

UNDERSTANDING COST BENEFIT ANALYSIS

Measuring impacts

Introduction

Making the best decision possible within a given set of circumstances and knowledge available at the time is critical to maximising progress and positive change within our communities.

Governments make big decisions every day that affect the lives of everyone in the community. This includes funding and budget decisions that affect our collective wealth and well-being.

We believe that great decisions that are well implemented are a fundamental driver of positive progress in government, in business and ultimately in society. Over the last couple of years, big steps have been made by government to implement improvements in evaluation and decision-making frameworks for new and large projects/initiatives. This is important because, over time, all investment decisions start to add up and if some decisions are made for short term and other reasons then any long-term economic costs will ultimately be borne by the community. The long time between investing in projects and realising benefits means such costs are sometimes not fully appreciated.

Applying the principles and frameworks from economics can help decision makers make great decisions. This short non-technical guide builds on the previously released Cost-Benefit Analysis for Decision Making. It explains how CBAs can be used to inform decision making and provides an overview of the types of questions CBA can answer. We hope that this short guide provides decision makers with an understanding of how CBAs can be used and ultimately how it can help you inform, influence and make great decisions.

What is CBA?

Conceptually, Cost-Benefit Analyses (CBA) attempt to quantify and monetise every incremental impact associated with the initiative being assessed. This includes impacts with a market value, along with those which do not.

Valuing impacts without a market value can be tricky, particularly where the impact differs between people or only occurs under certain conditions.

That said, economic analyses tackle this issue regularly. To help an economist to quantify these impacts, there are some key considerations. These include:

- How well is the impact understood?
- Is the impact well-defined, or is it more of a concept?
- How is the impact directly linked to the initiative?
- Is there a way to measure this impact?
- Do we understand how this impact effects people?
- Are there other drivers for this impact?
- How could this impact change over time?
- These concepts are explored in more detail through this guide.

Impacts

We tailor our CBA approach to suit the industry and initiative. However, there are some common steps or processes that we adopt to help us understand the impact and determine the most appropriate ways to measure the impact.

At a high level, this process involves:

1. Understanding the impact through observational or anecdotal data
2. Review guidance to determine if a standardised approach exists
3. Where there are gaps in the existing guidance, develop thesis statements on how the impact may be quantified and monetised
4. Test these statements through the available data or through published sources such as academic journals
5. Develop an approach and test it with industry experts.

In order to work through this process efficiently, it is helpful to understand impacts in detail. This ensures that the impact can be included in the CBA and increases the chances of successful quantification and monetisation.

More specifically:

1. Is there an existing market price for this impact, or is it subject to market failure such as externalities?
2. Is this impact incremental to the base case, or is it something that would happen anyway?
3. What is the tangible outcome of this impact?
4. Is this the ultimate outcome of the impact, or is it a symptom of a bigger problem?
5. Is there data to demonstrate that this impact is currently a problem?
6. Is it possible to measure the success associated with an improvement in this impact?
7. Have we considered the cost associated with this impact?
8. Is there an understanding on how many people will be affected by this impact?

In answering these questions, even at a high-level, there is a foundational understanding from which the economist can build.

Where possible, benefit transfer is undertaken. This may be through published economic guidance, or through academic journals or other sources. In many cases, innovative thinking is required where sources outside of the economic sphere are used as proxies in CBAs. Where this is unsuccessful, shadow prices or other methods of valuation may be required.

Considering demand

Estimating demand -whether demand for new infrastructure or demand for a new service is a critical component of the CBA evaluation

In some cases, elements of an initiative appear to have benefits which would help justify the project. However, when tracing the impact back to its root, the impact has a more material effect on demand rather than being its own source of benefit.

Increasing demand can have a range of benefits depending on the industry or sector being analysed. Identifying sources of this demand growth is very useful in economic assessments and often underpins the success of an initiative.

However, it is key to understand whether the impact being discussed is a driver of demand or a benefit in its own right. This sets the scene for the type of analysis to be undertaken and allows for well informed conversations.

What if Impacts Cannot be Monetised?

Despite the best effort of practitioners, not all impacts are able to be monetised. If impacts are not monetised, they are not considered in the headline results such as NPV and BCR. This means that some projects or options are not accurately assessed, particularly where key impacts are unable to be quantified or monetised.

Qualitative analysis can supplement the headline results to provide decision makers with an understanding of the non-quantitative impacts. This is often done by quantifying any known elements of a benefit or cost, then reporting the expected likelihood and probability. Often, this is a 'best guess' of the economist or project team based on the available information.

Case study

Cairns Health Innovation Centre



NineSquared was engaged by Cairns Hinterland Hospital and Health Service (CHHHS) to conduct both the Financial and Affordability analysis and the Economic analysis for the Cairns Health and Innovation Centre. The project aimed to aid in relieving capacity pressures at Cairns Hospital while also providing a world-class interdisciplinary technology-focussed, state of the art precinct for health education, training and research.

The economic analysis was undertaken qualitatively. This qualitative analysis provided insight for decision makers on how to advance the project through an economic analysis including:

1. An understanding of the potential community impacts of the project
2. A process for the collection of data to inform future quantitative analysis
3. An understanding of the potential magnitude of benefit based on the preliminary data available
4. A list of important considerations when reviewing the project and the various options through an economic lens.

Contact

Got questions?
Reach out to us for answers

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