Toolkit
Did it work? Monitoring and evaluating

Session 10

Charles Michaelis, Strategy Development Solutions – Pretoria, 16 October 2019
### Overview of the appliance and equipment training sessions

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What is evaluation?

Evaluation is an **objective** process of understanding how a policy or programme was implemented, **what** effects it had, for whom and **why**.

Leads to **more effective** policies and programmes.
What are indicators

Indicators are clues, signs or markers that describe **observable** changes or events which relate to a programme or policy and show how close a programme or policy is to its desired path and outcomes.

Indicators provide the **evidence** that something has happened – e.g. an output delivered, an immediate effect occurred or a long-term change observed.
Purpose of evaluation

• What we have achieved

• How we can improve
Different questions for different needs

- **Impact, what did we achieve?**
  - Regulators
  - NGOs and public

- **Process, how did it go?**
  - Programme managers
  - Partners

- **Economic, did we get value for money?**
  - Funders
  - Treasury
Indicators and evaluation in the policy making process

- Rationale
- Objectives
- Appraisal of options
- Evaluation
- Monitoring
- Feedback
Group exercise

As a group, list the reasons why indicators and evaluation are important?
Theory of change

- Forms the basis of monitoring and evaluation
- Should be developed alongside policy/programme design
- Participative process
- Refine in the light of evidence
**Generic theory of change**

- **Input**: Resources used to deliver the programme/policy – time and money
- **Activity**: What is done e.g. determine and implement MEPS
- **Output**: What happens as a direct result – inefficient products removed from market
- **Outcome**: Effect of the change – installed product stock becomes more efficient
- **Impact**: Wider effects – reduced energy consumption and CO2 emissions
Example indicators and evaluation questions for MEPS

- **Comparison to baseline or counterfactual**
  - Reduced energy consumption and CO2 emissions, improved energy security
  - What would have happened without the policy?

- **Energy consumption in use**
  - Products installed and operated to use less energy
  - Are products installed and operated as expected?

- **Sales of products by level of efficiency**
  - Consumers buy more efficient products
  - How do consumers choose products?

- **Proportion of products excluded from market**
  - Adopt Minimum Energy Performance Standards
  - Were the MEPS set at the right level?
Evaluation should test assumptions

- Products operated as expected
- Customers would not have bought efficient products otherwise
- Market would not have changed anyway
- MEPS are sufficiently stringent to remove poor performing product
- Adopt Minimum Energy Performance Standards
- Consumers buy more efficient products
- Products installed and operated to use less energy
- Reduced energy consumption and CO2 emissions, improved energy security
- Products used when expected
- Old products disposed of
- Enforcement is effective
Example indicator: EU Energy Label and Refrigerator Sales

topten.eu - Energy efficiency of White Goods in Europe: monitoring the market with sales data (2004-2014)
• **ABOUT 2,884,863** USED FRIDGES IMPORTED SINCE 2005.

• **40,000** UNITS SEIZED SINCE 2013, AND **10,472** TURN-INS.

**Figure 1:** Trend in Used Refrigerating Appliances Imports (2005 – 2018)

- **y = 23,904x + 228,477**
- **R² = 0.8653**
- **About 3.0 M Units Prohibited B/N 2013 & 2018**
- **Total Savings 3,624 GWh**

Monday, October 21, 2019

- Drastic reduction in used fridge imports from 2013 due to the enforcement of L.I. 1932 and increase in the imports of the new fridges (L.I. 1958).

- B/N 2013 & 2018, NEW FRIDGES WOULD HAVE CONSUMED 489GWh instead of 1,757GWh, resulting in a saving of 1,268GWh.

1.5M NEW & MORE EFFICIENT FRIDGES IMPORTED
Example evidence

Fan market distribution

Proportion of the market (%)

Energy efficiency level

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Did it work?

- Are appliances and lighting using less energy?
  - In total?
  - Than they would have done without the policy?

- Is it because of the standards and labelling policy?
  - How and in what circumstances is the policy making a difference?

- Could more energy be saved?

- What are the distributional effects?
  - Who pays and who benefits?
Change isn’t just caused by the policy

- Compliance with MEPS
- Labels influence competitive strategy
- Technological change
- Other influences on competitive strategy

- Manufacturers offer more efficient products

- Labels
- Relative price/affordability
- Environmental attitudes
- Brand

- Consumers purchase more efficient products

- Rebound – use for longer
- Rebound – bigger products
- More products
- Non-compliant products

- Unintended outcomes

- Energy Saving
Estimating the effect of energy labels – randomised control trial

- Population is split into 2 groups by random lot
- Outcomes for both groups are measured
Example – randomised control trial

- Test the inclusion of costs on energy label + staff training
- UK Government + John Lewis department store
- Trial group of stores compared to control group
- Small difference for washer dryers, no difference for other products
Randomised control trial

- **Strengths**
  - “Prove” effect of policy
  - In the circumstances of the test (when, where)
  - For the indicator being measured

- **Weaknesses**
  - Doesn’t tell you why the policy worked/doesn’t work
  - Doesn’t tell you if the policy will work in other circumstances
  - Challenging to design and implement
Estimating the effect of energy labels – theory based

• In theory, labels reduce energy consumption because:
  - Consumers have a reliable way of choosing energy efficient products
  - Manufacturers are motivated to produce more energy efficient products

• Theory based evaluation tests:
  - Whether the policy was implemented as intended
  - Whether there is evidence to support the theory
  - What else might explain what has happened

• Contribution analysis assesses the contribution to the change made by:
  - The policy
  - Alternative explanations

• Assess plausibility with a diverse range of stakeholders
Example of theory based evaluation

- Vietnam Energy Efficiency Labels
  - Implemented for a range of products in 2014
  - Survey of manufacturers found that labels had a:
    - Significant influence on manufacturers of air conditioning and refrigerators
    - Moderate influence on manufacturers of fans, rice cookers and lighting
    - No influence on manufacturers of washing machines and televisions
  - Survey of consumers found that labels influenced 85% of purchases to some extent
Summary

• Indicators and evaluation are key to delivering a successful policy

• Use theory of change to identify indicators and evaluation questions

• Consider what else might cause changes

• Design evaluation to test whether your policy has made a difference

• Consider who pays and who benefits to ensure fairness