The Use of Efficiency Assessment Tools: Solutions to Barriers

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Introduction

Efficiency Assessment Tools: Methods used to judge the efficiency of an intended measure/policy based on the highest return in monetary terms

Basic Efficiency Assessment Tools:

- Cost-Benefit Analysis (CBA)
- Cost-Effectiveness Analysis (CEA)
Barriers to the use of Efficiency Assessment

- **Absolute Barriers:**
  - Intense contradiction between beliefs
  - Convictions and political cultures related to the principles of efficiency assessment

- **Relative Barriers:**
  - Institutional barriers
  - Technical barriers

*Relative barriers may be overcome by implementing appropriate solutions.*
**Improving Technical Features of Efficiency Assessment**

- Best practice guidelines
- Creating and maintaining a database
- Quality control system
Best Practice Guidelines (1/3)

- Establishment of "best practice" guidelines for the Efficiency Assessment methods and techniques can enhance quality and uniformity of relevant studies.

- "Best practice" guidelines concern the two main methods: Cost-Effectiveness Analysis (CEA) and Cost-Benefit Analysis (CBA).

- These are related to:
  - Theoretical principles
  - Technical framework
  - Detailed valuation of all impacts of road safety measures (safety, travel time, pollution, and noise).
Best Practice Guidelines (2/3)

Guidelines for the following steps of Efficiency Assessment Techniques:

- Description of project alternatives.
- Estimation of implementation costs.
- Safety effects and side effects (on mobility and environment).
- Valuation / monetising all effects.
- Calculation of present value of costs and benefits and of efficiency measures (NPV, IRR).
Best Practice Guidelines (3/3)

Attention should be given to:

- **Mini-** and **maxi-CBA** and **computerised tools**.

- Distinction between **decision making at national and local level**, due to differences of project alternatives, applicable data and budgets for Efficiency Assessment.

- Situations with **multiple decision makers** and/or **powerful interest groups**, due to emphasis on the distributional effects.
Creating and maintaining a database (1/3)

Major practical barriers for Efficiency Assessment:

- Lack of information on safety effects
- Lack of information on side impacts
- Lack of information on costs
- Doubts on the validity of available values
Creating and maintaining a database (2/3)

- Arrangement of **existing evaluation studies** on effects of safety related measures on a **systematic basis**.

- Data on safety effects **retrieved, ordered, screened** and made **accessible** for CEA/CBA experts.

- Exploitation of **existing databases** of values (i.e. Norwegian Traffic Safety Handbook)
Creating and maintaining a database (3/3)

Establishment of a European Database:

• Access granted to a European network of experts.

• General typical values of safety effects at national and local level. Enable comparisons of local effects.

• Uniform quality of data on the measures implementation costs and on the effects on mobility and environment.

• Regular updates in accordance to last evaluation results in EU.

• European Road Safety Observatory (SafetyNet Project).
Quality control system

- Improvement of Efficiency Assessment quality by introducing *impartial quality control*.

- Permanent or ad-hoc *evaluation board* to judge CBAs on large-scale projects at national level.

- Stimulation of a *competitive market* for institutes executing CBAs.

- **Certification** of institutes highly specialised in CBAs.

- Establishment of appropriate *quality assurance procedures* by the EC.
Improving role performance of decision makers and analysis
Performing a proper Efficiency Assessment (1/3)

Close cooperation between decision makers and analysts

Questions to be answered:

• What is the definition of the decision problem (project alternatives, relevant impacts, equity issues)?

• Would an efficiency assessment be feasible and useful?

• Which evaluation method (CEA or CBA) would be adequate?
Important issues to be discussed:

• Use of a computerised tool, mini- or maxi- CBA.

• Presentation format of the results.

• Involvement of other interested parties.

• Timing of the deliverables.
Performing a proper Efficiency Assessment (3/3)

How to support and structure this process of cooperation:

- **Training** and **education** of decision makers
- Introduction of an informal **professional code** for analysts
- Development of **legal framework** for decision making on infrastructural projects
Training and education of decision makers

- **Motivation, knowledge** and **skills** to overcome barriers.

- **Various forms of training** (classroom instructions in post academic courses, seminars organised by networks of decision makers, job-training) due to different types of decision makers.

- **Requirements**: Clear training objectives, clear programme elements, adjustment to specific needs and experiences, encourage learning from each other.

- Initiation of **training programmes** for decision makers by the EC.
Professional code for analysts

• Establishment of **standard procedures** (code).
  
  - **Checklists** of items to be initially discussed.
  
  - **Techniques** for questioning decision makers (presentation of alternative options and consequences).
  
  - Examples of **various types of deliverables** (CBA/CEA, mini/maxi, presentation formats).
  
  - **Model** for the terms of reference.
  
  - **Reporting** methods, depending to the target group (Efficiency Assessment expert users, non-experts users).
  
  - **Examples** of the use of CBA/CEA at national and local level.
Legal embedding

- CBA in decision making stimulated by legal embedding in certain decision making processes (e.g. decisions about large investments in infrastructural projects).

- Too early to recommend a general legal binding CBA for road safety measures.

- More experience is needed with the application of the best practice guideline.

- Safety aspects should be included as an inherent part of the procedure.