
B Techniques of social evaluation

B.1 Overview

A framework for measuring the contribution of the not-for-profit (NFP) sector was set out in chapter 3. The framework can be applied at a ‘macro’ level to provide estimates of the contribution of the whole sector or specific segments. Alternatively, it can be applied as a reporting framework for ‘micro’ level estimates of the contribution of specific organisations, programs or activities. There are clearly strong links between the two uses.

There are three key benefits from applying a consistent measurement framework.

First, consistent measurement of inputs and outputs aids in aggregation to produce macro, or sector level, estimates. It also improves comparability of evaluations. Second, developing a common set of output and outcome indicators, that can be collected at the macro level, provides a more solid information base for micro level evaluations. The greater the ability to disaggregate such measures into location and other categories that distinguish communities of interest, the more potential such data offers for use in the evaluation and targeting of programs. That said, tailored output and outcome measures will often be required for evaluations. The framework offers a categorisation that can be used to assist others looking for suitable indicators.

Finally, a consistent measurement framework facilitates the collation of evidence on the contribution of the NFP sector. As discussed in chapter 5, attribution of observed outcomes and impacts to specific NFPs, or their activities is difficult, and at best inexact. Reporting evaluations in a consistent framework assists in compiling evidence on the nature and extent of the contribution of different types of NFPs and their activities. It can also assist in developing representative ‘values’ for specific outcomes that do not have market prices. In addition, macro measures (notably longitudinal data) are required to support econometric analysis that can be used to identify the aggregate contribution of sets of activities.

This appendix explores measurement issues in more depth. The first section sets out the underpinning relationships between inputs, outputs, outcomes and impacts. The second section considers some of the measurement issues that require attention in

estimating inputs, outputs, outcomes and impacts. It also notes that using single measures to gauge performance may have unintended consequences and therefore should be used carefully. For example, improving efficiency through unit cost reductions may actually hinder performance if it is accompanied by reduced effectiveness (such as through quality reductions).

The second half of this appendix deals with approaches to evaluation. The purpose of evaluation is to promote knowledge on what works and why and, importantly, on what does not and why. A range of techniques and approaches are considered and guidance provided for selecting the most appropriate approach for NFPs wishing to undertake evaluation. As a general rule, all measures of NFP contribution should be broadly-based, rigorous and presented in a transparent fashion to allow for independent verification.

This appendix concludes with some examples of the different approaches to evaluation taken. The most appropriate approach will depend on the nature of the NFP and its activities, the reason measurement is being undertaken, and the resources available for evaluation (including technical expertise and data).

B.2 Relationship between contribution measures

Chapter 3 set out a ‘hierarchy’ of contribution measures:

- *inputs* (measures of the resources used)
- *outputs* (indicators of the level of activity undertaken)
- *outcomes* (direct effects on activity participants)
- *impacts* (longer-term effects on the participant and the community more broadly).

Generally, moving through this hierarchy provides broader, and more meaningful, measurement of contribution, but it also requires more information and increasingly sophisticated evaluation techniques. While input and output measures focus more on the processes by which activities are delivered, outcome and impact measures assess the value of these activities to the intended recipients and the community.

The relationship between these measures are shown in figure B.1. The horizontal axis shows the level of activity (for example, number of service units provided), while the vertical axis shows the price (value) and cost per unit of activity.

The marginal cost (supply) curve shows the incremental cost of each unit of activity. Hence, the area underneath this curve shows the total resource cost for each level of activity. The marginal private value curve represents the benefit to

participants for each additional unit of the activity. At each activity level, the area underneath this curve represents the total benefit to participants. Similarly, the total benefit to society from a given level of activity is given by the area underneath the marginal social value curve. The difference between the social and private benefits are sometimes referred to as ‘spillover’ benefits because they are additional to those benefits directly received by participants. In figure B.1 the marginal social value curve is above the private value curve, reflecting net positive spillovers to the community. If net spillovers are negative the marginal social value curve would lie below the marginal private value curve.

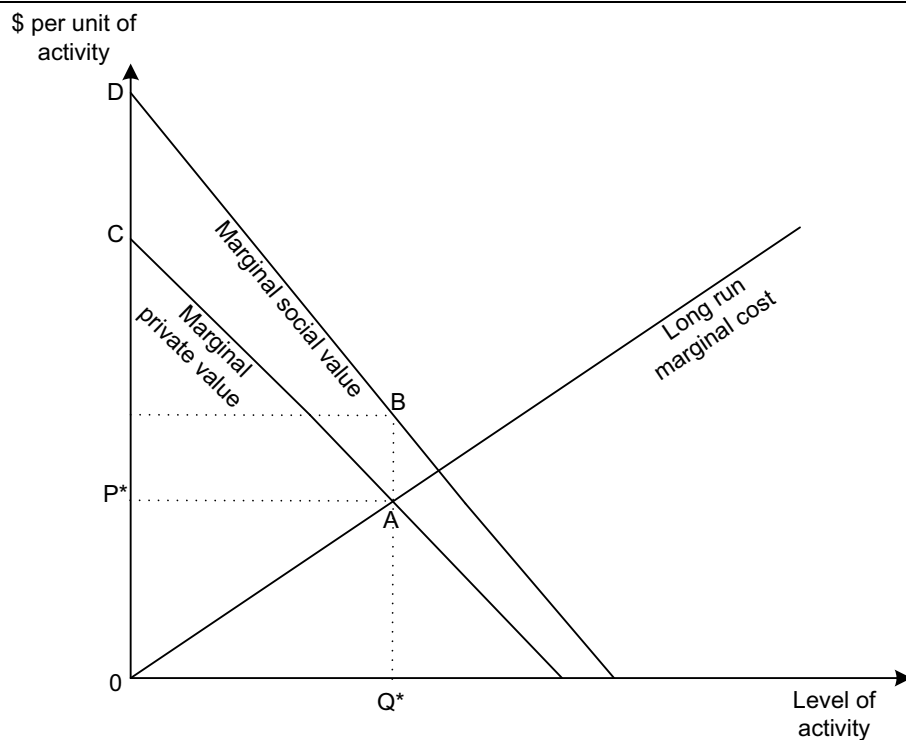
When Q^* of the activity is undertaken the opportunity cost of inputs used is given by the triangle $0AQ^*$. For paid labour, for example, the best estimate of this cost is their wage rate, while for volunteer labour it is the forgone wages (generally estimated at the average wage for the type of work). The market value of output (price times the quantity provided) is given by the rectangle P^*AQ^*0 . The difference between this and the cost of inputs gives the value-added by those providing the activity (triangle P^*A0).

The figure illustrates the additional value of services provided by NFPs where they choose a ‘socially optimum’ level of service provision rather than what is ‘privately optimal’. In a market consisting of for-profit providers, activity would be provided only up to Q^* . This is the point at which marginal private benefits, which reflect an individual’s willingness pay, are equal to the marginal cost of provision. However, this ignores the additional social benefits associated with the activity. Social welfare maximisation requires that the activity is provided to the point at which the additional costs of supplying it are equal to the additional benefits (inclusive of any social benefits). In figure B.1, this occurs at a higher level of activity than Q^* — at the point at which the marginal cost and the marginal social value curves intersect.

Even if only Q^* is supplied, the value of the outcomes and impacts exceed the market value of the activity. The total benefits, or total value, for participants is the area CAQ^*0 . Of which, the triangle CAP^* is additional to the market value of output. The additional benefit to the community is given by the area $ABDC$.

In general, the private benefits accruing to the individual will correspond to the outcomes of the activity. To the extent that they are anticipated by the individual, there may also be some longer term impacts among these private benefits. For example, the outcome of an activity may be to place an individual in employment. In addition to the benefits from obtaining a job, there may also be longer term benefits to that individual from having stronger connections to the labour market and enhanced social networks.

Figure B.1 Inputs, outputs and private and social benefits



Impact measures add the community benefits to these private benefits arising from the outcomes achieved for individuals. These additional benefits arise as a consequence of the individual outcomes for others in their community and the benefits that flow from enhanced community endowments. They also come from the dynamic contribution of the processes used and outcomes make toward enhancing broader wellbeing, such as through improved community engagement and greater safety from harm.

From figure B.1, several conclusions can be drawn about the relationship between these contribution measures.

- Input and output measures are closely linked to the processes (which resources are used and how they are used) by which activities are provided while outcome and impact measures are more closely related to how the benefits of activities are realised by individuals and the community.
- Measurement of inputs and outputs in a common metric (dollars) requires knowledge of prices (of the activity and the resources used to provide it). In the event that a market for the activity does not exist, or resources are not purchased, proxy indicators of the opportunity cost to those supplying the input or value to those receiving the output must be used. (As noted below, market proxies are commonly employed in measurement approaches.)

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- Notwithstanding these measurement challenges, input and output measures are more objective indicators of performance than outcome and impact measures. The latter often rely on perceptions of change attributed to the activity and subjective measures of value by individuals and the community.¹
 - However, input and output measures will typically understate the total value, or contribution of activities that effect the community. This has implications for those measurement techniques which rely on market prices as indicators of value (see below).
 - Input measures provide information about organisational processes and, with output measures, the productivity of resources used. An improvement in productivity, reflected in a downward shift in the supply curve (long run marginal cost), will increase the level of activity undertaken and/or lower the price. It will increase the value generated for individuals and society.
 - There is a relationship between input and output measures. Estimates of input costs can be used as a proxy measure of outputs when output prices or level of the activity cannot be directly observed (a technique commonly employed in national accounting — see below).
 - Quality improvements will be reflected in increases (an outward shift) in the marginal private value and marginal social value curves. This will increase the measured value of outcomes and impacts. Quality improvements only impact on the ‘market price’ if the individuals participating in the activity recognise and value quality. Where quality enhances spillovers without changing the participant’s views, only the marginal social value curve will shift out.

B.3 Measurement issues

Measuring inputs

Measuring the value of inputs acquired through the market is normally straightforward. However, a significant proportion of the resources utilised by NFPs are donated (such as volunteer labour, and use of facilities) and valuing these can pose considerable measurement challenges.

¹ In principle, the community value is the sum of the individual values of the consequences (including those that hold negative values). In practice, while the range of individual values can often be identified, it is only where there is a social ‘norm’ that robust measures of community willingness to pay can be estimated.

A key proposition in economics is that resources should be valued at opportunity cost (that is, their value in the next best alternative use). In this way, decisions about the most efficient allocation of resources can be made. Indeed, as discussed in chapter 3, interest in measuring the contribution of the sector has been partly driven by supporters of NFPs seeking to ensure that their donations (of labour, money or in-kind gifts) are put to the best use.

The need for correct measurement of inputs, to ensure the construction of comparable data, was noted in the statistical framework developed for the sector:

Because volunteer labour is so critical to the output of NPIs [non-profit institutions] that employ it and to their ability to produce the level and quality of services that they provide, it is important to capture that activity in the NPI satellite account. Doing so will give a more complete picture of services actually produced and consumed in the economy and in particular fields. The inclusion of volunteer labour input also permits more accurate comparisons of input structure and cost structure between NPI producers and those in other sectors. (UN 2003, p. 49)

While it is accepted that, for measurement, a valuation has to be placed on inputs that do not have a monetary value, how that is done is not clear-cut. Since the resources are not paid for, market proxies may not be an accurate reflection of value.

- From the perspective of an NFP, labour offered on a voluntary basis might not be utilised if market-based payment was required, so a market wage may be a poor reflection of value.
- Similarly, from the perspective of those donating their time and effort, a market wage may not be an accurate reflection of the value of the time given up to volunteer since most volunteering occurs outside normal working hours. (Although in the case of corporate volunteering, where a company organises for its employees to volunteer during work time, it will be a more accurate reflection of opportunity cost.)

Notwithstanding these challenges, there are three recommended approaches for measuring the value of volunteer time (ABS 2009).

- The *opportunity cost* approach — volunteer time should be valued at what the time is worth to the volunteer in the best alternative pursuit. The ABS (2009, p. 35) noted it had reservations about this approach since most workers ‘... have limited choices in the hours they work and are more likely to be giving up leisure time for voluntary work. This being the case, the opportunity cost should not be based on the wages they receive in the market but on the value they place on leisure’.

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- The *replacement (or market) cost* approach — volunteer time should be valued at what it would cost the organisation to replace the volunteer with paid labour. The ABS (ABS 2009, pp. 35–6) uses this approach in providing estimates contained in the satellite account. It notes that while ‘... this method is preferred over the opportunity cost approach, the value of volunteer services may be under or over estimated using this approach depending on variations in the productivity of volunteers compared with labour provided in the market sector.’
 - The *fallback* approach — which acknowledges that information may not always be available to estimate volunteer time according to the previous two approaches and instead recommends using the average wage for employees in the community, welfare and social service occupation category.

The approach taken to measuring the value of other inputs which have not been obtained through a market transaction (such as in kind gifts) or do not have a market-determined price will clearly depend on the nature of the input and the information available.

However, as the discussion of measurement approaches below makes clear, the assumptions and information used to estimate values needs to be transparent so the measurement results can be verified and their robustness tested. Even with inputs that have clear market values there can be confusion about how much of the cost to assign to the activity being evaluated. For example, this leads to questions such as how much of the cost of a public liability insurance premium should be allocated to a particular activity among several undertaken by the NFP.

In addition, for a number of inputs, the problem is compounded by the various ways in which they can be measured. This is a particular problem for capital inputs, which may have a low historic cost, high replacement cost, and not have a market equivalent to provide a proxy for the rental value. The adoption of a standard chart of accounts and standardised business reporting suited to NFPs will assist in improving the comparability of these input measures.

Measuring outputs

As noted in chapter 4, measuring the value of some NFPs outputs can be a challenge when these are not provided in a market at a price which reflects their value to users.² For estimates provided in the satellite account, the value of output for non-market NFPs is estimated as the sum of their production costs (ABS 2009).

² Market prices reflect the value to the marginal purchaser of the good or service, at this price they only just prefer to make rather than not make the purchase. For many purchasers the value is greater than the price paid. The sum of this value above the price paid is referred to as consumer surplus.

Use of inputs costs as a proxy measure of output is justified in order to produce aggregate data on a basis which is comparable with national accounts data for other sectors. However, at the ‘micro’ level — where data are primarily used for performance evaluation purposes — there is scope to identify output measures which are ‘fit for purpose’ (for example, number of clients served or beds occupied). This point was noted in the context of measuring public output which also experiences the challenge of estimating values for non-market activities.

... there is a difference between National Accounts estimates of output, on the one hand, and performance measures for the management of public services on the other hand. [It] recognised that performance measures and output indicators will use much of the same data, but spelled out the differences in the requirements. In the case of performance indicators ... the need was for precise, transparent and simple measures, not subject to manipulation, but there was no requirement for stability over time, and they could be selective in their coverage. In contrast, the output measures for national accounts purposes need to be as comprehensive as possible and to be consistent over time. Moreover, while simplicity and transparency of compilation would be desirable, national accountants typically expect to have to make complex adjustments to raw data. (Atkinson Review 2005, p. 7)

Hence, in the context of public sector activities, there is a distinction between measures of output contained in the national accounts and output measures used to assess performance (such as those contained in the *Report on Government Services* (SCRGSP 2009)).

The same distinction applies to NFP output. While broad estimates of output value are provided at the sector-wide level in the satellite account, at the organisational and activity levels specific output indicators are used to measure efficiency and benchmark performance. In some circumstances, where there is a meaningful correlation, output indicators can also proxy for outcomes. (Some relatively common output measures were suggested in table 5.1.)

Measuring outcomes

The concept of linking outcomes to the activities of NFPs is well established in performance measurement. For example, in the United States (US), the Urban Institute has instigated a research program to develop consistent frameworks and indicators for measuring outcomes.

Based on this work, figure B.2 shows a process of measuring outcomes in the performing arts, together with some possible indicators. In this example, the intended benefits to participants included increased appreciation of the arts and

increased life experience. Arising from these outcomes are the broader impacts (including strengthened community bonds).

Mapping is an important device in identifying outcomes and the contributing factors, some of which may be external to the activity. Figure B.3 provides some indicators for evaluating advocacy activities, also prepared by the Urban Institute. This would be strengthened by recognising the role that other activities play in going from publicity to improved community engagement.

As another example of the need to recognise external contributing factors, it can be difficult to link improved employment or health outcomes to a single cause (such as the services offered by a community organisation). This is particularly the case, when moving beyond outcomes for individuals to community level change.

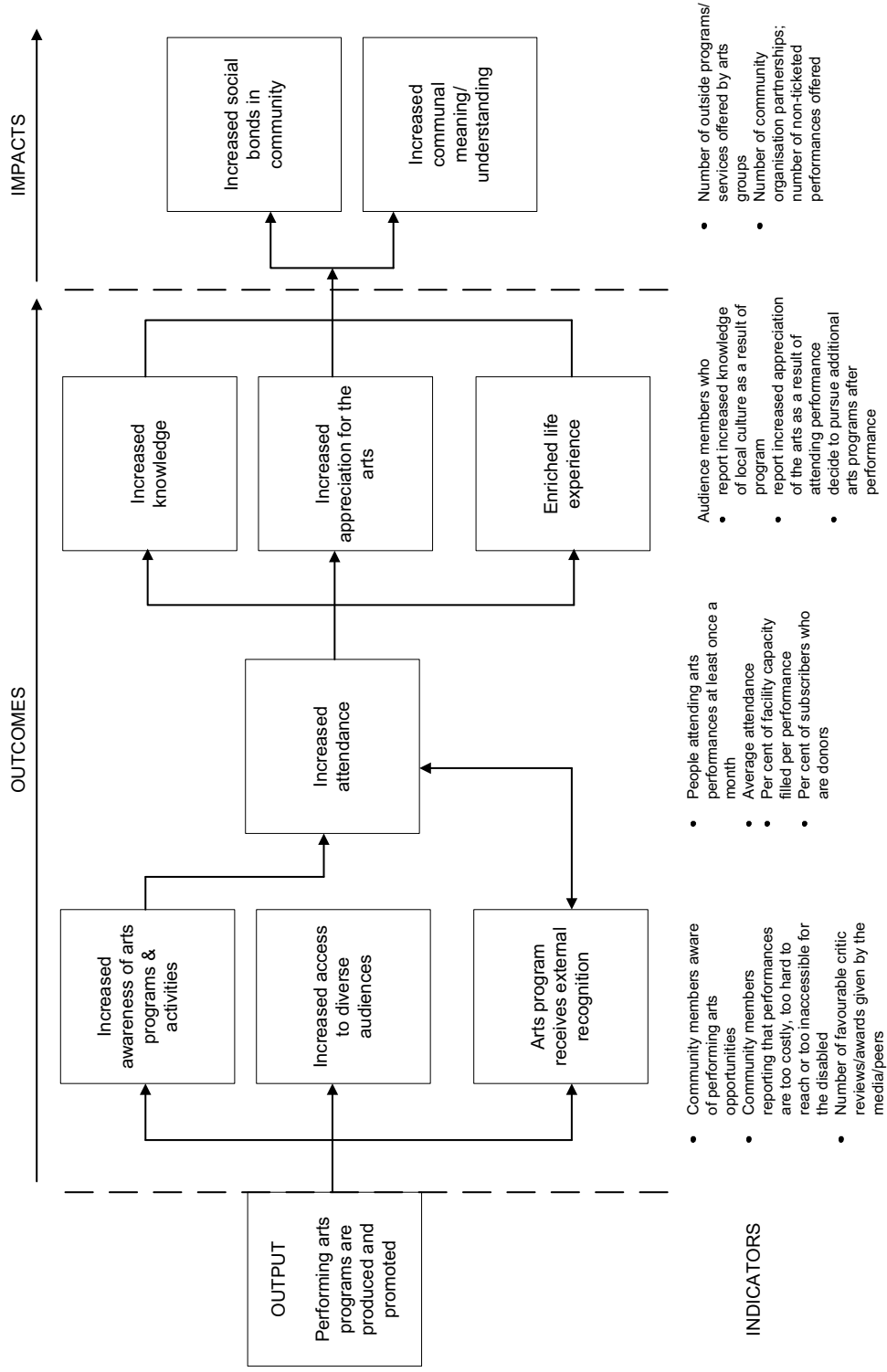
In addition, the activities of some organisations pose specific measurement challenges. For example, the benefits delivered by Australian based international development and aid organisations accrue largely to people living overseas. This raises the issues of whose outcomes and which community's net benefits are being measured.

The issue of attribution has also been acknowledged in measuring the performance of public sector agencies.

The first point to clarify is the difference between measuring total outcomes and measuring the contribution to outcomes of certain activities. A common objection to the use of outcomes is that the status of the population is affected by many factors other than public spending. Examination performance depends on the efforts and work done by pupils. Parents who devote more time to teaching their children increase the level of education of a society in a way that cannot be attributed to public spending. This objection is well based ... But it does not mean that outcomes are irrelevant. What it does suggest is that what we want to measure is the *incremental impact on outcomes arising from the activities of the public sector*. In the case of Education, the objective should be to measure the improvement in individual educational outcomes attributable to the schools. (Atkinson Review 2005, p. 41; emphasis in original)

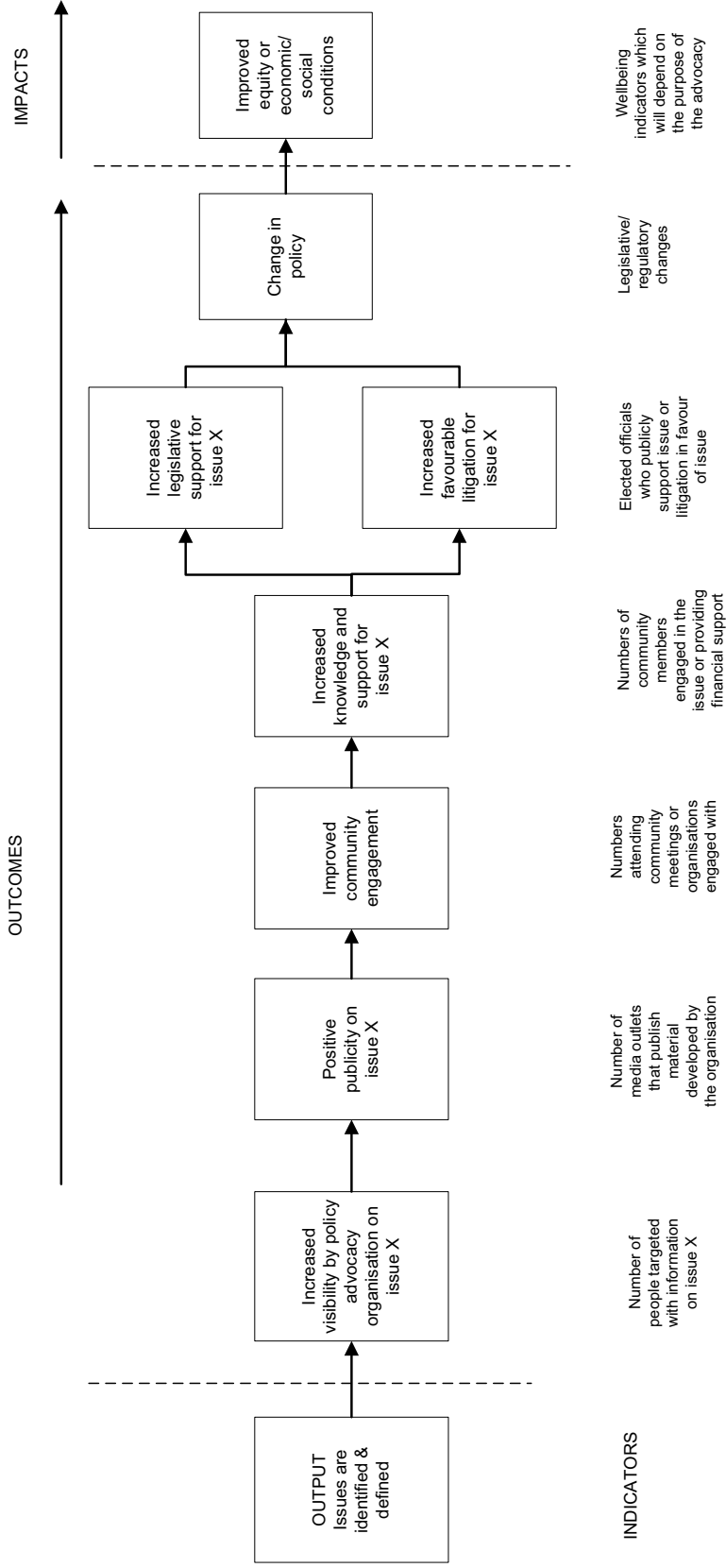
Hence, a significant challenge to measuring outcomes in the NFP sector is to identify the contribution attributable to NFPs. As discussed below, a number of techniques have been developed for that purpose.

Figure B.2 Measuring outcomes in the performing arts



Source: Adapted from The Urban Institute (nd)

Figure B.3 Measuring outcomes of advocacy activities



Source: Adapted from The Urban Institute (nd)

Performance measures

One of the purposes of collecting information on inputs, outputs and outcomes is to provide information on how well NFPs meet their objectives. Performance measurement can:

- help clarify organisation objectives and responsibilities
- enhance transparency and allow assessment of whether objectives are being met
- provide information on performance over time
- when produced on a comparable basis, enable benchmarking and provide incentives for improvements in relative performance (box B.1).

Box B.1 Benchmarking

Benchmarking service delivery is a systematic process of searching for and encouraging the introduction of best practice so as to deliver more efficient and effective services. The three main forms of benchmarking are: (1) results benchmarking (comparing performance within and between organisations using performance indicators of effectiveness and efficiency); (2) process benchmarking (analysing systems, activities and tasks that turn inputs and outputs into outcomes); and (3) setting best practice standards (establishing goals and standards to which organisations can aspire).

Benchmarking typically involves a number of steps. Whatever the chosen approach or focus, the steps usually include:

- deciding why, when and what to benchmark
- analysing plans and performance (reviewing objectives and identifying performance indicators of own performance)
- establishing benchmarking partners
- obtaining performance data and the most useful improvements
- implementing improvements in practice
- assessing improvements and re-benchmarking.

Source: SCRGSP (2009).

There are three common measures of performance:

- *Program effectiveness* measures how well the outcomes achieve the stated objectives of an activity.
- *Technical or production efficiency* measures how well inputs are transformed into outputs. It is expressed as the ratio of outputs to inputs.³ Technical efficiency can be improved by increasing the value of outputs from given quantities of inputs, or reducing the quantity of inputs used to produce a given output level.
- *Cost-effectiveness* measures how well inputs are used to generate outcomes. It measures the cost per outcome achieved and is expressed as the ratio of the value of inputs to the value of outcomes. Cost-effectiveness is also equal to cost per unit of output multiplied by the activity's success rate (the ratio of outputs to outcomes). So improvements in cost-effectiveness can arise through improvements in technical efficiency, improvements in the success rate, or both.

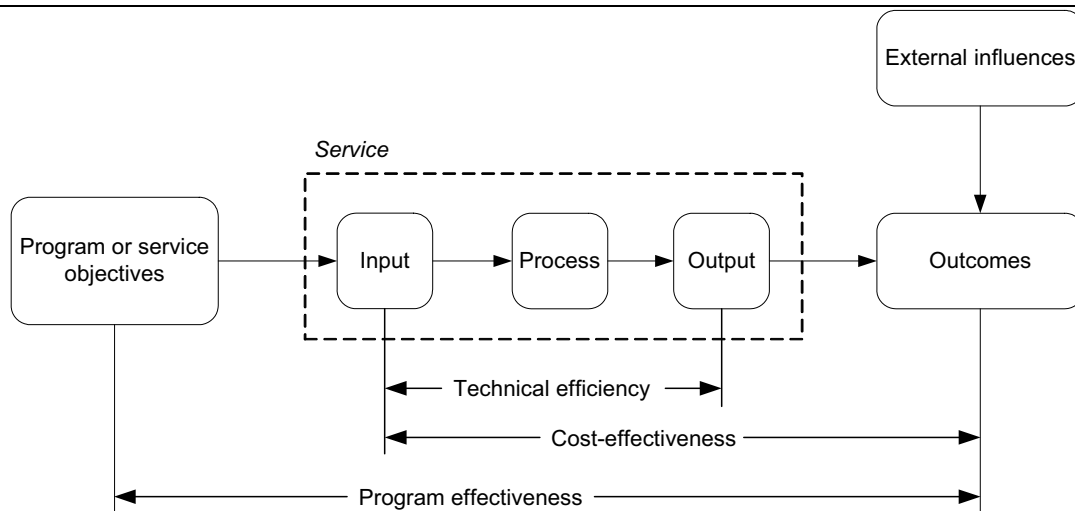
While all three measures can be influenced by factors external to the organisation, this is particularly the case for those involving outcomes (figure B.4). These measures also make it apparent that quality is fundamental to the effectiveness of organisational performance. Hence, cost reductions may not always result in improvements in measured performance — a point emphasised by Neuhoff and Searle:

... efficiencies sometimes come from spending more money, not less: Spending more on each teacher increased the number of teachers who later proved successful in front of their classrooms. By spending more money on *outputs*, organizations may wind up spending less on *outcomes* because they increase their success rates.

The converse is also true. Reducing the cost per output can increase the cost per outcome if the measures taken to cut costs hurt the organization's success rates. (2008, p. 35)

³ The inverse of this, the ratio of inputs to outputs, measures unit costs. So a decline in unit costs corresponds to an improvement in efficiency.

Figure B.4 **Measuring efficiency and effectiveness**



Source: SCRGSP (2009).

Measuring impacts

As discussed in chapter 3, impacts are the longer-term (intended and unintended) consequences of NFP activities. As such, they are not normally the basis on which the immediate success (or otherwise) of NFP endeavours are evaluated. However, as the broadest measure of contribution, encompassing the influence of NFPs on individual and community wellbeing, they are vital to understanding the contribution of the sector.

The economy-wide approach the Commission takes to estimating the effect of economic policy changes (such as tariff reform) illustrates the importance of measuring impacts, not just outcomes. The Commission uses a general equilibrium model to trace through the change in value-added and consumer surplus across all sectors resulting from a policy change. This demonstrates that while the removal of protection in one sector may reduce employment and profits in that sector, most workers are reemployed in other areas. Importantly, the lower costs to other industries generally stimulate greater expansion of these sectors with a net gain in employment and income. These models facilitate tracing through the effects of changes in economic activities on the economy. They work well where the issues being considered, and the induced behavioural changes, are captured well in the model and good empirical estimates are available for the model parameters. Unfortunately there are no such well developed nor accepted approaches to tracing through the social and environmental effects of changes in economic or any other activities to the net impact on community wellbeing.

Table B.1 Measuring wellbeing

Some contemporary Australian wellbeing frameworks

<i>The Australian Treasury</i>	<i>ABS Social Indicators</i>	<i>ABS Measuring Australia's Progress^a</i>	<i>AIHW Indicators of Australia's welfare</i>	<i>Community Indicators Victoria</i>	<i>Australian Unity Wellbeing Index</i>	<i>ARACY Report card on child and youth wellbeing</i>
Opportunity & freedom	Population	Economic	Healthy living	Healthy, safe & inclusive communities	Health	Material wellbeing
Consumption possibilities	Family & community	Social	Autonomy & participation	Dynamic, resilient local economies	Personal relationships	Health & safety
Complexity	Health	Environmental	Social cohesion	Sustainable built & natural environments	Safety	Education, training & employment
Risk	Education & training			Culturally rich & vibrant communities	Standard of living	Peer & family relationships
Distribution	Work			Democratic & engaged communities	Current life achievements	Behaviour & risks
	Economic resources				Future security	Subjective wellbeing
	Housing				Spirituality / religion	Participation
	Crime & justice				Community connectedness	Environment
	Culture & leisure					

^a While the ABS has chosen this three domain view of progress, in presenting the measures it groups them into four areas: individuals; the economy and economic resources; the environment; and living together.

Sources: ABS (2006, 2008); AIHW (2007); ARACY (2008); Australian Unity and Deakin University (2008); Treasury (2004); VICIP (2006);

Nevertheless, a number of frameworks have been developed to measure wellbeing (table B.1). These divide wellbeing into several broad categories or ‘domains’ as a means of focusing on particular dimensions of interest. The most common domains include: material wellbeing; health; relationships (personal through to community); and the environment.

Given the multifaceted nature of wellbeing and the inherent difficulty of unravelling its sources, there is no single or ‘right’ set of domains and, ultimately, much depends on the purpose of measuring wellbeing. Generally, organisations articulate wellbeing frameworks that reflect the nature and focus of their work, including those areas of public policy they are either directly responsible for or have an interest in. For example, the Secretary of the Treasury has observed in relation to Treasury’s wellbeing framework:

These dimensions are neither comprehensive nor independent. They have been chosen because they describe the aspects of wellbeing that have proven to be most relevant to the Treasury’s policy advising responsibilities at the centre of Australian government. (Henry 2009, p. 5)

Wellbeing measures can also focus on a particular group in the community. Examples include the Australian Research Alliance for Children and Youth (ARACY) report card on child and youth wellbeing and the national strategic framework for Aboriginal and Torres Strait Islander peoples’ mental health and social and emotional wellbeing. Such frameworks can help identify specific challenges to improving the wellbeing of particular groups and assist with planning and coordination, as well as program design, delivery and evaluation.

The Commission has analysed existing wellbeing frameworks and identified some unifying themes (box B.2).

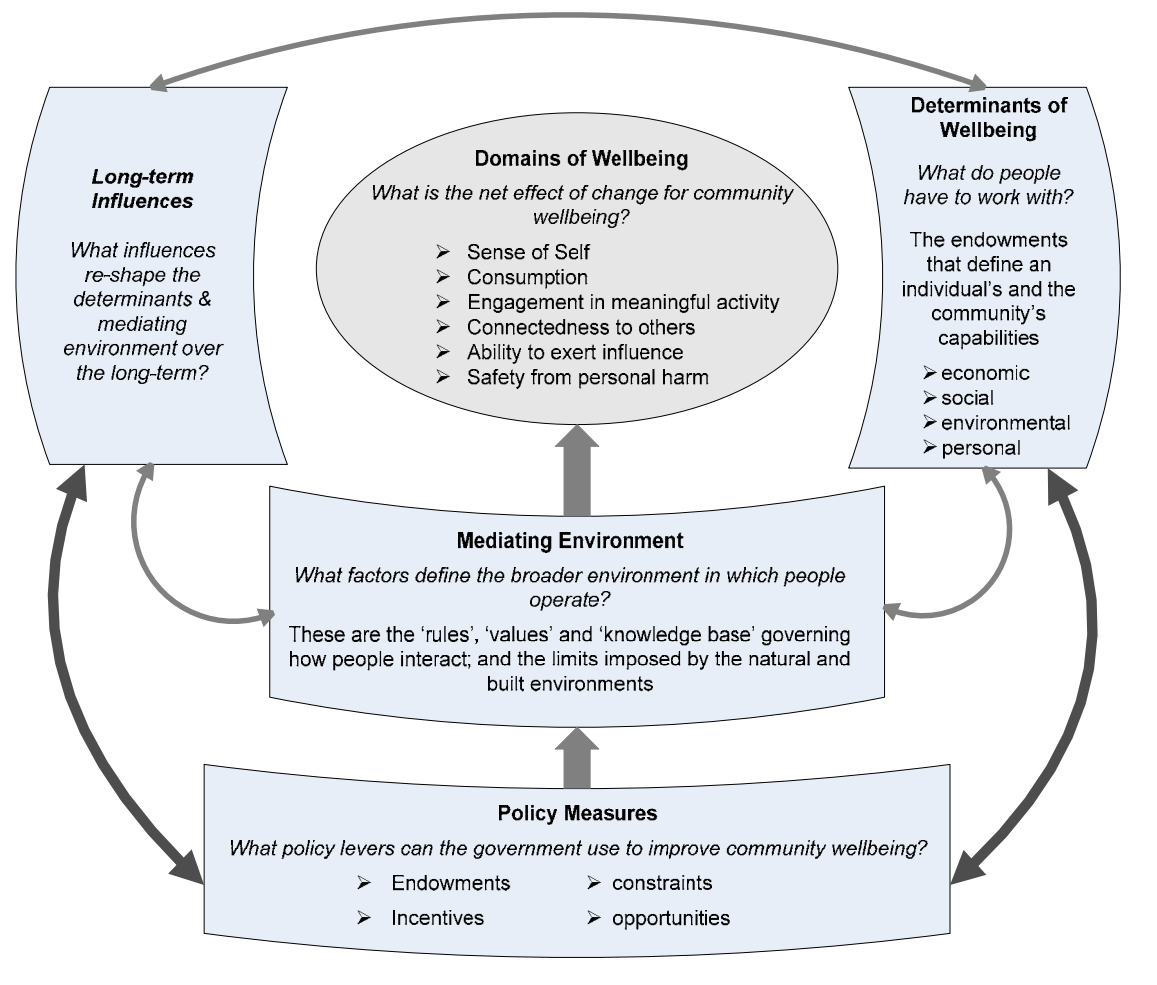
Even when relevant measures of individual or community wellbeing have been identified, disentangling the specific contribution of NFPs can be problematic. Impacts are usually the result of a complex interaction of activities (including those of the government and the NFP sector), as well as economic and social conditions more generally. Difficulties of attribution, which arise in the measurement of outcomes, also arise in the context of impacts. Again, the appropriate approach is to establish a causal link between NFP outcomes and the broader impacts and to account for any external influences. Wellbeing impact analysis must draw on a range of disciplines to establish theoretical links, which must then be backed by evidence that they are robust to the specific circumstances. Measurement is central to improving understanding of the links between cause and effect, and a number of measurement techniques have been developed to support analysis of the links, often referred to as impact mapping.

Box B.2 Synthesising the lessons of wellbeing frameworks

The Commission has examined the use of wellbeing indicators in public policy formulation and identified six broad domains (discussed in chapter 3). Similar to public policy, NFP activities can influence wellbeing both through effects on individual determinants and through changes to the mediating environment (see figure below).

- While some determinants are hard to alter (for example, character, cultural identity, belief systems and intelligence), others are more amenable to change (for example, education, work status, housing and safety).
- The mediating environment includes: the rules that constrain or enable individual choices and behaviour; the underpinning systems that govern opportunities; and the 'social norms' that condition how people interact. Key mediating systems include the markets which organise economic activity, knowledge systems that generate and disseminate knowledge, political systems that give voice and influence, legal systems that enforce and assign property rights and individual rights, community systems (social capital) that facilitate and support engagement, and the ecosystems which recycle the essentials of life such as air and water.

A synthesised wellbeing framework



B.4 Techniques and approaches to measurement

There are various approaches which have been used to measure the contribution of the NFP sector. Despite their apparent differences, these approaches share a number of common features — such as transparent presentation of results — to ensure rigorous measurement. The main differences lie in the techniques used to overcome the most challenging aspect of measuring contribution — identifying, quantifying and attributing the intangible effects of NFP activities.

The measurement approaches discussed in this appendix include:

- *frameworks* — many of which are based on impact mapping or program logic including: cost benefit analysis (used to analyse the contributions of activities within the sector); logical framework (used to evaluate the contribution of international aid); Results Based Accountability (RBA) (specifically designed to evaluate service delivery); and social accounting (which is derived from accounting frameworks).
- *techniques* — Social Return on Investment (SROI) (which uses financial values as proxies for outcomes) and stated preference (which elicits values from stakeholders).

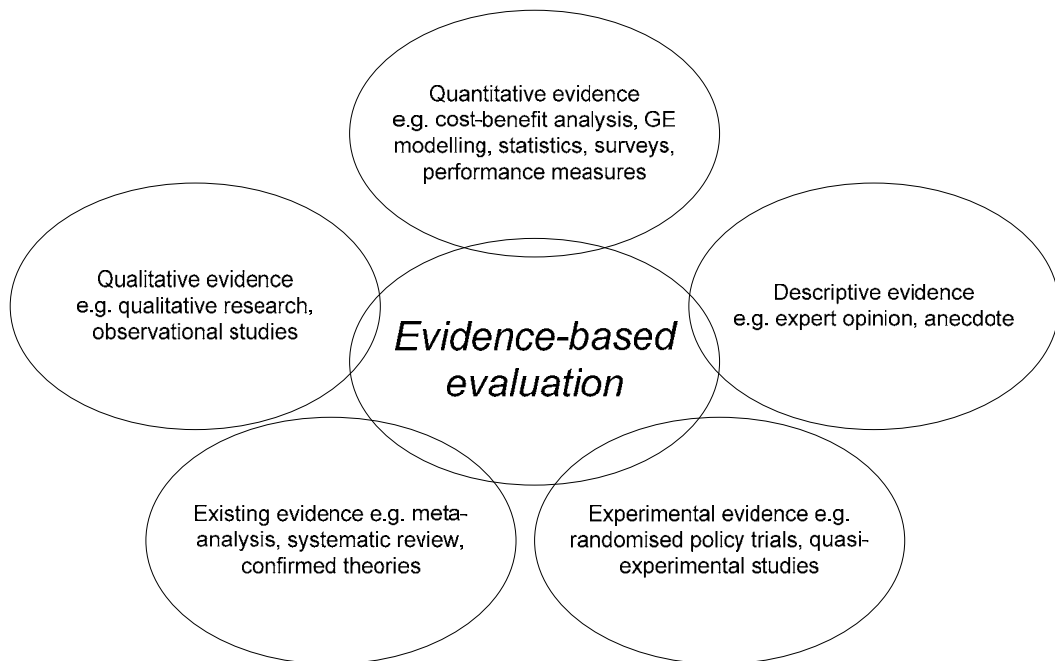
All these approaches are compatible with the overarching framework set out in chapter 3.

The sector is not alone in employing a variety of techniques to measure its contribution. In their evaluation of ‘evidence-based’ approaches applied to public policy, O’Brien and Bogaards (2009) identified an array of evidence and research methods (figure B.5) and identified three principles which should be followed in good evidence-based decision making:

- evidence should be broad, tested, rigorous and ideally capable of replication
- evidence should be robust and avoid common methodological pitfalls
- the entire process should be transparent and contestable.

These principles apply equally to assessing the contribution of the NFP sector and, where properly applied, underlie the various approaches to measurement adopted within the sector.

Figure B.5 **Types of evidence used in evaluation**



Source: O'Brien and Bogaards (2009).

Program logic

The measurement framework proposed by the Commission is based on impact mapping — which traces the relationships between the inputs, outputs, outcomes, and impacts. As the framework is general, and designed for reporting and aggregation, it does not specify the nature of these relationships. At a program and organisational level, the relationships can be determined by biophysical rules, technical or production relationships, and behavioural relationships. Program logic is an approach to program development that describes these relationships. An important part of this is defining the context or mediating environment, which in turn affects the success of a program.

Once the program logic is set out in the design phase, this guides collection of data for evaluation.

As ARACY point out in the attachment to their submission (sub. DR199), program logic describes:

- the intended outcomes to be achieved at different levels
- the potential unintended outcomes
- factors that affect outcome achievement and influencers for these

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- activities required to achieve outcomes
 - the type of information required to measure outcomes
 - what ‘success’ would look like for a program or intervention.

Good ex-ante cost benefit analysis will include consideration of all these factors, and, ex-post, look for what has happened in the mediating environment to develop the counterfactual. Similarly, both the logical framework and Results Based Accountability use program logic. The difference is in emphasis rather than overall approach.

Cost benefit analysis

Cost benefit analysis is an analytical framework used to evaluate the net benefit (benefit less cost) of an activity. Traditionally employed to value infrastructure projects, cost benefit analysis is becoming increasingly important in public policy evaluation. For example, both the Council of Australian Governments (COAG) and the Australian Government recently mandated the use of cost benefit analysis for significant regulatory proposals (Australian Government 2007; COAG 2007).

In setting out the principles of cost benefit analysis, the Australian Government noted that:

Its power as an analytical tool rests in two main features:

- costs and benefits are expressed as far as possible in money terms and hence are directly comparable with one another; and
- costs and benefits are valued in terms of the claims they make on and the gains they provide to the economy as a whole, so the perspective is a ‘global’ one rather than that of any particular individual or interest group. (2006, p. xi)

Cost benefit analysis provides a comprehensive framework for identifying all the costs and benefits of an activity to individuals and the community, even if not all can be quantified and valued in dollar terms. Where all significant costs and benefits can be quantified, the results of a cost benefit analysis can be used to rank the value of activities to society. Even where they cannot, the approach facilitates comparisons on a like for like basis.

In undertaking a cost benefit analysis, the costs and benefits of an activity are always compared to the baseline (that is, the costs and benefits which would result in the absence of the activity). This involves consideration of a hypothetical ‘what if’ situation. That is, it involves a calculation of costs and benefits if the activity is undertaken and a calculation of costs and benefits without the activity.

The second important characteristic of a cost benefit analysis is explicit recognition of how the costs and benefits arise over time. In general, cost benefit analysis will also distinguish between beneficiary and those who bear the costs.

The steps in undertaking a cost benefit analysis are shown in box B.2.

Box B.2 Steps in undertaking a cost benefit analysis

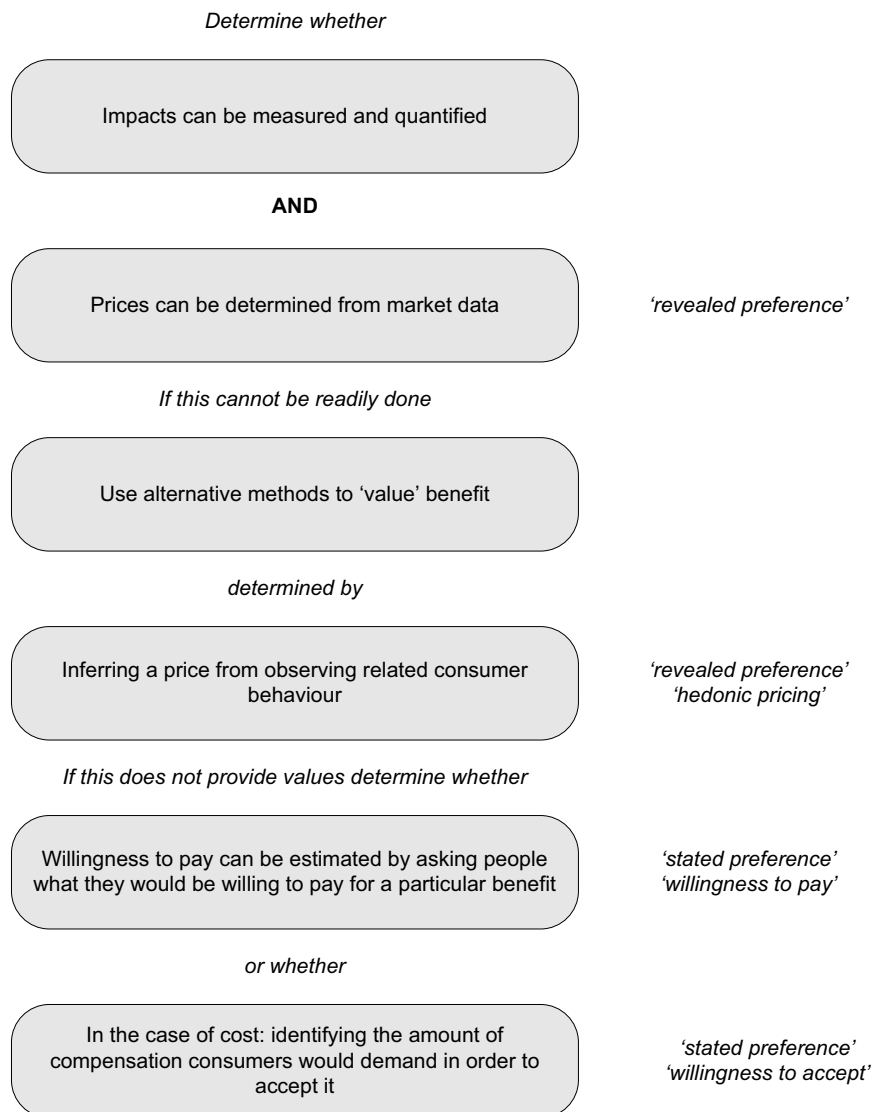
1. Identify all costs and benefits of each alternative.
2. Value the costs and benefits of each alternative.
3. Estimate the annual benefits and costs (for the 'life' of each option).
4. Discount the future stream of costs and benefits.
5. Calculate the net benefit of each alternative.
6. Test for the effects of changes in assumptions or data.

Source: Sinden and Thampapillai (1995).

The various techniques used to measure the contributions of NFPs are based on the underlying principles of cost benefit analysis. They vary largely in their approach to overcoming the considerable practical challenges involved in measuring the benefits (and to a much lesser extent the costs) of NFP activities, and in how they discount these flows over time.

Market prices provide an indication of willingness to pay and hence provide a guide to valuing inputs and outputs. Prices will tend to understate value in circumstances where the user was prepared to pay more. In circumstances where markets do not exist, or are significantly distorted by government intervention (so that prices do not reflect user preferences), there are a number of approaches used in cost benefit analysis to infer value (figure B.6). Value can be inferred by purchasing decisions ('revealed preference'), or where this is not available by behaviour in markets for similar activities ('hedonic pricing'), or users can be asked about their valuation ('stated preference'). These approaches have been used to value the activities of NFPs (see discussion below).

Figure B.6 Valuation Techniques



Source: Based on HM Treasury (2003, p. 23).

As noted in chapter 3, there can also be significant difficulties associated with attributing specific costs and benefits to the activity (or indeed to the NFPs which is undertaking it). In general, this is dealt with in cost benefit analysis by assigning a specific proportion of the benefits to the activity being evaluated. In situations where the activity was necessary but not sufficient for the changes to arise, this proportion will be less than 100 per cent. The rule usually applied in apportioning benefits is to use the relative share of total input costs. An alternative (and the only option where total input costs are not measurable) is to survey stakeholders about their assessment of the contribution of the activity. A survey should seek views

from a diverse set of stakeholders and use triangulation to establish an agreed attribution proportion.

Where the activity being evaluated has enhanced the outcomes, the benefit assessment should only include the consequences of the enhancement. If this is done properly attribution is not an issue.

In order to compare activities, costs and benefits are valued in dollar terms and, where these values arise over a number of years, are discounted to be expressed in current values. Discounting is used to account for the fact that, when costs and benefits are spread over time, their value will depend on when they are received. Benefits received (or costs incurred) further in future are given a lower value than those experienced immediately.

There is considerable debate in the literature about appropriate discount rates. While there is general agreement that capital investments in economic infrastructure should be discounted at the market rate, there are very different views about how other long lived investments, such as in climate change mitigation, should be discounted. A range of values can be used to see if the results are sensitive to the discount rate. Most importantly, when comparing alternative activities for achieving a desired outcome, the same discount rate should be applied.

The impact of changes to key assumptions or variables employed can and should be tested through sensitivity analysis. To varying degrees, the principles underlying cost benefit analysis provide the foundation for other measurement approaches used in the NFP sector.

Social Return on Investment

SROI was developed to enable NFPs to demonstrate the merit of their activities to potential donors within a consistent framework. As noted in a recent study, there can be considerable variability in how ‘investments’ in social enterprises are evaluated.

- Approaches to measuring social impact vary considerably from investor to investor; there is no consistent approach.
- Measuring impact is not a universal feature of investment processes. Some investors do not appear to incorporate approaches to measuring impact in their application and decision-making processes for making investments – or if they do, this is not prominent in the promotion of their work.
- Investors appear to concentrate primarily on measuring the impact of individual investments, rather than programmes or portfolios of investments.

-
- Investors do not generally appear to compare the impacts of individual investments, either actual or potential. (Durie, Hutton and Robbie 2008, p. 14)

Although underpinned by principles of cost benefit analysis, SROI also draws on the concepts of financial analysis and uses financial values as proxy indicators for the benefits derived from NFP activities.

... SROI Analysis builds on other approaches to understanding non-financial value by quantifying, and including monetary values of, some indicators of the added value. These are then converted to net present value and divided by the amount of monetary investment to arrive at ‘social return on investment.’

... While SROI builds upon the logic of cost benefit analysis, it is different in that it is explicitly designed to inform the practical decision-making of enterprise managers and their investors. By contrast, cost-benefit analysis is a technique rooted in social science that is most often used by funders outside an organisation to determine whether their investment or grant has advanced or will advance a social mission they have. (Biemann et. al. 2005, p. 4)

The first step in calculating the SROI is to identify the scope of the program under evaluation, including all relevant stakeholders who are ‘... all those who might affect or be affected by the activities within your scope, whether the change or outcome is positive or negative, intentional or unintentional’ (Office of the Third Sector 2009, p. 20).

The next step involves identifying the inputs, outputs and outcomes of the activities under evaluation. Values are then attached to these. Where possible, SROI utilises market values and in cases where prices are not directly observable proxy measures are used. But, it also recognises that some proxy values are more credible than others.

It is important when communicating social value that some proxies are more credible than others for different stakeholders. The most credible proxies have been used before (by third party sources with existing credibility), or are at least based on research undertaken by your organisation. Other proxies are market comparisons (what it would cost to achieve the same outcome) or working assumptions that will need to be related to the proposed future improvements. These latter two may be necessary but are usually less credible. (Office of the Third Sector 2009, p. 51)

Examples of proxy measures are shown in table B.2.

Table B.2 SROI: outcomes, indicators and financial proxies

<i>Stakeholder</i>	<i>Outcome</i>	<i>Indicator</i>	<i>Possible financial value proxy measures</i>
Person with mental health problem	Improvement in mental health	<ul style="list-style-type: none"> • Amount of time spent socialising • Extent to which participants engage in new activities • Level of use of mental health services 	<ul style="list-style-type: none"> • Cost of membership of a social club • Percentage of income normally spent on leisure • Cost of counselling sessions
Local community	Improved access to local services	<ul style="list-style-type: none"> • Take-up of services and by whom 	<ul style="list-style-type: none"> • Savings in time and travel costs of being able to access services locally
Local community	Improved perception of the local area	<ul style="list-style-type: none"> • Residents report improvements in the local area 	<ul style="list-style-type: none"> • Change in property prices • Amount spent on home improvements
Person with physical health problem	Improved physical health	<ul style="list-style-type: none"> • Number of visits to GP surgery • Extent of improvements in health (self-reported) • How often they exercise 	<ul style="list-style-type: none"> • Cost of visiting private GP clinic • Cost of health insurance • Cost of gym membership
The environment	Less waste	<ul style="list-style-type: none"> • Amount of waste going to landfill • Level of carbon emission 	<ul style="list-style-type: none"> • Cost of landfill charges • Cost of CO2 emissions
Young people	Decrease in drug use	<ul style="list-style-type: none"> • Level of drug use 	<ul style="list-style-type: none"> • Average amount spent by young people on drugs
Care leaver	Reduced homelessness	<ul style="list-style-type: none"> • Access housing upon leaving care • Satisfaction with appropriateness of housing 	<ul style="list-style-type: none"> • Rent • Cost of hostel accommodation

Source: Office of the Third Sector (2009, p. 49).

Once values are assigned to outcomes an impact map can be constructed to identify the contribution of an activity or program. To do this, several factors need to be accounted for:

- *Deadweight* — the share of outcomes which would have happened if the activity had not taken place. This attempts to account for factors external to the organisations which may have contributed to the outcome. ‘As deadweight increases [organisational] contribution to the outcome declines. When deadweight is high this may mean that the outcome is no longer material to your analysis.’ (Office of the Third Sector 2009, p. 57)

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- *Displacement* — the extent to which the activity generates negative effects elsewhere.
 - *Attribution* — the percentage of the outcomes directly attributable to the activity.
 - *Drop-off* — the percentage of the outcomes which are sustained over time.

Assumptions about these factors are applied to estimated outcomes to provide a measure of contribution. For example, an estimated deadweight of 10 per cent would mean that 90 per cent of the estimated outcome value (such as an estimate of the value attached to an individual participating in an employment placement program) would be attributed to the activity being evaluated.

This process can be repeated to evaluate contribution over time, with separate values calculated for each year the activity is expected to have an effect. The SROI is then calculated as the ratio of the present value of benefits to the estimated present value of inputs used in providing the activity. (Alternatively, the net SROI can be calculated as the ratio of the present value of benefits, less any financial costs, to the estimated cost of inputs.)

The methodology emphasises the importance of conducting sensitivity analysis to calculate the effect on the SROI of changes in key variables including: the estimated proportion of deadweight, attribution and drop-off; financial proxies; the number of those affected by the activity; and the value of inputs. It also encourages results, and the underlying assumptions, to be reported in a transparent fashion to enable independent verification. Participant views on SROI are shown in box B.3.

Box B.3 SROI — participant views

Family Relationship Services Australia:

SROI is seen as a framework to help understand the value of social change from the perspective of those changed. It tells a compelling story of change, which is a mix of narrative, qualitative and financial measures. It provides for a financial proxy value of this change, which can be understood alongside traditional financial costs. It is transparent and consistent and aims to create a more tangible currency in social value that everyone can understand. For both governments and organisations SROI can also help focus attention on particular activities and how well they are working to achieve social change. (sub. 132, pp. 12-13)

BoysTown:

In the past, it has been difficult to quantify the value produced through social intervention programs; however, a new methodology known as the Social Return on Investment (SROI) model calculates the social and economic value of program interventions by tracking their impact on the lives of individuals and the communities in which they live. Impacts include changes in projected tax revenues, offsets against public expenditure on welfare payments and social service programs, decreased legal, penal and public health costs and increased consumer spending ... The SROI measurement approach captures the economic value of social benefits by translating social objectives into financial measures. For example, when previously unemployed people complete a training and employment program and start a job, not only do they increase their personal income, but they also create value for government by paying taxes and no longer claiming welfare benefits ...

For severely marginalised people, e.g. ex-offenders, the downstream impacts are even more significant, with substantial savings in terms of public health, social security and justice system costs and benefits in terms of increased productivity and tax revenue. This method is particularly applicable to the type of social business enterprises that provide goods and services to customers in order to provide a supportive training and work environment for individuals who wish to improve their lives. (sub. 77, p. 6)

Catholic Social Services Australia:

The contribution of the not for profit sector to society is not analogous to the contribution of business to the economy. There is no single bottom line. Applying economic metaphors such as the 'social return on investment' to the work of the sector can result in a distorted perception of the sector's role and the underlying importance of its work. (sub. 117, p. 7)

'Stated' preference techniques — application in Stakeholder Value Management Analysis

Stated preference techniques have long been employed in economics to estimate intangible values (for example, the aesthetic value of a wilderness area and value of preserving it for future generations). Since people are being asked to state their preference, it is important that questions are asked in a way which reveals a preference which is as close as possible to the choice the individual would actually

make in a ‘real world’ situation. For example, the value placed on conserving an environmental area may change if the individual providing the valuation learns that they have to make a financial contribution to its conservation. This issue of appropriate framing of the question has been major area of research in contingent valuation techniques. Choice modelling techniques (box B.4) provide one method as they make the trade-offs more explicit. As noted above, stated preference valuation is commonly employed in cost benefit analysis.

Box B.4 Choice modelling

Choice modelling involves eliciting a respondent’s stated preference over a range of choice options in a hypothetical setting. Initially developed for market research for consumer product companies and adopted by transport economists, the techniques are now widely used to inform analysis of options in natural resource management. Options are formed by a set of outcomes (attributes) that can take different levels. Survey respondents are presented with several different options and asked to indicate which option they prefer in each of these ‘choice sets’. One of the options usually corresponds to the do-nothing option and is held constant over all sets of choices. The levels of the attributes characterising the different options varies according to an ‘experimental design’. In many valuation applications, one attribute involves a monetary payment and there would typically be another two or more attributes that together describe the options or choices available. By observing and modelling how people change their preferred option in response to changes in the level of attributes, it is possible to determine how they trade-off between the attributes. In other words, it is possible to infer people’s willingness to forgo some amount of an attribute in order to achieve more of another.

Source: Chairs of the Heritage Council of Australia and New Zealand (2005, p. 22).

Stakeholder Value Management Analysis is an application of the stated preference approach to NFP activities (Fletcher et. al. 2003). It elicits rankings of organisational activities from key stakeholders (clients, government or philanthropic funders, partners in service delivery and the general community).

Once key stakeholders are identified, they are asked to nominate which of the organisation’s activities they consider to be most important. More detailed questioning, and statistical techniques, can then be used to infer how willing stakeholders would be to make hypothetical trade-offs between various outcomes (in terms of both quality and quantity). This information can be used to calculate ‘rates of return’, by stakeholder, for the activities undertaken by NFPs.

A fully-fledged stated preference analysis can be an expensive proposition because it involves detailed questioning of a number of stakeholders. However, taking the first step of identifying an organisation’s key stakeholders and, broadly what their

interests are, can provide invaluable information in guiding organisational performance.

Since this approach relies on people's opinion, as opposed to their revealed behaviour, it is important that care be taken in asking questions to ensure 'realistic' responses. Notwithstanding this challenge, surveying stakeholders may be the only means by which certain intangible contributions can be valued.

Logical Framework

The Logical Framework (or 'log frame') takes a program logic approach to evaluation. It was developed as a design tool for activities undertaken by international aid programs. It also provides the basis for ex-post evaluation of an activity. It documents the logical structure that underpins why the activity should deliver on its objectives, describing the links between activities and outcomes and external conditions required for these links to operate as planned. It also establishes clear measures or indicators of success at each level (inputs, outputs, outcomes and achievement of goals).

The log frame, increasingly used at the World Bank, is based on a simple four-by-four matrix that matches information on project objectives with how performance will be tracked using milestones and work schedules, what impact project outputs will have on a beneficiary institution or system and how that will be measured, and how inputs are used to deliver outputs ... In other words, it is assumed that the project's intended impact is a function of the project's inputs and factors outside the project. Quantifiable measures should then be identified for each link in the project cycle. This approach does not preclude the evaluator from also looking at the unintended impacts of a project but serves to keep the objectives of the evaluation clear and focused. (Baker 2000, p. 19)

According to guidance provided by the Australian Government (2005), the first stage of developing a log frame is to produce an activity design which includes a:

- description of what the activity will do and how it will do it
- rationale for undertaking the activity from the perspective of key stakeholders (including those providing the funding and any partners in implementation). The rationale will typically include:
 - a discussion of the causes and effects of the problem under consideration
 - an assessment of the expected results of implementing the activity, including the logic which links the implementation of the activity to its expected effects
 - an evaluation of the benefits of the activity compared to alternative uses of the resources.

A key analytical tool is the log frame matrix (table B.3). The matrix sets out a hierarchy of objectives for the project — from outputs to outcomes and impacts. It also identifies indicators for measuring success and the assumptions made to link each of the objectives. The matrix is intended to ensure ‘vertical logic’ (that is, the objectives should be linked in a coherent manner) and ‘horizontal logic’ (that is, the indicators should be coherently related to the objectives).

Table B.3 Log frame matrix

<i>Activity description</i>	<i>Indicators</i>	<i>Means of verification</i>	<i>Assumptions</i>
Goal or impact — the long term impact (policy goal) of the activity	How the achievement will be measured — including appropriate targets (quantity, quality and time)	Sources of information on the goal indicator(s) — including who will collect it and how often	
Purpose or outcome — the medium term result(s) of the activity	How the achievement of the purpose will be measured — including appropriate targets (quantity, quality and time)	Sources of information on the purpose indicator(s) — including who will collect it and how often	Assumptions concerning the purpose to goal linkage
Component objectives or intermediate results — this level in the objectives or results hierarchy can be used to provide a clear link between outputs and outcomes (particularly for larger multi-component activities)	How the achievement of the component objectives will be measured — including appropriate targets (quantity, quality and time)	Sources of information on the component objectives indicator(s) — including who will collect it and how often	Assumptions concerning the component objective to output linkage
Outputs — the tangible products or services that the activity will deliver	How the achievement of the outputs will be measured — including appropriate targets (quantity, quality and time)	Sources of information on the output indicator(s) — including who will collect it and how often	Assumptions concerning the output to component objective linkage

Source: Australian Government (2005).

While acknowledged as a convenient means of summarising the resources needed to achieve the objectives, the log frame approach has been criticised for oversimplifying evaluation (in particular, a failure to adequately account for unanticipated external effects) (Gasper 1999). Indeed, the Australian Government noted that the log frame approach can be better suited to designing activities than ex-post evaluation.

LFA [log frame approach] is best started early in activity design. (It is more difficult to use LFA to review and/or restructure ongoing activities which were not designed using

LFA principles and practices). As LFA is an ‘aid to thinking’, it has widespread and flexible application. (Australian Government, 2005, p. 1)

Results Based Accountability

RBA is another method that uses program logic. It defines results (or outcomes) for specific activities and identifies indicators that can be used to measure success. Success is measured relative to a projected baseline, or the situation which would have occurred in the absence of the activity.

... baselines have two parts: an historical part that tells us where we’ve been, and a forecast part that shows us where we’re headed if we don’t do something differently.

Creating the forecast part of a baseline is an art, not a science. There is not a single, right forecast. It is sometimes useful to show a range of forecast scenarios: high, medium and low; or optimistic, pessimistic, and likely. (Friedman 2005, pp. 56-57)

RBA emphasises early consultation with clients and other stakeholders involved in service delivery to identify relevant outcomes and a process for monitoring them. Importantly, it also distinguishes between the performance of individual programs or activities and the general effects on the community. According to its developer, RBA:

... starts with ends and works backward, step by step, to means. For communities, the ends are conditions of well-being for children, adults, families and the community as a whole ... For programs, the ends are how customers are better off when the program works the way it should such as the percent of people in a job training program who get and keep good paying jobs. (Friedman 2005, p. 11; emphasis in original)

This distinction between performance at an organisational/program level and the impact on the broader community was elaborated on by UnitingCare Children, Young People and Families (CYPF):

RBA makes a key conceptual distinction between *population accountability* where the aim is to achieve better outcomes for particular groups (such as all children and young people) in a defined geographical area; and *performance accountability* which is intended to improve outcomes for the users of individual services, agencies and departments as a contribution towards achieving better outcomes at the population level. This distinction is critical but poorly understood. It is clearly the case that no single NFP or government department is solely responsible for, say, improving health outcomes for children or people with disabilities. Similarly, the distinction RBA makes between ‘outcomes’ (end results) and process indicators is important, because measuring ‘success’ on the basis of ‘outputs’ (which describe service specifications, delivery mechanisms and procedures) alone can be misleading. It is entirely possible for NFPs to deliver services that meet a wide range of process targets (such as timeliness and participation levels) specified in government contracts without improving outcomes for the people or communities it is supporting. (sub. 148, p. 12)

Similarly, the Local Community Services Association argued:

The concept is that single organisations can only be responsible for changing their clients results (performance accountability — below the line) — not for changing the results of the whole population (population accountability — above the line). For example, a neighbourhood centre can potentially be responsible for improving the connection with their community for the isolated clients that they actually serve. The Centre cannot be held responsible for changing this connection for all isolated people in their geographic area. They may contribute to it but it takes a wide range of partners to change population results. In the final analysis population results are the desired end everybody wants and is working to achieve. And performance or customer results are what Centre programs can deliver. (Attachment to sub. 144, p. 3)

CYPF argued that the distinction between measuring program performance and the effects on the broader community (at the population level) may strengthen organisational accountability:

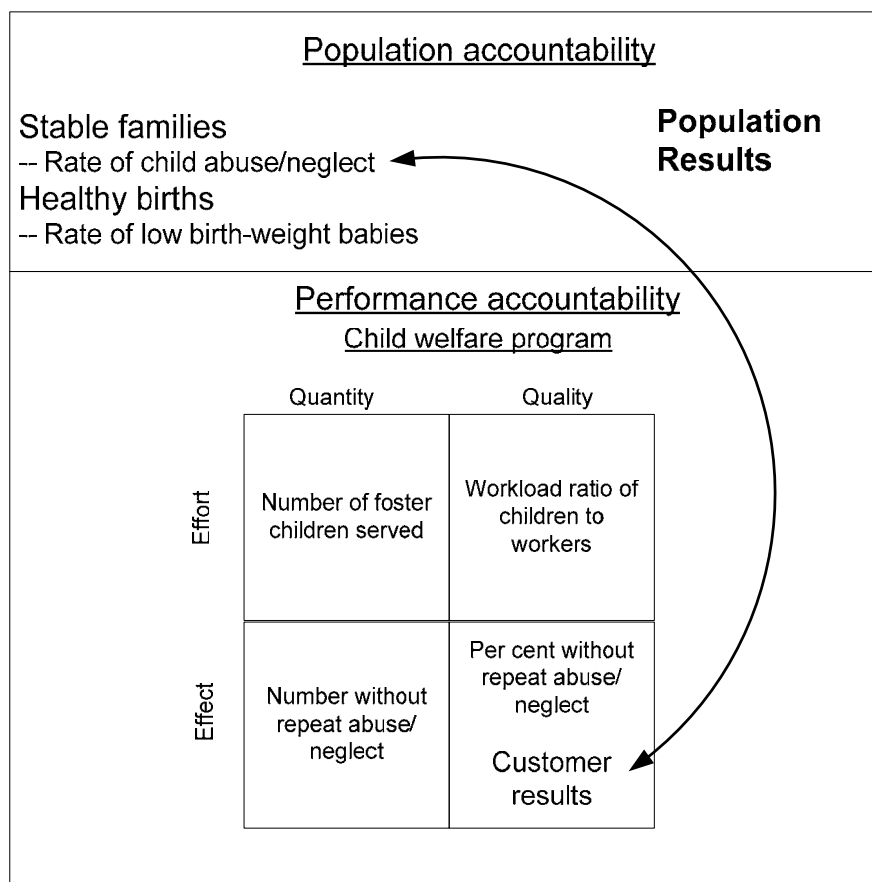
The RBA framework does not argue that NFPs be unaccountable for their performance. On the contrary, it argues that services be given greater freedom to implement strategies designed to improve population outcomes while being required to provide clear and reliable information on performance. (sub. 148, pp. 12–3)

In measuring performance, RBA avoids the use of input/output distinctions (which are regarded as more applicable to the production of physical goods rather than service delivery). Instead, it distinguishes between:

- quantity indicators of effort (*how much did we do?*)
- Quality indicators of effort (*how well did we do it?*)
- Measures of effect (*is anyone better off?*).

RBA ranks quantity measures of effort (such as the number of patients treated) as the least important. Measures of effect, which identify client outcomes, are regarded as the most important. Performance indicators provide evidence on how well an activity is delivered, while population indicators provide information on the broader community impacts (figure B.7).

Figure B.7 **RBA: Population versus performance accountability**



Source: Friedman (2005).

Table B.4 provides some commonly employed measures of effort and effect. Box B.5 provides an example of RBA applied at the program level.

RBA has been imposed as a requirement of funding by some government agencies. In doing so, some study participants identified a tendency for governments to impose overly rigid reporting requirements on NFPs. The Illawarra Forum argued that:

Through RBA, practices and activities become decontextualised for the purposes of quantification. Whether deliberately or not, the measures, which are usually imposed on organisations as part of their contracts, can dictate the processes that are used and distort the character of what they claim to measure. (sub. 52, p. 8)

Similarly, the Local Community Services Association noted that its:

... experience is that attempts to create a hybrid of Results Based Accountability and Results Logic frameworks creates systems which sacrifice meaning and real world experience for bureaucratic tidiness and the illusion of control. Such systems do not enhance, but considerably reduce the capacity to attain positive movement in population indicators and they fail to recognise and therefore stifle the full range of possible contributions. (sub. 144, pp. 11–2)

Table B.4 RBA: performance measurement examples

<i>Program</i>	<i>How well did we do it?</i>	<i>Is anyone better off?</i>
Welfare to work	<ul style="list-style-type: none"> • Per cent of trainees who complete job training program 	<ul style="list-style-type: none"> • Per cent of trainees who still have jobs 6 & 12 months later
Child welfare	<ul style="list-style-type: none"> • Ratio of workers to foster children • Ratio of workers to child abuse/neglect cases • Per cent of children with multiple placements in the last 6 months • Per cent of siblings placed together • Per cent of foster children placed in same school catchment area 	<ul style="list-style-type: none"> • Per cent of children with good school attendance • Per cent of foster children reunified or in permanent placement within 6 months of entering care • Rate of repeat child abuse or child neglect
Mental health	<ul style="list-style-type: none"> • Waiting list size • Average time to next open appointment 	<ul style="list-style-type: none"> • Per cent of clients in school or working • Rate of entry into institutional care • Rate of movement to less restrictive care
Public housing	<ul style="list-style-type: none"> • Vacancy rate • Per cent of tenants paying rent on time 	<ul style="list-style-type: none"> • Per cent of tenants who transition to non-subsidised housing • Per cent of tenants satisfied with building maintenance
Education	<ul style="list-style-type: none"> • Teacher retention rate • Retention rate for highly qualified teachers • Per cent of teachers with degrees in the subject they are teaching 	<ul style="list-style-type: none"> • High school graduation rate • Per cent of students with good attendance • Per cent proficient or better at reading, writing, math and science by grade level
Special education	<ul style="list-style-type: none"> • Rate of disproportional representation of minorities • Per cent of special education students in mainstream classrooms 	<ul style="list-style-type: none"> • Attendance rate • Graduation rate • Per cent of parents who think the school is doing a good job preparing their child for life
Advocacy	<ul style="list-style-type: none"> • Per cent of targeted policy makers contacted 	<ul style="list-style-type: none"> • Per cent of advocacy agenda adopted • Per cent of all potential policy makers who have adopted policy

Source: Friedman (2005).

Box B.5 RBA: an application

In 2004 UnitingCare Burnside commissioned a research paper on the educational outcomes of children and young people in our foster care program in Western Sydney. While the study showed that Burnside performed well in terms of placement and school stability, participation in extra-curricular activities and high levels of commitment to educational goals, just 38.5% of those old enough to have achieved an HSC had completed Year 12. This was only slightly above the average (35.6%) for children in out of home care and well below the average (80%) for children living with their birth families. In order to establish strategies to improve the school completion outcomes, a working group was established to implement the recommendations made in the 2004 report with respect to record keeping, carer support for educational achievement, provision of tutoring and other external supports, provision of adult mentors, provision of skilled career planning from Year 9 on, an educational focus in carer assessment and training, and further tracking of the educational attainment of children in care in Western Sydney foster care.

The working group met on a six monthly basis over the following three years to monitor progress and develop new strategies. An 'education census sheet' was developed to support case workers to focus on educational outcomes and to track changes for each young person in care on an annual basis. Three years on, educational outcomes for young people in our foster care programs have improved dramatically. ... we note that retention to Year 12 is up to 93-100% (way above the NSW average and our 2004 baseline) and in 2007, 80% of our young people who had left school the year before were engaged in further learning at TAFE, university or in trade courses.

The results achieved by Burnside link directly to the population outcomes specified in the *Melbourne Declaration on Educational Goals for Young Australians* released by the State, Territory and Commonwealth Ministers of Education in December 2008. One of the goals specified by the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA, 2008) is that:

All young Australians become:

- *Successful learners*
- *Confident and creative individuals*
- *Active and informed citizens.*

Source: CYPF (sub. 148, p. 14; emphasis in original)

Social accounting

Social accounting and audit is a framework for measuring the economic, environmental and social contribution of an organisation. After consultation with key stakeholders, the organisation prepares a set of social accounts which sets out the value of the activities undertaken by the organisation during the reporting period.

The information gathered, and the measurement techniques used, are determined by the organisation but the accounts are subject to scrutiny by an independent social

audit board to ensure that they are a ‘fair and honest reflection of what happened during the accounting period’ (box B.6). As such, social accounting provides a framework for measuring contribution rather than a technique for measuring outcomes and impacts.

Box B.6 Social accounting

The social accounting process has been refined over time and, following extensive consultation with people who have used the framework, a new *Social Accounting and Audit Manual* was produced in 2005 which has three steps. Each of the steps can be viewed as a distinct module that can provide benefits to an organisation. An organisation can choose whether or not to continue with the process after the completion of each step. Prior to the three steps, there is a stage called ‘getting ready’.

Getting ready. This step is about an organisation gaining an understanding of the framework, principles and history of social accounting. This stage also examines the implications for an organisation in terms of how the process will be managed and the resources required to undertake it.

Step 1 Planning. The organisation identifies its stakeholders through the production of a stakeholder map and from that it identifies its key stakeholders, whom it must consult as part of the process. This step assists organisations to clarify its mission, values, objectives and activities.

Step 2 Accounting. The organisation decides the ‘scope’ of its social accounting and then sets up the ‘bookkeeping’ systems it will require to gather the information. Often at this stage it becomes apparent that many of the systems required are already in place. The systems gather both qualitative and quantitative information from a variety of key stakeholders through the application of a variety of tools. The data are then analysed.

Step 3 Reporting and audit. This step involves bringing all the information together and writing the ‘social accounts’. The accounts are then verified by an independent Social Audit Panel whose role is to ensure that the information on which the social accounts are based has been properly gathered and interpreted. When the panel is satisfied that the report is a fair and honest reflection of what happened during the accounting period they issue a social audit statement. When approved, the accounts are made public.

Source: Robbie and Maxwell (2006, p. 41)

Summing up: how do the measurement approaches compare?

Table B.5 provides a summary of some of the measurement approaches that have been applied to NFP activities. While they differ somewhat in resource requirements, purposes for which they are undertaken, and the information they provide, they also share some common ground (for example, emphasis on stakeholder consultation and transparent presentation of results).

Table B.5 Comparing measurement approaches

<i>Approach</i>	<i>Advantages</i>	<i>Disadvantages</i>	<i>Comments</i>
Cost benefit analysis	<ul style="list-style-type: none"> • Well-established measurement methodology (in economics) • Requires an explicit counterfactual • Can be used to compare a number of activities • Can be used to evaluate performance over time • Properly applied, it is capable of capturing the 'intangible' benefits associated with NFP activities. 'Plug-in' values may also be used (eg. value of statistical life) • Utilises sensitivity analysis to test the robustness of results 	<ul style="list-style-type: none"> • Focus on net benefits may make it difficult to capture equity effects unless these are given a value, which can be controversial • Can be informationally demanding (eg. forecasting impacts over time) • May be technically challenging and expensive to implement • May require outside consultants to undertake, potentially limiting the learning achieved within the NFP 	<ul style="list-style-type: none"> • The principles underlying cost benefit analysis (eg. transparency, sensitivity analysis) also underlie other measurement approaches • Has been typically applied in larger scale 'activity' studies rather than program evaluation
Social Return on Investment (SROI)	<ul style="list-style-type: none"> • Utilises the principles of financial reporting to provide information to funders in a form that is well-understood • Emphasises importance of consultation with stakeholders and the need for credible assumptions (and transparent presentation of results) • Uses measurable market values as proxies for outcomes • Utilises sensitivity analysis to test the robustness of results • Standardised guidance is available to aid implementation — importantly on deadweight, attribution, displacement and drop-off 	<ul style="list-style-type: none"> • Disadvantages associated with cost benefit analysis may also apply • Market values may not always be a good proxy for some outcomes (eg. improvements) • Standardised approach to attribution and the counterfactual may be inappropriate 	<ul style="list-style-type: none"> • SROI was specifically designed for use in the NFP sector and is increasingly used to provide those who provide funding to social enterprises with information on the 'return' from their investments

(continued on next page)

Table B.5 (continued)

<i>Approach</i>	<i>Advantages</i>	<i>Disadvantages</i>	<i>Comments</i>
Log frame	<ul style="list-style-type: none"> Identifies the rationale of an activity and justifies its implementation relative to alternatives Provides a summary of the resources and conditions needed for a successful intervention 	<ul style="list-style-type: none"> Can be better at program design rather than ex-post evaluation May not allow straightforward identification of unintended consequences 	
'Stated' preference approaches — application in stakeholder value management analysis	<ul style="list-style-type: none"> Can be the only means of valuing intangible outcomes Is a well established valuation technique (eg. in environmental issues) Draws on extensive theoretical underpinnings from economics Emphasises the importance of engagement with stakeholders 	<ul style="list-style-type: none"> Can be expensive to undertake and require technical expertise The relevance of the results will depend on the nature of the questions and how they are asked Presents a 'snapshot' of stakeholder values so may be difficult to measure changes over time 	<ul style="list-style-type: none"> This is a measurement technique rather than a measurement framework and can be used in conjunction with other measurement techniques
Results Based Accountability	<ul style="list-style-type: none"> Designed specifically for service provision Has been applied widely in assessing NFP and public sector activities, both in Australia and overseas Standardised guidance is available to aid implementation Support is often forthcoming from government agencies to assist in implementation 	<ul style="list-style-type: none"> Governments that require the use of RBA as part of performance reporting may mandate a 'standardised' approach which can limit flexibility in NFP choice of performance indicators. 	<ul style="list-style-type: none"> This is a widely accepted framework which has been accepted for use in measuring service provision (eg. in the public sector)
Social accounting and audit	<ul style="list-style-type: none"> Emphasises the importance of transparently presented and independently verified results Is based on financial reporting frameworks which will be familiar to many organisations 	<ul style="list-style-type: none"> Does not provide specific guidance on which measurement techniques should be used Use of non-standard measurement techniques can limit comparability and benchmarking 	<ul style="list-style-type: none"> Social accounting was developed in the 1970s and a number of international accounting bodies have developed standards around the practice accounting

(continued on next page)

Table B.5 (continued)

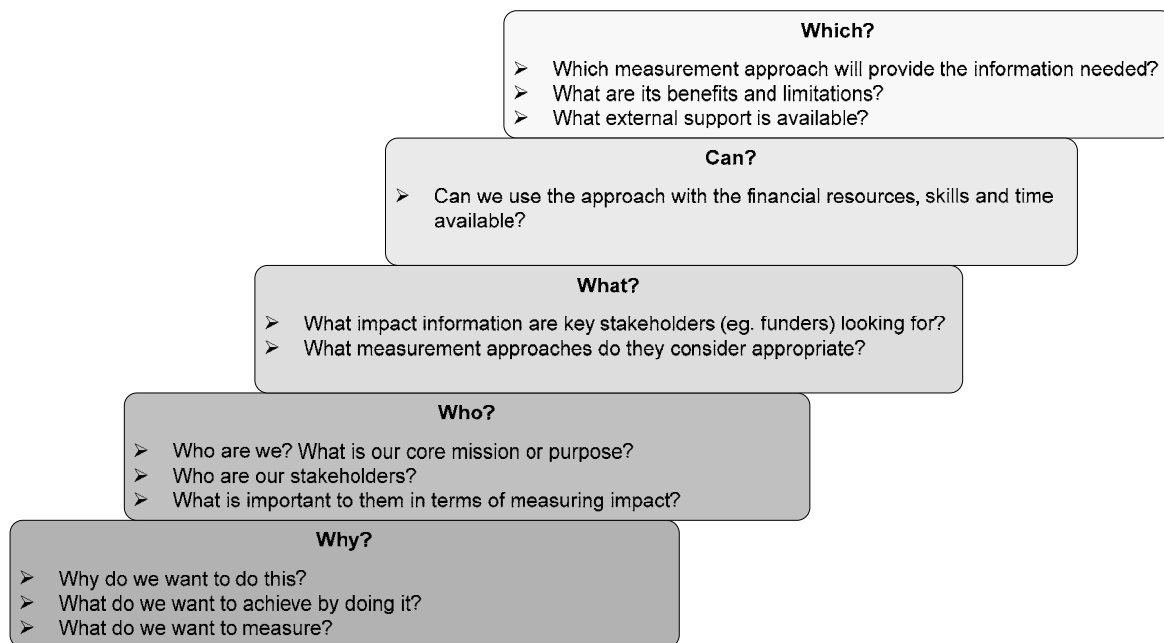
<i>Approach</i>	<i>Advantages</i>	<i>Disadvantages</i>	<i>Comments</i>
Social accounting and audit	<ul style="list-style-type: none">• Draws on developments in related fields (eg. environmental accounting)• Is not prescriptive in the measurement techniques used• Emphasises the importance of stakeholder consultation and verification		<ul style="list-style-type: none">• Recent interest in social accounting has been generated by the development of environmental

B.5 Choosing a measurement approach

The approaches outlined in the previous section are the main (but, by no means, the only) ways of measuring the contribution of NFP activities, programs and potentially organisations. Notwithstanding some common underlying principles, all are distinct techniques or frameworks. As argued in chapter 3, there is no ‘gold standard’ approach — one which is appropriate in all circumstances — so the method adopted will depend on what is the best ‘fit’ for purpose.

Among the factors which will determine appropriateness are: the nature of the NFP activity; the purpose of measurement (for example, for comparative benchmarking purposes or to provide information to funders); and the resources available to the organisation (including the technical expertise and data). In some cases, the choice may be made from outside the organisation (for example, as a condition of receiving government funding). Robbie and Maxwell (2006) suggest a five step approach to identifying which measurement approach is best suited to the purpose at hand (figure B.8). The first step is identifying why measurement is being undertaken.

Figure B.8 Five steps to choosing a measurement approach



Source: Robbie and Maxwell (2006).

B.6 Uses (and limitations) of measurement

As argued in chapter 3, measurement within an agreed framework can be a valuable source of information to NFPs and their stakeholders.

In the absence of a ‘single bottom line’, rigorous performance evaluations are the only means by which the performance of NFPs can be gauged. However, as noted above, no single measurement approach will be appropriate to all activities in all circumstances.

Irrespective of which measurement methodology is adopted, it is essential that the results are transparently presented and capable of independent verification. This ensures that the credibility of claims about performance, and the assumptions underlying them, can be rigorously tested. Such credibility is essential to the ongoing success of NFPs. As the Fundraising Institute of Australia noted:

Public attitudes and the views of donors and other stakeholders (including beneficiaries) are the primary incentives for nonprofit organisations to operate efficiently, effectively and innovatively. Nonprofit organisations depend on contributions from grant makers (both government and private), the public and their members, in order to deliver services to beneficiaries, and a loss of confidence from these stakeholders can be disastrous for an organisation. This incentive varies somewhat depending on an organisation’s sources of funding, however it is ultimately

an issue of being accountable to funders and stakeholders, regardless of who they may be. (sub. 76, pp. 7–8)

In addition, better understanding of the sector can aid governments seeking ways of achieving social and economic goals and researchers attempting to better understand the processes of the sector. The framework outlined in chapter 3 has the advantage that it is capable of accommodating the variety of measurement approaches that have been applied to evaluating sector activities; it draws on the language of public policy evaluation and so is compatible with frameworks for delivery of government funded services, and can be used to assess the broader contribution of the sector at the ‘macro’ level.

However, the nature of the sector’s activities makes it essential that any results derived from the measurement framework are subject to the necessary qualifications and interpreted in the context of the sector’s activities. Put simply, measurement results cannot be taken at face value.

The need for careful interpretation is well-known and arises for several reasons — comparability, quantification and applicability.

Problems of comparability

First, there is the difficulty of comparability. The measurement framework facilitates comparisons between activities and organisations within the sector. However, differences in performance outcomes can arise for reasons beyond the control of organisations. In its report comparing the performance of government agencies, the Steering Committee for the Review of Government Service Provision noted that:

The differing environments in which service agencies operate affect the outcomes achievable and achieved by agencies. Any comparison of performance across jurisdictions needs to consider the potential impact of differences in clients, geography, available inputs and input prices. Relatively high unit costs, for example, may result from inefficient performance, or from a high proportion of special needs clients, geographic dispersal, or a combination of these and other factors. Similarly, a poor result for an effectiveness indicator may have more to do with client characteristics than service performance.

This Report does not attempt to adjust reported results for differences that may affect service delivery. Users of the Report will often be better placed to make the necessary judgments, perhaps with the benefit of additional information about the circumstances or priorities of specific jurisdictions. (SCRGSP 2009, p. 1.22)

The transparent presentation of results and the assumptions underlying them (including those made about the ‘counterfactual’) can therefore enable users of

measurement results to better understand the reasons for divergences in performance outcomes. There will typically also be a role for qualitative explanation of, and any qualifications on, the results to be provided. As noted by Neuhoﬀ and Searle (2008, p. 37):

Wrongly applied, external pressure on nonprofits to focus on cost per outcome could simply become yet another reporting burden on capacity-strapped organizations. Foundations may also be tempted to compare two organizations' cost per outcome without taking into account important differences between them, such as the populations they serve or the kinds of overheads they have to bear.

Done right, however, reducing cost per outcome will lead to more bang for the nonprofit buck – a greater impact across the whole range of issues that nonprofits grapple with on society's behalf. And impact, after all, is the true bottom line of nonprofit work.

Problems of quantification

Second, the nature of the sector's activities suggests that many (if not most) of its benefits will not be amenable to quantification. This point was noted by Catholic Social Services Australia:

Much of the contribution of community and faith-based agencies cannot be expressed in economic terms. There are two major issues:

- *Value judgments*: there is no morally or politically neutral way of placing a value on the end results (impacts) of not for profit activity.
- *Not all contributions can be expressed in economic terms*: much of the not for profit sector's contribution relates to objectives that cannot be valued in dollar terms. (sub. 117, p. 7; emphasis in original)

These are clearly issues which considerably complicate the task of measuring the sector's contribution. But, they are also regularly confronted by governments seeking to assess the value of their policy decisions. Policies which involve favouring one group in the community over another invariably involve value judgments. And, many of the outcomes governments seek to achieve are difficult to value in dollar terms.

However, the increasing trend to evidence-based policy has led to ways of circumventing these problems. Transparency in making value judgments, and explicitly identifying the impacts on the various groups within the community, enable governments to be held accountable for those judgments. Governments have also endorsed a variety of approaches for measuring intangible benefits. For example, value of statistical life and quality of life indicators are used to provide estimates of the possible net benefits arising from regulations designed to reduce the probability of personal injury or death (Australian Government 2007). Again, the

key point is to ensure that the methodologies used to value these intangible benefits are presented in a transparent manner so their appropriateness can be judged by those using the measurement information. The use of ‘sensitivity analysis’ (a cost benefit tool which varies key assumptions to assess the change in the bottom line result) can also be used to test the robustness of measurement results.

Moreover, the increasing trend towards NFPs undertaking measurement exercises for their own purposes (chapter 5), suggests that while these challenges are significant they are going to be faced by an increasing number of organisations. Since one of the purposes of measurement is to enhance comparability, a framework which enables a consistent approach to overcoming these problems will improve the quality of measurement results. An important motivation for the establishment of the Centre for Community Service Effectiveness (chapter 5) is to provide a means to disseminate evaluation findings and to subject them to peer review. Over time meta-analysis of evaluations will provide information on more robust indicators of intangible outcomes and measures of value that can be applied with some degree of confidence.

Problems of applicability

Third, there is the issue of whether a structured measurement framework, based on impact mapping, is appropriate for all organisations within the sector. Flack argued:

Measuring the performance of many kinds of not for profit services using the ‘production model’ is problematic simply because the causal links between inputs, outputs and outcomes are difficult to establish in many of the services provided by NFPs ... Such measures are likely to be useful only in those circumstances where the services being measured are highly specified and quality of each unit of service is very similar ... Such systems of measurement rarely capture the unspecified but important elements of the services (‘shadow services’), such as the informal chat, help with a government form, etc., that are delivered with, for example, a meals on wheels service. (sub. 29, p. 8)

While a measurement framework which maps impacts from the inputs used to produce them is more straightforward to apply to an organisation with well established processes and homogeneous outputs, there are measurement approaches available to those organisations with more complex, multi-dimensional activities. For example, the purpose of Stakeholder Value Management Analysis is to initially identify which activities are most valued by stakeholders. This then allows organisations to prioritise resource allocation to these activities.

The measurement framework does not imply a strict one to one mapping between inputs and outputs and outputs and outcomes. The importance of how things are

done, as well as what is done, can be recognised in the framework in the quality aspects of the service outputs and in the outputs in the areas of connections and influence, for example. Nevertheless, it is important that attempts be made to articulate why what is done and how it is done should lead to the desired results. This articulation and documentation at the planning stage facilitates not only clearer thinking but also what measures would help to confirm that the thinking is correct. These measures form the most useful indicators for the NFP's own learning about how to do things better, and should be those of most interest to the funders in assessing effectiveness.

The distinction between outputs, outcomes and impacts provides a basis on which the service delivered by an NFP can be distinguished from the effects on those who benefit from that service. In the case of provision of a Meals-on-Wheels service, Land observes:

Input indicators might include the dollar value of the foods and facilities used to produce the meals; the number of individual volunteers or paid workers involved in the production and delivery of the meals; and the time and transportation costs involved in this delivery ... *Output indicators* might focus on the characteristics of the organization's clients and client satisfaction with the meals delivered. *[Impact] indicators* could be defined in terms of the effects of the meal delivery on the nutritional or health status of the clients and the impact of meal delivery on client satisfaction and thus on their overall subjective well-being or quality of life. Finally, assuming the data for a reasonable array of such indicators could be compiled, *analytic indicators* relating, for example, input estimators to output, outcome, and [impact] estimators could be estimated. (2001, p. 70)

Properly applied, measurement can reveal insights into NFPs

In sum, while the nature and activities of NFPs pose significant measurement challenges, these are not dissimilar to those faced in other areas (most notably, public policy). Moreover, the increasing pressures — both internal and external — on NFPs to evaluate performance mean that these challenges will have to be confronted rather than avoided.

That said, the process of measurement — of identifying resources, processes, key stakeholders, and the links between cause and effect — can be as informative for an NFP and for those seeking to better understand the sector as whole, as the results of measurement. As noted above, the key to good measurement is ensuring that results are robust, all relevant assumptions are made clear and calculations are presented transparently to allow independent verification.

B.7 Studies on the sector

A large number of studies have been undertaken into sector activities, organisations and programs. Some of these have been conducted to specifically assess performance, others to explore the more general contribution made by sector activities. The examples set out below all start with identifying and measuring outcomes. They differ in the scope of outcomes considered, and whether they attempt to place a value on the outcomes.

The stakeholder analysis example identifies both process and activity outcomes that are of value to stakeholders, but limits itself to ranking the relative importance of these outcomes. The comparative analysis (benchmarking) example looks for systematic differences in outcomes across types of providers. The differences in 'value' are qualitative in nature so cannot be aggregated to give an overall value comparison. This approach is more about providing information for improving performance, although it also informs choice where people's values differ across the different outcome areas.

Input costs are considered in the cost-effectiveness and cost benefit analyses. Both examples given here make the counterfactual explicit. The cost-effectiveness analysis does this through comparisons of outcomes for children who had not received the intervention. The cost benefit example counterfactual is based on a mix of outcomes in the US and expert judgement. These approaches also put a value on the outcomes, the cost-effectiveness using a costs avoided approach, while the cost benefit example uses a statistical value of life.

Stakeholder analysis

The Australian Red Cross Blood Service

Fletcher et al. (2003) undertook a stakeholder analysis of the Australian Red Cross Blood Service (ARCBS).

The ARCBS (a division of the Australian Red Cross Society) provides blood products, tissues and related services to the Australian community. Around half a million Australians donate blood to the organisation each year. It has a paid workforce of around 2000 full-time equivalents and a similar number of volunteers. Products and services are generally supplied free of charge to, and it receives grants from Commonwealth and state/territory governments (ARCBS 2009).

The organisation's key stakeholders were identified as governments, patients, health institutions, regulators, corporate sponsors, staff representatives and blood donors. Representatives of each of these groups were asked to place numerical rankings against attributes which were grouped into the key performance areas of the ARCBS. These included product safety, sufficiency and reliability of supply, research and development, public confidence and working with blood donors and volunteers. The study found that stakeholders placed the greatest value on product safety and surety of supply. Ability to work with donors and public confidence were also valued relatively highly.

Comparative analysis (benchmarking)

Residential aged care

The Allen Consulting Group (ACG) (2003) analysed the contribution of NFP residential aged care providers. The study found that there were not significant differences in broad measures of service quality between NFP, corporate and government providers. However, utilising data collected as part of the accreditation process for aged care providers, the study found that NFP providers tended to perform better according to indicators of 'resident lifestyle'. Accreditation results showed that NFPs within the sector had the largest proportion of facilities graded as 'commendable' and rated best relative to other provider's indicators of resident lifestyle. However, within each sector, there were significant variations in the accreditation grades received by individual facilities.

Cost-effectiveness analysis

Mission Australia's 'Pathways to Prevention' project

Over the past 10 years, Mission Australia (sub. 56) has undertaken a longitudinal study of children and families involved in its 'Pathways to Prevention' project (an early intervention family program in Inala, Queensland).

The project consists of an array of programs which combine behaviour management and social skills courses for preschool-aged children with support services for families (including behaviour management programs, skills programs and parent support groups) and community development activities.

The aim of the research is to measure outcomes for children and their families who have participated in the program. The research has been undertaken in collaboration

with Griffith University and with financial support from the Australian Research Council. The project's evaluation involved:

- investigating whether the program contributed to positive outcomes for children (i.e. did it make a difference to children's lives?);
- an attempt to understand why outcomes were achieved (that is, the mechanisms underlying change);
- an attempt to establish whether the program provided a useful model for 'real world' community practice;
- a thorough breakdown of costs and resources used in implementing the program, and an economic analysis of benefits produced in relation to those program costs which will provide the basis for on-going investigation of the cost-effectiveness of the *Pathways* model of prevention in comparison to other intervention strategies (including remedial or treatment-focused secondary and tertiary intervention programs); and,
- the development of methods for longitudinal follow-up of children's academic progress and their parents' level of engagement within the school system and involvement with their children's learning. (Homel et al. 2006, p. 40)

Measurement focused on improved outcomes for the participating children and included improved social competencies and language skills (outcomes for other family members were not quantified). Data was collected on measures of language proficiency and behaviour among the children participating at the start and end of each preschool year. In order to measure the difference intervention made, comparison results were also collected from preschools in which the programs were not offered.

The evaluation considered the marginal cost of providing the intervention programs offered under the project and compared these to the costs of remedial programs intended to deal with the problems which would emerge in the absence of such intervention. In the absence of evaluations on the effectiveness of those remedial programs, and the lack of a common metric for comparing outcomes across programs, the evaluation employed a sensitivity analysis. This compared outcomes using various assumptions about program effectiveness.

This enabled a range of cost-effectiveness ratios to be estimated for the 'Pathways to Prevention' project and for alternative remedial programs. The evaluation suggests that early intervention can cost up to \$20 000 less per participant for children with challenging behavioural problems.

Cost benefit analysis

Surf Lifesaving

The ACG analysed the economic and social contribution of Surf Lifesaving Australia (ACG 2005). The report notes that, with 110 000 members and 33 500 volunteer surf lifesavers, Surf Lifesaving Australia is ‘... possibly the greatest single volunteer service organisation in Australia’ (2005, p. iv).

Costs of surf lifesaving were based on input measures, including imputed values for volunteer time and expenditure by Surf Lifesaving clubs and governing national, state and territory bodies.

To calculate the value of output, the report considered the number of rescues undertaken by Surf Lifesavers in Australia each year. Using data from the US, and the opinions of local surf lifesaving experts, the proportion of these rescues which, if not undertaken, would result in death, permanent incapacity, minor injury or no injury was estimated. This established the counterfactual (that is, the situation which would have occurred in the absence of surf lifesaving activities). Sensitivity analysis was also conducted to establish how robust the estimates were to changes in assumptions about the number of rescues required.

A monetary value was placed on the value of lives saved, or serious injuries avoided, using a ‘human capital’ approach, which uses the value of income lost as a result of premature death or serious injury as a proxy for the value of life. As the report notes, this approach will tend to understate the true cost of death or serious injury because it does not explicitly recognise intangible costs such as pain and suffering.

The benefits to those who volunteer, including those arising through enhanced social networks, were discussed, but not valued in the study.

In net terms, the report considered that, through the value of lives saved or serious injury averted, surf lifesaving contributed \$1.4 billion in 2003-04.

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