

Infrastructure: Setting the public policy compass

Keynote address at GIH-CPPC-WEF Conference on Building Capability, Managing Risks and Enhancing Efficiency

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Distinguished guests, ladies and gentlemen;

It is a pleasure to give the keynote address at the Global Infrastructure Hub's inaugural conference. I would especially like to welcome delegates from non-G20 countries and also PPP experts from around the world.

It is generally accepted, the world is falling well short of meeting a growing infrastructure need. According to the OECD and McKinsey between US\$50-60 trillion in infrastructure investment is needed, or up to an annual investment requirement of 3.5 per cent of global GDP through until 2030. The Hub's best estimates suggest that on current investment levels 10 to 20 trillion of that amount will remain unaddressed.

Irrespective of whether government or the private sector finance this infrastructure it is ultimately governments that will be held accountable for its delivery and operation. That is why the focus of this inaugural GIH conference is on the public sector.

The agenda today covers the financing challenge, the opportunity to manage existing and future infrastructure assets more efficiently, the importance of developing long term pipelines of projects and risk allocation and pricing. These are all important topics and I am sure the discussions that you have will be insightful.

What I would like to do to help frame these discussions is set out some high level observations for how public officials should think about infrastructure, covering the role of infrastructure investment in economic growth, the role of politics and government in infrastructure, the role of the private sector, financing and funding and linkages between infrastructure and the broader reform agenda.

Infrastructure investment and economic growth

Infrastructure is a crucial input into strong, sustainable, long term growth. The right infrastructure can lift incomes, create opportunities, support economic development and help alleviate poverty.

Looking at a more granular level at the development impacts of infrastructure investment, clean water will reduce childhood mortality, household electrification will improve childhood literacy and paving of roads will assist girls' school attendance.

At the other end of the spectrum many economies – including Australia – would not have the high living standards they currently enjoy without past investments in nation-building infrastructure.

Investment in high-quality infrastructure can lead to a healthier, better-educated and more productive workforce. It can provide communities with market access for agriculture and other produce; open corridors for domestic and international trade and help businesses reap economies of scale.

In seeking to achieve the high quality investment that will lift growth there are significant benefits to consistent and long-term planning.

The better we are at this the less risk of wasteful spending on inefficient one-off projects. Up to 30% of all infrastructure projects in Australia fail to have a positive economic return as a result of poor project selection, according to research by the John Grill Centre for Project Leadership in Sydney. The flip-side is that through proper planning and project selection we can significantly lift the contribution to economic growth.

However, while infrastructure investment can expand supply capacity, lift productivity and support growth it should not be seen as a source of short term stimulus for the economy.

While conceptually appealing, especially when the cost of borrowing is relatively low, the scope for fast acting infrastructure projects to provide short term fiscal stimulus is very limited. The ideal fiscal stimulus is one that leads to rapid and broad-based increases in demand in order to soak up spare capacity.

Major infrastructure spending, by contrast, generally has long lead times resulting in a material risk of mis-timing stimulus. Indeed quality infrastructure projects are often

not 'shovel ready'. Many major projects require specialised labour which may not match the skill sets of available workers.

Rushing infrastructure projects to stimulate the economy also poses the risk of locking public funds into inefficient long-term commitments, which have not been properly prioritised and which lack clear objectives, in response to short-term economic goals.

The role of Government in infrastructure

Since returning to Treasury from the private sector, I have often reflected on the role of national Treasury's, and the bureaucracy more generally, in addressing the infrastructure deficits that we all face.

How do we best utilise cost-benefit analysis and how is the intersection between politics, government and infrastructure best managed?

It is important that governments of all persuasions ensure that major infrastructure projects deliver value for money. Governments need to undertake a rigorous assessment of an infrastructure project's business case, which should include a cost

benefit analysis of the project. It is an important first step in prioritising various projects from a limited pool of funds.

That said, it is just as important that governments also understand the limitations of cost benefit analysis, especially when there are wider economic and social benefits generated by the project.

The costs are often easily measured. They largely relate to construction and operation costs, which can be estimated with some reliability. Contracts are awarded, and while there are cost overruns, they are often within an expected bound. The benefits however are often more qualitative and difficult to measure. Patronage on a long lived asset can be difficult to forecast twenty to thirty years into the future. The analysis can also struggle to capture all of the value of the project, including the broader economic efficiencies and social gains.

Furthermore, these estimates are often made at a time when we can't envisage all the benefits that the infrastructure may provide. Who at the time of development could envisage a copper phone network being used to deliver the internet to millions of homes?

Policy makers assessing cost benefit analysis will invariably need to exercise caution in the assessing the promised benefits. On the other hand, they might also need to make intuitive evaluations of the benefits that cannot be measured, a process that often feels uncomfortable. Let us not translate this discomfort into undervaluing the benefits of infrastructure, erring too far on the side of caution. It is an important balancing act that requires us to embrace the potential gains from infrastructure while recognising the risks.

In relation to managing the intersection between government, politics and infrastructure, the answer is not some idealised world where setting of infrastructure investment priorities is depoliticised.

Indeed, the increasing recognition that we will never take the politics out of infrastructure is I think a positive step.

Infrastructure provides vital services to citizens and businesses, who ultimately pay for these services via taxes or user charges, so in any economy politics will, and should, always be part of the process.

Initiatives like national infrastructure audits and planning agencies, that try to engage the political process and bind politicians to a long term plan are a promising development. In Australia, for example, we have created Infrastructure Australia which released its National Infrastructure Audit on 17 February 2016, with 78 recommendations for reform and which sit alongside an Infrastructure Priority List. One acid test of this approach will be whether we can finally build a second airport in Sydney after it was first proposed in 1969 and after the first sod was turned in 1992!!

Improved regulatory frameworks are also fundamental to building the public confidence that will allow innovative infrastructure solutions. In today's information rich, social media driven environment consumer and taxpayer protection will always be hot button issues.

Governments and regulators need to strike the right balance between the needs of consumers and the needs of investors. Tilting the playing field too far one way or the other will ultimately serve no one's interest. Either private investors will lose their social licence or assets will simply not be built.

The role of the private sector in infrastructure provision

Deciding on the appropriate role for the private sector in addressing a nation's infrastructure challenge is another fundamental challenge facing the public sector infrastructure professional.

Benefits from private sector involvement in infrastructure provision include reduced construction costs, greater innovation in design and improved asset maintenance.

The private sector can help countries access international capital or, as in the case of Korea, help countries make better use of their existing pools of savings.

Of course, if the private sector is to bring capital, technology and management expertise the existence of sound legal frameworks, a competent civil service and developed capital markets all become important.

Probably the most critical factor driving the success of private sector infrastructure investment is getting the allocation of risks between the public and private sector right, and recognising that the risks that the private sector can bear will expand as the market develops.

Australia has learnt some hard lessons here, with over optimistic traffic projections on certain toll roads leading to significant losses for investors.

Importantly, the level of country income is not a determinative factor in the ability to attract private investment.

Rather it is political will and the ability to articulate a clear and well funded project pipeline. For example, the Philippines and Columbia have both been successful in attracting levels of private investment in infrastructure that are well above countries at similar stages of development.

Funding versus Finance

Infrastructure financing refers to the capital invested in an asset, while infrastructure funding refers to who pays the construction, maintenance and operational costs.

No matter what innovations governments and the private sector make in the financing of infrastructure, future needs will not be met without governments working with investors and communities to expand the options for infrastructure funding.

Ultimately there are only two sources of funding for new and upgraded infrastructure: funding by all taxpayers or funding from those who directly benefit from infrastructure.

The most common form of funding from beneficiaries of infrastructure is direct user charges. Direct user charging is common in the energy and water sector but in many markets the challenge is having this charging cost reflective, while also protecting the most vulnerable.

In the transport sector, tolling is increasingly common for incremental addition of new roads, particularly those built under private-public-partnership arrangements.

Road usage charging, charging users for the miles they drive, is the next step.

The enabling technology is now available and trials are starting in some jurisdictions.

For example, Singapore's Land Transport Authority plans to implement a comprehensive road pricing system based on satellite tracking by 2020. Similarly, Oregon's Department of Transport is undertaking a pilot scheme of road user charging, exploring the replacement of the state fuel tax with a mileage based tax.

Road usage charging recognises that a city, or indeed a country's road network is more than a series of individual roads. It is a complex network, where congestion problems (and solutions) are always interlinked.

It could provide a more efficient way to raise road funding than the existing cocktail of fuel excise, registration fees and general revenue, which do not directly correlate with the costs individual users place on the system or the levels of investment required. It could also help better utilise existing infrastructure through demand management.

A further funding source is value capture, which relies on capturing some of the financial gains of those who indirectly benefit from infrastructure.

Value capture, which can be operationalised in a variety of different ways, has been used in both advanced and emerging markets going back at least as far back as the initial roll out of the US trans-continental rail network, which was funded by associated land sales. More recent examples where value capture from associated land has played a role include the Docklands underground railway in London, the Hong Kong Metro, a good part of the Hong Kong-Shenzhen road network and rapid transit bus corridors in Bogota, Columbia and Sao Paulo, Brazil. In some cities in Brazil a land value increment tax has been utilised to capture value more comprehensively.

However, it is important to remember that value capture can fall victim to community opposition and expose governments to additional risk; particularly if tendering processes are not seen as competitive and transparent. An interesting historical example from Australia is the property levy used to partially fund the Sydney Harbour Bridge in 1922. Unfortunately, following strong community opposition the levy was cancelled, resulting in an additional debt load for the NSW Government.

Incidentally, on the positive side this project was a clear example of government vision. The initial eight lanes were only 4 per cent utilised but provided a priceless asset that transformed the city of Sydney.

Linkages with Broader Economic Reforms

The effectiveness of PPP driven infrastructure programs is also closely linked to the broader economic reform agenda.

There is no means of providing infrastructure for free, including the use of PPPs. Consequently, governments still need to undertake the taxation and expenditure reforms to create the fiscal space for infrastructure.

One of the largest liabilities governments often face is for the provision of social security support. As has been demonstrated in many countries, the creation of pension accounts to which employees contribute over the course of their working lives helps reduce these liabilities. Over time this also creates a growing pool of funds looking for assets with long dated returns, such as many infrastructure assets, to match the structure of their liabilities.

Competition policy reform can make a significant contribution on the cost side of infrastructure projects by introducing more competition into construction markets. We have seen this in Australia with large European construction firms entering the Australian market to compete with the local incumbents.

Within the transport and communications sectors, privatisation unlocked vast sums of additional investments in airport infrastructure while gradual privatisation, together with competition enhancing reforms, positioned our telecommunications sector well to ride the technology wave we have seen over the last two decades.

As Garry Bowditch, from the John Grill Centre points out, the contrast with the roads sector is stark: we have seen lack of reform, billions of dollars in funding provided and ongoing congestion problems.

Financial market reforms are also critical to fostering strengthened banking systems and capital markets and to fostering the innovative products and risk management skills that can be crucial for PPP delivery.

Conclusion

To finish back where I started I hope that some of these observations on how public officials should think about infrastructure are helpful in framing your discussions today.

The role of the private sector in driving innovation in infrastructure markets often receives considerable attention, but there is also much government innovation, both in project selection and project procurement.

By furthering the sharing of best practices, and helping build the community of government officials with responsibility for infrastructure, events such as these have an important role in driving the next generation of innovations.