

The Political-Economics of Private Infrastructure Finance:

The New Sub Prime

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Abstract:

State and local governments are seeking to lease elements of public infrastructure to close budgetary gaps. Private capital markets find any items of public infrastructure that have an actual or potential revenue stream attached to them attractive. Favored items include water and sanitation systems, toll roads, airports, parking structures, etc. Because these individual items of infrastructure are vital components of larger transport and public service networks that support modern urban life, their true value resides in the broader externalities that the networks create. Once private control of these individual items or portions of the network are privately monopolized, an inherent disjuncture emerges between the long-term goals of the private bondholders and the needs of urban regions to maximize the positive social, environmental and economic externalities of the infrastructure network. This paper explores the long-term implications of this new political economy of public-private finance for sustainability, social equity and economic efficiency through a review of recent experiences.

## Introduction

Agencies of government have always engaged both for-profit and not-for-profit actors in carrying out their assigned missions. In the closing decades of the 20<sup>th</sup> century the range and scope of this engagement was significantly expanded under a reprise of 19<sup>th</sup> century *laissez faire* economic ideology known contemporarily as neo-liberalism. A key policy feature of this *laissez faire* revival was the widespread promotion of programs of privatization - the private, usually for-profit, based production of public goods. The obverse side of the coin of reinvigorated reliance on the private market was the curtailment of the active role of the public sector in the production of public goods. From the point of view of urban planning, this shift has severe ramifications for the work urban planners do. This paper will explore one aspect of this shift; the increased reliance on public private partnerships to create and operate urban infrastructure.

The widespread adoption of public private partnerships (P3s) is one of the most important elements of the rejuvenated free market approach to public policy that emerged in the closing decades of the 20<sup>th</sup> century. Generally, under programs of privatization, responsibility for public service is purported to become a private sector responsibility.<sup>1</sup> In a P3 situation, the public sector explicitly retains ultimate responsibility but enters into a long-term contract (typically a contract term that exceeds 25 years) with a private partner to construct and/or maintain a public service or merely to maintain the service. (Grimsey and Lewis, 2004)

The most common forms of a P3 arrangement are for the delivery of public services tied to significant elements of public infrastructure. Examples of this are found in roads, water, railroads, airports, *etc.* At a superficial level, P3s appear as simply a sophisticated variation on the theme of privatization. Consequently the general admonitions about information asymmetry, adverse selection, moral hazard and principal-agent problems in contractual relationships all apply to this genre of public management. (Sclar, 2000, Phang 2007)

Equity and sustainability in the context of dynamic urbanization are central to the professional concerns of planners. These effectively receive short shrift in the comparatively static “value for money” decision calculus promoted by P3 advocates. The term value for money or VFM as it is called in the literature will be examined more fully below.

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<sup>1</sup> In theory this is the case. However in practice, it is often impossible for government to permanently shed vital service functions and thus responsibility always comes back to government when the private sector fails.

### **Urbanization, Infrastructure and Urban Planning in historic context**

It is important to begin by understanding the complex connection between urbanization, urban infrastructure and urban planning. We are about midway through the second wave of global urbanization. The first, extending from about 1750 to 1950, occurred primarily, but with several notable exceptions, in Western Europe and North America. (Pieterse, 2008) Second wave urbanization which is now about half ways through its predicted period of rapid growth<sup>2</sup> has its center of gravity in Asia and, secondarily, but perhaps as importantly, in sub Saharan Africa. This second wave has already carried us into a new era of human history: an era in which urbanization is now the predominant global reality, with all that that implies. As second wave urbanization spreads, the urban/suburban/peri-urban/rural distinctions that permeate so much of the policy and planning literature are becoming irrelevant. An even coat of urbanism is being spread across all of these landscapes as a result of the modern infrastructure technologies associated with transport and communications.

First wave urbanization is closely associated with the industrial city and mass production. Second wave urbanization is occurring as an integral part of a post-mass production global economy. In the era of mass production, urban-based industries churned out vast quantities of uniform goods of uniform quality. These were distributed over the then expanding market areas in the hinterlands that were defined by the canal, railroad and later the highway. The advent of the telegraph in the 19<sup>th</sup> century meant that for the first time in human history it was possible to divorce communications from transportation. Second wave urbanization builds upon and extends the importance of these technological innovations. It is taking place in a context in which the economic and social networks linked to transport and communications innovations have matured into a far larger role in defining urban life. The market area for both the production and consumption of contemporary goods and services are now produced through complex global movements of people, goods and capital. All of these depend heavily on the new communications and transport technologies. As a result writers on modern urbanization increasingly viewed the cities that are their subject matter as merely interchangeable nodes on this global network. (Castells, 2000, Sassen, 2001, Florida, 2002)

An important difference between first wave urbanization and second wave urbanization concerns the shift of balance between the importance of place and the importance of the network. In the first era of urbanization, the city was viewed as one with its infrastructure. Discussions of networks and infrastructure were peripheral, if at all mentioned by the writers who

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<sup>2</sup> By the third quarter of the present century, rates of population growth and urban population growth are expected to diminish significantly. (Ref xxxxx)

chronicled that period. (See for example, Park, Burgess and McKenzie, 1925, Wirth, 1938, Mumford, 1961) As the works of the contemporary urban writers makes plain, nothing epitomizes the new importance of networked infrastructure as much as the customized computers and motor vehicles that dominate our contemporary economic reality.<sup>3</sup> These products rely heavily upon the quality of the infrastructure in which they are embedded. Everything from design to production to marketing to final delivery is handled via sophisticated information and communications networks.

The ability to produce the customized just-in-time outputs that characterize this new urban world makes an enormous presumption: it presumes that the private production networks that lead to firm level efficiency are embedded in rich public networks of telecommunications; transportation and urban public services, i.e. public infrastructure. Hence the policy problem for planners when analyzing P3s is not the perfectibility of the market-based finance schemes used to deploy this infrastructure but rather the ways in which these financing arrangements impact the performance of the infrastructure; particularly the public goods quality of the infrastructure. It is these public goods qualities that make the services accessible to a wide range of population regardless of wealth or income that is critical to the concerns of planners.

Indeed the common thread that binds first wave urbanization to second wave urbanization is the abiding need for physical infrastructure. During first wave urbanization infrastructure was produced and delivered by public agencies or tightly regulated private monopolies. This “public goods” approach was an essential element of the urban-based welfare state that formed in response to the poverty, disease and degradation that the 19<sup>th</sup> century industrialized city created. This urban welfare state, in its democratic guise came to dominate national life in the nations of Western Europe and North America (Graham, 2000, Graham and Marvin, 2001). These infrastructure monopolies were the vehicles through which the comprehensive planning approach that dominated planning discourses shaped urban life in the middle to late decades of the last century. Urban planning and public goods were a rational approach to the challenges that urban density cast up for society.

In fact this first wave approach was so successful that by the middle of the 20<sup>th</sup> century infrastructure was essentially “invisible” to Jane Jacobs who’s critical commentary on urban planning (1961) and urban economy (1969)

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<sup>3</sup> However as Fields (2004) has demonstrated, it was also the case in the 19<sup>th</sup> century that firms seized on the innovations in infrastructure networks, especially for communications and transportation to design business models that would maximize their advantages to the extent possible given the market possibilities of their time.

became the conventional wisdom by the turn of the present century. By invisible I mean that infrastructure became so ubiquitous that it went unnoticed by even the keenest of urban observers. Jacobs never mentioned the role of the water, power, transport and sanitation infrastructure in her discourses. In the context of the high modernist era of urban writings, the period from roughly the 1930s through the 1970s which enfolded Jacobs, infrastructure as an integrated set of networks were considered part and parcel of the expanding city. Because they were essentially invisible, it was possible for the urban writers of that era, (Mumford, 1961, Wirth, 1938, Jacobs, 1961 and 1969 etc.) to proclaim that the essential urban discourse revolved around economy and social class in a fixed spatial context.

The collapse of the welfare state and the rise of postmodern ideologies of urban life were the policy and intellectual analogues to the rapidly declining costs of global transport and information exchange. These innovations rendered the idea of the city as a unified spatial socio-economic entity that needed to thrive as a whole or decline as a whole moot. They opened up the possibility that cities could function well as fragmented spatial places. They also brought down the curtain on the era of mass produced and uniform consumer goods and public services.

In analogous fashion the period saw a concentrated assault on the public services monopolies that provided the infrastructure that gave form to the notion of the spatial unity of place. The arguments for deregulation and privatization that characterized neo-liberalism were also arguments against the uniform public goods nature of monopolized public services and in favor of a segmented and consumer oriented approach to these issues as well. The impact of that was essentially a call for the customization and fragmentation of public services via privatization, deregulation and the creation of P3s to construct and maintain public infrastructure.

Lost in this turn towards segmented public services is a concern for the important contribution that urban place and density makes to the agglomeration and scale economies that make cities economically thriving spaces for all their citizens. A major concern that underlies this paper is that we are losing sight of the forest of urbanization as we concentrate on the individual trees of elements of infrastructure. Nodes on a global network must not be permitted to displace the importance of local density and local place.

### **The Drive for P3s**

Although many of the programmatic elements of the neo-liberal privatization era have by now fallen into disrepute P3s not only endure, but they are expanding. Between 1994 and 2006, within the US, over \$21 billion was paid via P3s to operate 43 highway facilities. Between 2006 and 2008 15 roads in 10 different states had been privatized. As of June 2009 approximately 79

roads in 25 states are under consideration for some type of P3. (U.S. PIRG, 2009) Between 1990 and 2001, nearly 2,500 infrastructure projects throughout the world, worth over \$750 billion in private commitments were attempted. (World Bank, 2003) It is almost unheard of for a new service or infrastructure project to move forward without at least considering the P3 alternative. More often than not the P3 alternative is now the default option and conventional public construction is considered unique, and perhaps even “quaint.”

Despite the widespread exposure of the complex and difficult contracting problems of infrastructure based P3s in both the popular press and the scholarly literature this approach continues to grow as the preferred option. One study published as early as 2002 concluded that as many as 74 percent of all transport concessions and 55 percent of all water concessions in Latin America were renegotiated in the 1990s (cited in World Bank 2003). We are now almost a decade past that study plus a range of others in the literature (see for example Siemiatycki, 2006, Siemiatycki 2007, Daniels and Trebilcock, 1996) yet the approach continues to grow in popularity. The question of why is therefore quite pertinent.

The very short answer is one word: collateralization. Collateralization refers to the ability of investment banks to bundle together large pools of savings such as pension fund money seeking a safe and high rate of return on their investments. Collectively known as collateralized debt obligations or CDOs, these investment vehicles were the core business arrangement in the spectacular collapse of the global housing market, with the US market as ground zero in this endeavor. Investment banks such as Morgan Stanley and Goldman Sachs make a great deal of their billions from the high fees paid to create CDOs that can join the savers with the purveyors of the returns. The purveyors can be offering mortgages, life insurance policies,<sup>4</sup> or infrastructure investment funds. It really does not matter the principle is identical. The investment banks seek any potential future stream of revenues that can be bundled together and sold via bonds or investment funds as a return to the upfront savings of the product buyers. The challenge is always to make the buyers comfortable with the promised future returns from the sellers.<sup>5</sup>

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<sup>4</sup>Anderson Jenny (2009) “Wall Street Pursues Profit in Bundles of Life Insurance,” *New York Times*, September 6  
<http://www.nytimes.com/2009/09/06/business/06insurance.html?scp=2&sq=life%20insurance&st=cse> Accessed September 7, 2009

<sup>5</sup> It was the job of the security ratings agencies such as Standard and Poor’s, hired by the investment banks to provide assurances to the buyers that their money was in safe hands with the sellers.

Infrastructure based CDOs have taken off with a vengeance in the wake of the collapse of the sub prime induced recent credit crisis.

But with the explosion of money flowing into private investments recently, fund managers have been exploring the fringes of the investing world in search of fresh opportunities. Now a slew of Wall Street firms—Goldman, Morgan Stanley, the Carlyle Group, Citigroup, and many others—is piling into infrastructure, following the lead of pioneers like Australia's Macquarie Group. Rob Collins, head of infrastructure mergers and acquisitions at Morgan Stanley, estimates that 30 funds are being raised around the world that could wield as much as \$500 billion in buying power for U.S. assets. (Thornton, 2007)

Reeling from more exotic investments that imploded during the credit crisis, Kohlberg Kravis Roberts, the Carlyle Group, Goldman Sachs, Morgan Stanley and Credit Suisse are among the investors who have amassed an estimated \$250 billion war chest — much of it raised in the last two years — to finance a tidal wave of infrastructure projects in the United States and overseas. (Anderson, 2008)

For state pension funds these vehicles are exceedingly attractive alternatives, as they need to garner sufficient returns to pay for the pensions of state workers in an era in which raising taxes are almost impossible. In 2008 the California State Teachers' retirement system authorized up to \$800 million for investment in infrastructure funds. Its sister fund, the California Public Employees' Retirement System earmarked \$7 billion for such investments through 2010. The State of Washington allocated 5 percent of its pension fund for similar investments. The returns on these investments promise to be quite attractive. The Ontario Municipal Employees Retirement System reported that it achieved a 12.4 percent return on its investment of \$5 billion. (Anderson, 2008)

"We're using [infrastructure] as a fixed-income proxy," says William R. Atwood, executive director of the Illinois State Board of Investment, who plans to invest \$600 million to \$650 million, or 5% of its portfolio, in infrastructure funds over the next three years. "We're hoping to get 11% to 12% returns and lower risk." (Thornton, 2007)

From the point of view of the industry, this is literally the new sub prime. Mark Weisdorf, the head of JP Morgan's infrastructure investments asserted,

“Ten to 20 years from now infrastructure investments could be larger than real estate.” (Anderson, 2008)

Firms are even beginning to market infrastructure to investors as a separate asset class, safe like high-grade bonds but with stock market-like returns—and no correlation with either. The Standard & Poor's 500-stock index has returned about 10% a year, counting dividends, since 1926. Bonds have returned about 5%. Firms say infrastructure will beat both, and without having to sweat out market dips along the way. That's a huge selling point at a time when stock, bond, and commodity markets around the world are becoming increasingly interconnected. (Thornton, 2007)

The reasons for this enthusiasm are easy to understand.

In the past year, banks and private investment firms have fallen in love with public infrastructure. They're smitten by the rich cash flows that roads, bridges, airports, parking garages, and shipping ports generate—and the monopolistic advantages that keep those cash flows as steady as a beating heart. (*Emphasis added*) Firms are so enamored, in fact, that they're beginning to consider infrastructure a brand new asset class in itself. (Thornton, 2007)

Infrastructure is ultra-low-risk because competition is limited by a host of forces that make it difficult to build, say, a rival toll road. (*Emphasis added*) With captive customers, the cash flows are virtually guaranteed. The only major variables are the initial prices paid, the amount of debt used for financing, and the pace and magnitude of toll hikes—easy things for Wall Street to model. (Thornton, 2007)

Compared with the way in which the investment banks used to make their return, the sale of government issued bonds for infrastructure, the new approach is so much more lucrative that there is little enthusiasm among the powerful financial interests that shape public decision making for going back to the older public option of first wave urbanization (bonded public debt combined with private construction and public operation to supply public goods).

To the extent that the public option remains viable, the essential policy debate in the scholarly literature has been reduced to a controversy over proper accounting valuations of non-priced costs and benefits; the value for money question. To be sure there are authors who raise the problem of equity along with efficiency but once more this is either viewed in terms of a “trade off” in which efficiency is sacrificed for equity or it is viewed as a “win-win” when the “proper” structuring of the P3 process is employed. Lost in this discussion are some far more fundamental concerns about the nature of public infrastructure in the context of the contemporary urbanization processes.

### **The Rationality Assumption for P3s**

The scholarly research on experience with P3s almost always concludes with a call for their continued use, but only with a series of caveats on the need for the public partners to be better prepared and a pressing need for a more “transparent process” whatever that means. Let us consider one example of this approach.

The crux of PPP contract design and the eventual success of the partnership lie in a careful analysis of the inherent risks involved in each of the project tasks and how best to manage them. Risk management involves four successive stages:

- \* risk identification;
- \* quantitative and qualitative evaluation of potential project impacts due to risk occurrence;
- \* risk mitigation;
- \* allocation of each residual risk to the most relevant partner.

(Phang 2007, citing work by Aoust *et. al.* 2000 and Gray and Irwin 2003)

The problem here is that while this is a logical and complete summary of the risk challenge of a P3, it is not a description of the actual risks.<sup>6</sup> Risks are by

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<sup>6</sup> In fairness to Phang, I note that while he reports this from the literature, he does not himself adopt such an idealistic position. Rather he believes that we can make P3s work better if we are better aware of the complexity and the need for transparency. He concludes his paper by arguing that P3s can never become the dominant method of acquiring infrastructure because they are simply too complex and too costly.

definition events of uncertain occurrence. The best we can do is estimate a probability for their occurrence; and that is far from a precise science. Hence the notion of quantifying risk potential is always more of a theoretical than a practical exercise. Moreover the ability to identify specific risks involves the ability to predict how the larger context in which the project is taking place will change over time. No one can really foretell that. Therefore it is never going to be possible to assess and allocate risk in the neat way that models such as the one describe here suggests is possible. The problem is further exacerbated by the fact that all parties will never have the level of equal information adequacy, risk tolerance and analytic competence required to evolve a perfectible market of happy and cooperative public and private partners. In a complex world where it is impossible to predict what will happen two weeks hence, the notion that it is possible to understand and anticipate risks over a period of 10 or more years is at best a comforting quest for a holy grail. Indeed the notion of “partnership” is never fully unpacked. But as the UK’s Association of Chartered Certified Accountants put it in their authoritative review of P3s, “Partnership is an ideal to be aspired to rather than a description of the actual working relationship.” (ACCA, 2004, page 8)

The dominant contemporary approach to the evaluation of P3s is VFM. VFM is actually the most recent justification for P3s. The original justification for P3s was the efficiency argument; that private companies are more efficient than public entities. That was always a dubious claim given the fact that governments had more experience at public construction than did the investment firms putting the CDOs together. Furthermore, because governments can always borrow at lower rates than can private parties, it was hard to make the case that private construction was less expensive than public. When the efficiency/lower cost argument began to collapse under the weight of accumulated evidence, the case for P3s shifted to VFM. VFM justifies the use of a P3 if it can be shown that the discounted financial costs, over the life of the project are lower than the costs of conventional procurement. The costs of conventional procurement are gauged via the use of a hypothetical public sector comparator or PSC. The basic problem for the comparative cost analyst is deciding which partner bears which risk; the more risk that can be shifted to the private sector, the lower are the costs of the PSC. But P3s are by definition a partnership in which the public sector explicitly holds on to the major portion of the risk. Complicating matter further P3 proponents argue that risk should be borne by the party most able to carry it. (ACCA, 2004) Invariably that is the public sector so invariably VFM demonstrates that the P3 is less costly.

Indeed the Irish Government, a strong promoter of the P3 approach inadvertently gives away the whole game on its website:

It is important to note that each of the formal value for money tests is assessing the potential for a project to secure value for money at a particular point in time and in light of the available information. The overall value for money of a project can only be fully determined at the end of the PPP contract term. (*My emphasis*)<sup>7</sup>

Hence there is really no *ex ante* way to know if P3s are cost effective. The VFM analysis of P3s gives a new dimension of meaning to the expression “faith based initiatives.”

Given the expensive, intensive and asset-based specificity of this form of private sector engagement, its inherent long-term nature, the multiplicity of both individual and compounded risks and the centrality of infrastructure to the effectiveness of urbanization, reliance on P3s raises planning concerns that go well beyond the financial risk that permeates the public policy discussion. Infrastructure decisions have long-term impacts on the spatial and social character of the places they are intended to serve. It is these impacts that are the central professional concern of planners. Financial models based on numerical projections, no matter how sophisticated they are at the moment they are performed, are an inadequate tool for addressing the complex concerns about environment, climate change, social equity and economic sustainability that planners must consider when they make recommendations about infrastructure.

### **Three Problems with P3s from a Planning Perspective**

From an urban planning perspective, three interconnected questions about P3s that must be addressed; the public goods questions, the democracy question

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<sup>7</sup> “Value for Money and the Public Private Partnership Procurement Process,” (October 2007) Published by Central PPP Unit in the Department of Finance Government of Ireland <http://www.ppp.gov.ie/about-the-central-unit/about-the-central-unit> (Accessed on 08/06/09) It is noteworthy that the term “value for money” does not necessarily mean that the P3 is the least cost way of producing the good; it simply means that the discounted benefits of the P3 appear to exceed their discounted costs at the moment that the decision is made. Hence the employment of the term “value for money” is simply meant as assurance to the general public that this ideological approach is not abusing public money even it is not maximizing efficiency.

and the comprehensive planning question. In this section I consider each of these in turn.

Public goods are formally defined in theoretical economics as goods that are non-excludable and non-rivalrous. That is a good that any who wish to avail themselves of can (non-excludability) and their consumption of it does not damage the ability of others to use it (non-rivalrous consumption). In practice it is difficult to identify a pure public good. Sunshine on a summer beach is a close approximation to a pure public good. All the beach goers can soak up all the sunshine they wish without impairing the ability of other sun worshippers to do the same. Of course a private beach would exclude some from a particular location. Infrastructure in the forms of transport, power, water, sanitation and communications are not automatically public goods because exclusion and rivalrous consumption of them are real possibilities. However because infrastructure creates externalities or nonmarket benefits or costs, in the context of the high density living that is urban space, planners typically treat these elements as public goods. The rationale for making these non-excludable are similar to the rationale for free public education. The benefits redound to more of us than just the direct consumers of the service. That was the reason why water, sanitation and transport were treated as public goods during first wave urbanization.

There are three important elements implicit in the public goods approach to infrastructure that characterizes planning. The first is that the approach assumes equity of access across a very broad swath of the urban population. The second pertains to cross-subsidization. To the extent that user charges are employed they are often used to cross-subsidize portions of the network that are less used than others. It is often the case in urban transport that densely used trunk lines can generate a surplus of fare revenue over costs. But lightly used portions of the system that are equally important to the functioning of the entire urban region cannot. The surplus from the densely used portions can help to subsidize the less densely traveled portions. The final element that the overall effort is focused on the all-important capture of externalities.

The democracy question, or more accurately what I would call the non-democracy question is central to the creation of P3s. When infrastructure is privatized (or corporatized), the decisions about its size, shape and placement are driven by market demand. The private partners are interested in elements of infrastructure that can yield the longest and strongest streams of privately capturable revenue not the ones that yield the largest public benefits. Timothy Carson, vice president of the Pennsylvania Turnpike Authority argues that "These [deals] are largely driven by one factor: the permitted toll increases." (Thornton, 2007)

The aggressive toll hikes embedded in deals all but guarantee pain for lower-income citizens—and enormous profits for the

buyers. For example, the investors in the \$3.8 billion deal for the Indiana Toll Road, struck in 2006, could break even in year 15 of the 75-year lease, on the way to reaping as much as \$21 billion in profits, estimates Merrill Lynch & Co. (Thornton, 2007)

However as Uwe Reinhardt, Professor of Economics at Princeton University observed; "You have to ask yourself if you want roads that used to be considered a public service to be rationed by income class." (Thornton, 2007) If your concern is revenue and not equity of access, the answer is yes. When the rationing of public services by income class becomes the standard then the gated community with all of its own services internally provided becomes the highest form of urban spatial consumption. If gated communities remind you a bit of the walled cities of the dark ages, well *plus ça change, plus c'est la même chose*.<sup>8</sup> In terms of transport based P3s, it is the ability to make equity of access a concern of secondary import to direct revenue from access that is at the heart of the attractiveness of this approach to urban infrastructure for the private partner. Because this approach is so heavily revenue based, any potential for allowing cross subsidy disappears fast, which in turn exacerbates the problem of taxation of service delivery. Once the ability to use public finance becomes seriously constrained, the ability to plan is perhaps fatality impaired.

Which leads to the final question: the comprehensive planning question. Because the interests of the private partners in the placement of infrastructure and their concerns about protecting their revenue streams come to dominate the local discourse the planning approach begins to shift from one in which a comprehensive view of the urban space is replaced by one that views the space as a collection of individual projects that each have to be nurtured separately in terms of the rates of investment return that are pledged to the private owners of the concession for however long the concession lasts.

### **Texas State Highway 130**

State Highway 130 is a toll road that runs east and south of Austin, Texas. It essentially parallels Interstate 35, which runs directly through the center of Austin. SH 130 was constructed to relieve the Interstate's traffic congestion through the Austin-San Antonio corridor by serving as an alternate route. The highway was developed in response to the tremendous surge in truck traffic generated by the North American Free Trade Agreement. A local business group estimated that congestion along I-35 corridor was costing businesses more than \$194 million a year in higher operating costs and lost productivity.

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<sup>8</sup> "The more it changes, the more it is the same thing."

On June 28, 2006, Cintra-Zachry, an international infrastructure operating firm and the developer of the Trans-Texas Corridor, reached a \$1.3 billion agreement with the state to build the final segments of SH 130. In exchange for their investment, Cintra-Zachry received the right to collect tolls for 50 years in a revenue sharing agreement with the state. The state owns the road and the developer is responsible for financing, design, construction, operation and maintenance over the life of the agreement.<sup>9</sup>

In the spring of 2009 a couple of local residents ran an experiment to compare travel speeds on SH 130 and I-35. The trip around Austin on SH 130 was 22 minutes faster than the trip directly through town on I-35. It is important to note that at the time of the trip I-35 was not congested. None the less travel speed on SH 130 averaged 70 mph, on I-35 the travel speed was 50 mph.<sup>10</sup> Why was that the case? Traffic is running about 12 percent above the projected estimates on the new toll road. But revenue is about 18 percent below the projection. The reason for this result is that tractor-trailers that would pay about four times more than passenger cars to use the new road avoid it. The difference of 22 minutes is not worth the added tolls plus the added fuel costs to these truckers. So they, along with lower income Austin area residents remain on the slower but more direct I-35 and higher income residents and those in a special hurry get a speedier trip on a privatized highway, but at a price. This essentially means that this piece of infrastructure effectively designed to remove heavy truck traffic from the city center did the exact opposite. Because of the need to pay both for road maintenance and debt service out of tolls, it has fragmented the public goods function and aggravated social equity concerns. The financial structure of a P3 in this case produces a result that is the very opposite of the public goods rationale with which planners approach the question of infrastructure construction.

### **Sidney Cross Town Tunnel**

Sydney's Cross-City Tunnel opened to traffic in August 2005. It is a short (1.3 miles in length) underground route connecting the city center to its eastern suburbs. It was a DBOM P3 project. The infrastructure reverts to public ownership in 2030. In 2008, three years after opening, it handled a daily traffic volume of about 35,000 vehicles. However, as is typical in these situations, the business plan upon which the financing and construction was

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<sup>9</sup> [http://en.wikipedia.org/wiki/Texas\\_State\\_Highway\\_130](http://en.wikipedia.org/wiki/Texas_State_Highway_130)

<sup>10</sup> <http://www.austincontrarian.com/austincontrarian/2009/05/sh-130-vs-i35-early-returns.html> Accessed August 2009.

organized forecast a volume of roughly 90,000 vehicles per day.<sup>11</sup> About one year after opening, in December of 2006, the tunnel was handling between 20,000 and 30,000 vehicles per day. The international consortium that owned the tunnel could not meet its debt obligations and operating costs on that volume. They tried a range of pricing schemes to boost volume but to little avail. Similar to the SH 130 problem the basic business model was in trouble because it essentially had to compete with the above traffic street network, as SH 130 competed with the I-35 freeway. The tolls for using the short tunnel to avoid above ground traffic are steep, approximately \$3.50 US for private automobiles and more than double that for larger vehicles. The result was the original owners of the concession were forced into bankruptcy and a new set of international investors is attempting to make a go of it. However for my present purposes, this is not the most interesting aspect of this case.

The tunnel has been embroiled in two controversies that illustrate the clash between the concerns of planners and the concerns of private financiers. The first concerns the need to minimize competition to maximize the monopoly revenues for the structure. The City never released the full details of the contract between the tunnel operator and the government, but it was well known in Sidney that the City created a series of road closures and traffic diversions that appeared designed to divert above ground traffic into the tunnel. The disruptions caused by this agreement generated fierce protests across the city from the very beginning. The complaints were sufficient strong that on December 6, 2005 the head of the Cross City Tunnel said under oath that the company would not seek compensation if some of the controversial road changes were undone; but on December 7, one day later, after discussions with the company's lawyers, this offer was rescinded. Clearly the goal of a transport planner would be the efficient movement of traffic through the CBD and not the volume necessary to make the investor's target rate of return. It is not that these are necessarily mutually exclusive, but it is more often than not the case that they clash. No analysis of discounted present values captures such a fundamental difference in point of view. Hence the fact that P3s often contain contract provisions requiring noncompetition from alternatives are the direct opposite of the planner's value for infrastructure redundancy to create disaster resilience during unforeseen emergencies or merely to better balance the challenge of day-to-day and season-to-season events that are part of ordinary urban life.

The second controversy concerns environmental quality. It was well known in Sidney that air quality around the ventilation towers for underground tunnels could be particularly poor. The cross-city tunnel was no exception.

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<sup>11</sup> For purposes of comparison bear in mind that after 80 years the Holland Tunnel in lower Manhattan handles that volume. The Holland Tunnel connects Manhattan to New Jersey with a direct link to the NJ Turnpike.

Even at the lower number of vehicles using the tunnel, the mobile source pollution was high. As part of the contract, the tunnel operator was required to installed air quality monitors at its ventilation towers. The contract only called for operating these for a 3-year period. In August of 2008 the air quality monitors were removed. A spokeswoman for the operator “said the company would not be reconsidering the dismantling of the monitoring stations and said that only the air quality inside the tunnel would be monitored in the future.”<sup>12</sup> Clearly for environmental planners this clash between environment health and financial risk for private investors would never be resolved in this manner.

### **Chicago Parking Meters**

In December 2008, the City of Chicago leased its system of 36,000 parking meters to a private company for 75 years in exchange for a payment of \$1.157 billion in a spectacular variation on P3s. The entire episode went from public announcement of the proposal on December 2<sup>nd</sup> by the mayor to final approval by a vote of 40 to 5 in the City Council on December 5<sup>th</sup>. There was no real analysis of the details or debate about alternatives. The entire deal to lease the City’s parking meters for effectively three generations was completed in less than three days. In January of 2009, the City of Chicago’s Inspector General’s Office (City of Chicago, 2009) launched an investigation into the affair and concluded in a final report issued in June 2009 that:

- 1) The administration failed to fully assess the costs and benefits of the arrangement and
- 2) That the City entered into the arrangement to cover a short-term budget short fall and not because of a long term P3 advantage.

More specifically:

The report finds that if the City were to keep control of the parking-meter system and operate it under the same terms as the private company, the system would be worth approximately \$2.13 billion to the City over 75 years. In other words, by giving up control of the parking-meter system for 75 years, the City relinquished future parking-meter revenue that has a present value of approximately \$2.13 billion. (City of Chicago, 2009)

Essentially on a VFM basis the City of Chicago underpriced its asset by 46 percent.

The report further found:

The City has also argued that it would make no sense to calculate the value of the parking-meter system to the City under the terms

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<sup>12</sup> <http://sydney-central.wherelive.com.au/news/story/cross-city-tunnel-air-monitoring-station-dismantled/> Accessed 06/29/09

of the lease, because the City could never operate the parking meters under the same terms as a private company. Specifically, the City has argued that (a) it would have been impossible for the City to have both kept the parking-meter system and raised the rates to the same extent as the lease, because there was not sufficient political will to do so (the “impossibility argument”); and (b) any private company would be able to operate the parking-meter system more effectively and efficiently than the City could (the “government inferiority argument”). (City of Chicago, 2009)

The report finds that neither of these arguments has merit. In brief, the “impossibility argument” is disproven by (among other things) the fact that the City did in fact raise the rates when it approved the lease, and the fact that other cities have kept their parking-meter systems and passed large rate increases. The “government inferiority” argument is disproven by (among other things) the performance of the winning bidder in the first few months of the lease (when governmental intervention was required to fix the problem), and the fact that the increased efficiencies in the system are expected to come from capital improvements that are well within the City’s capability and expertise. (City of Chicago, 2009)

The report looked at the issue in the standard way, from a public policy cost-benefit point of view. However from a planning point of view, this particular P3 takes the notion to an extreme limit. From a public policy point of view the city leased parking meters, but from a planning point of view the city turned over valuable lanes of public street capacity to a private investor intent on maximizing their financial gain over three generations rather than being concerned with how the city could meet the challenges that the new century will present for an older city in which little new infrastructure can or will be built. Consider just one issue that the city will face. The contract makes the city liable to the contractor for anything that it does to impair its ability to collect revenue from its parking meter operation. For example, if the City of Chicago in response to congestion and climate change decided to institute a network of bus rapid transit lanes to interlace the city and get people out of cars, it would face two problems. The first would be that it would impair the private contractor from collecting revenue because it would take lanes away from parking and turn them into exclusive bus lanes. It will further face the problem of diminishing demand for the remaining metered spaces as people would have a more efficient way to get around town. As a result of both of these situations, the City of Chicago will find itself in the position of having to compensate the investors to whom it sold its city streets at a price almost 50 percent below market value, if the IG is correct, or do without the modernization. That is a major planning problem that was never discussed.

**Conclusion: Reframing the Debate: The Port Authority of New York and New Jersey as an Alternative Model**

From a public policy perspective the P3 argument is also a variation on what the Chicago IG characterizes as the impossibility argument (government cannot raise capital for infrastructure) and the inferiority argument (the private sector does everything better). From a planning perspective the infrastructure issue needs to be formulated in a two-fold manner. There is the question of finance, it abides as a real question, but planners do not generally engage in the inferiority argument. Rather planners are concerned with the public goods argument (infrastructure generates positive externalities that can only exist if everyone can access the infrastructure).

Planners, with their long-term professional concerns with equity, environment and urban density need to reframe the argument about infrastructure so that these concerns became foreground and not background. In that regard, sometimes the best answers are not the latest but the oldest. I would propose that we critically reconsider the strengths and weakness of the public authority model. The experience of the Port Authority of New York and New Jersey (PA) is an excellent case-in-point.<sup>13</sup> This is a bi-state agency created by an act of Congress in 1921 to manage the complex infrastructure that defines this important urban bi-state region. The PA was the first interstate agency created under the interstate compact provisions of the Constitution. It was also the model for similar progressive era public authorities. The strategy was to create a public agency with sufficient insulation from local politics to be free from contract graft and corruption as it pursued the efficient realization of public goals. It was empowered to carry out long term public infrastructure projects for a rapidly expanding urban region. Of course the flip side of the coin that always plagues such agencies is the lack of democratic accountability. It is beyond the scope of this paper to delve into this issue.

The most important point for this paper is the fact that for much of its almost 90-year history it has proven to be a model of a creative public goods approach to the creation of urban infrastructure and the provision of urban public services. As a public authority, its organizational mission is quite naturally a public service mission. Hence it heavily values this consideration in its projects. It does not need to protect a monopoly position, though it quite often has one. Because of its public role it would be obliged to consider the public welfare in air quality monitoring. It could not hide behind the terms of a contract.

The Port Authority operates on the revenues it makes from its rents, tolls, fees, and facilities. It has no taxing power. But the various operations that it runs including real estate throw off sufficient revenues to engage in the

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<sup>13</sup> I am grateful to my colleague at Columbia University, David King for this suggestion.

construction and maintenance of infrastructure. Because it is not in business to maximize return to share holders, it can charge prices for the use of its facilities' that meet its production costs and financing costs and that can cross subsidize users whose fees do not cover the full costs. Finally, because it is a public agency, its capital costs are significantly lower than are the comparable costs for private sector P3s.

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