Cost-Benefit Analysis: Project

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CBA: Group Project

Project

- Now it's your turn to work!
- Pair up in groups of 3 or 4.
- Objective: find a project of interest (not existing yet) and find out whether it is worthwhile by conducting a CBA analysis.
- Ideally use some real life data, otherwise come up with realistic estimations.
- Present the results of your analysis to the other students in class.

CBA: Project

Project

First step: find a project.

- Brainstorm about the type of project you would like to consider.
- Infrastructure: brige, highway, tunnel, railway, airport, stadium, etc.
- Energy: dam, solar power plant, wind power plant, nuclear power plant, etc.
- Urban planning, healthcare, etc.
- Any project is possible, as long as you believe it can (potentially) improve social welfare.
- Ideally find a project where you can use your own knowledge and expertise, but not absolutely necessary.

CBA: Project

Project

Second step: evaluation phase.

- Why would such a project be desirable in the first place, independently of any cost considerations?
- What will be the impact of the project: on the economic activity, on the environment, on society as a whole, etc.
- Who is set to benefit the most from the project, who will (should?) be paying for it (standing).
- Background information critical, with data if possible (Statistics Danmark is a good source).

CBA: Project

Project

Third step: specifics of the project.

- Get more specific: define location and specific characteristics of your project.
- Example: bridge between Zealand and Jutland. How long? What path? How many lanes? Railway? etc. Try already to think how to justify these choices based on the background information. Using a map could also be useful here, depending on your idea.
- This will allow you to get a first estimate of the cost of the project.
- Cost estimation: look for similar projects in the recent past so to come up with a reasonable estimate (interval) of the cost of the project.

CBA: Project

Project

Fourth step: define alternatives to the considered project.

- A project can only be assessed in relation to other possible benchmarks.
- Status quo: project zero.
- Other less costly projects might also be considered instead of the project you have in mind.
- Example: instead of building a new lightrail, improve the quality and frequency of existing bus transportation.

CBA: Project

Project

Fifth step: Identify the impact categories, catalogue them, and select measurement.

- Define relevant indicators to measure the impact of the project.
- Predict the impacts quantitatively over the life of the project.
- Monetize all impacts: find relevant measures for value of time, value of life, etc. May be dependent on the country you're considering.

CBA: Project

The basic steps of CBA

Sixth Step: conduct CBA analysis.

- Compute the net present value of each alternative.
- Perform sensitivity analysis with respect to several of your assumptions.
- Make a recommendation!
- Prepare a presentation to explain your results to the other students in class.