


Working with Economic Evaluation: Dream or Nightmare?

Australasian Evaluation Society Conference Presentation
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 Victoria
The Place To Be

DEPARTMENT OF
PRIMARY INDUSTRIES | farm
services

Round table session outline:

Aims:

1. Present lessons gained whilst working on an economic evaluation
2. Share perspectives on where both types of evaluation can work together, and the role that evaluators not trained in economics can play

Process for the day:

- Introduction – Bern
- Case study- Geoff
- Lessons – Bern
- Discussion and report back - All

Context for this work: the need

An emerging need for greater use of economic analysis within the DPIV Dairy Program & more broadly across DPI

- In 2007 Dairy Australia (DA), and other Rural Industry Research and Development Corporations embarked on a schedule of both targeted and random ex-post benefit-cost evaluations of projects
- At the same time, both Dairy Australia and DPI were seeking greater use of ex-ante benefit-cost analysis in program proposals to help inform investment portfolio decisions
- The DPI evaluation team needed to better understand how to work on economic evaluations

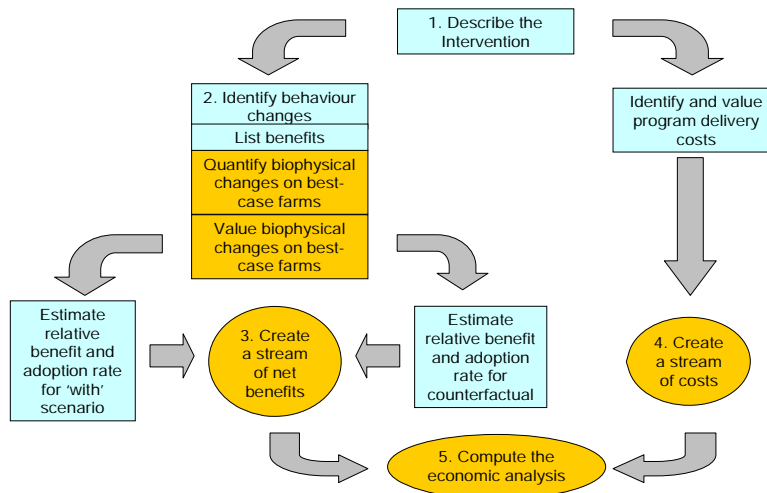
Our response: three-pronged approach

1. Development of a simple and transparent benefit-cost methodological framework as a set of guidelines
2. Initial application of the framework to existing data for the Feeding Pastures for Profit (FPFP) by the Dairy Program Evaluation Manager
3. Building on the initial analysis, with refinement of the process, feedback and subsequent data collection

Benefit-cost framework

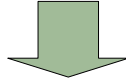
1. Describing the project intervention
2. Identifying, quantifying and valuing the project benefits in the 'with' and 'without' intervention (counterfactual) scenarios
3. Creating a stream of net benefits over time based on adoption curves and individual benefits
4. Identifying, quantifying and valuing the project costs and creating a stream of costs over time based on costing data and delivery schedules
5. Computing and interpreting the economic analysis, including sensitivities and assumptions

Applying the BCA framework

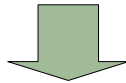


Step 1. Describing the project intervention

The FPPF program provides dairy farmers with decision guidelines + tools + support



2 theory days + 4 on-farm group days + 1 farm visit over 12 months



Improved grazing management and optimized feeding management → more pasture, more milk at lower cost → increased profits

Step 2: Identifying, quantifying and valuing the project benefits.....

2. Identify behaviour changes
List benefits
Quantify biophysical changes on best-case farms
Value biophysical changes on best-case farms

- previous evaluation showed 95% participants changed thinking, 89% changed grazing practices
- workshop identified pasture, supplement, cow, and people benefits
- more pasture grown and eaten (2t/ ha) + more conserved on 60% of farms + more timely supplements + more cows + milk per cow = more milk produced at lower cost
- farm consultant developed whole farm best case scenario and profit figures

Step 2: (cont)'with' and 'without' scenarios

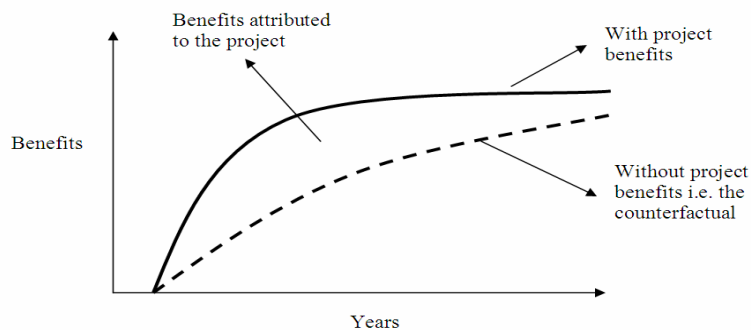
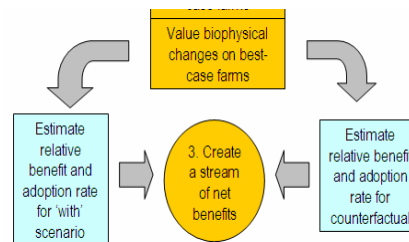
With intervention scenario:

- what proportion of participants gained high, medium, low benefits relative to best case ? → weighted average
- how long does it take to gain benefit, how long does benefit last ? does benefit decline over time ?

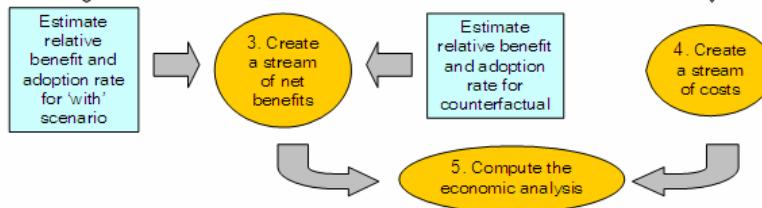
Without intervention scenario;

- to what extent will farmers gain his information from other sources ?
- what adoption profile without intervention ?

Step 3 : create stream of net benefits



Step 4: stream of project costs...5.convert to present value and compute benefit cost



- project costs readily available from delivery schedules
- convert benefits to Net Present Value
- convert costs to PV Costs
- compute BC ratio

Lessons learnt

Lesson 1: a program logic is an extremely useful tool to signal benefits, and as a starting point to understand delivery costs

Lesson 2: in this evaluation it was useful to identify best-case scenarios and as well the range of change scenarios across different participating clients

Lessons continued

Lesson 3: a multi-disciplinary team with experience in program delivery, farm economics, economic and non-economic evaluation can be valuable in identifying, quantifying and valuing behaviour changes and associated benefits

Lesson 4: credible evidence of behaviour change will provide a strong foundation to identify, quantify and value benefits

Lesson 5: deriving a counterfactual is critical in estimating economic net-benefit of a program, and should also be considered when assessing the non-economic impact of programs

Lessons continued

Lesson 6: people with different skill sets can play a different role at each stage of the BCA process, however it not clear cut who should lead the evaluation overall and produce the final report

Lesson 7: that data collection should be planned to fit with the requirements of an economic evaluation for accuracy and time-effectiveness

Discussion question

In table groups please share your own experiences with economic evaluation

1. Comment on the lessons we've identified and share those from your own experience
2. Discuss whether, in your evaluation work, you could list, quantify and value your program outcomes

...then report back to the wider group