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Conclusions and recommendations

It is possible at present to obtain virtually any desired result that one might wish from a cost-benefit analysis (CBA) study. Although the methodology and concepts in CBA are well established, their practical application leaves much to be desired, at least in some Australian jurisdictions.

To accept the current situation as merely a practical matter of little import in the real world would involve a misplaced sense of complacency. Anecdotal evidence indicates that public servants and their political masters are not averse to hiring consultants with a flexible disposition.

For example, Craig Emerson (2015), a former Australian minister for trade and competitiveness, writing about bilateral and regional trade agreements, recalled recently:

in what might seem a perverse decision, the Labor government rejected a recommendation that a cost-benefit analysis be done on all trade deals before they were locked into place. The reason was not based on opposition to transparency. It was a repudiation of the farcical approach that had been adopted by previous governments of hiring a favoured private consulting firm to produce pre-determined results in support of negotiated agreements.

Absurdity reached dizzying heights when a quantitative analysis of the trade-liberalising effects of the US–Australia free trade agreements was unable to produce any tangible positive results. With little else

to show its client, the consultant threw in a massive positive effect on the Australian economy of a decision by the Howard government to increase the amount of American investment that would be free of screening by the Foreign Investment Review Board from about \$240 million to \$1 billion. Professor Ross Garnaut described this analysis as failing to pass the laugh test.

Worse still, there is a tendency for some politicians to refuse to obtain information on which to base a decision about the net social benefits of a pet project. Senator Stephen Conroy, the then Minister for Broadband, Communications and the Digital Economy, famously refused to commission a cost-benefit study of the major National Broadband Network project (e.g. Jones, 2010). Similarly, in discussing the mooted Mt Isa to Tennant Creek railway project, the Chief Minister for the Northern Territory stated that '[we] don't need a feasibility study to tell us that we should open up opportunities to develop the significant resources we know exist in this region' (Giles, 2015).

A survey of economists and other professionals (Chapter 2) confirms the view that all is not entirely well in the area of CBA studies.

Two aspects in particular afford considerable leeway in determining the results of a CBA:

- the use of a diversity of values in the various jurisdictions allows analysts and consultants to pick and choose those that may suit a specific purpose or desired outcome. Values of variables, such as the value of statistical life and the social cost of carbon emissions are common examples. In the absence of harmonised values — or at least ranges of values — it is possible to justify any particular value, either by reference to usage in another study, or by more nebulous reference to claimed plausibility
- the absence of a 'belts and braces' analytical framework. For example, it is currently acceptable to nominate only the basic project — such as funding a new road — and to compare it to a hypothetical base case situation. This binary approach automatically excludes other possible projects, such as a rail link, or a market-based solution like congestion charging. A 'belts and braces' framework would require analysts and consultants to provide a list of all feasible strategies that address a specified objective, and then to both list those chosen for analysis *and* to justify the exclusion from further consideration of the remainder.

It would be unrealistic to expect an overnight development of scrupulously honest and rigorous analyses in the case of every government project of policy. Organisational culture and governance play a key role, irrespective of formal guidelines. However, a greater degree of confidence could be engendered through the adoption of a harmonised CBA framework that provides more detailed and specific guidance than that currently presented in government manuals and guidelines.

As a first step, the adoption of a common framework for presenting the results of all CBA studies would improve transparency. Finding relevant assumptions, data and results in idiosyncratic CBA studies is difficult because there is no pattern or location to assist readers to find information. Adoption of a common framework, like that proposed in the 10 sequential categories below (see Chapter 4), would be a useful first step.

1. specify the objective of the analysis
2. define 'standing' and scope
3. establish the base case: establishing a reference point
4. predict the impacts of the policy or project over its life cycle
5. estimate the economic value of the costs and benefits
6. adjust costs and benefits for risk
7. calculate the net present value of the costs and benefits
8. conduct sensitivity analysis
9. determine distributional consequences and distributional weighting of costs and benefits
10. arrive at a conclusion or recommendations for the CBA.

Based on discussion in the body of this monograph and in the appendices, it is recommended that jurisdictions should consider adopting a framework CBA harmonised around the following points:

1. Specify the objective of the analysis

- record explicitly the objective of the proposed project or policy
- provide a full list of alternative projects and policy initiatives that could be used to achieve the objective, including market-based alternatives to construction of infrastructure or its expansion

- provide reasons for not including alternative projects in the CBA analysis
- ensure that a process of objective and independent peer review is instituted at an early stage of the analysis as a matter of course for all government-funded studies.

2. Define 'standing' and scope

- explicit specification of 'standing' should be provided in all CBA studies. Where more than one perspective is adopted (e.g. to provide additional information requested by decision-makers), results should be shown separately for each specification
- adoption of a national perspective for all CBA studies, should be the default position. Studies should clearly identify the parties whose benefits and costs are included, as well as those who are specifically excluded from the analysis
- consideration should be given to adopting a convention that all residents of Australia, not just citizens, be granted standing in a CBA study.

3. Establish the base case

- a list and full explanation of all assumptions should be made in choosing or developing the base case scenario
- as a default option, use official sources for key variables employed in projections
- require specific justification for use of estimates that are not based on official sources
- require specification and justification of the time period selected for the base case
- where relevant, ensure consistency of base case assumptions with those used in projections of impacts of the project or policy.

4. Predict the effects of the policy or project over its life cycle

- provision of a comprehensive list of impacts and an explanation of all assumptions made in predicting impacts
- provision of a list of persons and sources consulted to identify project impacts

- provision of evidence-based justification of causality for all impacts identified
- cogent explanations for excluding impacts that have not been short-listed
- all costs and benefits, including the costs of preliminary analyses or administrative preparation, should be attributed to the project, even where the project is implemented in stages that may appear to be separate projects
- inclusion of all relevant implementation costs, including post-implementation and final ex post review on completion of the project or program
- identification and/or valuation of major transfer payments that are significant enough to include in a distributional analysis
- require the use of official sources for key variables employed in the base case
- explanation of reasons for use of estimates that are not based on official sources
- ensure consistency of the time period used with that of the base case
- where relevant, ensure consistency of project impact assumptions with those used in the base case.

5. Estimate the economic value of the costs and benefits

- provision of justification for the timeframe used for analysis
- explanation of reason(s) for selecting a particular method of estimating benefits, rather than feasible alternative method(s)
- ensure replicability of results by making data publicly available (e.g. online), or providing references for sources used
- require use of official or authoritative sources for variables employed in projections
- comprehensive tabulation of all costs and benefits, including those that are attributable to the project but are incurred outside the period of analysis
- consideration of greater use of stated preference methods on a national basis to permit estimation of benefits on a comparable basis

- recording of all variables that it is not possible or practicable to quantify
- provide a statement explaining measures taken to minimise potential optimism bias in estimating infrastructure construction costs or predicted benefits, possibly by comparison with projects that have been completed in similar circumstances, but also including the identity of the author of the estimates.

6. Adjust costs and benefits for risk

- risk analysis should, in principle, be undertaken for all CBA studies
- where risk analysis is not used, an explicit explanation should be provided of the reasons for the omission
- Monte Carlo analysis is preferred, provided that relevant probability functions can be specified with sufficient confidence
- the rationale and estimation method for cost 'contingencies' and 'escalation' factors should be disclosed fully
- if the Monte Carlo technique is employed as part of risk analysis, details should be provided regarding the derivation and rationale for the probability functions used.

7. Calculate the net present value of the costs and benefits

- prior to commencement of the analysis, specification of a single social discount rate to be used in the CBA
- adoption of a common discount rate, at least within jurisdictions
- consistency within a CBA study in terms of use of either real or nominal values
- if real values are used, derivation of the expected future rate of inflation for each period should be explained.

8. Conduct sensitivity analysis

- focus sensitivity testing on key variables
- avoid treating social discount rates in CBA as variables to be subject to sensitivity testing
- interpret and analyse the results of sensitivity testing.

9. Determine distributional consequences and weighting of costs and benefits

- consideration should be given to the use of extended tableau formats to present the distributional consequences of CBA studies
- adoption of comprehensive tableau formats should be subject to safeguards that maintain the apolitical nature of public service advice
- justification for the use of weights, and for their value, should be established and recorded before commencement of the analysis
- because of the scope for potential manipulation of overall results, subsequent changes to the values of weights used should not be permitted
- if distributional weights are used, then two sets of results for the CBA should be presented: one with, and one without application of weights.

10. Arrive at a conclusion or recommendations for the CBA

- all statements and assertions regarding findings should be referenced to tables or paragraphs in the body of the study, or to relevant appendices
- sufficient data should be provided in the body of the study, or in relevant appendices, to permit reviewers to replicate key findings
- in the absence of genuine commercial or national security sensitivities, studies should be published in full to allow public scrutiny and to facilitate their use as models for evaluating other projects or policies.

Implementation

- CBA manuals and handbooks produced by agencies should specify undesirable methodologies
- agencies should consider supplementing manuals with training courses that provide a fuller context to the contents of manuals and handbooks.

- publication of CBAs should be encouraged as a means of fostering wider discussion of methodology and the values used
- jurisdictions should adopt a common approach in presenting the results of CBA studies, using a harmonised framework, such as the 10 steps outlined above
- in the absence of a formal inter-jurisdictional agreement, a central agency should take an informal leadership role by adopting a framework along the lines outlined in this chapter
- section 47C(3)(a) of the *Freedom of Information Act 1982* should be amended to specifically include the social sciences within the meaning of 'technical matters', in order to permit the release of CBA studies.

This text is taken from *Social Cost-Benefit Analysis in Australia and New Zealand: The State of Current Practice and What Needs to be Done*, by Leo Dobes, Joanne Leung and George Argyrous, published 2016 by ANU Press, The Australian National University, Canberra, Australia.