A Multiple Account Approach to Benefit-Cost Analysis

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Definition and Role of BCA

• An evaluation of the changes in resource allocation resulting from a particular “project” where a “project” may include:
  • A public or private investment project
  • A change in laws, regulations or rules
  • A broader program or policy of one or more levels of government

• Role is to *inform* public policy debates
  • Monetizes costs and benefits
  • Doesn’t necessarily resolve debates
Traditional BCA

- Identify benefits and costs of a project
  - Aggregate to a single bottom line: net benefit
  - Provides simple ranking of alternatives
  - Typical approach: net benefit >0 => proceed with project
  - Opaque distributional consequences

- Social Benefit-Cost Analysis performs a market valuation of a policy or project, adjusting for social benefits and costs not reflected in market prices and costs.
Social versus Private

• Determined by the *reference group*: the set of (only those) persons whose gains and losses are to be included as directly relevant to the project decision

• **Social**: the project reference group is some social group as defined by residency, citizenship or similar criteria

• **Private**: the project reference group is some narrowly defined set of agents

• Separate private and social analyses may be conducted side-by-side for the same project
## Social versus Private

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Multiple Account Analysis

- *Multiple Account Analysis* performs a market valuation, representing social adjustments through the use of various stakeholder accounts
  - Acknowledges the role of **normative judgement** in decision-making
  - Recognizes that **values** are complex
  - Recognizes **not all consequences can be incorporated into a single measure of net benefit**
  - **Transparently identifies complex and imprecise measurement** of social benefits and costs
  - Clearly displays the **distribution** of net benefits across different stakeholders
Multiple Account Analysis – Typical Accounts

• Market Valuation Account
• Taxpayer Account
• User or Target-Beneficiary Account
• Economic Activity Account
  • Labour Activity
  • Business Activity
• Environmental Account
• Social Account
• Other Considerations – the baseline
1. Start with the Market Valuation
   Discounted cash flows adjusted for net effects

2. Social Adjustments by Account
   - User account
   - Taxpayer account
   - Economic activity account
   - Environmental account
   - Social account

3. Determination of net benefits and distribution
   Net present value of market valuation and all social adjustment accounts
Benefits of MABCA

• Evaluation framework to systematically identify:
  • Different types of costs and benefits
  • Relative value or significance of consequences to different affected parties
  • Transfers of value between stakeholder groups (i.e., taxes)
  • Trade-offs and critical values associated with alternatives

• Does not monetize all impacts

• Does not provide a single bottom line answer
  • Matrix summary of consequences
  • Describes pros and cons of alternatives
  • Describes distributional effects

• Transparency
Example: Rapid Transit Project

• Reference group key for determining effects in each account
  • City vs region vs province

• Market Valuation
  • Benefits: incremental revenues from new transit riders, avoided expenditure, subsidies
  • Costs: operating and capital costs, additional needed infrastructure

• Taxpayer
  • Benefits: incremental tax revenue, federal/provincial contribution
  • Costs: incremental expenditure, foregone tax revenue, subsidies, change in road maintenance

• User/Target Beneficiary
  • Benefits: faster commute (transit users and drivers), lower cost of commute vis a vis baseline
  • Costs: cost of commute
Example: Rapid Transit Project

• Economic
  • Benefits: incremental businesses near transitway
  • Costs: lost activity from taxis, lower fuel purchases

• Environmental
  • Benefits: air quality improvements
  • Costs: land disturbance from transitway

• Social
  • Benefits: less urban sprawl, reduced neighbourhood traffic
  • Costs: noise from buses
Conclusions

• Multiple Account methodology *transparently* and *explicitly* identifies trade-offs associated with projects and policies

• Helps inform policy debates

• Allows discussion of tradeoffs and distributional consequences