Preparation of Cost Benefit Analysis

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MoS Workshop - Brussels, 28 September 2016
Agenda

The role of CBA in CEF Transport Calls

CBA in the evaluation process

CBA in practice

Recommendations
The role of CBA in CEF Transport Calls
What is it?

- A public decision making tool
- An application of economic theories (Welfare Economics)
- A very prolific field of research in the 70s
What does it do?

• Concludes whether a project is desirable

• The criterion used it to check whether it makes society better off
How does it do it?

- It is a quantitative exercise forecasting the impact of the project on all economic actors.
- Verifies that socio-economic benefits are larger than costs.
Why is it relevant?

- **TEN-T Regulation Art 7.2.c**
  - "A project of common interest shall be economically viable on the basis of a socio-economic **cost-benefit analysis**."

- **CEF Regulation Art 10.6**
  - "The amount of financial assistance (...) shall be modulated on the basis of a **cost-benefit analysis** of each project, availability of Union budget resources and the need to maximize the leverage of Union funding."
How is it used?

- Additional evidence of socio-economic performance (impact criterion) – Economic analysis
- To Identify cases of potential overfunding – Financial analysis
CBA in the evaluation process
What does it mean in practice?

- A CBA is required for Works and Mixed proposals (with sectorial exceptions for compliance driven projects – e.g. ERTMS)

- Specific CBA assessment has been embedded in the evaluation of CEF 2015 Call projects proposals.

- Dedicated experts have been involved during the assessment of applications to review the CBAs.
Award criterion Impact

CBA is an additional input

- The CBA analysis is a complementary source of information for the assessment of the 'Impact' criterion.
- The CBA-specific experts provided to the traditional external experts a CBA Assessment Report with their analysis.
- The CBA has been taken into consideration together with other elements in the evaluation and scoring of "Impact".
What is it meant by "major weakness in CBA"?

- The impossibility to achieve one of the two objectives defined by the Regulations:
- When it is not possible to conclude or concludes negatively on the funding need (Financial analysis as per CEF Regulation Art 10.6)
- When it is not possible to conclude or concludes negatively on the socio-economic impact (Economic analysis as per TEN-T Regulation Art 7.2.c)
What is a "major weakness in the CBA"?

**Financial Analysis**

**Not possible to conclude on the CEF funding needs**

- The financial analysis is missing;
- Revenues are not properly quantified;
- The methodology is too different from the recommended one (e.g. accounting analysis including depreciations instead of cash flows analysis, deviation from main parameters – e.g. discount rate – without justification)

**Conclude negatively on the CEF funding needs**

- The project generates sufficient revenues to fully repay operational costs and the capital investment;
- The project fails to demonstrate financial sustainability (risk of running out of cash flows);
- The project is financially profitable and therefore there is no need for CEF grants.
What is a "major weakness in the CBA"?

Economic Analysis

- Not possible to conclude on the socio-economic impact
  - The economic analysis is missing;
  - Negative externalities have not been considered.
  - The methodology is too different from the recommended one (e.g. deviation from main parameters – such as discount rate - without justification)

- Conclude negatively on the socio-economic impact
  - The socio-economic benefits of the project are less than the costs;
  - Even taking into consideration qualitative impacts (that could not be quantified) the evaluation concluded the project will result in a negative socio-economic impact.
CBA in practice
Which methodology?

- The European Commission methodology developed for the Cohesion Policy (DG REGIO)
- Applicable to both Cohesion and General calls

RECOMMENDED
How do you do it? (1/2)

- Economic theory and practice suggest to start the CBA from a financial analysis.

- This is roughly a normal financial cash flow analysis.

- The financial analysis is used to conclude on the funding need of the project and if necessary modulate it.
How do you do it? (2/2)

- The next step is to transform the financial analysis into your economic analysis.

- Addition of externalities and correction of market prices to social values.

- The results of the economic analysis are an additional input to the assessment of the Impact criterion.
How to prepare a good CBA?

Main underlying principles

- **Incremental approach.** CBA compares a scenario with-the-project with a counterfactual baseline scenario without-the-project (BAU).

- **Discounted cash flows.** Depreciation, reserves and other accounting items are excluded.

- **Opportunity cost.** Defined as the potential gain from the best alternative forgone.

- **Long-term perspective** Ranging from a minimum of 10 to a 30 years (could be adapted in case of concessions, very long term projects).

- **Microeconomic approach.** Direct effects are reflected in the ENPV, indirect (on secondary markets) and wider effects (large part of Network effects) are usually excluded.
How to prepare a good CBA?

The typical drivers for economic analysis in transport

- Time savings (per category – workers/free time)
- Vehicle operating costs savings (notably road or avoided on road)
- Accidents (avoided)
- Reduction of GHG emissions (CO₂ equivalent)
- Reduction of non-GHG emission (toxic emissions)
- Reduction of noise emissions
- Reduction of congestion
- Improvements in service quality
Recommandations
Recommendations

General

- CBA should part of the project **preparation process** to improve projects (not treated only as an obligation).

- The CBA should include both **economic and financial analysis**. The REGIO methodology includes also technical feasibility, environmental sustainability and a risk assessment.

- **Single unit of assessment**. In some cases the CBA should target the global project not only the action (e.g. unconnected – isolated action is meaningless). **MoS is an exception** as more than one CBA (using the same scenario) might be necessary (it is not necessary to prepare and submit a combined CBA).
Recommendations

Financial Analysis

- Make sure **the funding gap calculation is correct** and includes all revenues directly borne by users of the infrastructure under the scope of the action.

- Provide additional **qualitative information on revenues** (number of sources, formalisation/contractualisation of the revenue streams).

- Unless transferred to users by a reduction of fares or compensated by an equal reduction in the operating subsidy, **cost savings are considered as revenues** and therefore impact the funding gap.

- **Taxation** is a common source of mistakes. It **should be excluded**, especially in the economic analysis.
Recommendations

Economic Analysis

- **Labour** shall be treated as a **cost** (yet probably lower than the market value). Efficiency enhancing projects often forget to consider the employment reductions in the analysis.

- Make sure traffic volume forecasts are in line with national and EU planning (when relevant), otherwise explain the variance. Optimistic demand could overestimate socio-economic benefits.

- Some CBAs use **unrealistic scenarios without the project**. For example MoS projects in SECA area adopting a scenario where they keep emitting sulphurous gases (which is no more allowed since January 2015). This leads to an overestimation of benefits and investment costs.
Thank you for your attention