PUBLIC PRIVATE PARTNERSHIPS FOR INFRASTRUCTURE: FORGING AHEAD IN AMERICA

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ABSTRACT

Public-Private Partnerships (P3) have emerged as a popular strategy for infrastructure development worldwide. Within the US, the momentum for P3 arrangements is building as: states put enabling legislation in place, public authorities search for expedient solutions for the infrastructure funding gap, and investor capital becomes increasingly attracted by the risk/return profile of infrastructure assets. Proponents of P3’s tout advantages while detractors claim that the expected benefits rarely materialize or they are obtained at too great an expense. Misconceptions are plentiful. Until they are clarified, P3’s are unlikely to become a part of America’s solution to its widening infrastructure gap. Accordingly, several major misconceptions are identified and discussed. Potential strategies for moving forward are also described. The underpinnings for the views offered are derived from the writer’s domestic and international research and consulting experience. The intent of this paper is not to present research outcomes but rather to trigger a dialogue about P3’s and how they might improve America’s infrastructure assets.

KEYWORDS: Contracting, Infrastructure, Project Delivery, Project Financing, Public-Private Partnerships

PREFACE

Over the past decade, I have had the good fortune of exploring a rich and fascinating domain from an academic’s perspective. The world of infrastructure project and service delivery has experienced somewhat of a renaissance over roughly the last two decades. When I began this journey, the principal moniker of this rebirth was “alternative project delivery systems”; today, it is “public-private partnerships” (or P3). The gradual rediscovery of methods that lay dormant for years in the United States (as well as elsewhere), particularly in the water resources and transportation sectors, has fueled new debates about the roles of the public and private sectors in infrastructure. Even these debates in the U.S. are not new; in the late 18th century public officials in New York City grappled with the benefits versus costs of private provision of water supply (Blake 1956). What is rather unique, however, is the “machine” that has risen during the rekindling of forgotten delivery paradigms. Over the past two years, I have spoken at multiple P3 forums and workshops, consulted with organizations involved in the P3 market, and participated in an FHWA/AASHTO international scan of P3 programs.2 This experience has allowed me to observe the machine at work in the United States and to contrast the current situation here with those overseas. My foremost conclusion from this experience is that the machine in the United States is not telling the whole truth or the “rest of the story”. This machine sustains itself by feeding off of overmatched government administrative agencies, which are accustomed to conventional methods of project delivery and contract management. The rise of this machine is not necessarily surprising. Lowi (1979) would likely suggest that our
contemporary political system has encouraged it. Elected officials often see P3 as a pariah or panacea. If enough take the latter view, then authorizing legislation is passed and executive agencies are charged to make P3’s happen. Enter the machine, which has two dimensions. The first is designed to promulgate P3’s, and the second is aimed at demonizing them. This might be an exaggeration to make a point, but only a slight one. My intent with this paper is to begin to tell the balance of the story. While I cannot possibly complete what would require a novel in the course of several pages, I can potentially pen portions of the opening and closing chapters. What follows is not necessarily entirely defensible, but it is based upon my involvement in this market as a researcher and consultant for over a decade. To this extent, I request your indulgence to allow me to present what I consider a “thought” piece for your consideration.

INTRODUCTION

American infrastructure is on the minds of many. Average citizens in the nation’s urban centers undoubtedly curse the congestion they experience almost daily, even though they may not list infrastructure as one of their greatest concerns. Legislators scheme to fund infrastructure, implementing tax increases seemingly as a last resort. Public agencies grapple with mounting infrastructure restoration, modernization, and expansion requirements in an environment where conventional resources are scarce. Private players, often from outside the United States, position themselves to provide infrastructure development and management services, waiting for the market potential that they envision to unfold. Investment houses introduce infrastructure funds as alternatives to utilities or real estate while pension fund managers consider the potential of these funds to provide an appropriate risk/return profile, diversification advantages, and inflation-linked cash flows.

Is the perfect storm for P3’s imminent? Given the conditions just described, it would seem so, but the United States remains a slow mover in this market relative to its peers in Europe and Australia. Indeed, less than half of the fifty states even have the legislation in place to allow P3’s for transportation. Why is this so? Perhaps, the answer is related to the relatively ineffective infrastructure P3 strategies implemented in the 1990’s (Garvin 2007). Another plausible explanation is that many entrenched public and private institutions and organizations have vested interests in maintaining the status quo – the delivery and financing system in the United States is not necessarily broken it just needs someone to kick start its funding stream. Or perchance the naysayers are correct; infrastructure is just too vital to put into private sector hands, particularly if those hands are foreign.

Notwithstanding these arguments, my experience over the last decade investigating alternative infrastructure delivery and financing strategies suggests that P3’s suffer from numerous misconceptions in this country. This perspective has been amplified over the last two years as I have participated in multiple national forums on the topic, consulted with public and private agencies, and visited other countries. Until these misconceptions are rectified, P3’s will remain primarily on the sidelines as an infrastructure development and management strategy. This is not to suggest that P3’s are the solution to America’s infrastructure problem, far from it. Given the capital and expertise searching for opportunities, however, they ought to become

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3 Lowi argues that since the Great Depression government has expanded by responding to and assuming responsibility for programs sought by special interests; it has then subsequently delegated the responsibility for such programs to administrative agencies. Hence, the balance of power has swung toward the executive branch of government.

4 Alternatively, executives themselves grab the P3 banner and attempt to make them happen.
options for consideration to help address the problem. Accordingly, my intent here is to focus on several key misconceptions that need attention and to offer a few strategies that might quicken the pace of development of the P3 infrastructure market in America.

**MISCONCEPTIONS**

**Private sector involvement in all tasks and phases of an infrastructure project is a new phenomenon in the United States.**

In a contemporary context, this is perhaps true. If one examines the nation’s history, however, the facts reveal that the private sector has played a pivotal but fluctuating role in infrastructure development and management. In 1796, Ebenezer Zane submitted what was likely the nation’s first unsolicited proposal when he petitioned Congress for assistance with a project to extend a trail into the Ohio valley following an Indian trace that crossed the Muskingum, Hocking, and Scioto Rivers and would eventually wind south to meet back up with Ohio River at what is now Maysville, Kentucky. Zane requested landing sites at each of the three river crossings and money to survey the route. In response, Congress offered only a conditional grant of land in tracts one-mile square at each river crossing as well as a franchise opportunity. Zane would be allowed to establish and operate ferries at each of the river crossings on the condition that: (1) he conduct the route survey at his own expense, (2) submit plans with his survey results to the government, and (3) within six and a half months produce proof that the road was complete and open and that the ferries were operating at all three sites. If these conditions were met and Zane provided security that the ferries would be maintained, then Congress would issue deeds to the land at the river crossings. Congress also stipulated that two judges of the Northwest Territory would set the ferry tolls. Zane took the offer and his road and ferries helped open up the interior of Ohio. Miller (2000) and Garvin (2007a) offer further historical examples of varying levels of private sector infrastructure involvement since our nation’s founding.

**Infrastructure public-private partnerships are predominantly leases or concessions.**

Certainly, the long-term leases of highway facilities, which prompted BusinessWeek in 2007 to speculate about the potential dollar value of similar arrangements for other infrastructure assets including such icons as the Golden Gate Bridge, has contributed to this perspective. Figure 1 depicts a continuum of potential P3 models where the potential influence that the private sector acquires increases from top to bottom. While this figure is not all inclusive, it does incorporate the predominant P3 approaches that have been implemented or are being considered in the United States.

Additionally, the figure is founded upon a particular definition of

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**Figure 1. Continuum of P3 Arrangements**
P3’s. Currently, the Federal Highway Administration defines P3’s as “contractual agreements formed between a public agency and private sector entity that allow for greater private sector participation in the delivery of transportation projects.” (FHWA 2008) This definition is quite broad and to understand it a point of reference is necessary. In the context of the U.S. this point is likely design-bid-build, which has been the dominant delivery system for infrastructure projects for roughly the last half century. I have proposed a fairly flexible but specific definition in various forums (Garvin 2007b, 2008): a public-private partnership is a long-term contractual arrangement between the public and private sectors where mutual benefits are sought and where ultimately: (a) the private sector provides management and operating services and/or (b) puts private finance at risk. Perhaps, the significance of this definition is what it excludes as opposed to what it includes. Notably, this definition excludes both design-build and the transfer or sale of infrastructure assets or services to the private sector. While presenting some unique challenges, design-build is a modest derivative of the design-bid-build project delivery system, which is the dominant (and often mandated) delivery method for public works projects in the United States. The transfer of an asset or service qualifies as “privatization”; this distinction is more than semantic. P3 arrangements are governed by contracts and the accompanying body of contract law. Privatizations are regulated enterprises where the governance and legal structures are quite different.

To properly characterize P3’s, perhaps we need to scrap the term altogether. In some respects, the World Bank has already done so preferring now to refer to this model of development as Private Participation in Infrastructure (PPI). Possibly, a return to referring to all arrangements as project delivery systems would be more appropriate. If the infrastructure community were to do so, Figure 2 then might help delineate the differences between the delivery systems. An adaptation of Miller’s (1995) quadrant framework, this framework places “funding source” on the y-axis with endpoints of government payment and user fees and “lifecycle activities” on the x-axis with endpoints of segregated and integrated. This creates a nine-cell matrix space to plot any delivery approach based upon the where the funds for the project are derived and how integrated the lifecycle activities are in the service arrangement. For instance, the prototypical approach in the United Kingdom today for their Private Finance Initiative (PFI) projects is to use what they call a design-build-finance-operate (DBFO) service arrangement and a direct government payment that is primarily based upon the availability of service, i.e. an availability payment. This arrangement would plot in the upper right cell of the framework. While the moniker public-private
partnership probably has too much inertia to stop its use, Figure 2 is still useful as a potential tool to differentiate the varieties of P3’s being implemented.

**Infrastructure public-private partnerships are principally financial arrangements.**

This misconception is a corollary to the prior one, but it is an elixir being sold by both public and private parties. When the City of Chicago received nearly $2 billion for its Chicago Skyway in 2004, many saw a solution to public sector or infrastructure funding gaps. The lease or concession of certain infrastructure assets in exchange for upfront payments could provide the capital needed to fund other public requirements or infrastructure projects. This helped further the perspective of infrastructure as being financial assets rather than fixed assets. Certainly, this notion is not entirely new, but this deal and similar subsequent ones helped push the financial arrangements of P3’s to the forefront, potentially at the expense of their service provisions.

My international visits suggested that our counterparts overseas have matured beyond this perspective. Unquestionably, the financial arrangements for any P3, whether they are secured by government payments or user fees, are paramount. However, P3 arrangements, particularly in the most mature markets, are not primarily financial transactions; rather, they are the selected project delivery strategy based upon a value for money or feasibility analysis. In the majority of the countries that I visited, this perspective was either firmly held or gaining traction. For instance, the policy in Victoria regarding any potential infrastructure project is that budgetary funds must be available to support it in order for it to be considered for inclusion in a capital program. If the potential project has the attributes necessary for a P3, then it will be evaluated through Victoria’s “Value for Money” guidelines. Only if the project demonstrates value for money as a P3 will it proceed that way. Otherwise, the budgetary funds will be utilized to finance its conventional delivery.⁵

Evidence of the emphasis upon P3’s as service arrangements was observed in Victoria’s most recent highway P3, EastLink. EastLink opened recently in Melbourne, Australia. The $2.4 billion project includes nearly 40-km of freeway, twin 3-lane 1.6-km tunnels, 88 bridges, and a 40-km of shared use (bicycle/pedestrian) pathway. Among other things, the Victorian government required the concessionaire’s proposal to: (a) establish the toll structure and concession period desired, (b) factor in and share any financial gains from potential refinancings, (c) share any profits above an established maximum revenue threshold, and (d) emphasize urban design features (See Figure 3 for an example outcome of this emphasis). In addition, the Victorian government created an extensive Key Performance Indicators (KPI’s) regime that focused upon customer service, road maintenance, landscape and environment, and tolling accuracy. Failure to comply with KPI’s can result in up to $17 million annually in penalties. Interestingly, any penalty money collected from the

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⁵ It is worth noting that this was the policy described by Victorian officials; whether or not this policy is being followed is unknown. Still, the mere existence of such a policy suggests a radically different political view of P3’s relative to the United States.
concessionaire will be distributed to EastLink’s users rather than being retained by the government.

**Transportation public-private partnerships require the imposition of user fees.**

P3 arrangements certainly require revenue sources or rights to be granted to the contractor to support its capital, operating, financing, and transaction expenses and to provide a return on equity investments. This source of revenue, however, does not necessarily have to come from user fees or tolls. While the concept “the user pays” remains a solid economic argument, the reality is that the socio-political environment domestically and abroad is a real barrier to widespread tolling. A variety of mechanisms are employed by our international counterparts to provide such funding – real tolls, shadow tolls, and direct payment mechanisms. Real tolls are relatively well-understood; users pay a fee to utilize an asset. Shadow tolls and direct payment mechanisms are less so. Often, shadow tolls are viewed as payments from a public entity to a contractor that are based upon the volume of users of an asset. In Portugal and Spain, however, a shadow toll is comprised of a service payment, which is linked to traffic volume, and an availability payment, which is linked to the level of service provided. The simple notion of a direct payment mechanism is often used in the UK as the fee the public entity pays the contractor; the payment mechanism is comprised of several components but the availability of service is the principal one.6

**The public sector must grant the private sector maximum flexibility in public-private partnership arrangements.**

This mindset was dominant in first generation P3 projects, both domestically and abroad. The prevailing wisdom was that to obtain the advantages of increased private involvement and to attract private participation the private sector had to receive substantial flexibility technically and contractually. While staunch P3 advocates would likely still make this claim, experience has demonstrated that this is not absolutely necessary for successful P3’s. Amongst the seasoned international community, when defining or scoping a PPP project, the primary focus currently is often upon identifying and conveying the outputs desired without inappropriately compromising existing technical standards. Outputs of a project are what its customers focus upon – reliable travel times, safe travel environment, comfortable ride, etc. The transition to thinking about what customers desire first rather than developing a prescriptive definition of an asset is a major transition in practice. However, an emphasis upon defining and measuring outputs should not come at the expense of sound engineering. Often, an Independent Verifier is used to ensure that technical provisions are followed. The Independent Verifier serves as an objective third party to generally administer (certify pay requests, etc.) and review (compliance with requirements, on-site visits, etc.) the project during design and construction.

**STRATEGIES**

**Normalization**

One of the advantages that many European nations have is that their P3 program is driven primarily by the national government. This creates consistency and stability for the market

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6 In early PPP arrangements in the UK, shadow tolls based only upon volume of service were commonly used; the UK has evolved to use payment mechanisms that are based heavily upon availability of service. Hence, this overall approach to payment is often referred to as **availability payments**.
across the nation. The same is not true in Australia where the state governments play the leading role. The situation in the United States is obviously similar. While autonomy among the states has certain advantages, we cannot have 50 unique markets for P3’s; this would deter private participation and drive up transaction costs. Thus, some level of normalization is necessary. States will likely want jurisdiction over infrastructure projects (which seems reasonable since they are footing the bill for most of it these days), but some standardization in procurement processes and contract provisions is essential. While FHWA has made efforts to produce model enabling legislation and P3 program guidelines, more work in this area is needed.

Interestingly, the Australian states have incrementally normalized themselves. New South Wales moved first and the Victorians followed. Despite the friendly rivalry between the two, they have learned from each other as their programs have evolved. Now, Queensland has recently gotten into the act as well, and they have borrowed knowledge acquired from their sister states and utilized it to their advantage, even going so far as utilizing public personnel from other states in the procurement process. A similar approach in the United States could prove beneficial. Notwithstanding the good that federal agencies can do in this regard, states can work together through organizations such as AASHTO or AWWA to educate one another. Early movers such as Virginia, Florida, Texas, Oregon, and North Carolina can undoubtedly improve the market’s reliability by identifying and sharing best practices with one another.

Capitalization

As a relatively late mover in the contemporary P3 market, the United States as a whole can capitalize upon the experiences of its international counterparts. Significant institutional learning has occurred over roughly the last decade in the countries that I have visited. Like America, most P3 programs began in response to fiscal crises, and the private sector was viewed, particularly by politicians, as a potential solution. Not surprisingly, the early P3 arrangements in these countries, while well-intentioned, did not necessarily provide the best value for the public. Since that time, the planning, procurement, and management of P3 projects have improved substantially. This circumstance is very advantageous for the United States since its institutions can adopt tested second and even third generation policies and practices.

“Optimization”

This strategy is a child of “capitalization”, but it is worth special mention. Early and recent P3 arrangements in the United Kingdom and Australia emphasized maximum risk transfer to the private sector. More than likely, the requirement to demonstrate “value for money” via a public sector comparator contributed to this philosophy since risk transfer is quantified and often determines whether a project is delivered by P3 or not. My conversations with public officials in both countries suggested that a new philosophy is emerging – optimal risk allocation in lieu of maximum risk transfer. Clearly, this is not a new concept for construction or infrastructure academics or practitioners. The notion that risks should be borne by those best able to manage or mitigate them is well-known. This age-old adage, however, was seemingly forgotten in the process of justifying private involvement in infrastructure.

Education (and Research)

Finally, America needs an aggressive public agency education program. Experienced public and private representatives from the international community should be brought to the United States now. While P3 forums and workshops are seemingly a dime a dozen, these are often populated with consultants (and a few academics) talking to consultants. Regional
workshops where public procurement officers and contract managers from countries like Australia, Chile, Ireland, Portugal, Spain, and the United Kingdom speak with their U.S. counterparts could dramatically help those states that are serious about considering and implementing P3’s. More systematic and formal education programs could then follow.

Research such as the following is also needed:

- Develop in-depth case studies of representative projects (past and current) which highlight maturing PPP programs, processes, and practices

- Examine and evaluate the advantages and disadvantages of alternative forms of organization for public sector PPP divisions ranging from independent temporary public authorities (such as those utilized in Australia) to segregated specialist divisions (such as the Project Planning Division, the Procurement & Contracting Division, the Contract Management Division, etc.)

- Examine the strengths and weaknesses of an open competitive procurement process and a negotiated competitive procurement process for PPP projects

- Investigate the risk mitigation practices of the private sector in PPP arrangements to determine if participants in PPP consortia are assuming real levels of risk; if not, assess the impacts of the diversification and/or minimization of risk upon PPP arrangements and recommend mechanisms to preclude excessive risk minimization practices.

CONCLUSION

The transition to a world where a non-trivial percentage of infrastructure services is provided by the private sector appears to be underway. Essentially, governments will become the overseers of such service rather than the service providers. Will the United States become a major market for P3’s and will this transition be beneficial? Undoubtedly, the American P3 market is still rather immature with ample examples of missteps and mistakes. If this market is to progress, misconceptions must be rectified and strategies devised to create a stable, reliable, and effective environment for infrastructure P3’s. P3’s are not a panacea, but neither are they a fad. Other countries are finding ways to use them strategically. We must quickly close the knowledge gap between our international counterparts and us. Otherwise, the gap that may develop will present challenges that are far more difficult to handle.

REFERENCES


