



EASTERN REGIONAL ORGANIZATION
FOR PLANNING AND HUMAN SETTLEMENTS

46th EAROPH Regional Conference, Iskandar, Malaysia, Thistle Hotel, Johor Bahru, 19th - 20th November, 2013.

Managing Cities' Assets

Kerry McGovern, EAROPH Australia

Abstract

Building infrastructure and new buildings and providing residents with public assets (parks, cemeteries etc) provides politicians with photo opportunities that mark them as contributors to the future growth of the economy and the future quality of life of a city's residents.

Economists have asserted that capital investment, of itself, creates growth. But is this so? Especially if the revenue of the city is not sufficient to maintain these assets so that citizens can enjoy the benefits of them.

This paper looks at the underlying assumptions that "capital investment is good" and questions how cities can demonstrate to their citizens that the services for which they pay are being provided to an acceptable standard. When a city designed and built its own assets, this was a challenge. Now that private firms are building and operating assets in cities, how can politicians demonstrate their contribution to the residents who elect them?

Are city governments now merely enablers for private sector activity, rather than providers of services? This paper examines these issues and considers the capacity that city administrations must build if they are to continue to be relevant to residents.

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Introduction

With the growing population of human beings increasingly living in urban areas¹, the building of infrastructure and new buildings, not just providing residents with specific public assets (parks, cemeteries etc), provides politicians with photo opportunities that mark them as contributors to the future growth of the economy and the future quality of life of a city’s residents.

Economists used to assert that capital investment, of itself, creates growth. But is this so? Especially if the revenue of the city is not sufficient to maintain these assets so that citizens can enjoy the benefits of them.

This paper looks at *the underlying assumptions* that “capital investment is good” and *questions how cities can demonstrate* to their citizens that the services for which they pay are being provided to an acceptable standard. When a city designed and built its own assets, this was a challenge. Now that private firms are building and operating assets in cities, how can politicians demonstrate their contribution to the residents who elect them? Are city governments now merely *enablers for private sector activity*, rather than providers of services?

This paper examines these issues and considers *the capacity* that city administrations must build if they are to continue to be relevant to residents.

¹ UN/POP/EGM-URB/2008/01. An overview of urbanization, internal migration, population distribution and development. http://www.un.org/esa/population/meetings/EGM_PopDist/P01_UNPopDiv.pdf

1. New Infrastructure: is it “good”?

With the undoubted increase in human population and the expectation that 70% of humans will, by 2050, live in urban areas, there is **an unquestioned belief** held by some economists and some politicians that all capital investment is good for a country². This belief underpins our attitude that resources, of themselves, generate economic activity and more resources create more wealth. But the World Bank is questioning this belief, especially in resource rich countries like Australia³.

Resources may lead to the lowering of the quality of institutions and hence a nation’s and a city’s social infrastructure, which, in turn, determines its prosperity and sustainability⁴. Adherence to the “more resources is good” belief leads political leaders to find ways to build new infrastructure⁵.

When city finances are inadequate, they look for “innovative financing” to overcome this obstacle to building the economic base of the city. It is estimated that throughout the world, “over \$1 trillion a year is needed to finance the infrastructure gap between what is needed and what is being built in low- and middle-income countries⁶.” What is missing in this estimate is the cost of operating and maintaining this infrastructure, should its building be funded. As new infrastructure adds to the stock of current infrastructure, the call on the recurrent budget for operating and maintaining the enlarged infrastructure stock grows. The backlog of maintenance depends on recurrent funding, while new capital projects are funded by capital funding or are outsourced to private investors.⁷

In today’s cities, a “good” leader is one who can finance extensive infrastructure in ways that minimise the call on the city’s budget. Public-Private Partnerships have been identified as one way to build and operate infrastructure off the balance sheet of the city / government.

Using Public-Private Partnerships⁸ (PPPs), governments are getting new city infrastructure paid for by the private sector.

² UN Habitat, 2011. “Infrastructure of Economic Development and Poverty Reduction in Africa”, The Global Urban Economic Dialogue Series, Nairobi, 2.4 Infrastructure and Economic Development, p.9.

³ De Rosa, D. and M. Iooty, 2012. “Are Natural Resources Cursed? An Investigation of the Dynamic Effects of Resource Dependence on Institutional Quality”, Policy Research Working Paper 6151, World Bank.

<http://www->

wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2012/07/31/000158349_20120731090512/Rendered/PDF/WPS6151.pdf

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<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTSOCIALCAPITAL/0,,contentMDK:20185164~menuPK:418217~pagePK:148956~piPK:216618~theSitePK:401015,00.html>

⁵ For example, in October China’s leader Xi Jinping has called for an infrastructure development bank in Asia to further enhance the region’s connectivity. <http://www.nationmultimedia.com/politics/Chinese-leader-asks-for-Thai-support-in-Asia-infra-30216456.html>

⁶ <http://www.worldbank.org/en/news/feature/2013/09/25/planning-financing-low-carbon-cities>

⁷ PIAC, 2013. *Infrastructure Maintenance in the Pacific: Challenging the Build-Neglect-Rebuild Paradigm*, Sydney. . <http://www.kmcgovern.com/wp-content/uploads/2013/07/149856004-Infrastructure-Maintenance-in-the-Pacific-Challenging-the-Build-Neglect-Rebuild-Paradigm-1.pdf>

⁸ Australia has a list of failed public-private-partnership (PPP) projects which have led to investors losing their funds. Many of these have been small investors and retirees who believed that investing in infrastructure is a safe investment. This has turned out to be a belief that was false. Sydney’s Cross-City Tunnel (Auditor General 2006) failed to attract the trips relied on in its original estimates. It resulted in a \$900m loss to investors. The Lane Cove tunnel in Sydney also was placed in liquidation. Brisbane’s Airport Link, Clem Jones Tunnel similarly failed with both companies going into liquidation and investors losing funds, and banks renegotiating loans to

Certainly some governments have benefited from infrastructure provided by private sector firms that have gone broke as a result, with no cost to the government⁹. And certainly some governments have tied themselves into contracts in which they took the risks and the private sector firm took the cash flow¹⁰.

The need for new infrastructure in burgeoning cities is supported *by demand* demonstrated by population growth estimates and poor current services. However, the capacity to deliver the required infrastructure is inhibited by the low revenue base of the cities.

Calls for sustainable cities recognize that current practices are not sustainable. While growing populations have meant that future generations are in a better position to pay for infrastructure and hence borrowing to build now and repay later is economically defensible, when the population begins to decline this belief no longer holds good. Japan, Italy and some Eastern European countries are experiencing negative population growth¹¹. Neither does it hold good if future generations have access to inadequate funds to finance interest and redemption, and operating and maintenance costs. Future generations may not be in a position to pay for our infrastructure. Changes in technology may mean that current designs have a short life and the underlying asset may not have a life greater than that of the financing instrument.

Is all new infrastructure “good”? Economic theorists have found that the connection between infrastructure and growth is largest at the macroeconomic level and lowest at the local or city level¹². A detailed review of economic research undertaken by UNHabitat has found:

“Overall, the literature supports the view that infrastructure matters but does not unequivocally argue in favour of more or less infrastructure investments.’

The report goes on to conclude:

“Infrastructure capital stocks are inadequate proxies to the growing private nature of infrastructure services, while physical indicators are still too coarse to really capture the flow of services to households and firms, and optimal stocks are unlikely to be ever identifiable at the aggregation level of regions or countries¹³.”

So we can safely state that not all infrastructure is “good”.

“It depends”, is the answer.

the cost of road users. BrisConnections got their usage estimates wrong by expecting 100% and getting 40% of their estimate.

⁹ The government’s role in protecting vulnerable investors from unscrupulous borrowers of their funds is an issue worth discussing further.

¹⁰ In New Zealand, the government invested in large infrastructure projects in the 1970s. Brian Easton points out that “The problem was that the risk was written so the Government took all the downside and none of the upside”. This left the government with a serious economic problem when fuel prices went against the trend in the early 1980s. Easton goes on to state: “The pain from Think Big taught us to look very carefully at who - carries the risk when things go wrong in a PPP.” See: <http://www.eastonbh.ac.nz/2008/09/put-the-boot-in/>

¹¹ Some countries are experiencing negative growth rates leading to population decline. See:

<http://unfpa.org/psa/second-part-1-3-8/>

¹² UNHabitat, 2011. p. 10.

¹³ UNHabitat, 2011, p 11.

The United Nations Development Programme (UNDP), in discussing its human development indicators, states that *the basic objective of development is to create an enabling environment in which people can enjoy long, healthy and creative lives*¹⁴.

Yet the belief that more infrastructure is “good” still mesmerizes leaders who give their attention to the rise and fall of the gross domestic product without any understanding of the limitations of it as a measurement of the quality of life of its citizens. The Commission of the Measurement of Economic Performance and Social Progress, in its survey of existing approaches to measuring socio-economic progress, states that “GDP is a measure of economic activities leading to monetary transactions”. It is not a measure of the **quality of life of people**¹⁵.

Even within the paradigm that *accepts* GDP as a proxy for well-being, the IMF, in 1998, found that “some public investments can end up reducing a country’s economic growth because even though the share of public investment in gross domestic product may have risen, the average productivity of that investment has dropped¹⁶ (1998:1)”. 2008 research in Australia on the correlation between road and communication infrastructure and productivity has found “no clear relationship between productivity growth rates in unadjusted road and communications infrastructure services¹⁷”. It found that “Aggregate time series analysis has not provided evidence that is sufficiently clear to help guide formulation of specific policies (for example, an increase in spending on infrastructure of specific types would lead to increased productivity of a certain magnitude)¹⁸.” There may be a relationship, but if there is, the magnitude of the relationships **remains unclear**.

Infrastructure Maintenance

The needs of consumers and residents need to be at the heart of decisions to provide services. In New Zealand local authorities have to, by law, provide opportunities for residents to participate in decision-making processes.

Yet, in all countries, infrastructure is often planned without the participation of those for whom the infrastructure service is being provided. The cost of maintenance is not always taken into consideration when planning the financing of infrastructure.

In examining how infrastructure is maintained, the Pacific Infrastructure Advisory Center found that that the “implicit assumption is often that economic infrastructure will lead to economic development, thereby generating income to pay for ongoing infrastructure maintenance. However, in many cases this is not true, with infrastructure often constructed for social objectives or for motivations of ‘national prestige’¹⁹”.

Indeed, this assumption is so strong that many infrastructure projects have been funded using

¹⁴ UNDP, Human Development Indicators, http://hdr.undp.org/en/media/Human_development_indicators.pdf

¹⁵ Stiglitz, J. 2009. Commission on the Measurement of Economic Performance and social Progress, http://www.stiglitz-sen-fitoussi.fr/documents/Survey_of_Existing_Approaches_to_Measuring_Socio-Economic_Progress.pdf

¹⁶ IMF, 1998. “Roads to Nowhere: How Corruption in Public Investment Hurts Growth”, IMF, Washington.

¹⁷ See: Commonwealth of Australia, Shanks, S. and Barnes, P. 2008, Econometric Modelling of Infrastructure and Australia’s Productivity, Internal Research Memorandum, Cat No. 08-01, Productivity Commission, Canberra, January, unpublished. Paragraph: 1.1 in

http://www.pc.gov.au/data/assets/pdf_file/0007/79081/economic-modelling-infrastructure.pdf

¹⁸ Commonwealth of Australia, page 11,

¹⁹ PIAC 2013. , page 2

specific purpose securitised borrowing instruments, or infrastructure bonds. In Queensland bonds are issued by the Queensland Treasury Corporation. The assumption remains that the infrastructure service providers need only generate sufficient income to repay the interest and redemption payments on the bonds raised.

In 2009, when the Australian Productivity Commission²⁰ examined public infrastructure financing it reported that this type of borrowing has been common around the world, with the tendency to now use it not only for income generating infrastructure, but for social infrastructure.

“Specific-purpose bonds have been used more commonly in countries with a federal system of government (such as Australia, Canada and the United States) than in countries with a unitary and more centralised systems of government — such as France, New Zealand and the United Kingdom (section 5.1). Specific-purpose bonds are not limited to economic (income generating) infrastructure projects, but have also been used for social infrastructure such as schools and hospitals, where taxation is the source of debt repayment. Indeed, the use of specific-purpose bonds for social infrastructure has increased significantly over the past 20 years (section 5.2).

Governments recognise that projects do not all have the potential for full cost recovery. But few have yet to fully cost the cash flow required by projects, not only to fund interest and redemption of bond issues, but also to fund the operating and maintenance of the infrastructure. Some consider that infrastructure maintenance an investment because incurring costs for maintenance gives rise to a stream of future benefits²¹. This argument leads to the loan funding of the maintenance of infrastructure. Road maintenance is often funded through borrowing because of its large scale and size. Other infrastructure maintenance is frequently ignored and may be caught up in fighting with other recurrent costs for annual budget allocation. Yet the result is a sizeable and growing backlog of maintenance in most countries. The **Pacific Infrastructure Advisory Center** recently reported that “The World Bank has estimated that ongoing annual maintenance of infrastructure requires the allocation of approximately five to seven per cent of GDP (Fay and Yepres 2003:11)²²”. Yet this estimate does not include the funds required to address the backlog. Backlog maintenance is historical maintenance that should have been done routinely but was neglected. Where routine maintenance is not done, and maintenance is reactive rather than planned, the cost in lost service is real, though difficult to quantify. The main loss is in the trust with which the residents hold the city’s or government’s administration. The loss of productivity that results is real.

There is a history of governments postponing the maintenance of schools, hospitals, ports, telecommunications networks, and water and electricity supply facilities to fund programs with immediate political appeal.

Governments have addressed this tendency by preparing accrual based balance sheets of government. These disclose the valuation of the classes of assets and make explicit any reduction in

²⁰ [Chan C., D. Forwood, H. Roper, C. Sayers, 2009. “Public Infrastructure Financing: An International Perspective”, Productivity Commission Staff Working Paper, March, Canberra.](#)

²¹ Bitros 1976, quoted in Chan, C., op cit., page 10.

²² PIAC 2013, op cit. page 17.

the value of the overall stock resulting from inadequate maintenance. However one line in a balance sheet “plant and equipment” or “land and buildings” will generally hide the run-down of specific assets, and this approach by itself is insufficient to ensure the asset stock in each sector is well-maintained.

The United Nation’s Millennium Development Goals identify safe, accessible drinking water as a key priority for cities and other human settlements. Yet water is frequently provided **locally from local water sources and the whole sector may be poorly managed, if managed as a sector at all**²³.

Strong public good features of infrastructure make it difficult, even undesirable, to privatise some infrastructure services. The Australian Productivity Commission identified these to include “the bulk of the (non-trunk) road networks and many services that benefit the broad community” (2009:11).

The ability to repay loans has, until now, been assumed to arise from the economic benefits the infrastructure brings. Governments rely on population growth, inflation and the cash flow from a goods and services / value added tax to enable them to fund operating and maintenance costs, as well as interest and redemption payments.

But with a declining population countries and cities (Detroit) have to very carefully examine the sources of funds to operate and maintain its stock of infrastructure as well as to fund individual infrastructure projects. PPPs have distanced governments from an immediate obligation, but with risks for individual investors. This may not yet be a sustainable solution.

So how do we determine if a city’s investment program will provide economic benefit and improve the well-being of the cities’ peoples?

2. Demonstrate Benefit of Public Assets at Local Level

The ability of a city to demonstrate the benefits it provides depends on the information it collects, collates and is able to report. The Asian Development Bank (ADB) has stressed the importance of knowledge management in its Urban Operational Plan²⁴.

There is a good reason for this. Without good information, the actual costs of services cannot be identified, and the real benefits cannot be captured²⁵. Green Cities²⁶, Inclusive Cities²⁷, and

²³ See, for example, the findings of the Pacific Regional Report of the Cooperative Performance Audit: Access to Safe Drinking Water. http://www.environmental-auditing.org/Portals/0/AuditFiles/NewZealand_f_eng_PASAI-Cooperative-Safe-Drinking-Water-Audit.pdf

²⁴ ADB, 2012. Urban Operational Plan 2012- 2020, p 14.

²⁵ The Stiglitz Commission on the Measurement of Economic Performance and Social Progress (2009) called for “on-going research into the development of better metrics that will enable us to assess better economic performance and social progress” p 12.

²⁶ ADB, 2012. Green Cities, Urban Development Series, Manila. <http://www.adb.org/sites/default/files/pub/2012/green-cities.pdf>

²⁷ Steinberg, F. and M. Lindfield, 2011. Inclusive Cities, Urban Development Series, Manila, <http://www.adb.org/sites/default/files/inclusive-cities.pdf>

Competitive Cities²⁸ cannot be created without a way to monitor and evaluate how objectives are being successfully achieved. These benefits can be communicated to residents and will eventually replace the more crude “photo opportunity” of politicians announcing new infrastructure projects.

Benefits sought by city residents vary from city to city and from age group to age group within a city. They also vary from generation to generation. The United Nations has noted that local government needs to be working in partnership with other levels of government if local areas are to gain the benefits of increasing urbanisation, and address the new challenges specific to each area arising from natural disasters and climate change. In addition, there needs to be a “two-way link²⁹” between urban and rural areas if the quality of life of city and rural residents is to be maintained. Food security is an issue for all cities.

So how do a city’s leaders and administration demonstrate that the public assets are adding to the quality of life of all residents? A long-term plan is required. And, for this to have credibility, it must have the trust and support of residents.

Long-term Plan

New Zealand’s Local Government Act 2002, requires local authorities, including cities, to prepare long-term-plans (OTPs). The LTP sets out a local authority’s priorities in the medium to long term. The LTP’s purpose is to –

- **Describe the council’s activities and the community outcomes it aims to achieve.**
- **Provide integrated decision-making and coordination of the resources,**
- **Provide a long-term focus.**
- **Show accountability to the community.**
- **Provide an opportunity for participation by the public in council decision-making processes³⁰.**

New Zealand has introduced LTPs for their local governments³¹. Within these plans, each local government is required to prepare Asset Management Plans (AMPs). Indeed, AMPs are the foundation of every LTP. These LTPs highlight the strategies in place to provide the services expected in the life of the plan, as well as the way these strategies will be funded. A financial strategy aligns

²⁸ Choe, K and B. Roberts, 2011. Competitive Cities in the 21st Century, Urban Development Series, Manila. <http://www.adb.org/sites/default/files/cluster-based-local-economic-development.pdf>

²⁹ TST Issues Brief: Sustainable cities and human settlements. http://sustainabledevelopment.un.org/content/documents/2306TST%20Issues%20Brief%20Cities_FINAL.pdf, page 3.

³⁰ Glossary on the New Zealand Local Council’s website: http://www.localcouncils.govt.nz/LGIP.nsf/wpg_url/Resources-Glossary-Index#LongTermPlan

³¹ See: Controller and Auditor General, 2012. Matters arising from the 2012-22 local authority long-term plans, Office of the Controller and Auditor-General, Wellington, New Zealand, at <http://www.oag.govt.nz/2012/ltps-2012-22/docs/long-term-plans-2012-22.pdf> for the Controller and Auditor-General’s review of issues arising in their implementation.

with the AMP so that ratepayers and other residents can see how future capacity will be paid for, and who will pay.

In reviewing local authority LTPs, the New Zealand Controller and Auditor General found that local authorities need to “find a suitable middle ground in LTPs between a high-level description of strategy and a detailed record of management “in meeting their obligations. She also found that New Zealand’s local authorities’ “LTPs suggest that the financial sustainability of the sector is reasonable, with small operating surpluses, reasonable debt levels, and provision for an increasing proportion of expenditure on renewing and improving assets.” (2012:12).

AMPs must be grounded in good asset data and activity management plans. This requires each city to have the capacity to prepare and manage LTPs and AMPs.

For example, Napier City Council in New Zealand, in the Appendix to its Ten Year Plan³², allocates the cost of activities to residents and non-residents, reporting the costs allocated to each, as follows.

³² Napier City Council, Ten Year Plan 2012/13 to 2021/22 Appendix A Detailed Financial Information and Council Policies, adopted 26 June 2012.

Assessed Benefits Allocation Of General Rates Funded Activities

| Activity | Rate Funded Cost \$ 2011/12 | Allocation % | | Cost Allocation \$ | |
|------------------------------|-----------------------------|--------------|----------|--------------------|-----------|
| | | Res. | Non Res. | Res. | Non Res. |
| Democracy & Governance | 2,048,900 | 74 | 26 | 1,516,186 | 532,714 |
| Roading | 13,640,300 | 50 | 50 | 6,820,150 | 6,820,150 |
| Refuse - Litter Control | 430,700 | 82 | 18 | 353,174 | 77,526 |
| Stormwater | 3,216,600 | 80 | 20 | 2,573,280 | 643,320 |
| Sportsgrounds | 2,556,500 | 75 | 25 | 1,917,375 | 639,125 |
| Napier Aquatic Centre | 1,361,000 | 95 | 5 | 1,292,950 | 68,050 |
| Marine Parade Pools | 178,700 | 95 | 5 | 169,765 | 8,935 |
| Reserves | 2,551,400 | 90 | 10 | 2,296,260 | 255,140 |
| Inner Harbour | 138,700 | 77 | 23 | 106,799 | 31,901 |
| Libraries | 3,000,400 | 90 | 10 | 2,700,360 | 300,040 |
| War Memorial Centre | 183,500 | 25 | 75 | 45,875 | 137,625 |
| Municipal Theatre | 230,900 | 70 | 30 | 161,630 | 69,270 |
| HB Museum & Art Gallery | 991,400 | 50 | 50 | 495,700 | 495,700 |
| Cultural Services | 337,100 | 90 | 10 | 303,390 | 33,710 |
| Community Advice | 1,054,400 | 90 | 10 | 948,960 | 105,440 |
| Safer Community | 162,400 | 70 | 30 | 113,680 | 48,720 |
| Halls | 154,900 | 90 | 10 | 139,410 | 15,490 |
| Cemeteries | 332,100 | 95 | 5 | 315,495 | 16,605 |
| Public Toilets | 727,900 | 88 | 12 | 640,552 | 87,348 |
| Emergency Management | 380,400 | 69 | 31 | 262,476 | 117,924 |
| City & Business Promotion | 596,100 | 40 | 60 | 238,440 | 357,660 |
| City Promotion Grants | 205,400 | 10 | 90 | 20,540 | 184,860 |
| Marineland of NZ | 528,900 | 60 | 40 | 317,340 | 211,560 |
| National Aquarium of NZ | 295,100 | 40 | 60 | 118,040 | 177,060 |
| Napier i-SITE Visitor Centre | 310,700 | 30 | 70 | 93,210 | 217,490 |
| Kennedy Park | (846,800) | 50 | 50 | (423,400) | (423,400) |
| Planning Policy | 644,900 | 20 | 80 | 128,980 | 515,920 |

It also reports on the strategic assets of the City, as follows:

5.1 Napier City Council List of Strategic Assets

| Asset | Notes |
|---|--|
| Roading system (as a whole) | Includes footpaths, off-street parking, bridges. |
| Wastewater Reticulation System (as a whole) | Includes pipes and pump stations. |
| Wastewater Treatment Plant | Includes all land, buildings and plant. |
| Stormwater Reticulation System (as a whole) | |
| Reservoirs and Water Reticulation System (as a whole) | Includes the land and structures. |
| Refuse Transfer Station | |
| Share of Omarunui Landfill | |
| Sportsgrounds and Reserves | |
| Centennial Hall | |
| Cemeteries | |
| Napier and Taradale Library collections | Includes books and heritage. |
| Napier Aquatic Centre | |

New Zealand demonstrates how to report appropriately on the financial costs of local authority services.

Calculating Fees and Charges

New Zealand's local governments have tried to factor in the replacement cost to **ongoing fees and charges**. The Controller and Auditor-General has issued a Guide to Charging Fees for Public Sector Goods and Services³³. In that she provides clear advice on what to take into consideration when calculating fees and charges. These factors include:

1. Legal authority for charging fees
2. Justification for charging
3. Fees clearly reflect costs
4. Costs include the use of resources:
 - a. labour,
 - b. overheads,
 - c. materials,
 - d. fixed assets,
 - e. depreciation and
 - f. other costs associated with assets (2008:part 3).

³³ Controller and Auditor-General, 2008. "Charging Fees for Public Sector Goods and Services", Office of the Controller and Auditor-General, Wellington, New Zealand, at <http://www.oag.govt.nz/2008/charging-fees/docs/charging-fees.pdf> last accessed 7 November, 2013.

Governments can recover direct costs, and may be authorized to also recover indirect costs, but they usually cannot make a profit. However they can recover the cost of asset depreciation, and thus might be able to generate sufficient funds to replace the current capacity of the infrastructure.

Non-Financial Benefits

There are a number of examples of cities that have chosen not to build expensive road projects and, instead, have elected to establish other ways for residents to move through and around the city. Several small cities³⁴ and towns now provide free public transport rather than new transport infrastructure. This enables people to move around freely without the incentive to take their car. It may target movement to schools and hospitals or airports, or within shopping centres on escalators.

In the first decade of this century, Bogota replaced its orientation around cars and the privatising of public spaces with hundreds of kilometres of cycle paths, new parks and pedestrian malls and the city's first rapid transit centre using buses instead of trains. When cars were banned from all roads in the city for a day people became more optimistic. Charles Montgomery, in "Happy City: Transforming our lives through Urban Design"³⁵ links these decisions with the new science of happiness. Public assets include the social capital of cities and the happiness that comes from, for example riding a bicycle with friends, enhancing their experience of the city³⁶.

Happiness is a difficult attribute to demonstrate. A number of organisations are endeavouring to establish a methodology to measure it. The "World Happiness Report 2013"³⁷ uses the following as indicators:

- Social support
- Freedom to make life choices
- Generosity
- Perceptions of Corruption
- Life Expectancy
- GDP per capita.

In the 2013 report, Australia is at number 10, New Zealand at number 13, Thailand at number 36 and Malaysia at number 56.

The rankings may reflect the availability of data more than the feelings expressed by the people of our countries. But the main issue is that over the last decade, a substantial body of work has been done in creating methodologies for measuring assets: physical and intangible assets³⁸, social capital³⁹ and environmental capital, cultural capital⁴⁰ and now happiness.

³⁴ See: <http://freepublictransports.com/city/> There is a free ferry and bus in the central business district in Brisbane. Hasselt in Belgium has zero-fares for public transport but has yet to demonstrate the benefit with good data.

³⁵ Montgomery, Charles, 2013. "Happy City: Transforming our lives through Urban Design," Penguin.

³⁶ As reported in the Guardian. <http://www.theguardian.com/society/2013/nov/01/secrets-worlds-happiest-cities-commute-property-prices>.

³⁷ Helliwell, J., R. Layard and J. Sachs 2013. World Happiness Report 2013.

³⁸ International Public Sector Accounting Standards See: www.ifac.org.

The sustainability of a city requires the integrated management of physical, social, cultural and environmental assets with an eye to what creates general happiness in the residents.⁴¹ - The United Nations' Secretary General's High Level Panel on the post-2015 development agenda stated that "cities are where the battle for sustainable development will be won or lost"⁴². The future of human settlements on Earth now depends on the capacity of city managers to juggle these demands and to build the required skills.

3. Capacity to maintain assets

Capacity

The capacity of a city to manage its assets determines the quality of life of the city. The happiness of residents can be managed by ensuring they have access to their neighbours, to green open spaces and other recreational areas, and to their place of work. Cities, like corporations, go through cycles in the type of capacity that is highly prized. In the early stages of a city's development, visionaries are prized. Then engineers ensure the vision is implemented. Financial managers provide access to funds and maintenance staff members ensure all assets are well maintained. Artists create a beautiful city and economists make sure the economy of the city links to new opportunities for economic activity. Gardeners create green spaces. These professionals have worked together within the city administration to create some of the most beautiful cities in the world.

The public sector is now seeking to access new technologies not only in the public sector, but also through contracting the services of private firms: construction, architects, planners, banks, asset and financial managers and maintenance firms. Experienced public sector engineers are finding their skills in high demand in firms seeking contracts with the city administration or other level of government. These were the very people who used to design and prepare specifications, screen tenders and oversee their implementation. Now these public servants are joining private sector firms.

This movement of staff creates an imbalance within the public sector / private sector relationship. The private firm now has all the power, with otherwise junior staff negotiating with their erstwhile bosses. The capacity of public sector negotiations, procurement, monitoring and evaluation is declining at the very time governments need to monitor PPP contracts⁴³. Institutions are being reduced in size as private firms take over building and managing infrastructure. This weakens the

³⁹ World Bank, "Measuring Social Capital"

<http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTSOCIALDEVELOPMENT/EXTSOCIALCAPITAL/0,,contentMDK:20193059~menuPK:418220~pagePK:148956~piPK:216618~theSitePK:401015,00.html> and the UNDP World Human Development Report.

⁴⁰ Axelsson, R., P. Angelstam, E. Degerman, S. Teitelbaum, K. Andersson, M. Elbakidze, and M. Drotz, 2013. *Social and Cultural Sustainability: Criteria, Indicators, Verifier Variables for Measurement and Maps for Visualization to Support Planning*, *Ambio*. 2013 March; 42(2): 215–228.

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http://sustainabledevelopment.un.org/content/documents/2306TST%20Issues%20Brief%20Cities_FINAL.pdf

⁴² As quoted in TST Issues Brief: Sustainable cities and human settlements, page 2.

http://sustainabledevelopment.un.org/content/documents/2306TST%20Issues%20Brief%20Cities_FINAL.pdf

⁴³ Koppenjan, Prof dr Joop, 2013. "Dutch Experiences with Public-Private Partnerships (DBFMO)", presentation delivered to the Australia Asset Management Collaborating Group, Brisbane, 23 October, 2013.

public sector in this and the next generation and reduces the benefit from PPPs. Only by highly skilled teams coming together to ensure a good product, from both the private firm and the public institution/s, is the public good served.

The types of weaknesses in contract management being noted include:

1. Contract sanctions are not being applied.
2. Contracts are not being monitored in detail.
3. Number of contract changes are large and costly
4. Contract management and learning capacity is not adequate to the need
5. Parliament is not being kept informed⁴⁴.

Good data underpins a cities' ability to monitor service levels against that promised and against contracts. Professional information managers bring together data from disparate sources and make it available to all users. Where one profession or area of government puts a barrier around the data they use, the whole city suffers. This is equally true if a private sector provider does not release data on the operation and quality of services provided of the infrastructure they operate.

With large projects funded outside government, the incentives change.

Incentives

There is a built-in incentive to access loan funds for large infrastructure projects, not only to enable politicians to feel as if they are contributing to the nation's / city's development, but also because one large funding instrument through the issue of government bonds or through PPPs that access the capital market or banking finance is much easier to obtain and manage than an infinite number of maintenance contracts / budgets across public, private, civil society and individual households.

Many PPP projects are designed to raise fees to cover the ongoing cost of the service. Maintenance costs are built into the contract and maintenance firms benefit from obtaining contracts to service the whole, or parts of, the infrastructure. The effectiveness of this strategy relies on there being a deep market for maintenance services. Where there are monopoly providers, efficiencies may not be obtained.

Within the city administration fees and charges are being levied on city residents to finance operating costs, and some maintenance costs, of local infrastructure services (water, waste management), but these are generally insufficient to cover the full cost of the operation, maintenance and replacement of infrastructure.

Large contracts may attract unscrupulous business people, as well as unscrupulous public sector managers and other leaders. A small percentage on a very large figure is a very large source of income for these unscrupulous people. The IMF identified this difficulty in 1998 and attempts have been made to reduce companies' ability to claim tax deductions for "facilitation payments" in third countries. But the practice is still attractive⁴⁵.

⁴⁴ Court of Audit of the Netherlands, Report on Contract Management by DBFMO, 6 June 2013

⁴⁵ For example, it has been reported that a quarter of the national budget of Papua New Guinea is lost in detectable fraud. See: <http://www.abc.net.au/4corners/stories/2013/09/23/3852506.htm>

There is a number of decision points involved in a large project: specification and design, issue of the tender, tender scrutiny, tender negotiations, tender approval, contracting, verification of works and arbitration about points of disagreement. If a city / government has not maintained a high level of skill and integrity in these areas, weaknesses can be taken advantage of and, if so, the public good will not be served.

Where a firm pays a commission at each of these decision points to ensure they obtain the business, the firm itself rarely pays the cost. Rather it is factored into the overall cost of the project, making it more expensive than it would otherwise need to be.

Also firms can submit a low bid, on the understanding that it can be increased to deal with changes in the design. The cost of materials can be reduced to cover the bribes, thus reducing the standard of service to the citizens. These practices are an impost on the citizen. Several large projects in Europe have failed because of the results of the renegotiation of the project design⁴⁶. Where there is a capacity risk, unscrupulous firms and public sector leaders have the opportunity to creatively defraud the public. **Public sector managers, and their private sector counterparts, need to scrupulously manage this risk.**

When this personal motivation impedes the productivity of the capital investment, the economy suffers along with the society, the environment and culture. Trust is diminished.

If the productivity sought from public assets can only be obtained if those assets are maintained so that users get the benefit of the services for which they were obtained, then **a transparent and accountable system** that motivates all stakeholders to be as productive as possible maximises the chances of productivity gains being achieved.

The IMF has found that **there is an association between high corruption and:**

- **high capital investment**
- **low government revenue**
- **low operation and maintenance expenditures**
- **poor quality of infrastructure**⁴⁷.

The above incentives create risks that need to be carefully managed. If the UN advisers are accurate in predicting that the earth's sustainability depends on city administrations, cities' management of public assets, including infrastructure, is a high priority for humankind.

Clear guidelines, accepted procedures, skilled staff in both the public and private sectors and civil society and well managed accurate data are prerequisites for cities to meet the coming challenges. Natural disasters raise the stakes of managing public assets to a new level again, with people's lives being immediately affected by their access to core infrastructure.

⁴⁶ The high-speed rail stations in the Netherlands and the Frya high speed train service (Prof dr Joop Koppenjan).

⁴⁷ IMF, 1998, page7-8.

Conclusion

Cities' ability to carefully manage capital investment is crucial if cities are to meet the challenges ahead. This means ensuring that each project responds to real needs, and that the city's residents support the project and are willing to pay the price of it. It means that to manage a city's assets well, a city must collect the revenue to which it is legally entitled, budget funds for the operation and maintenance of all assets and monitor the quality of those assets to ensure a high quality of life for all residents. To do this it must build its capacity to collect, store and retrieve data, negotiate contracts and to monitor actual performance of all its asset stock, whether owned, controlled or contracted. It must develop the capacity to manage all types of public assets, including environmental assets and the happiness of city residents. Only then will cities be able to demonstrate they are managing public assets to meet the needs of their residents and to ensure a sustainable future for humans on Earth.

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