

THE END OF THE *PRIVATELY-FINANCED* TOLL ROAD?

Gordon Mills

Centre for Microeconomic Policy Analysis, University of Sydney
Australia

INTRODUCTION

1. The economists and other citizens of New South Wales have been given an excellent opportunity to see at close quarters the benefits and disadvantages of the *private provision* of toll roads, especially roads in urban areas, thanks to the energetic initiatives of recent NSW governments. This short paper reviews those government actions, and also the increasing concerns about some fundamental aspects of the programme. It goes on to argue that full privatisation brings difficulties that outweigh the benefits, and suggests that contracting out of construction may be a better alternative.
2. Before turning to the NSW experience, it is useful to clarify a methodological and terminological matter. In providing expensive assets such as high-quality roads, the fundamental issue is whether it is the users or the taxpayers who should pay. Following the practice adopted in EPAC (1995), this is called the *funding* issue.
3. When funding comes from user charges, there is a less important issue concerning who should bridge the temporal gap between outlays on construction and the later receipt of user payments. Again following EPAC, this is called the *financing* issue. This nomenclature helps to make it clear that reliance on user funding does not imply any need for private financing. A viable alternative is for financing to be undertaken by government, which may choose to borrow on money markets.
4. The following discussion is based on the premise that user charges *should* be levied.

STEPS IN ESTABLISHING A NEW TOLL ROAD

5. Financial aspects apart, the steps may be listed in a linear sequence:

- determine location and design features (especially capacity)
- evaluate environmental impacts
- obtain (land-use) planning clearance
- acquire right-of-way
- clear the site
- build the road (including any bridges, and the links with other roads)
- establish toll collection procedures
- determine toll levels
- open and operate the road
- undertake road maintenance (especially of pavement)

As always with a sequence of steps, some iteration may be required. For instance, an initial feasibility study may reveal insurmountable environmental or other problems, which may in turn lead to specification of an alternative scheme, which must then be examined for feasibility.

FULL PRIVATISATION

6. One approach is for government to invite tenders from private companies that wish to bid for a BOOT (build-own-operate-transfer) contract. For this approach, it is argued that the road should be cleared before the contract is awarded (Fielding and Klein, 1993). In other words, government should undertake the first four steps in the process, leaving the successful tenderer responsible for most of the other steps, with only these as possible exceptions:

- toll levels may be at the company's initiative, but be subject to government regulation
- the method of toll collection and the location of toll collection facilities may have land-use planning implications, requiring some government input.

The argument for clearing-before-awarding is that the necessary activities can be done most effectively by government itself. If the tasks are left to the private company, the company is assigned some major risks which it is not well placed to manage, and for which it will seek a very large risk premium, making the contract a very expensive one from the point of view of the community.

7. Thus full privatisation may be defined as acceptance by a private company of these risks:

- construction (notably the risk of a cost blow-out)
 - management of operation of the road
 - revenue (notably the risk arising from the difficulty in making even sound – let alone accurate – demand forecasts)
8. However, and as will be seen when the NSW experience is examined, even in such a 'full' privatisation, the company may ask the government to take certain decisions that have the effect of setting aside some other market forces, in a manner that favours the company. And if NSW is any guide, it seems that there is a substantial prospect of governmental acquiescence.

THE NEW SOUTH WALES STORY

9. In the Sydney metropolitan area, there are already three private toll roads in use; these are the centrally-located Harbour tunnel (Mills, 1991) and two radial roads, the M4 and the M5 (Mills, 1994a and 1994b). Construction of another radial road (the M2) began late in 1994, and the government's agency (the Roads and Traffic Authority of New South Wales) has plans for others.
10. For each of the four roads, the privatisation schemes are substantially similar. All involve BOOT contracts; neither the government nor the successful bidders have been keen to disclose the full details of the contract (though in the case of the Harbour tunnel, a considerable amount of information was disclosed when the company insisted on incorporation of many of the contractual terms in legislation); and all were cleared-before-award, in the manner canvassed by Fielding and Klein.
11. There was no competitive bidding for the tunnel, and few bidders in the other cases. For these and other reasons, it seems fair to say that competition for the contracts may not have been very vigorous. All the schemes are subject to government regulation of toll levels, the usual arrangement being one which includes escalation clauses linked to price inflation. In all cases (except *possibly* the M4), the government has made significant financial contributions; these have taken the form of (1) provision of the land at no charge or on terms that value the land at less than its market value, and/or (2) provision of loans at interest rates and on other conditions that are more generous to the company than those it could obtain by commercial borrowing (Mills, 1991, p. 282, NSW Auditor-General, 1994, pp. 391–393 and section 25 generally, and NSW Auditor-General, 1995, pp. 86–95). On the other side of the coin, ownership reverts to the government at the end of the concession period; but since the contracts are for periods of between 17 and 45 years, the present value of the reversion is small.
12. Because of the companies' risk-aversion, the government has often had to agree to restrictive conditions. The company which built and operates the

tunnel faces no revenue risk, notwithstanding some contractual window-dressing. In the M2 case, the government would be obliged to compensate the company should it build (or allow to be built) any rival road or rail capacity during the 45 years after the M2 is opened (NSW Auditor-General, 1995, pp. 40-43 and p. 10). (There may well be similar provisions in the (undisclosed) contracts signed by the government and the private companies that have built the M4 and the M5.)

13. These NSW contracts draw attention to a number of problems with privatisation of toll roads. These are taken up in the next section, where the discussion draws upon the NSW cases for illustration.

EVALUATION OF FULL PRIVATISATION OF TOLL ROADS

14. In assessing the public benefits of such BOOT contracts, it is appropriate to begin with revenue risk. Apart from the Harbour tunnel, the NSW contracts do place *some* revenue risk upon the contractor. But to what purpose? Were there no financial contribution by government, private provision would serve to filter public-sector proposals: provided the private bidders are competitive and knowledgeable, the only infrastructure that is built is that which deserves to be built in the sense of generating enough revenue to cover the costs.
15. But, of course, there are two major difficulties which may make the filter ineffective:
 - the user charges may not capture all the important benefits
 - often government does make a financial contribution, and then it may be profitable to build the road even if the amount of the (social) benefit falls short of the total (social) cost.

Though the privatisation mechanism then does not necessarily eliminate socially-undesirable projects, it still puts risk on the private company, and this may be expected to lead to bidders seeking a high risk-premium (especially if the bidding situation is not very competitive).

16. Of course, the alternative is also flawed: filtering of public-sector projects by (optimistic) cost-benefit analysis can also lead to the construction of infrastructure that does not earn its keep. In an attempt to combine desirable characteristics of both approaches, private-sector revenue forecasts could be used in public-sector cost-benefit analysis. However, this too has difficulties (Mills, 1994c); it would also require postponement of the government decision until after the bids have been evaluated. So far, private-sector forecasts have not been so used by the NSW government. But a major divergence between cost-benefit and financial appraisals has been noted for the M2 (NSW Auditor-General, 1995, pp. 90-92), though here astonishingly

the successful bidder's traffic forecasts are much *higher* than those used in the earlier cost-benefit analysis.

17. There can be other difficulties too. The interdependence between road links is another feature that can subvert the use of financial appraisal as a proxy for cost-benefit analysis (Mills, 1994b and 1995); this problem has arisen particularly in the case of the M4, for which see also NSW Auditor-General, 1994, pp. 358-359 and p. 364. And negative externalities can be a problem, especially with long-term contracts which may see secular growth in (for example) noise pollution, growth that is not anticipated in the contract and that makes government intervention well-nigh impossible, or, at least, financially costly.

CONCLUSIONS

18. Privatisation of the revenue risk for a toll road can bring many problems. Furthermore, when the road is given financial support from the government, such privatisation has little or no purpose – since the market test then does not guarantee that construction of the road is in the public interest. Accordingly, there is much to be said for not privatising the revenue risk.
19. Even so, there can still be an important role for the contracting out of the construction of new infrastructure, and the operation and maintenance of assets. For construction, the major problems with the traditional form of public-sector provision are excessive costs through poor project management, and excessively long construction periods. Contracting out may yield important gains in both respects. When faster construction increases costs, an appropriate financial incentive can be given to the government agency, to encourage it to plan for an appropriate timetable. (Specifically, the agency should be required to finance debt from the stream of user payments.) Private companies could then offer bids for the construction work, relying on their skills in project management.
20. Although basing its case on a somewhat different list of grounds, the interim report EPAC (1995), on infrastructure in general, is also cautious about the use of full privatisation, mainly because important risks are often better handled by government (p. 3). In the case of roads, EPAC adds the argument that operation and maintenance are not "strongly dependent" on design (p. 85), and suggests that "contracting out will generally be a more efficient way of providing urban roads than BOOT schemes" (p. 86).
21. Could it be that in Australia, at least, it is the end of the road for private financing?

REFERENCES

- Economic Planning Advisory Commission (1995) *Private Infrastructure Task Force: Interim Report* Canberra: AGPS
- Fielding, G.J. and D.B. Klein (1993) How to franchise highways *Journal of Transport Economics and Policy* 27 113-130
- Mills, G. (1991) Commercial funding of transport infrastructure: lessons from some Australian cases *Journal of Transport Economics and Policy* 25 279-298
- ____ (1994a) Privately-owned toll roads in Sydney *The Transport Economist* 21 (No. 1) 1-5
- ____ (1994b) Privately-owned toll roads: how profit and welfare effects can have opposite signs, being pp. 315-320 of J. Love (ed.) *Proceedings of the Third International Conference on Competition and Ownership in Surface Passenger Transport* Toronto: OMCA
- ____ (1994c) Public evaluation of proposals for privately-funded transport infrastructure, being pp. 258-271 of H. Cwiklinski and J.W. Owsinski (eds) *Nordic-Baltic Europe is Restructuring* Warsaw: The Interfaces Institute
- ____ (1995) Welfare and profit divergence for a tolled link in a road network *Journal of Transport Economics and Policy* 29 137-146
- NSW Auditor-General (1994) *Private Participation in the Provision of Public Infrastructure: The Roads and Traffic Authority* Sydney: NSW Auditor-General's Office
- ____ (1995) *Roads and Traffic Authority: The M2 Motorway* Sydney: NSW Auditor-General's Office