OTP3 also has responsibility for planning and implementing PPPs across all modes of transportation within the state. The authority that this fledgling unit now has is similar to the authority found in units such as Partnerships British Columbia.

Aside from state DOT's, other important public players are the Transportation Research Board (TRB) and the American Association for State Highway and Transportation Officials (AASHTO). Both have committees and representatives focused on enhancing project delivery and financing.

Private Agencies

Within the private sector, the most well-known advocate group for PPPs is the National Council for Public-Private Partnerships (NCPPP), which is a non-profit, non-partisan organization founded in 1985. NCPPP's mission is "to advocate and facilitate the formation of public-private partnerships at the federal, state and local levels, where appropriate, and to raise the awareness of governments and businesses of the means by which their cooperation can cost effectively provide the public with quality goods, services and facilities." Other organizations such as the American Road and Transportation Builder's Association (ARTBA) have dedicated divisions or committees designed to promote and enhance PPPs.

Project Environment

Project Planning

As mentioned previously, the statutory requirements of environmental legislation at both the federal and state level have a tremendous influence over project planning. Aside from this, the US has quite a bit of variance with regard to the structure that PPPs may take. Several high profile projects were the result of unsolicited proposals, so project planning in these circumstances becomes an interesting balancing act between public and private interests. In other cases, project planning has started to evolve toward the types of approaches employed in

Europe and Australia. A phenomenon that is somewhat unique to the US is the pre-development agreement (PDA) for PPPs. PDAs do provide certain advantages for public agencies that may not be able to define or scope a project (even with consultant support) without engaging a committed private partner. One might conclude that the EU's competitive dialogue procedure was fashioned for this possibility. In the US, however, a comparable or derivative procurement standard is not in place for PDAs to maintain a level playing field and to foster accountability and transparency during implementation of this strategy.

As an example project, the Capital Beltway (I-495) was initially constructed in 1956 and completed in 1964. It serves as a perimeter highway circling Washington, D.C. Originally designed to serve through traffic bypassing Washington, D.C., the primary use has shifted towards local traffic with more than 75% of the current travelers along the Virginia section of the Beltway beginning or ending their trips in the neighboring county. The Beltway totals 3% of the lane miles in Northern Virginia while carrying nearly 11% of all daily regional trips. Realizing that the congestion issue along the Beltway required action, the Virginia Department of Transportation (VDOT) completed a Major Investment Study in 1994, concluding that highway improvements on the Beltway should promote High Occupancy Vehicle (HOV) and bus travel in the region to address the area's congestion problems. In 1998, VDOT and FHWA began an Environmental Impact Study (EIS) to examine various improvement alternatives. In 2002, FHWA approved the EIS that included several HOV lane alternatives for the Beltway. In the same year, VDOT received an unsolicited PPTA conceptual proposal from Fluor Daniel to develop, finance, design and construct High Occupancy Toll (HOT) Lanes on the Capital Beltway. Although VDOT advertised for competing proposals as required by its state legislation, none were received. In the spring of 2003, VDOT submitted a grant application to FHWA to study HOT lanes and other "value pricing" applications in Northern Virginia; it also held several public input meetings to solicit input regarding HOV versus HOT lane alternatives. A strong majority of the public feedback supported the HOT lanes concept. Early in 2005, the state's Commonwealth Transportation Board selected the HOT lanes plan as the preferred alternative. By 2006, FHWA gave its final approval of the HOT lanes plan.

Project Procurement

States tend to maintain jurisdiction over infrastructure projects although federal requirements and approvals are necessary for projects involving federal resources or under federal jurisdiction, but some standardization in procurement processes and contract provisions is advisable as it is currently absent beyond the general requirements of the FAR. As early as 2000, the American Bar Association's Section of Public Contract Law promulgated its Model Procurement Code for states and local jurisdictions for this reason. However, relatively few states have adopted legislation based on the Model Procurement Code, and in those states where the Code has been adopted, it is not uncommon for the DOT to be excluded from Code requirements. Procurement processes for PPPs have emerged that are not unlike those found in Australia or the United Kingdom; this is not surprising since many of the consultants that DOTs retain for advisory purposes have substantial experience in these global markets. In the case of unsolicited proposals that are implemented or PDAs, the process is negotiations-based and can be rather lengthy.

For example, the Fluor Daniel team submitted a detailed proposal in October, 2003 for the Capital Beltway project at the request of VDOT once no competing conceptual proposals were received. An advisory panel reviewed the proposal in June 2004, issued its findings, recommending the project be further developed, as long as issues identified were addressed, with

the goal of entering into a public-private partnership (PPP) contract, or comprehensive agreement, with Fluor. This document was signed in April 2005.

Meanwhile, the Australian developer Transurban joined the Fluor team in 2004, and they entered into an agreement to develop the Beltway project together. Under this structure, a concessionaire named Capital Beltway Express (CBE) was created through a 90/10 joint venture of Transurban and Fluor. The contractor would be a 65/35 joint venture of Fluor and Lane construction, with design to be carried out by the consultant HNTB. The Fluor-Transurban team agreed with VDOT that it would be appropriate to conclude a new version of the contract, which was termed the Amended and Restated Comprehensive Agreement (ARCA). This document was signed by VDOT and CBE in December 2007. The funding plan required \$1.93 billion, which was sourced from \$587 million in senior debt private-activity bonds, \$587 million in a TIFIA loan, \$350 million in private equity, and \$409 million in VDOT funds. Construction is underway with the expected opening of the lanes in December 2012.

ANALYSIS AND DISCUSSION

Cross-National Comparison

Each of the cases was analyzed to assess the level of standardization and customization present. Standardization was gauged by the strength of market and socio-political forces present that were pushing the PPP environment toward normalized policies and practices. Similarly, customization was evaluated by the strength of regional/local and project-based forces that were countering or balancing the drive toward normalization and promoting outcomes that were sensitive to regional or local needs and requirements. An adjectival rating scale was employed based on the evidence gathered. Table 1 depicts the outcomes across the cases.

In the case of Europe/Netherlands, the forces of standardization tend to outweigh those of customization. A strong environment at the EU and national level exists to create mechanisms to keep transaction costs down, foster transparency and accountability, and to emphasize predictable/repeatable processes. Alternatively, a moderate situation is observed at regional and project levels. Clearly, adaptation to circumstantial conditions is possible and even encouraged as evidenced by the joint responsibility for PPP-related decisions between the Ministry of Finance and the line departments. Still, the market and socio-political environment appear to impact PPPs in the Netherlands more prominently. In Australia, some similarities with Europe are observed, and Australia appears to be transitioning from a PPP environment long dominated by its states to one that is moderated by its federal government. The advent of Infrastructure Australia and its subsequent actions are notable in this regard; however, the autonomy of states remains intact as evidenced by the exclusions in the federal guidelines and processes and the continued significant role of state PPP units. In effect, Australia appears to be searching for a point of equilibrium. In the US, the situation is quite different. The federal role in PPPs is limited to procurement and statutory requirements that are imposed on all public works projects where there is federal funding or jurisdiction; the strongest normalizing forces are the market players themselves as they transfer their influence across the states where they work. This is not to say that the federal role is insignificant; rather, at the federal level PPPs are treated nearly as infrequent exceptions. The balance of the impact is at the state level where the legislation and practices are state matters and vary from locale to locale. Accordingly, the evidence suggests a continuum from strong standardization and moderate customization to moderate standardization and strong customization across the three cases.

	Europe/Netherlands	Australia	USA
Standardization	W. J W. B	14 14 . THE T	N. 10
Standardization Market forces Socio-political forces	 High to Medium Emphasis on using PPPs for large, complex projects Standardized procedures and documents (NL) Published DBFM handbook (NL) NL tendency to use CD procedure can drive transaction costs up High Strict EU regulations Overarching EU and NL principles Utilization of standard VfM practices, etc. to foster transparency and accountability 	 Medium to High IA standardised phases and requirements of delivery to increase predictability and lower transaction costs IA prioritization creates project pipeline of sorts Infrastructure Partnerships Australia (private entity) influences policy and process Emphasis on competitive awards Medium to High Establishment of Infrastructure Australia (IA) in 2008 Overarching national principles IA published guidelines Utilization of standard VfM practices, etc. to foster transparency and accountability 	 Strong reliance by federal and state agencies on consulting community for guidance and services Tendency to use prior agreements and contractual precedents to ameliorate transaction complexity No central PPP guidelines or standards beyond FAR Medium to Low Federal procurement and statutory requirements imposed when federal funds or jurisdiction Federal instruments such as TIFIA and PABs are popular but centrally administered Establishment of FHWA's Office of Innovative Program Delivery in 2008, but with minimal authority Limited use of VfM practices, etc. and no
Customization Regional/local forces	 Medium Adaptation of EU requirements to NL environment NL joint responsibility for PPP decisions between Ministry of 	 Medium to High Strong state PPP units and line departments Exclusions from IA guidelines allowed to meet local requirements 	national standard or model Public interest debates prevalent High States have own legislation and regulations governing PPPs State DOTs responsible for PPP planning and
	Finance and line departments NL social infrastructure typically handled locally NL knowledge centres	 Increased emphasis across all jurisdictions on service quality 	implementationState PPP units uncommon

	Europe/Netherlands	Australia	USA
Project-based forces	focused on service quality in PPPs Medium NL has shown tendency to follow CD procedure for PPPs, which theoretically should provide scoping flexibility	 Medium Contracting authorities have capacity to tailor project specifications and outputs 	 High Project development approaches vary widely, i.e. unsolicited proposals States tend to tailor project processes and contracts to circumstances
	1		circumstances

Table 1. Assessment Standardization and Customization of Cases

Limitations

Indeed, inter-jurisdictional analyses are quite difficult, as others have documented and criticized.⁶ In this effort, the data collected was rather general as was the method employed to assess the impacts of drivers of standardization and customization. Further, the limited use of projects as a unit of analysis limited the project-based observations that were possible. Future work should focus on refining the data collection and analysis method while considering whether or not a more in-depth focus on a project or a set of projects would aid in assessing how the issues discussed are manifested in actual project environments. If done, this would permit greater utilization of the business model framework as a basis of analysis.

CONCLUSION

The paper's title posed the question: does standardized procurement hinder PPPs? While this research may not have answered the question, the basis of the tension between standardization and customization was explored via existing literature and debates in various fields. Further, the factors that tend to promote or diminish both within the PPP environment were depicted. On this basis, information was gathered from Europe/Netherlands, Australia and the US to examine the circumstances in each jurisdiction along three broad dimensions – the national, programmatic and project environments. The data collected was assessed on a basic level to broadly characterize each case. The evidence suggests that the Netherlands operates in a PPP environment more influenced by market and socio-political forces, Australia appears to be searching for a balance between standards and context, and the US finds itself in a situation where regional/local and project-based forces are more significant.

The findings confirm the presence of sound reasons and drivers for the different approaches adopted, e.g. the availability of finance and tendering norms. For instance, specific situations such as economic turmoil or cultural/historically rooted regional characteristics necessitate tailor-made solutions. It is also clear that further standardization of policies, institutional approaches and project documentation may indeed lead to improvements.

⁶ As is inter-jurisdictional writing where Australian, UK and American English collide and may not necessarily be rectified!

REFERENCES

- Al-Salka, M.A., Cartmell, M.P. and S.J. Hardy (1998): A Framework for a Generalized Computer-based Support Environment for Conceptual Engineering Design, *Journal of Engineering Design*, 9:1, pp. 57-88
- Amit R & Zott C. (2001). Value creation in e-business, *Strategic Management Journal*, June–July Special; Issue 22: 493–520.
- Attoe, W. and D. Logan (1992). *Catalysts in the Design of Cities*, American Urban Architecture, University of California Press, Berkeley
- Baker and McKenzie (2012). Public Private Partnerships: evolution or revolution? Global Business Challenges, http://www.bakermckenzie.com/files/Publication/f926f49a-d12a-4cd4-9a3a-be74e63b45ea/Presentation/PublicationAttachment/248d75c6-bc1d-48a7-ad10-63cced1b7043/bk_australia_pppsreport_mar12.pdf. [accessed 25.6.12] of our
- Bechky, B. and G.A. Okhuysen (2011) Expecting the unexpected? How Swat Officers and Film Crews handle surprises. *Academy of Management Journal*, vol 54, no.2, pp.239-261
- Blanken, A. (2008) Flexibility against efficiency? PhD Thesis Twente University, Enschede
- Bos, B. (2009). Inventarisatie van mogelijke verbeteringen voor Lijstrisico's bij PPS projecten van Rijkswaterstaat. Delft University: Master Thesis.
- Bruijn, H. de and E. ten Heuvelhof (2008). Management in Networks, On multi-actor decision making, Routledge, London.
- Buxbaum, J. N., and Ortiz, I. N. (2009). *NCHRP Synthesis 391: public sector decision making for public-private partnerships*, Transportation Research Board, Washington, DC.
- Davies, A, Frederiksen, L & G. Dewulf (2010), "Business models, Infrastructure and the changing Public-Private Interface", Working Paper Proceedings of the Engineering Project Organisation Conference, Lake Tahoe, November.
- Demsky, S. and W. Salet (2010). The transformative potential of institutions: how symbolic markers can institute new social meaning in changing cities; *Environment and Planning A*, vol 42; pp. 611-625
- Dewulf, G., Blanken, A. and W.D. Bult-Spiering (2012). *Strategic Issues in Public-Private Partnerships*; Wiley, London.
- Froud, J. (2003). "The Private Finance Initiative: risk, uncertainty, and the state. *Accounting, Organizations and Society*, 28 (5), 567-589.
- Grimsey, D. and Lewis, M. (2007). "Public private partnerships and public procurement." *Agenda*, 14(2), 171-188.
- Grimsey, D., and Lewis, M. K. (2004). *Public private partnerships: the worldwide revolution in infrastructure provision and project finance*, Edward Elgar, Cheltenham, UK.
- Jooste, S. F., Levitt, R., & Scott, D. (2011). Beyond 'one size fits all': how local conditions shape PPP-enabling field development. *Engineering Project Organization Journal*, 1(1), 11-25.
- Kaufman, R. and R. Watkins (2000) We are what we say, do, and deliver. *Performance Improvement*, Vol. 39 (4): 23-32.
- Koppenjan, J. F. M. (2005). The Formation of Public-Private Partnerships: Lessons from Nine Transport Infrastructure Projects in The Netherlands: Wiley.
- Love, T. (1998). Social, environmental and ethical factors in engineering design theory: a post-positivist approach, PhD Thesis, University of Western Australia, Dept of Mechanical and Materials Engineering.

- Ostrom, E. (1990) *Governing the Commons; The Evolution of Institutions for Collective Action*, Cambridge University Press, Cambridge.
- Raisbeck, P., Duffield, D., and Xu, M. (2010). Comparative performance of PPPs and traditional procurement in Australia, *Construction Management & Ecomomics*, 28 (4), 345-359.
- Shafer, S.M., Smith, H.J. & Linder, J.C. (2005) The power of business models, *Business Horizons*, 48: 199-207.
- Shaoul, J., Stafford, A., & Stapleton, P. (2009). Financial black holes, the disclosure and transparency of privately financed roads in the UK. *Accounting, Auditing and Accountability Journal*, 23(2), 229-256.
- Stone, T. (2006). *PFI is there a better way?* KPMG Global Infrastructure and Projects Group, London.
- Teece, D. (2010). Business models, business strategy and innovation, *Long Range Planning*, 43: 172-194.
- Yaro, R.D. (2002). Epilogue: Implications for American Planners, in A. Faludi: *European Spatial Planning* (ed.) Lincoln Institute of Land Policy, Cambridge, pp. 209-217
- Yescombe, E. R. (2007). *Public-private partnerships: principles of policy and finance*, Elsevier: Boston.
- Zonneveld, W., Korthals Altes, W., Spaans, M., Waterhout, B. and H. de Wolff (2011). Knelpunten gebiedsontwikkeling: de rol van Europese richtlijnen. Ministry of Economic Affairs, OTB, Delft.