COST BENEFIT ANALYSIS AND HISTORIC HERITAGE REGULATION

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WP 2008-03

Working papers
in cost-benefit analysis

Office of Best Practice Regulation

Department of Finance and Deregulation

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Introduction

Governments are increasingly aware of the impact of poor quality regulation. To guard against the introduction of unnecessary regulation and improve the quality of existing and new regulation the Australian Government has sought to strengthen the regulatory impact analysis framework over recent years:

- in October 2005 it announced its commitment to the more rigorous use of cost-benefit analysis within government when new regulations are being considered;
- in January 2006 it received the Report *Rethinking Regulation* from the Taskforce on Reducing the Regulatory Burdens on Business, which made a number of important recommendations to address the underlying causes of over-regulation, and to improve the quality of regulation;
- in August 2006 it announced its final response to the Taskforce Report which included the strengthening of regulatory assessment requirements and the establishment of the Office of Best Practice Regulation; and
- in November 2006 it released the *Best Practice Regulation (BPR) Handbook*, which among other things, places an increased emphasis on cost-benefit analysis.

These initiatives aimed at improving the quality of regulation have increased the focus on cost-benefit analysis as a tool for regulatory assessment. Cost-benefit analysis is a framework for analysis that follows a logical sequence of steps: identifying policy options to solve a problem, setting out costs and benefits of each

* Address to the Department of the Environment and Water Resources Workshop *"The Economics of Heritage: integrating costs and benefits of heritage into government decision making"* Canberra, 11 October 2007. The views expressed in this paper are solely those of the author and should not be attributed to the Office of Best Practice Regulation.

policy option, where possible measuring costs and benefits of each option in dollar terms, and then ranking the policy options in terms of net benefits to the community.

Delivering net benefits to the community (taking into account economic, social and environmental impacts) should be one of the underlying criteria for evaluating historic heritage conservation efforts. Because society has limited resources to spend, cost-benefit analysis can help illustrate the trade-offs involved in making different kinds of heritage conservation decisions. However, in practice, there are significant challenges, mainly because it is inherently difficult to accurately measure benefits and costs in dollar terms.

But even when it is difficult to estimate some heritage conservation costs and benefits with any precision, applying the framework is important and useful in itself. The process of trying to describe and measure costs and benefits is worth doing. Cost-benefit analysis makes clear and transparent the assumptions and judgements made. Further, attempting to quantify costs and benefits encourages these factors to be more closely examined. Even imprecise measures can be valuable, because they can identify those proposals that are obviously worth proceeding with and those that are not.

Should cost-benefit analysis apply to heritage conservation?

According to the Productivity Commission’s 2006 report, *Conservation of Australia’s Historic Heritage Places*:

“The rationale for government in heritage conservation rests on the view that owners, acting in their own interests, would conserve too little historic heritage.

Governments have intervened by introducing regulatory regimes based on the identification of places with heritage characteristics and the subsequent provision of statutory protection through their inclusion on lists of protected places. This protection places a range of obligations on owners, essentially requiring them to undertake no action which would threaten those characteristics unless approved by the relevant authority.

Typically cost considerations are irrelevant for the decision to list. As a consequence, the current heritage system,…, essentially requires property owners to provide, without payment, community-demanded heritage conservation services.

This approach entrenches divergences between the incentives faced by owners and the community, and introduces incentives to list and conserve historic heritage places where the benefits are less than the costs of conservation. It also provides an incentive for listing agencies to continue to press for further conservation effort until there are few more benefits to be had – irrespective of the costs involved. Without the discipline imposed by having to pay the costs of heritage conservation, there may be over-provision of the heritage public good, or of particular types of heritage places, resulting in a net cost to the community as a whole, rather than a net benefit." (pp 219-220)

Governments currently identify, list and provide strong regulatory protection for privately-owned heritage places. The ultimate objective of the current regulatory arrangements, as they apply to privately-owned historic heritage places, should be to conserve the right amount and right type of these places. But as the Commission's report says, the existing arrangements do not necessarily achieve this objective because:

- they do not always ensure that regulation results in community benefits being greater than community costs; or
- where regulation does potentially result in net community benefits, they do not always ensure there are sufficient incentives for the required maintenance of privately-owned heritage places in circumstances where the private costs of listing are greater than the private benefits.

On the Commission's assessment, it is important for policy makers to develop a clearer understanding of the magnitude of the costs and (where possible) benefits generated and how these costs and benefits are allocated between private owners and the wider community.

Cost-benefit analysis can play a useful role in heritage conservation by helping to:

- systematically seek out and assess the costs and benefits of listing prospective heritage places, including identifying which historic heritage places should be conserved because they are likely to provide a net benefit to the community;
- explicitly recognise that there are substantial costs to providing privately-owned heritage places for community benefit; and
- prioritise the 'portfolio' of heritage places – in terms of the number, composition and quality of heritage places that give the community the outcomes it seeks and is willing to pay for. (Byron 2006)

It is important to recognise at the outset that while cost-benefit analysis can be helpful to decision-makers, it ought to be viewed as a tool for decision makers to utilise, rather than a substitute for decision making. While delivering net benefits to society as a whole is important and should be given due weight, it is only one consideration. The way in which costs and benefits are distributed within society (i.e. who receives the benefits, who pays the costs) can also be important. Decision makers have to consider the extent to which such distributional impacts are important and need addressing. While cost-benefit analysis can help inform such decisions by quantifying the impacts of proposed policies on different groups within society it cannot make the decision.

What is cost-benefit analysis?

As noted in the Government's Best Practice Regulation Handbook (2007) cost-benefit analysis involves a systematic evaluation of the impacts of a regulatory proposal, accounting for all the effects on the community: not just the immediate or direct effects, financial effects, or effects on one group. It emphasises, to the extent possible, valuing the gains and losses from a regulatory proposal in monetary terms.

Ideally, cost-benefit analysis adds the dollar value of the benefits and costs for all people affected. If the sum is positive, the regulatory proposal would provide a net benefit to the community.

Cost-benefit analysis can be applied to non-market goods like historic heritage conservation as well as to market goods and services, although the measurement of non-market values is challenging.

Cost-benefit analysis provides a useful framework to apply in the heritage listing process because it:

- *promotes transparency:* the results of a well executed cost-benefit analysis can be clearly linked to the assumptions, theory, methods and procedures used in it. This improves accountability.
- *takes a community-wide perspective*: by encouraging decision makers to take account of all the positive and negative effects of a proposal, and discouraging them from making decisions based only on the impacts of a single group within the community;
- *promotes comparability*: by quantifying the impacts of proposals in a standard manner, assists in the assessment of relative priorities and encourages consistent decision making; and
- *reveals the degree of rigour of analysis associated with a proposal*: by informing the decision maker about the adequacy of the assumptions and judgements made, estimation methods used and the information collected.

Cost-benefit analysis may be characterised by the following steps (see Cowen 1998):

- specify the set of policy options to solve a problem;
- specify all relevant costs and benefits of each policy option;
- where possible, measure those costs and benefits of each policy option in dollar terms;
- take those measurements from evidence in the real world, preferably from markets;
- discount future costs and benefits according to their location in time;
- perform sensitivity analysis where there is considerable uncertainty about predicted impacts; and
- come up with a final figure of net costs or net benefits for each policy option, using the information generated, then rank the policy options.

Although, as many recognise, for environmental regulation, and historic heritage regulation in particular, this is much easier said than done given the difficulties of measuring heritage conservation benefits in monetary terms. Nevertheless, it is still worth attempting. Even a qualitative discussion of costs and benefits using the cost-benefit analysis framework can be useful. As the BPR Handbook (2007) says:

"The process of trying to describe and measure costs and benefits is valuable in itself. By examining what determines the costs and benefits and how they are likely to vary, policy makers are encouraged to consider different approaches and determine the best way to achieve the intangible objectives. Is the policy the best way of producing them – or could a better outcome be produced by some alternative? Even qualitative descriptions of the pros and cons associated with a contemplated action can be helpful." (see p.124)

In the cost-benefit analysis of many regulatory proposals, particularly relating to the environment, the costs of regulatory change are often far easier to quantify than the benefits. Moreover, establishing a consensus about how to measure benefits has proven difficult. Frank (2000) suggests that this has led to regulatory decisions being driven primarily by cost considerations. However, this is not the case with statutory listing of historic heritage, since heritage costs seem to be largely unknown and unassessed (Byron 2006).

Finding 6.2 of the Productivity Commission report says:

"Current methods of identifying historic heritage places for statutory listing focus on the benefits expected to accrue to the community. Typically, there is little if any,

consideration of the costs imposed either, on the owner or the community more generally." (p.149)

Attempts should be made to value both costs and benefits. By doing so it places them on an equal footing and allows them to be more easily compared.

Specifying the costs and benefits of heritage regulation

In the historic heritage context, cost is a measure of the value of what must be forgone to conserve the historic heritage environment. Hence, the costs of historic heritage regulations are the foregone benefits due to employing scarce resources for historic heritage conservation purposes, instead of putting those resources to their next best use.

The Commission's report identified a number of cost impacts. There are on-budget costs to government of administering (monitoring and enforcing) historic heritage regulation. But cost–benefit analysis also includes the costs associated with regulatory compliance by private businesses and individuals. For business, these include legal and other transactions costs, management time, and the possibility of disrupted production.

The Commission's report says, for privately-owned heritage places, costs should include:

- the value of opportunities foregone as a result of heritage listing, for example:
  - development opportunities lost;
  - decrease in capital value of the land; and
  - consequences of foregone options to improve 'liveability' or 'usability' as a result of restrictions on modification or adaptation to current owner use and enjoyment.
- the additional maintenance and repair costs imposed to maintain the heritage-specific characteristics. (p.239)

As the report identified, it is important to identify the incremental costs of the heritage regulation:

"the additional private costs of heritage listing should not include the costs normally incurred by non-listed properties in the same zone (including restrictions on development faced by all properties in that zone). After all, the relevant question is how more costly *is it to conserve the property given the allowed development in that zone."* (p.238)

Indicators of the benefits of a heritage policy are the collection of individuals' willingness to pay (WTP) for the reduction or prevention of damages to historic heritage places or individuals' willingness to accept (WTA) compensation to tolerate such damages.

The benefits people derive from heritage protection are numerous and diverse. A critical distinction is between use value and non-use value. In addition to the direct benefits (e.g. aesthetic benefits, financial benefits) people receive through the use of a heritage resource, people may also derive passive or non-use value from historic heritage. In these situations, people are willing to pay for something they do not 'consume'.

For example, an individual may value a historic heritage place because she wants to preserve the option of visiting the site in the future (*option value*) or because she desires to preserve it for future generations (*bequest value*). Some individuals may envisage no current or future use by themselves or future generations, but still wish to protect the heritage asset because they believe it should be protected or because they derive satisfaction from simply knowing it exists (*existence value*).

Freeman (2003) says non-use values are likely to be important when some heritage resource is unique or special and there is irreversibility of loss. For example, there are obviously important non-use values in conserving the Sydney Opera House or Canberra's Old Parliament House. In contrast heritage resources such as a suburban house whose potential significance derives from the fame of a person who once lived there (and perhaps, many other residences), or the architect who designed it (and perhaps, many other houses), are not likely to generate significant non-use values because of the availability of close substitutes.

Valuing costs and benefits in dollar terms

It is often difficult to measure the effects of a regulatory proposal, especially when there are policy impacts on goods not traded in markets. For example, people can enjoy the benefits of viewing the facade of a historic heritage building without having to pay for it in the market.

With markets, consumer and producer decisions about how much of a good to purchase or sell at different prices reveals useful information regarding benefits and costs. With non-market goods, it is necessary to try and estimate costs and benefits by drawing inferences from market behaviour (*revealed preference techniques*) or by using survey methods (*stated preference techniques*).

Revealed preference techniques

Revealed preference techniques infer value from observed behaviour by consumers in markets. A non-market good's value may be reflected indirectly in markets for related goods. In some situations, you may be able observe relationships that exist between a non-market, heritage good and some good that has a market price.

For example, individuals reveal their preferences for heritage goods in the housing market (*hedonic pricing method*). The hedonic pricing method is founded on the proposition that people value goods in terms of bundles of attributes, which may include non-market factors, like heritage listing.

This method is useful for establishing whether heritage listing has private benefits or costs, rather than public benefits or costs, because it is only applicable to heritage values that are embodied in house prices. It does not include non-use values.

Hedonic pricing was used to ascertain the effect of heritage listing in two local government areas in the Commission's report. That study concluded that heritage listing did not have a significant impact (either positive or negative) on property prices. But the Commission's report said such studies need to be interpreted cautiously when extrapolating the results to determine the impact on individual properties. The potential for owner's detriment to arise from heritage listing can differ significantly between properties.

"How listing impacts on property values will depend on the extent to which development controls associated with listing impose opportunity costs and offset any potential benefits of being accorded official heritage status. It may be the case that, where neighbourhood amenity is valued, heritage listing ensures the continued preservation of the neighbourhood's character and so enhances value. However, in cases where development pressures are important, the private costs of listing may outweigh the benefits." (pp.141-42)

In other cases, individuals may reveal their demand for heritage goods through their decisions to travel to specific locations (*travel cost method*). Because this method relies on the assumptions that the heritage site can be visited and that travel is undertaken for the sole purpose of visiting the site this technique is useful for assessing the benefits of iconic publicly-owned historic heritage places that frequently receive tourist visitors. The method is not very useful for historic heritage places that restrict access, or where third parties reap aesthetic benefits in an incidental manner, for example, by viewing the heritage when passing by. The travel cost method also does not capture the non-use values discussed above.

Revealed preference methods are favoured on theoretical and empirical grounds because they utilise actual decisions made by people in markets. However, they are limited in their direct applicability to historic heritage conservation. In many situations, it is not possible to observe behaviour that reveals people's valuations of changes in historic heritage conservation. This is particularly the case with non-use values associated with heritage conservation.

With no market trade-offs to observe, analysts must resort to stated preference techniques to obtain information on how people value costs and benefits.

Stated preference techniques

In the most well known stated preference technique, contingent valuation surveys, survey respondents are presented hypothetical scenarios that require them to trade-off something (usually money) for a change in the heritage good in question.

Choice modelling is another survey method, used when the benefits from a policy proposal have a number of attributes and the policy options provide different combinations of those attributes. By including a monetary attribute, values of other attributes can be inferred. Unlike contingent valuation, choice modelling avoids an explicit elicitation of respondents' willingness to pay. The OECD (2006) discusses the advantages and problems of choice modelling relative to standard contingent valuation techniques. It concludes that:

"Both approaches are likely to have their role in cost-benefit appraisals and a useful contribution of any future research would also be to aid understanding of when one approach should be used rather than the other." (p.138)

The BPR Handbook (2007) says these stated preference techniques are not without controversy because of the potential for bias, since responses are based on intentions rather than actions. Survey respondents may have little incentive to take the question seriously, invest in obtaining the information necessary to answer it accurately, or be truthful. Because no budget constraint is actually imposed they bear little costs for inaccurate or ill-considered answers and may have an incentive to exaggerate.

Nevertheless, stated preference methods are the only way to estimate non-use values for heritage goods. Considerable efforts have gone in to estimating non-use values of natural heritage such as wildlife resources, wilderness areas and endangered species. The particular estimates are often contentious. There is on-going debate as to whether non-use values should be included in cost-benefit analysis because of the uncertainty surrounding the actual estimates. While the inclusion of non-use values is legitimate and justified, where they are included, they should be treated cautiously. Scrutiny and testing by independent experts would be helpful in providing a reality check of the results.

Boardman et al (2006) suggests one way forward would be to estimate non-use values whenever possible, and then provide the cost-benefit analysis results with and without their inclusion to make clear how they affect net benefits. When non-use values are not measured, departments should qualitatively discuss their possible significance.

There would seem to be some scope to further develop the use of stated preference techniques, in particular choice modelling, in relation to historic heritage conservation benefits. However, as Viscusi (2006) says:

"The development of new techniques for monetising benefits has led to new controversies, both because the empirical methods themselves remain in the process of development, and because there has been an effort to extend and refine the estimates in a variety of ways." (p.30)

Despite these controversies, stated preference studies are still worth attempting for historic heritage. If no attempt is made to extend and refine the value of historic heritage benefits of statutory listing these benefits may continue to be 'assumed'. As a consequence, heritage outcomes will not necessarily reflect the willingness to pay of the community to conserve historic heritage.

Determining heritage impact valuations from secondary sources

The valuation techniques discussed above allow for the practical valuation of historic heritage impacts, but are difficult to do well. If departments do not have the time or resources to conduct an original study, it might be possible to 'plug-in' values from previous studies that have evaluated similar impacts.

According to the US Office of Management and Budget (2003), secondary sources can provide a quick, low-cost approach for obtaining desired monetary values. However, such information should be treated cautiously. The Office of Management and Budget lists a number of criteria to be met when selecting appropriate studies[1].

Plug-in values should be based on adequate data, sound and defensible empirical methods and techniques. Judgement is required to determine whether results from a

[1] See United States Office of Management and Budget 2003, *Regulatory Analysis*, Circular A-4, p.25, September.

previous study are appropriate to transfer. Estimates gleaned from secondary sources may need to be adjusted, depending on the specifics of the particular application.

It is often important to make adjustments due to socioeconomic differences among different populations. One of the most important variables is income. Historic heritage is likely to be a ‘normal’ good so people place higher values on it as their income rises. Preferences may also differ from one region to another. People who live in or near heritage precincts may object more than others to a reduction in historic heritage assets. Such differences in preferences affect how much people are willing to pay for historic heritage conservation.

Obtaining previous stated preference studies that are sufficiently similar to a proposed heritage listing may be difficult, given the paucity of heritage valuation studies currently available (see Mourato and Mazzanti 2002). In addition, the site specific nature of most stated preference studies means that heritage results cannot be routinely transferred to other buildings and cities.

Dealing with intangible costs and benefits

From the discussion above it is apparent that the estimation of historic heritage benefits (and costs) is difficult. But ignoring benefits and costs because they are difficult to quantify is not an adequate solution.

The key issue is how to treat the costs and benefits that resist the assignment of dollar values. The BPR Handbook (2007) says the challenge for departments undertaking CBA is to consider non-monetised impacts adequately but not overplay them. For example, if a proposed statutory listing shows large monetised costs the onus is clearly on the department to explain why the intangible heritage benefits would tip the balance.

CBA can encourage decision makers to reveal the limits they place on intangible heritage benefits. For example, the monetised costs of a proposed heritage listing may exceed monetised benefits by $1 million, which equates to a net cost of $1 per resident. Is the intangible heritage benefit valuable enough to outweigh the net quantified cost? It may be considered reasonable to assume that residents value the heritage benefits at more than $1 each. But if the net costs were, say $100 per resident, it may not be plausible to assume such a high willingness to pay for the heritage benefits.

As stated earlier, if quantification of heritage conservation benefits is not possible, departments should at least describe such intangibles in a qualitative manner and evaluate the strengths and limitations of the relevant arguments for taking these impacts into account.

Conclusion

The increased prominence of cost benefit analysis in the government's regulatory assessment requirements indicates an increasing acceptance by government of its usefulness in improving the quality of regulation.

Challenges in measuring historic heritage costs and benefits are likely to continue. Despite these challenges, cost-benefit analysis can play a useful role in the statutory listing process. Undertaking the process of trying to describe and measure historic heritage costs and benefits is valuable in itself. Though some heritage conservation benefits will remain intangible, cost-benefit analysis can still assist the decision maker to make a judgement about whether the intangible heritage benefits are likely to be greater than the quantified costs – an easier judgement than one about the possible magnitude of the intangible heritage benefits (see Kopp et al 1997).

Using cost-benefit analysis in helping to decide which heritage places to protect and conserve will reduce the risk that resources are wasted on the conservation of places with low heritage values, at the expense of those with high heritage values. It will compel prioritisation of conservation demands, focusing attention on historic heritage places where the community benefits are likely to be the greatest in comparison to the costs involved. This will lead to a better allocation of scarce conservation resources - heritage efforts are more likely to be directed towards conserving those historic heritage places the community values most highly. This is good news for both the historic heritage environment and the wider community.

Cost-benefit analysis can also be used to help identify if property owners are facing unreasonable costs so that decision makers can see whether there needs to be a rebalancing of these costs between private owners and the wider community. As the Commission's report argued, such a rebalancing will improve the incentives so that historic heritage places are actively conserved by their owners, instead of leaving them in a state of benign neglect, or worse still, demolishing them. At the same time, a requirement for the community to pay will place some discipline on the community's 'demand' for heritage services.

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