

Public-private partnerships

Why they happen and how they work in urban public transport

Introduction

There are many different ways to run an urban public transport system. What is best for one city might not be best for another. There are many variable factors, such as a city's size and population density, the strength of its civic institutions and its levels of poverty and inequality. This briefing explores the various forms of relationship between public and private roles, drawing on recent experience in various countries with particular focus on employment issues and the effects of public-private partnerships (PPPs) on service quality and sustainability.

Public transport services require infrastructure as well as services, and therefore capital investment as well as operational finance. All of this is the responsibility of government, but some of it can be carried out by private companies in contractual relationships of one kind or another with, or under the regulatory oversight of, public institutions.

There are three broad categories of public-private partnerships:

- Where private operators provide services using infrastructure that remains under public control. We will call these *operational PPPs*. They are typical in Bus Rapid Transit (BRT).
- Where public operators provide services using infrastructure under private sector control. We will call these *infrastructure PPPs*. They have been used particularly to build, renew and/or maintain railway tracks, signalling, and stations.
- Where private operators provide services on infrastructure also under private control. We will call these *concession PPPs*. These have been the typical form of railway privatisation and light rail development and are the normal form in which governments partner with the private sector for infrastructure development.

In all PPPs, the core issue is how risks and rewards are allocated between the public and private parties. Experience has shown that optimism about PPPs in public transport, and in urban railways in particular, was based on overestimation

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Its purpose is to build the capacity of urban transport unions to campaign for quality services and build alliances with passengers and other civil society organisations to promote sustainable transport systems.

That means services that enable everyone to travel safely, comfortably and quickly, and employ enough securely employed, properly trained and fairly rewarded transport workers.

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of the extent to which the private sector could or would absorb risk and underestimation of the extent to which it would seek opportunistically to maximise rewards.

These miscalculations have arisen in part from the rise in the 1980s and 1990s of free market ideology, which persuaded policy makers that earlier assumptions about the boundaries between public and private responsibilities no longer applied. This was fuelled in part by financial problems faced by governments, leading them to look for private investment in public services despite the cheaper cost of borrowing for the public sector.

The economic crisis since 2008, and the widespread awareness that it was caused by the opportunistic behaviour of banks in an environment that had become insufficiently regulated, has shown that neo-liberal ideology exaggerated the extent to which private profit-seeking could be reconciled with the public interest. Similarly, experience of a number of failed railway PPPs -- including some in which private 'partners' refused to fulfill their contractual obligations -- has corrected the unrealistic view of the extent to which private investors would deliver quality public transport in a sustainable and cost-effective way.

This revision of over-optimistic expectations for PPPs has had three effects:

- Recognition that the nature of the risks and rewards varies greatly between the three types of PPP -- with infrastructure and concession PPPs by their nature far more problematic than operational PPPs -- and depending on city characteristics.
- Reduction of confidence in infrastructure and concession PPPs, and return of some investment and service provision responsibilities to the public sector, especially in rail and light rail, and often on terms that have brought very large public finance costs arising from the failed PPP.
- Further innovations in regulation, to change the design and improve the performance of operational PPPs, especially in BRT.

Public and private roles in service delivery

The options for public and private roles in service delivery can be seen as in Table 1, on page 3.

In theory, both public and private service providers can be involved right along the spectrum between monopoly and open markets. There is no technical reason why publicly owned services cannot operate in a liberalised environment or a monopoly cannot be entirely privately run. In practice, however, where there are monopolies they are most likely to be public, and where markets operate in public transport there are still key roles for government in designing and regulating them. In many developing country cities, there is a combination of public monopoly of formal bus services along with a liberalised environment for informal economy services.

Technological factors affect the choice of options. For example, those parts of transport systems that are based on fixed networks, such as railways and bus rapid transit, cannot be an open market, whereas there is no technical reason why bus services on ordinary roads should not be. However, just because bus services can

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be operated through a liberalised market doesn't mean they should be! In fact it is impossible to run a quality public transport system on a fully liberalised basis -- as many congested and polluted cities have learnt to their cost -- because it leads to oversupply of potentially profitable services and undersupply on the rest, and low standards for those most in need of quality public transport.

Table 1 - Public and private roles in urban passenger transport

Mode	What it involves	Comments
Public monopoly	All system assets and operations under state control	This is the widespread norm in China, Europe and the United States
Management contract	State owns assets but contracts with private company to perform defined operational and/or management functions	Contract can be awarded with or without competitive tendering, and for any particular large or small aspect of operations
Area or route contract -- gross cost	Public authority contracts with private operator to provide services in specified areas or routes for a specified period for a specified fee, with fare revenues going to the authority not the operator.	Contracts awarded by competitive tendering, or (especially in circumstances such as a new BRT system when existing private bus operators are being displaced) through negotiation or selection.
Area or route contract -- net cost	Public authority contracts with private operator to provide services in specified areas or routes for a specified period, with fare revenue retained by the operator. Normally, if this results in profits the operator pays a royalty to the authority, while losses are covered by public subsidy.	Contracts awarded by competitive tendering, or (especially in circumstances such as a new BRT system when existing private bus operators are being displaced) through negotiation or selection.
Private service monopoly	Area and/or route contracts in which a single provider has exclusive license for a specified period. This means that although there is no competition <i>in</i> the market there can be competition <i>for</i> the market.	Contracts normally awarded through negotiation or selection, as this type of arrangement usually favours particular interests with political influence.
Liberalised market	Any provider can provide any service at any time on any route at any fare.	There might or might not be some regulation of quality standards.

Public and private roles in Bus Rapid Transit

An increasing number of cities around the world have developed bus rapid transit (BRT) systems over the past decade or so, a trend that is continuing. This is not only for technological reasons but also to introduce more public planning, financing and regulation into urban public transport. Many cities, particularly in China, Europe and the United States, have developed BRTs through their existing public monopolies, whereas in others, particularly in Africa and Latin America, private operation of BRT services is more typical.

Where they are not run by the public sector, a combination of *competition for the market* -- in which private companies bid to provide licensed services -- and *competition in the market* -- in which providers operate alongside each other -- is the norm for BRT core services and the feeder buses that link to them. But experience so far shows that no particular approach is perfect and that in any given set of urban circumstances it is a matter of devising the best available solutions from a mix of opportunities and problems associated with any institutional or structural design.

The 2007 *Bus Rapid Transit Planning Guide* produced by the Institute for Transport and Development Policy (ITDP) offers a useful historical perspective about public and private sector roles in developing countries:

“Publicly-operated bus systems in the developing world were popular into the 1970s. Public systems still persist in South and East Asia, but are increasingly rare in Africa and Latin America. The historical development of public systems in developing nations stems from a diverse set of reasons. In some instances, the public sector took over routes and areas that were not sufficiently profitable for the private sector. The public sector thus can provide a role of social equity in under-served areas.

“Public operations also frequently grew out of dissatisfaction with the poor quality of private provided service. In Africa for example, it was typical for bus manufacturers from the colonial power to own the municipal bus companies, often providing fairly poor quality service. In turn, public takeover was part of the process of decolonisation. Also, in lower-income countries, indigenous business sometime did not possess the capital to procure buses, so only the state was able to assemble the levels of investment required for vehicle procurement.” (ITDP BRT guide, 2007, p.550.)

However, in more recent years under-investment (often related to debt problems and structural adjustment programmes associated with conditions of loans by the World Bank and other international financial institutions) and other problems (including domination of public sector governance by elites) has prevented expansion of public transport systems and undermined quality of service. Typically this has been associated with the growth of informal bus services, more or less unregulated, filling gaps in public provision with low quality and often unsafe private services. These are often controlled by political or other elites, for whose members ownership of one or more minibuses or taxis can be a sort of retirement plan, and they employ workers to operate them on casual contracts that are highly precarious but better than no livelihood at all. Weak or non-existent public regulation of these services has left a vacuum filled in a variety of ways, by enterprises, ‘cooperatives’ or ‘unions’ that are sometimes controlled by criminal elements.

In these circumstances, there has been a trend towards the introduction of state regulation and investment in which, instead of a free-for-all, private providers run

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services on public infrastructure. Therefore, although PPPs are sometimes understood as a form of privatisation, they can often be seen more accurately as a step *towards* rather than away from public control. The ITDP BRT Planning Guide (p.547) points out (p.560): “By taking public transport vehicles out of congestion and improving their capacity and speed, BRT systems can dramatically increase the profitability of the public transport system and end a downward spiral of declining public transport use and declining quality of service.”

Bearing in mind the variety of circumstances of different cities and that one size does not fit all, the ITDP research indicates there are five key elements of the most successful BRT PPP models, namely:

- Strong regulatory institutions to provide effective public oversight.
- Cost sharing in which the private sector finances the vehicles.
- A process that maximises competition *for* but limits competition *in* the market.
- Operators paid according to vehicle-kilometres travelled rather than number of passengers.
- Independently concessioned fare collection system that distributes revenues in a “wholly transparent manner”.

Some cities have found that existing state institutions were not suitable or capable of providing the planning and regulatory functions involved, and they have created new institutions for the purpose. Some of these are responsible for the whole public transport system in their areas, such as Transport for London. Others are responsible for only a particular service, such as TransMilenio in Bogotá, which oversees just the BRT system there, while other institutions have responsibility for other parts of the public transport system.

Clearly, a systematic approach to multimodal urban transport planning and design can benefit from an integrated institutional framework. On the other hand, organisations that are unable to plan their own strategic development and investments over reasonable timescales cannot function effectively. Therefore a balanced approach with clear institutional roles and boundaries is important whatever the particular division of responsibilities.

Institutional capacity and the political economy of PPPs

In the PPP context, the length of contracts, the extent of competition within areas and routes, and methods by which private providers are chosen and rewarded have all varied greatly. To some degree this variation reflects an international learning curve about how to design and implement these schemes most effectively in different national and urban circumstances. However, it also reflects differences in institutional capacity and the political economic circumstances in which PPPs have taken place.

The problem of institutional capacity is important, and is in fact closely related to the political economy issues. It is often cited as a reason to enter into PPPs, to overcome weaknesses in know-how or incentives in the public sector by enabling access to formal private sector expertise and attitudes. However, governance and management weaknesses in the public sector will negatively affect a PPP as much as or even more than direct public provision, because private companies can exploit those weaknesses.

Similarly, while PPPs can end reliance on weakly regulated informal public transport providers, those informal providers, and their workers, have to be incorporated somehow into the new system, or else their resulting hardship is likely to lead to a vigorous and perhaps violent backlash against the new system. As the ITDP Guide puts it (p.554), “even the most competitively designed concession systems, such as Bogotá, introduce some degree of support for existing operators”. This can lead to some danger of capture by those interests.

In Quito, Ecuador, for example, the existing operators were given exclusive rights for ten years and their vehicles were paid for with public funds but owned by the private operators. In León, Mexico, the incumbents were given monopoly rights in perpetuity, the fare collection system lacks transparency and -- because fares are paid only on the first bus used on each journey, which is a feeder bus for morning commuters to the city centre but the BRT bus on the return journey -- there is no incentive for the feeder buses to operate at all in the afternoon.

To avoid those problems, and for other reasons, some PPPs involve international operators rather than local firms, but this too can lead to consequences that are not in the public interest. When one side of the relationship is able to draw upon a growing body of international experience and legal expertise, while the other might be negotiating a PPP contract for the first time, it is hardly surprising if the results favour one side more than the other.

All these issues, alongside the basic divergence of interest of profit-seeking companies and public service, can affect particular aspects of the PPP contract. For example, whereas public control is best exercised through short contracts, if they are too short it means there is insufficient incentive to invest in vehicles. Length of concession contracts needs to be closely related to the lifetime of vehicles, and if the contract duration is much shorter, the private provider doesn't have enough time to recover the vehicle investment cost, whereas if it is longer the condition of the vehicles can deteriorate too much.

The balance of competition for and in the market is also important because of the dangers of monopoly at one end of the spectrum and of too liberal a competitive environment at the other end. If there is only competition for the market this can and often does lead to the private company that wins that competition taking advantage of its monopoly status once it is in place. On the other hand too much competition can also undermine quality by encouraging dangerous or otherwise undesirable practices to secure passengers, such as speeding to be the first to pick-up points.

Similarly, where private providers have been paid on the basis of the number of passengers they carry it has given them incentives to compete aggressively to maximise the number but no incentive to give them quality service. So payment by distance covered tends to work better, although private operators require a minimum guarantee, which means that the public partner continues to bear some of the risk.

That too provides no guarantee of quality, and so contracts can also include penalties or rewards for poor or good service standards. For example, in Bogotá the BRT service providers have to meet certain minimum standards to qualify for the selection process, and depending on the extent to which they meet those standards they are also more likely to be selected. In addition there is a penalty system which enables TransMilenio to withhold or reduce payments to them (otherwise determined by distances they serve)

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against a range of criteria, such as vehicle maintenance standards, driver performance, environmental impact and security and customer service standards. Drivers themselves can also be penalised for service quality failures, which means that they and their unions need to ensure that when there is a failure the fault for it is correctly apportioned.

Employment and PPPs in Johannesburg's BRT

The experience of Johannesburg offers one example of how these challenges have been handled, and the tensions they involve. In 2006, spurred on by a national commitment to improving urban transportation in time for the 2010 World Cup, the Johannesburg City Council announced an ambitious plan to integrate a BRT network into its existing, but erratic, public transport system. The new system was to be called Rea Vaya, but was later renamed PioTrans.

Up to then, the publicly owned Metrobus operated alongside a private bus company, Putco, both of which were publicly subsidised. They were supplemented by thousands of unsubsidised minibus taxis, the main form of transport for the urban poor. Many of the drivers of minibus taxis lacked any formal training and had incentives (in order to maximise fare revenue) to go too fast. Anecdotal evidence also suggests that some demanded higher fares in return for picking up disabled and overweight passengers. There were also 'taxi wars', in which personnel associated with one provider shot and killed those of others.

The City Council knew it had to find a way to allow operators to be displaced by the BRT to make the transition from informal to official transport service. Negotiations with taxi operators began in 2009, and lasted 14 months. This was a "complex engagement where the stakes were high: a prestigious 12-year contract, offering a transformative shift from the informal minibus-taxi industry into a corporate world of state-of-the-art bus operations". ('Negotiating the Deal to Enable the First Rea Vaya Bus Operating Company: Agreements, Experiences and Lessons' in *Sustainable Transport*, No. 7).

Contracts were eventually signed between the municipality and representatives of 313 minibus-taxi owners from nine different taxi associations represented by "the Phase 1A taxi industry negotiations team". It was agreed that:

- Affected routes were those that used the same routes as the planned BRT network, or those within walking distance of BRT routes.
- Only the equivalent (in terms of transport capacity) of private vehicles would be taken off the roads once BRT buses were in operation (therefore 585 taxis would no longer be in operation).
- Operators were paid compensation by the City for their lost revenue, and replaced private vehicles were disposed of (scrapped or sold) by the Council, and the operating licence 'surrendered'.
- The affected operators would become shareholders in the company providing the service in their areas.
- For every scrapped vehicle, an operator was given the right to a share in the BOC (Bus Operating Company).

The first phase of Rea Vaya was supposed to be 'employment neutral', which was defined as "creating at least as many jobs of equivalent or better quality and remuneration as it directly removed", and to support the Black Economic Empowerment

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programme to encourage black entrepreneurial opportunities. As 585 taxi drivers were to lose their jobs when their routes were replaced by BRT buses, there were supposed to be 585 positions available to them in the new services, which would be run by former operators of the minibus services. In fact, according to Rea Vaya, 830 permanent jobs have been created by the BRT system: 256 in the BOC, 280 at the Metropolitan Trading Company, 240 in security and cleaning and 40 in Rea Vaya management.

However, there were various complications in the transition to incorporating informal workers into the new BRT system:

- Many drivers on taxi routes who were to eventually lose their jobs in the BRT takeover (specifically the 585 drivers mentioned above) missed the opportunity to apply for positions in the new system because the jobs became available a year before the BRT actually commenced services.
- 200 taxi drivers who were selected, trained and employed in that process were mostly not affiliated with the new shareholders.
- Drivers applying for the new jobs were also expected to have licence qualifying them to drive the Brazilian-made BRT articulated buses. As many drivers lacked this, they were offered temporary contracts in order to reserve the permanent contracts for members of the BOC. However, in July 2010 temporary contract drivers went on strike over this issue, and their contracts were made permanent.

PioTrans Ltd. was formed in January 2011 when nine TOICs (Taxi Operator Investment Companies) owned by 313 taxi operators signed a 12 year operating contract. The name was chosen to celebrate “the pioneering steps of the taxi operators who have decided to transform and grow into the fully-fledged public transport operator as part of the public transport transformation process in the City and South Africa”. PioTrans is now the official name of the service, formerly known as Rea Vaya.

Despite all these efforts to incorporate the existing operators and their workers, and despite the fact that the jobs of those in the new system are much more secure, better trained and better rewarded than under the informal system, there are still many problems. Some of these have arisen from disgruntled taxi operators who have not benefitted from the new system, while others have arisen from the increasing expectations of the workers who have.

When the service was first launched in 2010, buses had to be escorted by police vans, as there were various fatal incidents of drivers, passengers and policemen getting killed from gunmen hired by taxi operators. The leader of Joburg’s Transportation Department, and great advocate of the BRT system Rehana Moosajee, was fired at as she entered her home, injuring her security guard.

There have been several strikes as well. In 2011, for example, BRT bus drivers went on an eight-week strike against PioTrans, demanding higher pay and pension and healthcare benefits. During 2012 another dispute broke out when drivers demanded the same pay as dispatchers and back payments into their provident fund.

It appears, therefore, that, although the bus workers are much better off than before, their perception is that they have benefitted much less than their employers have done from the shift into the formal system. Clearly, the particular South African context has its own unique characteristics, but it nevertheless provides some general lessons about

the way in which particular environmental factors affect the options and constraints associated with any particular institutional and structural approach.

Public and private roles in infrastructure and concession PPPs

The challenge of allocating and managing risks and rewards are quite different in the context of infrastructure and concession PPPs than in operational ones, which also tend to increase the public risk by being much longer contracts.

The rationale for them is that, although public borrowing backed by sovereign guarantee is cheaper than interest rates available to private investors, the difference is more than compensated for by greater private sector efficiency, and PPPs also mean governments can reduce their own borrowing and gain access to private sector knowhow. In reality, however, that reasoning has proved to be false.

As a Swedish study has put it: “When carried out successfully, PPP projects can be very powerful tools to quickly construct new infrastructure facilities and operate them efficiently. However, experience has also shown that they may sometimes go wrong, creating transportation systems that are inefficient, under-used and loss-making.” (*Prospects and Pitfalls of Public-Private Partnerships in Railway Transportation -- Theoretical Issues and Empirical Experience*, Gunnar Alexandersson and Staffan Hultén (2007). Even the World Bank, which had been the leading international institutional promoter and funder of railway PPPs, concluded in 2007 that the experience “has disappointed, playing a far less significant role in financing infrastructure in cities than was hoped for”.

PPPs in which the private investor is paid a fee by the public agency concerned, rather than gaining a return on their investment by also operating services, are less widespread than the concession type. The London Underground offers the most prominent example. The British capital needed to renew the Underground’s track, signalling and stations and entered into three PPPs that, between them, were intended to enable investment of £30bn (about \$45m) over 30 years, starting in 2003, and to be paid fees throughout that period.

The contracts were, in effect, underwritten by government financial guarantees, meaning that, despite the rationale for the arrangement, risk remained with the public side of the deal although the higher cost of private borrowing was supposed to be justified by shedding that risk. In addition, the private consortiums involved sub-contracted work to their own subsidiaries, which added layers of profit-taking to the extent that one study suggests that, between the higher cost of borrowing and the profit-taking, the deals cost some 20 per cent more than if the investments had been funded from public finance. (*The Fantasy World of Private Finance for Transport via Public-Private Partnerships*, Jean Shaoul, Anne Stafford and Pam Stapleton, International Transport Forum, OECD, Paris, 2012.)

The costs increased further when, just four years into the contract, one of the consortiums went into administration. Three years later, with the cost of one of the other PPPs rising, it too was brought to a close at public expense. As Christian Wolmar, widely acknowledged to be Britain’s leading transport commentator, and author of *Down the Tubes*, a vivid account of the PPPs, put it: “The PPP was dysfunctional and unworkable. ... When the PPP was originally conceived, the money for investment was supposed to come from the profits of running the Tube and no subsidy was envisaged. That was laughably optimistic and it was clear very early on that there would

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have to be a huge subsidy.” While there was certainly significant and much needed investment in the Underground, it is estimated that the PPP achieved that at a cost of more than \$2 million more than if conventional public borrowing had been used.

The record has been no better in the case of concession PPPs, of which there are three broad types:

- *Build – Develop – Operate*: The private sector entity buys or leases an existing asset from a public agency, invests in it and operates it according to the terms of a contract with the public agency.
- *Build – Own – Operate*: The public agency specifies the design of the project, but ownership of the asset remains with the private agency once it is built, and its revenues come from operating services.
- *Build – Operate – Transfer*: The private entity is responsible for the construction of the infrastructure and subsequently operates the infrastructure for a pre-specified period of time under a contract or franchise agreement with the agency, before ownership reverts to the public agency at the end of that period.

Although positive about operational PPPs in BRTs, the ITDP 2007 BRT Guide is scathing about the infrastructure and concession types: “The limits to the viability of this form of PPP, where full-cost recovery for private infrastructure investment is expected, are due to the basic economics of most public transport corridors, and especially for corridors in developing nations. In order to deliver a realistic and equitable fare level, most corridors will simply not generate sufficient revenues to cover infrastructure, rolling stock and operational costs.” (Page 637). As a result, only “the most lucrative public transport corridors” are developed, and there is “potentially less focus on quality of service” and less equitable service coverage and fare structures. (Page 640).

A succession of high profile failures have justified that verdict. For examples:

- The Johannesburg Gautrain project allocated 90 per cent of the investment cost to the public purse and yet gave the private consortium a 15-year monopoly underwritten by guarantees to protect it from demand risk. Yet within two years of the project starting cost estimates had risen by more than three times.
- The Las Vegas Monorail project “immediately ran into difficulties with both low ridership numbers and mechanical problems”, leading to fare increases of more than 60 per cent and further falls in ridership.
- In Kuala Lumpur, where two PPPs developed light railways, “after only three years of operation, the system had run up debts of over US\$1.4 billion”, and “while the private developers slipped away with their profits intact, the Malaysian taxpayer ended up bearing the debts left behind” (ITDP BRT Guide 2007, p.643).
- In Buenos Aires, where suburban rail services were turned over to two 20-year concessions in 1994, they initially “won plaudits from observers around the world” but led to “service curtailment and lower service levels, resulting in long delays for commuters”, and even “ugly scenes of riots and vandalism of trains on a number of occasions.” (“Transformation of the Urban Rail Sector through PPP”, Phang Sock Yong, in *Journeys*, November 2009, p.29.)

Conclusion

As stated at the outset of this briefing, there are many different ways to run urban public transport systems, and many and various factors to take into account in designing and operating them. The definition of public and private roles varies and the effects of any particular approach is affected by the political, economic, social and institutional context.

Where there is strong institutional capacity in public transport agencies, it is evident that it is possible to invest and innovate effectively, and at lower cost and with less exposure of public finance to risks, through public ownership of assets and operation of services.

But where investment in innovative services such as BRT is taking place in the context of domination by unregulated informal public transport provision, even where that is alongside limited public providers, there is a case for private investment in and operation of services within a publicly planned and regulated system.

However, the record of infrastructure and concession PPPs has been overwhelmingly negative, in terms of cost, sustainability, equitable access and quality.

In all cases, there is no alternative to the development of strong, democratically accountable and properly resourced public transport institutions. Neither publicly nor privately operated services will work well without them.

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