

Exploring the Outcomes Star™ and Cost-Benefit Analysis (CBA) methodology

A summary of our learning and reflections as of October 2018

1 Introduction

Cost-benefit analysis (CBA) is a systematic approach that assigns economic costs and benefits to an intervention, project or policy. The financial implication of a New Delivery Model (NDM) is compared to Business As Usual (BAU) with consideration of what would have happened without intervention to assess whether a policy or project is economically beneficial.

Within CBA, Social Return on Investment (SROI) is a specific approach which is oriented more towards internal learning and demonstrating value to commissioners. It places particular emphasis on the perspective of service users and other stakeholders, including their views on the value of a wide range of outcomes.

Cost benefit analysis approaches require that the outcomes of the intervention are measured in some way as this provides a basis for calculating the economic costs and benefits. This document draws on three experiments in combining the Outcomes Star and CBA to look at the pros, cons and issues to be considered in using data from any of the tools in the Outcomes Star suite as a basis for this calculation.

Outcomes Stars are evidence-based tools that both support and measure change, created by Triangle Consulting Social Enterprise Ltd and available for use under licence and with training. There are over 30 sector-wide versions of the Star available, consisting of a set of outcome areas underpinned by a 5-stage scale called the Journey of Change. They are designed for use by frontline services to both measure outcomes whilst also providing a consistent framework for outcomes-driven keywork and engaging and empowering service users. They are not primarily designed for use in a CBA context. More information about the Outcomes Star and the use of Star data can be found on our website www.outcomesstar.org.uk.

2 The role of the Outcomes Star tools in the CBA process

Here we set out the stages in a typical CBA process, explaining the features and values of the Outcomes Star that are relevant for each stage and therefore the roles that the Stars can play.

a) Identify stakeholders and scope

Stakeholders are those that experience material change because of the service - e.g. service users, local council, central government (benefits for individuals and the state are usually measured separately). Stakeholders are identified in all forms of CBA but only in SROI are they involved in determining the outcomes and their value.

The Outcomes Star tools only measure impact on the service user and do not usually measure any wider benefits to others (for example the service user's wider family or community).

b) Develop an impact map

An impact map is a theory of change linking inputs, outputs and outcomes. Traditional CBA is more likely to focus on expected policy outcomes, so the theory of change is more pre-determined. In SROI there are no assumptions about the impact of a service, it only measures outcomes found to be important through extensive stakeholder engagement (questionnaires or semi-structured interviews/workshops). Outcomes can be unintended or negative.

The process of development of the Outcomes Star tools involves identifying the key individual service user outcomes that are important for that service user group. This well-researched set of outcomes can be used in CBA, but the disadvantage is that it is not specific to the particular project in question.

c) Establish impact

This stage involves the measurement of outcomes from the project or intervention.

Using an Outcomes Star tool provides a way of measuring those outcomes.

In addition to measuring outcomes, CBA also involves identifying aspects of change that would have happened anyway or because of other factors. In order to do this data is collected for each outcome on:

- 'dead weight' - i.e. what would have happened anyway under BAU
- the impact on each outcome because of the intervention (NDM);
- the level of need in the cohort or geographical area targeted by the intervention;
- the degree of engagement with the cohort;
- the time lag before the change in outcome, and the sustainability of each outcome

The Outcomes Star does not in itself enable an organisation to make these calculations so a way of doing this needs to be designed in addition to using the Outcomes Star to measure outcomes.

d) Evidence and value outcomes

In this stage a financial value is assigned to each outcome (e.g. X change = £ benefit). Valuing outcomes involves using research/databases (e.g. average number of times A&E is accessed if a person is homeless and cost per A&E visit).

The Outcomes Star does not include this kind of cost information, so this needs to be obtained from elsewhere.

e) Calculating the cost-benefit ratio

This stage involves adding up all the benefits, subtracting any negatives and comparing the result to the investment

f) Verification of the results

This is only explicitly part of the SROI approach to CBA and can range from simply talking to stakeholders to formal external verification. Social Value UK (SVUK) and the Housing Associations' Charitable Trust (HACT) provide an approval process.

3 Examples of using the Star in CBA

We have explored the viability and advisability of the use of the Outcomes Star tools within CBA using an action research approach, by experimenting with using three different versions of the Outcomes Star in this way in three different settings:

1. The Community Star and Groundwork
2. The Homelessness Star and Camden Council
3. The Justice Star and Norfolk Police and Crime Commissioner

1. The Community Star and Groundwork

In 2010 NEF and Triangle worked together on an SROI project using the Community Star within the Marks and Spencer / Groundwork Greener Living Programme.

Stakeholders were identified and involved in the development of the impact map. As part of this, Community Star scales were mapped onto specific outcomes. For example, positive movement along the 'Feeling safe' arm of the Community Star was identified as one indicator of feeling safe in the neighbourhood, alongside more objective indicators. A draft version of the financial proxies linked to each outcome was developed (e.g. for Antisocial behaviour, the financial proxy was Cost (economic and social) per capita of criminal damage in England and Wales). Data on the costs assigned to each proxy was also gathered. A plan for assessing attribution of benefits (i.e. how much value was added by the projects) was also developed.

This work did not get as far as assigning values to specific Journey of Change (JoC) stages but provided a starting point for the next joint piece of working looking at the Homelessness Star in Supporting People services in Camden Council.

2. The Homelessness Star and Camden Council

In 2012 New Economics Foundation (NEF) and Triangle carried out a paper-based Valuing Model for the Homelessness Star using the principles of SROI for a services commissioned by Camden Council's Supporting People programme and provided by St Mungo's and St Christopher's. Three stakeholder groups were identified: individual service users, Camden Council and Central Government.

Interviews were conducted with staff at St. Mungo's and St. Christopher's in order to map the Homelessness Star scale definitions onto hard outcomes and desk research was carried out to identify the probability of these outcomes at different points on different scales and to identify the financial consequences of these outcomes. For example, 'Stuck' in the Mental health area was linked to 'Frequent displays of manic or psychotic behaviour' (hard indicator), which was linked to 'Cost of responding to crisis intervention if presents at A&E', with this estimated to occur three times a year. The probability of hard indicators at each JoC stage was estimated and financial cost adjusted accordingly (e.g. 0.50 probability and £1000 cost = £500).

3. The Justice Star and Norfolk Police and Crime Commissioner

In 2018 Triangle carried out a piece of work with Norfolk Police and Crime Commissioner to value outcomes measured by the Justice Star data using a valuing tool created by New Economy Manchester.

In order to do this Triangle mapped the JoC onto the indicators in the valuing tool, identifying the point on the 1-10 scales at which it was reasonable to assume change in hard indicators. For example, in this grid change in a hard indicator listed in the CBA tool was expected when a service user moves from Stuck (1-2) to Accepting help (3-4) but not when they move from Accepting help to a reading of 5.

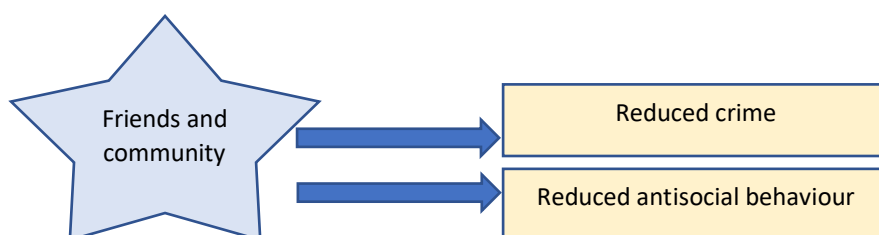
1 st Star	2 nd Star					
	1-2	3-4	5	6	7-8	9-10
1-2		✓	✓	✓	✓	✓
3-4				✓	✓	✓
5				✓	✓	✓
6					✓	✓
7-8						✓
9-10						

The concurrence between Star areas and the CBA tool hard indicators varied by Star area, so a level (1-3) was assigned to Star areas to reflect this. On the basis of this mapping the Police and Crime Commissioner decided to use Star areas identified as having strong concurrence with the hard indicators they were interested in as a basis for their CBA calculation.

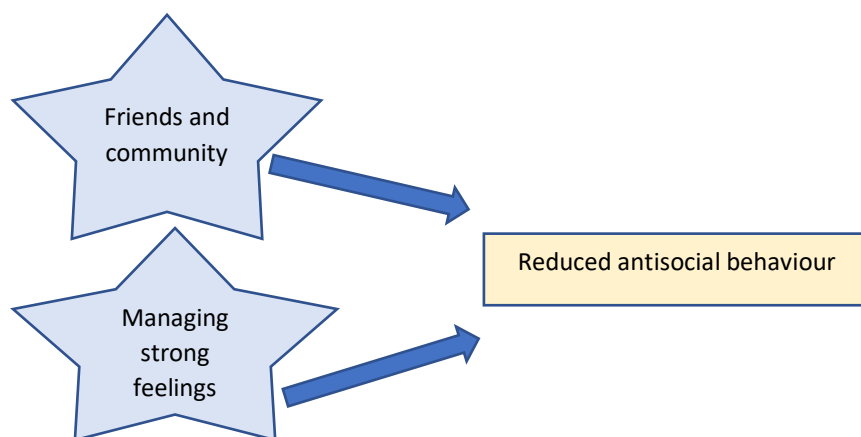
4 Issues and findings

These three experiments identified a number of challenges encountered in using the Star as a basis for valuing outcomes:

- a) Star areas are baskets of relevant changes within an outcome area so do not always lend themselves well to objective indicators, for example:
 - o Positive use of time includes employment, training, education and other meaningful use of time. Even at 10 people are using their time well but this may or may not involve work
 - o Living Skills and self-care contains health and other aspects of living skills and self (e.g. managing money), so someone may move up to 10 without any change in health behaviour
- b) Star areas could be good indicators of change in, say, mental health and well-being or increased employability, but the mapping becomes less meaningful and more problematic when very specific proxy indicators are used as is usually the case with SROI (e.g. NVQs or reduced child truancy)
- c) It can be hard to define Star thresholds by which indicators are likely to have been achieved. In many cases the probability of the outcome indicator changes gradually with change in the Star, but only when someone moves to around 8 have they achieved definite change in the indicators. It is possible to use probabilities for each JoC stage in a CBA
- d) Suggestions about how to code the Star for outcome indicators (e.g. Mental health) can be affected by the specific outcome in the CBA tool (e.g. reduced cost of interventions). The time scale of the cost-savings is worth considering - progressing beyond Stuck results in immediate costs but reduced cost of long-term intervention. For example:
 - o someone at Stuck in the Mental health area of the Star will probably have worse mental health (than those at higher Journey of Change stages) but will probably cost less in terms of interventions
- e) Some Star areas are mapped onto more than one outcome indicator. For example, positive movement on Friends and community is likely to be associated with reduced crime and reduced antisocial behaviour. If someone progresses on this Star area, it is reasonable to code both indicators as there could be cost-savings associated with each type of change



- f) Some outcome indicators could be predicted by change in more than one Star area. For example, reduced antisocial behaviour is likely to be predicted by positive change in both Friends and community and Managing strong feelings. If someone progresses on both areas, care must be taken not to count reduced antisocial behaviour twice for the same service user.



Because of these issues decisions have to be made around how to map scale descriptors onto costable impacts, the likelihood of achieving these impacts at different points on the JoC and how to avoid double counting.

In making these decisions in the three studies described here, interesting dynamics in the way that costs increase and decrease were revealed:

- The Justice Star study indicated that although some cost savings are achieved earlier in the scales, often cost savings are not achieved until 8 or 9 on the scale – a point that many service users do not reach
- In the Homelessness Star study, progress on some scales was associated with cost savings to Central Government but increased costs to the Council. In the Managing mental health scale the financial cost to the state and council decreased as individuals moved up the JoC and they only become ‘savings to the state’ at Self-reliance
- In the Justice Star study, some scales costs increase when progress is made from Stuck to Accepting help and then on to Believing and Trying and it is not until the Self-reliance stage that savings are achieved.

5 Conclusions and recommendations

The work described above highlights that use in CBA is not one of the intended purposes of the Stars and they are not developed or tested with that purpose in mind. For this reason, there is often an imperfect fit between the definitions that form the scale points on the tool and the kinds of costed indicators that are included in value banks such as those provided by New Economy Manchester. The number of assumptions and estimates that need to be made make any findings and conclusions necessarily tentative and dependent on the accuracy of those assumptions. In addition, because in the short to medium term costs can initially increase with service user engagement with services, this kind of analysis may not always provide the compelling case for funding that service providers hope for.

Nevertheless, Triangle’s experiments with using the Star in CBA indicates that it is possible and can provide a comparatively quick and easy way of estimating benefits.

While the specific conclusions of a CBA using the Star should not be presented as a ‘scientific proof’ of cost savings in a specific instance, we have found that this kind of application can be helpful as a way of illustrating that hard to pin down progress made by service users (and measured on the Star) does translate into real benefits. In addition, it can help to identify the dynamics of the way in which costs and benefits change at different stages of the Journey of Change and how they are experienced differently by different stakeholders. For example, costs might be borne by social services, but savings experienced by the NHS Trust.

More broadly we believe that caution should be exercised in any application of CBA in practice settings, whether utilising the Outcomes Star as part of the outcomes measurement or not. CBA is primarily a tool for research and as such requires a level of work, expertise and rigour that most organisations are not equipped to bring to routine service delivery. Furthermore, the need to look at issues such as deadweight can require experimental research designs which are difficult to set up.

We would argue that economic analysis of any kind has limitations even when financial proxies for non-economic benefits like quality of life are used. The approach tends to imply that the complex dynamics of policy and service delivery can be reduced to a single figure and so everything can be ‘scientifically’ compared by means of the unifying metric of money. In practice, choices about service provision and priorities should involve values and judgement as well as numerical data.

6 Further information

We are happy to share our learnings and discuss opportunities for using the Star in CBA. Please get in touch on info@triangleconsulting.co.uk or +44(0) 207 272 8765.

For more information about all aspects of the Outcomes Star please visit our website www.outcomesstar.org.uk.

More information about CBA and SROI can be obtained from the following websites:

- HACT (<https://www.hact.org.uk/>)
- Social Value UK (www.socialvalueuk.org/)
- Social Audit Network (<http://www.socialauditnetwork.org.uk/>)
- Social Value Engine (<https://socialvalueengine.com/>)