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An Evaluation of Private Sector Provision of Public Infrastructure in Australian Local Government

John Cannadi and Brian Dollery**

Abstract

Private sector provision of public infrastructure in Australia all levels of government, including local government has steadily increased over the past twenty years. Nevertheless, this method of providing public infrastructure remains controversial. This paper seeks to provide a critical review of the arguments surrounding private sector provision of infrastructure in Australian local government. It examines both the case for private sector provision of municipal infrastructure in Australia and the major arguments advanced against this approach to infrastructure development. Given the inclusive nature of both the conceptual argumentation and empirical evidence on private municipal infrastructure provision, it is argued that a comparative institutions approach should be adopted on a case-by-case basis.

Key Words: : public infrastructure; local government; private sector.

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1. INTRODUCTION

Almost a decade ago the (then) Economic Planning Advisory Commission's (EPAC) Private Infrastructure Task Force argued in its *Interim Report* that 'there are a number of reasons why private sector provision of infrastructure services may be flawed' (EPAC, 1995a, p.18). Despite these reservations, governments of all political persuasions and at all levels in the Australian federal system have continued to rely on private sector provision of public infrastructure. Given the controversy surrounding this method of providing public infrastructure, this is somewhat surprising. Accordingly, in this paper we attempt to evaluate the economic merits of the private provision of public infrastructure in the context of Australian local government.

The paper itself is divided into four main parts. The first section paper briefly discusses the meaning of infrastructure, how local government can finance infrastructure, and the levels of private involvement in Australian local government infrastructure provision. Section two outlines the case against the private provision of public infrastructure provision revolving around natural monopolies, externalities, public goods, standards of service, job losses, risks, equity considerations and cross subsidisation. The third section of the papers considers the advantages of private sector provision of municipal infrastructure, including a reduction of public borrowing, efficiency gains, and competition. The

paper ends with some brief concluding comments on the implications of the analysis for policy making.

2. PRIVATE SECTOR INVOLVEMENT IN MUNICIPAL INFRASTRUCTURE

Australian local governments provide a wide range of economic and social infrastructural services that are essential to both households and industry (Dollery *et al.*, 2003). These services include public buildings, local roads, bridges, footpaths, water, sewerage, drainage and waste disposal, amongst a host of other important items. Indeed, the provision of infrastructure is the most economically significant activity of local councils in Australia.

The provision of public infrastructure is expensive; there is an initial one off capital outlay followed by maintenance costs of the asset. For instance, the provision of water to a new urban housing development represents a salient example of municipal capital expenditure. It would include the costs of laying the pipes, the upgrading of pumping facilities and extending the capacity of the water reservoir. The ongoing maintenance costs of the pipes, pumps and reservoir to keep the assets in workable order represent a recurring expenditure (McNeill and Dollery, 2000).

Australian local government faces increasing community demands to provide and service infrastructure. However, councils have limited access to resources. Four sources of funds to finance municipal infrastructure services exist (McNeill and

Dollery, 2003): (1) Direct charging for a service: This may include a user charge and/or an annual access charge. For example, councils that have a user charge for water, set a price per litre of water, and an annual cost for water connection; (2) Charging developers for the cost of providing a service or requiring the developer to install the infrastructure themselves; (3) Council's may also fund infrastructure services: This is generally done through property rates or through government grants; and (4) Council's may also borrow to cover the cost of capital outlay for major infrastructure capital: These borrowings are subject to Loan Council approval and therefore may need state government approval. The servicing of loans occurs through recurring revenue, such as property rates.

Across Australian local government, public sector investment levels have declined in recent years. This is because councils have received less funding from upper tiers of government; they have been restrained from increasing recurrent funding from property rates by state governments; and there has been a general reluctance to increase debt levels (Johnson, 2003). As a means circumventing these financial constraints, Australian local governments have thus sought private funding of public infrastructure. Commonwealth and state governments, through their ongoing microeconomic reform regime, have also encouraged private sector provision of infrastructure, including municipal infrastructure. In addition, one of the key local government reform initiatives has been to enhance the competitive

mechanisms used by local authorities to deliver their services (Aulich, 1997). The introduction of the provision of infrastructure by the private sector has been used as a means towards this end.

There are essentially five levels of private sector involvement in the provision of public sector infrastructure (EPAC, 1995b; Neutze, 1995b): The introduction of private sector management procedures into the public sector; charging developers for infrastructure and/or requiring them to provide the infrastructure; contracting out particular service functions; contracting out construction and operations; and full privatisation, usually with some government regulation.

3. A CRITIQUE OF PRIVATE SECTOR PROVISION OF INFRASTRUCTURE

Australian governments, including local authorities, have traditionally been involved in the provision of goods and services (Neutze, 1995b). It has been argued that markets have often failed to produce allocatively efficient results and have not necessarily generated socially equitable outcomes. Real and perceived “market failure” has thus provided an intellectual basis for government intervention in order to achieve economically efficient and/or socially equitable markets (Wallis and Dollery, 1999). Some of the more common arguments are sketched below:

Natural Monopolies: Infrastructure services are typically natural monopolies, usually because the initial capital costs of establishing the operation are prohibitive. Public utilities such as water, electricity and gas have traditionally been defined as natural monopolies (Aulich *et al.*, 2001; Hughes, 1998). Competition is notoriously difficult to establish in natural monopolies. In essence, economies of scale in the provision of services as a whole and as part of a network of services represent a major part of the operations. Economies of scale thus form an effective barrier to entry by potential competitors. These characteristics of public infrastructure have inclined policy makers to believe that the private sector provision of infrastructure would result in abuse of monopoly power to the detriment of the public interest (EPAC, 1995b, p.4). In other words, profit maximizing monopolistic infrastructure providers may attempt exploit their market power and supply goods or services at a higher price than necessary. Accordingly, governmental response to the problems of monopolistic supply has taken the form of either regulating monopoly suppliers or taking them into public ownership (Aulich *et al.*, 2001).

Externalities: Externalities occur when the benefits or costs of producing or consuming a service affect persons other than the individuals involved in the transaction (EPAC 1995a). Pollution is a typical example of a negative production externality. It is argued that in a competitive market system, profit-seeking private

firms would not take into account the external costs placed on society by their pollution of the environment (Wallis and Dollery, 1999). In many cases, only interventionist public policy can alleviate the effects of negative externalities on others (Hughes, 1996). For example, Australian governments, including municipalities, commonly impose legislative regulation on environmental pollution. Governments intervene either directly or indirectly: They seek to influence the market directly through public production or regulation or indirectly by means of taxes and subsidies (Wallis and Dollery, 1999).

Local Public Goods: Local public goods include such items as roads and bridges, sewage disposal and traffic control systems (Hughes, 1998). The significance of public goods as a source of market failure in the present context derives from the inability of private markets to deliver public goods as a consequence of their peculiar characteristics: Non-excludability and/or non-rivalry. Essentially most local public goods and services have to be provided by municipal councils for the community as a whole because it is impossible or too costly to exclude from some or all of the benefits those who do not pay (Neutze, 1995b).

Standards of Service: The quality of care and service may deteriorate as profit and/or cost cutting is the driving force with private enterprise. Moreover, the use of the private sector for the provision of local public infrastructure may also affect the ability of the local community to pursue standard of service concerns against

private service providers. Government sector agencies, such as the NSW Ombudsman's Office and the Department of Local Government, do not oversee the private sector and therefore are not available to consumers to pursue their complaints about a contractor (NSW DLG, 1997).

Employment Concerns: The use of the private sector for the provision of public sector infrastructure services often results in job losses. A successful private sector contractor, for example, may absorb a number of existing staff, but generally, evidence suggests that not all staff are redeployed in this way (Industry Commission, 1996). Similarly, the UK Equal Opportunities Commission (1995) has shown that as a result of the introduction of competitive tendering in the UK, full-time council employment fell by 6 per cent and part-time employment fell by 3 per cent. Private sector provision of infrastructure can therefore add to local unemployment. This is a potentially serious concern in the context of regional, rural and remote local authorities in Australia, since in many of these communities the local council is the largest employer.

Risks involved in Infrastructure: It is often contended that the public sector would better able to bear the risks involved in large-scale infrastructure projects (Quiggin, 1996). The main issue in effective private sector involvement in infrastructure is the apportionment of risk (EPAC, 1995a). Risks involved in the construction of infrastructure include cost risk, interest rate risk, and demand risk,

among others. Cost risk refers to the unexpected changes in costs during the construction period. Interest rate risk derives from unexpected changes in interest rates during the period of operation. Demand risk results from the possibility of lower demand than predicted (Neutze, 1995b).

It is questionable whether these risks are lower for the private sector than the public sector. Regardless of whether a private firm or the private sector is involved in the provision of infrastructure, if a third party increases prices, the cost of infrastructure must still be paid. In regard to interest rate risk, Neutze (1995b) argued that public sector can obtain capital cheaper than the private sector because the government is a good credit risk, and this risk is unrelated to the project risk. The private sector is substantially affected by demand risk. If demand is not as high as predicted, the private business may be unprofitable. In comparison, demand risk does not affect government to the same extent. This is because an unprofitable enterprise can be cross-subsidized by government. Finally, governments have in recent times accepted risk, particularly demand risk, on behalf of private business. This is evident with the Sydney Harbour Tunnel, where the NSW Auditor General found that the owner of the Tunnel is the NSW Government because of the acceptance of such risks (Neutze, 1995b). Moreover, the failure of the Sydney City to Airport rail link saw the NSW state government

take responsibility for operating the facility after demand was over estimated and the private company failed.

Equity Considerations: Governments not only intervene on the basis of allocative, productive and dynamic efficiency, but also on ethical grounds. Contemporary Australian governments claim a moral duty to ensure basic rights for all citizens. Although equity considerations are rarely important in determining the means of funding physical infrastructure services, they are taken into account, especially where the services are required to meet community service obligations (Neutze, 1995a). These include obligations to provide services at less than full cost to particular users for equity reasons. Examples are a range of services provided to small towns and remote locations and lower charges for pensioners for a range of services (Neutze, 1995a). These costs are often met through cross subsidization from other revenue sources.

Cross subsidization: Cross subsidisation refers to using funds from profitable parts of business to support the delivery of goods and service in areas where it is unprofitable (Ryan *et al.*, 1999). For example, the Commonwealth government owns part of the telecommunications provider Telstra. Unprofitable services to rural areas are subsidised from the surplus Telstra gains from profitable services internationally and domestically. The private sector may be unwilling to invest in ventures that it considers highly risky and potentially not profitable. In

comparison, local governments may make such investments in the interest of providing equitable services to all citizens and to assist economic development (Ryan *et al.*, 1999).

4. ADVANTAGES OF PRIVATE SECTOR PROVISION OF INFRASTRUCTURE

There are several important advantages claimed for private sector provision of municipal infrastructure services. They include *inter alia* the reduction of public borrowing, efficiency gains and competition.

Reduction in Public Borrowing: In general, privatisation automatically reduces budget deficits in the short and medium term. This may represent an advantage since local governments typically face severe budgetary constraints. However, the savings in public debt interest associated with privatisation may be insufficient to offset the loss to the public of the earnings of the enterprise concerned (Quiggin, 1994, p.1). Government borrowing is restricted because of future needs for funds to pay interest. It forces up the interest rate at which it must borrow and also “crowds out” private capital formation (Neutze, 1995b, p.2). However, the private sector borrows to provide the same services at a higher cost and many of the risks remain with the government. We have already considered this aspect of risk in the preceding section.

Efficiency Gains: It is often claimed that the public sector is less efficient than the private sector in delivering infrastructural services (King and Pitchford, 1998, p.314). However, there is no definitive empirical evidence to support the view that public management is inherently worse than its private sector counterpart (see, for instance, Hughes, 1998, p.416; EPAC, 1995a, p.16).

The efficiency of the private sector compared to the public sector has been the subject of extensive research. Two substantial surveys of the available empirical evidence reached conflicting conclusions. Borchering (1995) concluded that the empirical findings are “consistent with the notion that public firms have a higher unit cost”. However, Millward (1992, p.82) found that there was “no broad support for private enterprise superiority”. At a more detailed level, there has been substantial analysis of the extensive privatisation program in the United Kingdom. The principal findings of this literature were that there had been substantial efficiency gains in firms that were previously publicly owned. However, the improvement in performance appears to depend on several factors, of which privatization was only one dimension. (EPAC, 1995a, p.17). Accordingly, privatisation may not necessarily secure efficiency gains (Hamilton, 1994, p.6).

Competition: Linked to the promise of improved efficiency is the basic premise that private sector involvement in the provision of local government infrastructure should lead to more competition in the economy (Wilkshire, 1992, p.233). The

increase in competition should in turn lead to a more efficient allocation of resources since the private sector has powerful incentives to reduce costs and maximise profits. It is argued that public firms are not subject to the rigours of a competitive market and this lack of competition may induce inefficiencies (King and Pitchford, 1998, p.215). Competition therefore provides powerful incentives to produce and price efficiently (Hughes, 1998, p.411). The Industries Commission (1996, p.xvi) contended that: “Public enterprises and private business not attuned to customer demands, or who overprice their products, will lose market share, customers and a deterioration of financial performance as competition increases”.

There is a counter argument that the private sector provision of infrastructure leads to greater competition, reduced costs, reduced prices and increased quality of service. The argument parallels those government enterprises that were competing with private sector organisations before privatisation. These include Australian Airlines, the Commonwealth Bank and the NSW Government Insurance Office. These firms may not have been substantially less efficient than their privately owned competitors (King and Pitchford, 1998, p.315).

Improving In-House Performance: The involvement of the private sector in the provision of infrastructure services requires councils to look closely at the level of service desired, the specifications and the level of quality. This can assist councils in analysing their own costs and efficiencies in the provision of similar

infrastructure. Thus efficiency gains may be realised within councils themselves through the process of competitive tendering regardless of whether or not a contract is eventually awarded externally.

The use of competitive tendering focuses attention on outcomes rather than processes. Municipalities may thus find that costing a service leads to changes in service priorities. Accordingly, councils may need to refine their organisational structure and resources as a result of defining the desired outcome more clearly (NSW DLG, 1997, p.7). In other words, if there is a threat of competition, this may force local authorities councils to rethink their activities, with positive outcomes in the sense of more efficient and effective service delivery. Without competition private and public organisations may not operate to full capacity. The savings from introducing competition to perform a service have been reported as 20% on average and often much higher (Murfitt *et al.*, 1996, p.11).

Taking Advantage of Innovation: Seeking input from specialists outside of council can lead to innovative solutions and to improved work practices (NSW DLG, 1997, p.7). Contractors involved in the provision of infrastructure may also be able to offer cost savings by providing access to skills, equipment, technology and scale economy advantages that derive from specialisation.

Protecting Funding for Welfare Needs: It is argued that local government could better help the needy and provide community services if it were freed of the

burden of publicly owned infrastructure assets. The essence of this argument is that as long capital and other needs of government commercial and business enterprises continued to exhaust scarce financial resources, spending on welfare activities would suffer (Wiltshire, 1992, p.39).

5. CONCLUDING REMARKS

Persuasive conceptual arguments can be identified both for and against the private provision of public infrastructure in contemporary Australian local government. Moreover, available empirical evidence appears mixed. It thus seems reasonable to deduce that no conclusive *a priori* case exists either for or against the private provision of municipal infrastructure.

This places local government policy makers in an invidious position in planning, implementing and financing the development of municipal infrastructure. Given the uncertainty surrounding the desirability of private municipal infrastructural provision, perhaps the most prudent way to proceed resides in a case-by-case appraisal of any proposed new development. If policy makers follow this approach, then they can draw on the notion of comparative institutional advantage in new institutional economics (Dollery and Wallis, 2001). According to this view, different institutional structures, like public agencies, private firms, and voluntary organizations, each enjoy comparative advantages in the delivery of different types of public services. For instance, highly individualised social services, such as the

provision of meals to elderly and frail people in their own homes, are best delivered by non-profit organisations that specialise in the deployment of empathetic volunteers. Similarly, standardised product delivery, with readily defined objectives that are easy to monitor, can clearly reap the financial benefits of private firms operating in a competitive environment. However, where market contestability is hampered by significant barriers to entry, where performance monitoring is difficult, and where possibilities for opportunistic behaviour by private contractors abound, public provision will possess a comparative advantage. A comparative institutions approach to local government infrastructure provision in Australia would thus seek to establish the peculiar characteristics of different types of municipal infrastructure, and then determine which institutional delivery mechanism is likely to generate the requisite levels of service at the least cost. There is no denying that private sector provision of council infrastructure will continue to be used in all levels of government in Australia. However, it seems prudent to evaluate alternative structures of the private provision of infrastructure relative to their municipal counterparts.

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