

**From the three P's to the three W's
PUBLIC PRIVATE PARTNERSHIPS AND BEYOND**

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Abstract

This paper explores the topic of Public Private Partnerships (PPP) in an Australian context. As PPP's are intrinsically linked to infrastructure, both direct and social, the paper provides a background to the definition of infrastructure and it's importance both in an Australian and international economic context

The paper then reviews the interaction between public and private partners in a PPP relationship, and the potential opportunities for an expansion of the PPP process.

The paper then provides a review of issues which confronts the successful integration of PPP's structures in Australia, at all three levels of government, and it discuss the challenges and opportunities ahead. In short the paper hypostasis's how do all parties with project procurement move from the theory of the three P's (Public Private Partnerships) to the application of the three W's (Why, What and When).

Finally the paper provides a case study using a PPP analyses technique in a social housing/infrastructure context, this particularly important in Australia given the increasing demands being placed on issues associated with social housing (in all .sectors) due to recent changes in the new Commonwealth Housing Agreement (2002).

Key Words

Public Private Partnerships; social housing; infrastructure; social infrastructure

THE IMPORTANCE OF INFRASTRUCTURE TO THE AUSTRALIAN ECONOMY

Introduction

The significance of infrastructure to Australia in economic terms is difficult to measure due to a number of factors.

1. Firstly, there is no specific data available that measures infrastructure capital stock or the annual rate of private and public sector infrastructure investment
2. Second, the different methods employed by government owned enterprises (GOEs) and the private sector for the reporting of assets, inventories and investment levels are largely irreconcilable, and this situation has existed for over 30 years.
3. Third, research for the Organization of Economic Cooperation and Development (OECD) indicates that fiscal measures of infrastructure investment comparisons between countries are largely meaningless (Sanchez-Robles 1998).

In Australia, most measures of infrastructure use the attribution methodology adopted by the Private Infrastructure Task Force (EPAC 1995a). This would suggest that the written-down value of economic infrastructure in Australia at 30 June 2000 was AUD621 billion which is approximately the same size as Gross Domestic Product (GDP) for 1999/00 at AUD632 billion using current prices (ABS 5204.0 1999-2000). Three additional statistics are relevant at this point.

1. First, the rate of growth of Australian GDP has outstripped that of infrastructure net capital stock throughout the 1990s. This approximates the experience of most developed economies at this time.
2. Second, around 90% of infrastructure was held by the public sector in the mid 1990s although this ratio is declining.
3. Third, economic infrastructure is Australia's third largest asset class behind non-residential property (AUD706 billion) and listed equities (AUD682 billion) at 30 June 2001 (Regan 2001).

A second measure of infrastructure used in Australia, is the rate of new investment using gross fixed capital formation (GFCF) data. Statistics associated with this measure are;

1. Australia's aggregate investment performance at 23.9% of GDP is slightly above the OECD median in 1999-00 (OECD 2001). However, investment in economic infrastructure has declined from around 8% of GDP in the 1950s (RBA 1995) to around 6.2% in 2000-01.

2. The GFCF contributions of both the public and private sectors are approximately equal in 1999-00 terms (Regan 2001).

Economic Importance

In understanding the economic importance of infrastructure it is relevant to highlight the strong correlation of economic infrastructure with output growth, productivity, income and private sector investment in developed economies (Aschaeur 1998, Barro 1997, Barro & Sala-i-Martin 2000, Knox 2000, Regan 2002a). It is important to note that correlation suggests no more than that these variables move together but it doesn't help to establish causation.

Research over the past 20 years, drawn from both the endogenous and neoclassical approaches to growth discloses;

- Strong evidence of two-way causation flows between investment in infrastructure and the variables of
 - output,
 - the rate of growth of output,
 - productivity, incomes and
 - Investment generally.

However, there is strong evidence that public infrastructure investment makes a positive and significant contribution to output and output growth (Sanchez-Robles 1998).

INFRASTRUCTURE & PUBLIC PROVISION

What Is Infrastructure?

Infrastructure is a unique asset class, featuring the investment characteristics of indexed bonds and the unsystematic risk profile of direct property (Timms 1995). Typically, infrastructure assets are;

- Capital intensive,
- Involve high initial sunk costs,
- The output meets steady long term demand,
- Assets are site and use specific, and
- Generally operate under conditions of limited competition.

Infrastructure assets generally involve large-scale distribution networks, their output forms an important part of the cost structure of other sectors and the services produced are generally essential in nature. Demand for infrastructure services generally features low price elasticity (EPAC 1995a, BIE 1992, Regan 2001).

Infrastructure is generally characterised as a public good ie, it is a non-rival and non-exclusive good or service available to the general community. Public goods are provided by the public sector and financed through consolidated revenue and taxation.

Public Provision

Traditionally, infrastructure was provided, operated and maintained directly by government or through government agencies. Until the 1980s, there was little privately owned infrastructure in Britain or Australia although the franchising of public services at local government level was commonplace in France from the early 1930s. In Britain and Australia, the generation and distribution of electricity, rail transport, ports and airports, telecommunications facilities, hospitals, water and sewerage services were all publicly owned. Today, there is still an expectation that essential services will be provided by the public sector (Regan 2002b). The reasons often cited in support of this include the risk of market failure, resource allocation decisions, pricing concerns, mitigation of risk over a wide taxpayer base and the principle of collective responsibility for what can be broadly described as strategic community interests.

Developed economies experienced major structural changes after the international recession of 1989/90. The liberalisation of economic management, the importance of balanced budgets and low public sector debt and currency volatility meant that governments had to look to the private sector for capital to fund the provision of public assets and services. There was little science to this in the initial stages with the full and partial privatisation of GOEs at the industry level proceeding concurrently with BOOT and other franchising arrangements at the project and regional economy level.

The transfer of many GOEs to private ownership meant that infrastructure became a form of quasi-public good with some barriers to use and pricing often determined by a combination of negotiation and market forces. Most early privatisations in Australia concerned GOEs in competitive markets and included sales of the State owned savings banks and insurance companies, Qantas, the Commonwealth Bank and the network utilities. This process was quickly followed by the grant of exclusive franchises for new assets such as tollways and social infrastructure including car parks, public buildings and facilities servicing health and educational infrastructure.

In Britain, the sale of regional GOEs was undertaken together with the franchising of social infrastructure including public housing, government employee accommodation, asset maintenance, public buildings and aged care facilities.

Privatisation and the outsourcing of government services was a major structural adjustment to world economies. In Britain, between 1979 and 1999, privatisation transferred 15% of GFCF (equivalent to around 7% of GDP) to the private sector (Pollitt 2001). In Australia, around AUD72 billion of public assets were transferred to private ownership in the 10 years to 2000 representing around 12% of the nation's infrastructure

assets. This estimate excludes capital expenditure incurred by the private sector on new undertakings.

PRIVATE SECTOR PARTICIPATION

The Early Years

Was privatisation merely an asset shuffle or did it introduce real economic benefits?

Research by Andersen and the London School of Economics, identified average cost savings of 17% compared with conventional public sector provision (H.M. Treasury 2000). Liberalisation is credited with sustainable GDP increases of up 6% in developed economies (Gonenc, Maher and Nicoletti 2000) and national economies worldwide benefited from significant reductions in public debt made possible with the proceeds of sale (Harris and Lye 1998, Megginson and Netter 1999; Reserve Bank of Australia 1997).

There is evidence that privatisation, contracting out and franchising resulted in retail price reductions in most infrastructure services (Domah and Pollitt 2001, Klitgaard and Reddy 2000) and has produced more efficient asset allocation practices (Pollitt 2000). Other benefits to accrue to the public sector included the economic value of risk transfer and the more timely delivery of new facilities where construction and project management are undertaken by the private sector (Clifford Chance 2001).

The Evolution

A further benefit of franchising of public services is that the public sector's procurement cost is not immediately invested in assets but amortised over the life of the franchise or the service contract (Gerrard 2001). However, as an instrument of privatisation, franchising meets the public sector need for capital and operational efficiency at the asset or enterprise level. It has its limitations.

Franchising of activities that require the provision of both assets and services generally involves significant capital expenditure, the lease of land and long tenure periods. The economics of these arrangements of which the BOOT is better known, require that the cost of the asset and capital expenditure incurred during the holding period be amortised over the tenure period in addition to a return commensurate with risk. Franchise contracts for terms of 25 years or longer are inflexible and not easily restructured to meet changed market conditions (Pollitt 2000).

Many early franchises were consortium bids that included a group of "active" participants providing intermediation, design, construction, management or financial services to the undertaking. Difficulties arise between consortium members where there is a mismatch of

investment horizons or where asset ownership is put at risk by the sub-standard performance of one member. The solution to these potential problems lies in the separation of asset ownership from service delivery and the use of more flexible delivery systems.

The Private Finance Initiative (PFI) program was introduced in the early 1990s as a public sector procurement policy. PFI was reviewed by the new Labour Government in 1998 and incorporated within the new PPP program introduced in 2000.

The comprehensive guidelines for Britain's PPP program are contained in Public Private Partnerships: The Government's Approach (H. M. Treasury 2000).

Public Private Partnerships

The core of PPP is its **focus on government services and not assets**. In this respect, it is different to franchising using build own operate transfer (BOOT) and similar arrangements.

The switch in emphasis from assets to services introduces a number of different considerations to the BOOT approach and includes:

- 1 the allocation of responsibilities for service provision. How is the service to be labelled?
- 2 access pricing for network utilities
- 3 the effective regulation of service provision
- 4 the mechanisms to remedy operator default
- 5 retail pricing
- 6 the implementation and administration of quality and service standards.

Infrastructure services that involve private sector participation are now generally recognised as quasi-public goods. PPP permits any number of legal arrangements for the delivery of services. Privatisation involves the transfer of the service and the whole mechanism of its provision but PPP is essentially the "contracting out" of specific services. A consequence of this is that resource allocation and the responsibility for providing essential services resides with the public sector as it did before. This meets the public's need for certainty, confidence and accountability.

Overseas experience suggests that the introduction of private sector innovation and efficiency within a balanced framework of regulation with incentives can deliver cost savings, better services and lower prices to consumers.

There are some sectors where PPPs will only have a limited role. These include the sensitive areas of public health and education, public security and the administration of justice. However, even in these sectors there is scope for the "contracting out" of non-professional and administrative functions to the private sector.

Australia has several unique circumstances that differentiate it from most other countries particularly New Zealand and Britain. These include a federal constitutional structure with the States and Territories controlling most infrastructure within the economically artificial construct of State and Territory borders; a tradition of strong government participation in the economy; a large continent with a small population; the need to maintain essential services in regional areas and an uneven distribution of natural resources between the States and Territories. These constraints and the fragmentation of infrastructure planning over 8 regional governments and the Commonwealth make it difficult to set coordinated national priorities and agendas. These are major impediments to the future provision of infrastructure in this country that PPP cannot resolve.

PPP's AND BEYOND

From the three P's to the three W's: An Introduction

Public private partnership arrangements have been adopted in New South Wales, Victoria, Queensland and South Australia and programs are being implemented in the other States and Territories.

In the absence of national coordination of infrastructure planning and management, this suggests that guidelines and methodologies will vary between the States and Territories.

In Britain, the PPP program contemplates four types of transaction:

- 1 Joint ventures to provide public goods and services with the private sector taking a majority or minority equity stake and/or management role
- 2 Initiatives to sell public sector services into wider markets and arrangements to use private sector capital and expertise to exploit the commercial potential of public sector services (also known as the Wider Markets Initiative)
- 3 Private sector financing arrangements for the provision of public services including franchising and “contracting out” of services
- 4 The sale of majority and minority interests in GOEs.

The PPP Policy Guidelines (H.M. Treasury 2000) acknowledge the benefits of private sector management expertise, innovation and productivity performance incentivised by having private capital at risk. The UK Guidelines also recognises that some reform of the public sector in Britain was necessary to facilitate the PPP program. These included extensive staff training and external assistance to public sector agencies.

The problems that these agencies faced included a major change from input to output based procurement, contracting and service specifications; project evaluation and complex contract negotiations with the private sector (H.M. Treasury 2000). Another area

of difficulty concerned vices problems with local government authorities and agencies. In the case of Britain's health services system, this has taken nearly 10 years to resolve.

The challenges of PPP for the private sector include

1. a shift in thinking from short term asset provision to "whole of life" project economics,
2. the elimination of "shadow tolls" and other forms of public sector underwriting of risky projects,
3. risk mitigation and the procurement of long-term financing of assets to match the economic lives and
4. cash flow characteristics of long term infrastructure investment.

Gerrard (2001) takes the view that the critical feature of PPP arrangements is the constituent joint venture or franchise documentation and the terms of long term tenure and/or supply contracts between the PPP vehicle and the public sector. These documents define

1. the scope of the business,
2. allocate risks and responsibilities,
3. specify the priorities,
4. output specifications and service delivery standards and
5. articulate the regime which will include matters such as output pricing and management incentives.

The primary role of the private sector will be to deliver the PPP vehicle's business objectives on terms that meet the public sector's value for money criteria.

In Britain as in Australia, PPP Guidelines place no limitations on the form of public private sector collaboration. A variety of ownership, management and contractual arrangements are employed. The Queensland Government's PPP Policy Guidelines also stress that flexibility is a key characteristic of its approach.

The British Government's PPP Guidelines suggest 8 transactional models (which are briefly outlined below). These models are not definitive and no limitations are placed on the form of arrangement in respect of which PPP can be employed. The models provide a broad guide to future possibilities for PPP applications in Queensland.

The Eight Proposed Transactional Models of PPP; or from the three P's to the three W's

The Sale of Surplus Assets

Sale of surplus public sector assets: This will release the potential “value adding” contribution of private sector finance and management.

Example

The lease of surplus land adjoining public hospitals or other social infrastructure to the private sector with a ground rent linked to retail rent performances.

Improving Public Sector Return

Improve public sector returns by providing arrangements that utilise the private sector's innovation and management expertise, to improve both the productivity and the range of uses of the public sector's physical and intellectual assets.

Example

Was a joint venture between the UK's Medical Research Council (MRC) and private sector organisations providing expertise and financial backing to exploit the MRC's research activities.

The Sale of Interests in Public Sector Businesses

The Sale of Interests in Public Sector Businesses by the sale of shares in state-owned businesses, by floatation or trade sale, with the sale of a minority or majority stake.

Example

An example is the merger of public and private sector businesses ahead of public listing. The amalgamation of Suncorp, QIDC and Metway provides an example of asset restructuring involving the public and private sectors ahead of a public listing that is designed to maximise the asset sale price. The opportunity exists to introduce private

sector investment, capital market disciplines and therefore improved management performance to release the potential of state-owned businesses.

Maintaining Community Service Obligations

Maintaining community service obligations (CSO): This contemplates introducing private ownership to state-owned businesses that observe community service obligations (CSO). The CSO components can be combined with incremental revenue sources, regulation, partnership agreements or retention of a public sector stake in the business.

Example

The franchising of a new hospital car park with a percentage of spaces allocated to hospital employees or low income groups at concessional rates.

Linking Service Contracts to Asset Provision (PFI)

Linking service contracts to asset provision (PFI) by the use of public sector contracts to acquire services to specification with defined outputs on a long term basis from the private sector including the construction, ownership and operation of the assets.

Example

By the use of traditional BOOT arrangements and the provision of aged care and public housing (*This example will be used later in this paper to provide an example of the benefits of using these type of arrangements over more tradition asset elevation approaches*)..

Joint Ventures

Joint ventures (and partnerships) between the public and private sectors, involving the pooling of assets, capital and/or management. These arrangements may include one or more private sector parties.

Example

A joint venture example includes the partnership between the Commonwealth Office's Global

Purchasing Group and the Australian Government for the supply of furniture and equipment for Britain's diplomatic assets in foreign countries and a partnership set up in the UK to exploit public sector scientific research.

Public Sector Investment, Private Sector Management

This canvasses the possibility of partnerships between the public and private sectors in which the public sector contributes capital or assets and the private sector manages the activity. The public sector would share in the return generated by this investment.

Policy Implementation

Policy implementation is an arrangement in which private individuals and firms are involved in the development or implementation of policy.

Precedents

Precedents for policy implementation in Britain include The National Skills Task Force, the Creative Industries Task Force and the Competitiveness Council and Public Housing Trusts.

PPP's and Beyond: A Case Study:

This case study uses a PPP analyses technique in a social housing/infrastructure context, this particularly important in Australia given the increasing demands being placed on issues associated with social housing (in all sectors) due to recent changes in the new Commonwealth Housing Agreement (2002).

Case Study Support

During the next two decades, Commonwealth and State Governments, and State housing departments in particular, face a significant challenge to develop a comprehensive approach to the provision of good quality, affordable rental housing and accommodation for older Australians who have not attained home ownership. While home ownership is and will continue to be the predominant form of housing tenure for Australians aged 65

and over, some 12% of older Australians are currently in rental accommodation, divided almost equally between private and public rental (ABS 1999, p. 90). It is likely that the proportion of the aged population who are renters will be maintained over the coming decades (AHURI,1996, pp. 106-107), and that the absolute numbers will increase substantially (an estimated investment required is equal to the indicated for the private equity based market). State housing authorities have provided rental accommodation for older people since the early 1970s (Kendig and Gardner 1997), and rent assistance is provided by the Commonwealth Government to older people in the private rental market. However, there is a pressing need for a more comprehensive approach to the housing needs of non-home owning older people, which encompasses the roles of the public, private and community sectors, and involves a wide range of policy instruments.

The main challenges facing housing policy-makers seeking to develop a comprehensive approach to the housing of this population group include: ensuring an adequacy supply of affordable housing that is suitable to older people's current and future needs; developing new partnerships with the private and community sectors; promoting diversity and choice for older people who rent; improving the quality of 'marginal accommodation'; and developing effective linkages between housing provision and aged care services. With respect to overall supply, there is a widely held view that the capacity of housing authorities to provide sufficient accommodation for this group through the public housing system is limited, and that a broader approach involving new partnerships with the private and community sectors is required. There is a need for an approach that utilises a range of policy instruments to stimulate private investment in affordable accommodation for older people, alongside public sector provision. Relatedly, the diversity of circumstances and preferences of older people need to be fully considered, and means of providing a wider choice of housing types in both the public and private sectors need to be explored. The provision of rental accommodation within retirement villages, and the emergence of new forms of 'rental villages' and other forms of congregate housing needs to be analysed in this context. The limited choice available to many lower-income older renters has resulted in many being housed in 'marginal accommodation' such as boarding houses/hostels and long-stay caravan parks, and some being homeless. The regulation of

various forms of marginal accommodation for older people, and development of programs for older homeless people are part of the comprehensive policy approach that is being identified in the recently awarded AHURI grant to be undertaken by Dr.Earl and his team at the University of Queensland.

Current & Possible Solutions

The interest in the market outlined in the case study support above is attracting substantial investment activity as can be identified by the recent interest by the Westpac Banking group in their “Village Life Property Trust” product disclosure statement.

The negatives to the current level of involvement in the market can be identified as:

1. high levels of pension contribution
2. the ability to only get the model to work in regional and fringe city locations
3. high initial yields required to attract investment funding
4. uncertain asset management/asset journey considerations

The ultimate goals to providing a platform that will encourage substantial investment (\$9 to \$19 billion in year 2001 dollars over the next two decades) into the rental market for aged Australians are:

1. Lower levels of pension contribution
2. An ability to allow a high level of location accessibility
3. removal of the necessity to depend on initial yield constraints
4. provide certainty in the asset management / journey considerations

Some solutions may be as follows, many were detailed in Dr.Earl’s PhD thesis in 1995 and subsequent papers, which indicated rental savings of up to 60% on traditional rental markets, which can also be linked with the types of structures covered in this paper associated with PPP

1. The requirement to provide a seamless transition between, development, investment and asset management, which may be referred to as the identification of risks in the above process which will enable lower investment return rates to attract project funding
2. The quarantining of enhanced taxation benefits, which reflect the unique qualities of the market
3. The recognition that the market more closely resembles an infrastructure type investment rather than a traditional property investment, and therefore any investment analyses could use PPP (Public Private Partnership) type investment structures

To illustrate the potential of these types of approaches a case study is provide in Appendices 1 & 2 of this paper. The case study analyses in Appendix 1 is an investment using a traditional yield approach and the resultant per fortnight payment (investment income) to support the investment, whereas appendix 2 using all of the issues raised in 1 to 3 above.

As can be observed

1. The use of the benefits raised in 1 -3 above, which include the reduced risk IRR and, shared secondary tax quarantining and the adoption of a PPP approach, effectively reduce the required rental income by 49% over that required by a traditional investment vehicle.

2. If the same IRR is required and all other factors remain the same (points raised in 1) the required income reduction is 33%

OVERALL PAPER CONCLUSION

This paper has provided a brief overview of Public Private Partnerships (PPP) in an Australian context. As PPP's are intrinsically linked to infrastructure, both direct and social, the paper has provided a background to the definition of infrastructure and its importance both in an Australian and international economic context

The paper then reviewed the interaction between public and private partners in a PPP relationship, and the potential opportunities for an expansion of the PPP process. In short the paper hypostasized how do all parties move from the theory of the three P's (Public Private Partnerships) to the application of the three W's (Why, What and When).

Finally the paper provided a case study using a PPP analyses technique in a social housing/infrastructure context, and showed how long term financial benefits can flow to all parties participating in PPP's

REFERENCES

From the three P's to the three W's PUBLIC PRIVATE PARTNERSHIPS AND BEYOND

Australian Bureau of Statistics, 2000, Australian National Accounts: Capital Stock, Cat No 5221.0, 1999-2000, ABS, Canberra

Aschaeur D, 1992, Infrastructure, Productivity and Economic Growth: Fair Dinkum? In Bureau of Industry Economics, 1992, Private Provision of Economic Infrastructure, Occasional Paper No 7, AGPS, Canberra

Aschaeur D, 1998, Public Capital and Economic Growth: Issues of Quantity, Finance and Efficiency, Working Paper No 233, The Jerome Levy Economics Institute

Barro R J, 1998, Determinants of Economic Growth, MIT Press, Cambridge, MA

Barro R J, Sala-i-Martin X, 1995, Economic Growth, McGraw Hill, NY

Barro R J, Sala-i-Martin X, 2001, Economic Growth, 2nd ed., McGraw Hill, NY

- Bureau of Industry Economics, 1992, Private Provision of Economic Infrastructure, Occasional Paper No 7, AGPS, Canberra
- Clifford Chance, 2001, Public Private Partnerships Newsletter, January, London
- Domah P, Pollitt M G, 2001, The Restructuring and Privatisation of Electricity Distribution and Supply Businesses in England and Wales: A Social Cost-Benefit Analysis, Fiscal Studies, Vol. 22, No.1, p107
- Economic Planning Advisory Council, 1994, Investment for Growth, Background Paper No 39, Papers presented at an Office of EPAC seminar held in Canberra on 23 November 1993, AGPS, Canberra
- Economic Planning Advisory Commission, 1995a, Private Infrastructure Task Force, Interim Report, AGPS, Canberra
- Economic Planning Advisory Commission, 1995b, Private Infrastructure Task Force, Commissioned Studies, AGPS, Canberra
- Economic Planning Advisory Commission, 1995c, Private Infrastructure Task Force, Final Report, AGPS, Canberra
- Economic Planning Advisory Commission, 1995d, Investment and Economic Growth, Commission Paper No 9, AGPS, Canberra
- Erenburg S, 1993, The Real Effects of Public Investment on Private Investment: A Rational Expectations Model, Applied Economics, vol. 25, no. 26, p 831-837
- Erenburg S, 1994, Linking Public Capital to Economic Performance, Public Capital: The Missing Link Between Investment and Economic Growth, Working Paper, The Jerome Levy Economics Institute, NY
- Flemming J, Mayer C, 1997, The Assessment: Public Sector Investment, Oxford Review of Economic Policy, vol. 13, no. 4
- Gerrard M B, 2001, Public Private Partnerships, International Monetary Fund, Finance and Development, Vol. 38, No.1 September.
- Gonenc R, Maher M, Nicoletti G, 2000, The Implementation and the Effects of Regulatory Reform: Past Experience and Current Issues, OECD Working Paper, Paris
- H. M. Treasury, 1996, PFI: Guidelines For Smoothing The Procurement Process, Stationery Office, London
- H.M. Treasury, 2000, Public Private Partnerships: The Government's Approach,

Stationery Office, London

Klitgaard T, Reddy R, 2000, Lowering Electricity Prices through Deregulation, Current Issues, Vol. 6, No. 14, Federal Reserve Bank of New York

Knox M, 2000, Infrastructure, Private Investment and Jobs in Queensland, Economic Strategy 13 July, Morgans Stockbroking Limited, Brisbane

Lemos T, Betts M, Eaton D, Akmeida L T, 2000, From Concessions to Project Finance and the Private Finance Initiative, Journal of Project Finance, vol. 6, no. 3

Meggison W L, Netter J M, 2001, From State to Market: A Survey of Empirical Studies on Privatisation, Journal of Economic Literature, vol. 39, no.2, p231

Pollitt M G, 1999, A Survey of the Liberalisation of Public Enterprises in the UK Since 1979, Working Paper, University of Cambridge, Department of Applied Economics

Pollitt M G, 2000, The Declining Role of the State in Infrastructure Investment in the UK, Working Paper, University of Cambridge, Department of Applied Economics

Regan M, 2001, The Dimensions of Economic Infrastructure in Australia, Working Paper No 12, Construction, Property and Infrastructure Research Unit, Department of Geographical Sciences and Planning, The University of Queensland

Regan M, 2002a, The Macroeconomic Effects of Infrastructure Investment, Working Paper No.15, Construction, Property and Infrastructure Research Unit, Department of Geographical Sciences and Planning, The University of Queensland

Regan M, 2002b, Ownership of Public Assets and Services, Working Paper No. 5, Construction, Property and Infrastructure Research Unit, Department of Geographical Sciences and Planning, The University of Queensland.

Reserve Bank of Australia, 1995, Australian Economic Statistics 1949-50 to 1994-95, Occasional Paper No 8, RBA, Sydney

Reserve Bank of Australia, 1997, Privatisation in Australia, RBA Bulletin, December

Sanchez-Robles B, 1998, Infrastructure Investment and Growth: Some Empirical Evidence, Contemporary Economic Policy, vol. 16, no.1, p 98

Steering Committee on National Performance Monitoring of Government Trading Enterprises, 1996, Government Trading Enterprise Performance Indicators 1990-91 to 1994-95, vol. 1, Overview, Industry Commission, Melbourne

Timms G, 1995, Private Investments Golden Opportunities, Paper presented at an AMP Investments Client Seminar at Brisbane on 28 September

From the three P's to the three W's CASE STUDY

Stimson, R., Earl, G., <u>The Retirement Village Industry in Australia – Evolution, Prospects and Challenges</u> , RVAA 2002
Regan, M, Earl, G., <u>Public Private partnerships and Beyond</u> , Working Paper 14, CR-SURF UQ, June 2002
Earl, G., Elliott, P., Reed, R., <u>The Valuation of Self Funded Retirement Villages in Australia: Analysis Reliability and Investment Valuation Methodology</u> , Pacific Rim Real Estate Society Conference, Christchurch, 2002
G. Earl, S. Allen, <u>“Benchmarking Government Housing Production”</u> , November 2001
G. Earl, <u>“Housing the Aged: Accommodation Supply and Asset Management Implications”</u> , 14 th Annual Retirement Village Association of Australia Conference, Australia, October 2001
G. Earl, S. Allen, <u>A strategic housing asset indicator: Exploring dimensions of the problem</u> , RICS COBRA, September 2001
W. Earl, et.al. <u>Property Condition Index’</u> , Queensland Department of Housing, April 2000
W. Earl, <u>“Institutional in Investment in Low Income Housing”</u> Workshop on Housing Policy in Emerging Economies, as part of the URA-IPS World Conference on Model Cities Proceedings, April 1999
W. Earl, <u>Benchmarking Indigenous Housing Costs Computer Software</u>
W. Earl, <u>Housing Cost Benchmarks, Queensland Housing</u> , Queensland Department of Housing, October 1998 (Confidential)
W. Earl, <u>Indigenous Housing Performance, Queensland Housing</u> , Queensland Department of Housing, October 1998, (Confidential)
W. Earl, <u>Housing Infrastructure Benchmarks, Queensland Housing</u> , September 1998, (Confidential)
W. Earl, J. Flood, M.Spiller, <u>Housing Indicators</u> AHURI Canberra, July 1998, (Confidential)
W. Earl, <u>Benchmarking Housing and Land Costs Computer Software</u>
W. Earl, <u>“Benchmarking Public and Private Housing Costs”</u> , Queensland Department of Housing, September 1997, (Confidential)
W. Earl, <u>“Benchmarking Public and Private Rental Housing Property Management”</u> , Queensland Department of Housing, July 1997, (Confidential)

W. Earl, R. Stimson, <u>Australian Federal Government Inquiry into the Private Rental Investment Market</u> , “Affordability of Housing: The Role of Institutional Investors” April 1997, AHURI, Melbourne
W. Earl, “ <u>Housing Affordability: A Time for Attitudinal Change</u> ”, August 1996, European Housing Network, Copenhagen
W. Earl, <u>Inequity in Housing: There is a Chance</u> ”, August 1996, European Housing Network, Copenhagen
W. Earl, “ <u>Housing Choice For All</u> ”, March 1996, The Building Economist
W. Earl, “<u>Alternative Housing Choices at Benchmark Affordability levels by ‘TEIRM’ Tenure</u>”, November 1995, PhD Thesis
W. Earl, “ <u>Housing Choice For All</u> ”, May 1995, International Cost Engineering Council Conference
W. Earl, <u>Home Ownership A Thing of the Past</u> , September 1994, Conference proceedings, referred, European Housing Network Conference, Pages unnumbered.
W. Earl, <u>Total Housing Choice for All</u> , August 1994, Conference proceedings, refereed, Australian Urban Development Institute
W. Earl, <u>Residential Choice For All</u> , January 1994, Conference proceedings, Australian Real Estate Educators Conference
W. Earl, “ <u>A New Approach to Housing</u> ” AUBEA August 1993

Appendix 1: A Traditional Approach

30 YEAR ANALYSIS

	Factor
Purchase Cost	100,000
Value Escalation (PA)	3.000%
PA Gross Income	14,398
Income Escalation Rate (PA)	3.00%
Vacancies	5.00%
PA Outgoings (Fixed)	-
PA Outgoings (variable)	30.00%
Costs Escalation Rate (PA)	3.00%
Management Fees	7.00%
Maintenance of Capital Costs	1.50%
Purchase Transaction Costs	3.00%
Sale Transaction Costs	3.00%
Tax Rate	30.00%
Depreciation % Value	70.00%
Depreciation Rates	
BA (4%)	
BA (2.5%)	84.00%
Depreciation (10%)	8.00%
Depreciation (20%)	2.00%
Depreciation (33.33%)	4.00%
Depreciation (100%)	2.00%
TOTAL DEPRECIATION	100.00%
Discount Rate	8.50%
PFI	\$ 554
IRR	8.50%

Appendix 2: Using a PPP Approach

30 YEAR ANALYSIS

	Factors	
Purchase Cost	70,000	
Value Escalation (PA)	3.000%	
PA Gross Income	7,402	
Income Escalation Rate (PA)	3.00%	
Vacancies	5.00%	
PA Outgoings (Fixed)	-	
PA Outgoings (variable)	20.00%	
Costs Escalation Rate (PA)	3.00%	
Management Fees	7.00%	
Maintenance of Capital Costs	1.50%	
Purchase Transaction Costs	0.00%	
Sale Transaction Costs	0.00%	
Tax Rate	30.00%	
Depreciation % Value	100.00%	
Depreciation Rates		
BA (4%)	68.00%	
BA (2.5%)	0.00%	
Depreciation (10%)	8.00%	
Depreciation (20%)	20.00%	
Depreciation (33.33%)	4.00%	
Depreciation (100%)	2.00%	
TOTAL DEPRECIATION	100.00%	
Discount Rate	8.50%	
PFI	\$	285
IRR		6.0001%