IMPROVING TRANSPORT PROJECT APPRAISALS IN THE ISLAMIC COUNTRIES — A conceptual framework



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Outline

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- 2. The conceptual framework
- 3. Appraisal of transport projects: international practices
- 4. An ideal type





Project appraisals and incentives

The credibility of project appraisals is often undermined by the information and incentive structure surrounding it

- Decisions taken before an ex-ante analysis is carried out
- Different and conflicting objectives of stakeholders
- Expenditure-driven approach to rise political consensus
- Incentive to adopt cheapest technology by suppliers
- Willingness to praise the client rather than scrutinise the project





Project appraisals and incentives

The credibility of project appraisals is often undermined by the information and incentive structure surrounding it

- **Misrepresentation** can be mitigated by specific features of the institutional setting or the funding mechanism and by the incentives system
- **Incentive systems** are tools for monitoring efficiency and for reducing the risk of moral hazard, e.g. linking the access to funds to the conditionality of achieving the targets initially set





The World Bank framework

The must-have of a Public Investment Management system

- Investment guidance, project development, and preliminary screening
- Formal project appraisal
- Independent review of appraisal
- Project selection and budgeting
- Project implementation
- Project adjustment
- Facility operation
- Project evaluation

Source: Rajaram et al., 2010





- Elaborating on the World Bank framework, **institutional and technical aspects** influencing transport project appraisal practices have been identified and structured, based on sectorspecific literature and drawing from international good practices
- The developed conceptual framework provides a **detailed checklist** to assess current practices in different contexts
- It has been used as a guide to carry out a survey and case studies in OIC countries and to analyse international practices, as well as to formulate conclusions and recommendations









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Legal basis of transport project appraisals

Elements included

- Legal requirement: which type of requirement is in place, if any? Is there a legal requirement to carry out transport project appraisal or it is it simply a recommended practice? Does the obligation define appraisal objectives, features and methodology?
- Scope of application: is the project appraisal system diversified depending on the scale and typology of the project? Is the appraisal performed on individual projects or on strategies?
- **Timing**: is project appraisal performed 'early' enough in the process, when project alternatives are still to be selected?





Are there legal requirements to perform CBA? Evidence from OECD



Which is the objective of CBA? Evidence from OECD



When is CBA carried out? Evidence from OECD



Scope of transport project appraisals Evidence from international practices

- Lithuania: CBA is applied for all projects above 300,000 Euro
- Malta: CBA is mandatory for all projects exceeding 5 million Euro
- Chile: there is a legal requirement for all public sector investment projects and programs to be evaluated, including infrastructure concessions funded by the private sector
- A general **proportionality principle** applies: a rule of thumb is for example to calibrate the depth and effort of the study according to the phase and cost of the investment



Governance of transport project appraisals

Elements included

- **Roles**: who is responsible for transport capital expenditure decisions? Is there a coordinating entity at central level or are project appraisal practices delegated to sectoral/local procurement agencies? Which activities are delegated? Who performs transport project appraisals?
- Quality review: How are quality standards for project appraisal defined? Is there a system of independent quality review of project appraisal?
- **Publicity**: are project appraisal reports publicly available? How are the stakeholders included into the appraisal process? Are project appraisal results used to inform public debate?





Who performs CBA? Evidence from OECD



Who checks the quality of CBA? Evidence from OECD



Are CBAs publicly available? Evidence from OECD





Capacity and tools in transport project appraisals

Elements included

- **Capacity**: Is technical capacity monitored and ensured? Is there a systematic training and dissemination programme to improve internal capacity? Is training in project evaluation provided? If yes, by whom?
- **Tools:** Are there standard tools such as models or templates that shall be followed for analysis and reporting? Are general and specific guidelines developed?
- Standards and guidelines: Are there legal requirements on the content of the appraisal report or is there no standard required? Are references parameters (e.g. time horizon, discount rates) and unit values provided in a prescriptive way or does the project analyst enjoy flexibility in performing the analysis?







Content of transport project appraisals

Elements included

- Methodology: What types of analysis (CBA, CEA, MCA, qualitative analysis, macroeconomic modelling etc.) are required as part of the project appraisal development? Is there one specific suggested methodology for project appraisal?
- **Items**: What is the standard content of a project appraisal? Which are the typical items included in an appraisal report? Which benefits/impacts are considered? How are they calculated?
- **Risk assessment**: How is the risk assessment incorporated in into the project appraisal? Are forecasts expressed by a baseline figure or are confidence intervals also provided? Is a quantitative and/or qualitative risk analyses carried out?





Methodologies in use for transport project appraisal

Methodology	Output
Macroeconomic simulation models	 Variation of gross domestic product (GDP) growth and other macroeconomic variables (inflation rate, employment rate, wages, etc.) and productive factors Variation of Human Development Index or other indicators Variation of Environmental Performance Index or other environmental indicators.
Input/Output models	• Variation of GDP growth and other macroeconomic variables (inflation rate, employment rate, wages, etc.) and productive factors. They are not suitable for capturing the technological change
Cost-Benefit Analysis	 Indicators at micro level, with a relation to economic the dimensions: net present value (NPV), internal rate of return (IRR) Willingness to pay for increased aesthetic value, hedonic price for urban regeneration, social value of improved safety, etc. Monetary value of environmental externalities using revealed or stated preferences
Cost-Effectiveness Analysis	 Quantitative indicators on travel time savings Quantitative indicators on safety: n. of avoided deaths and injured, Quality Adjusted Life Year (QALY)
Information Elicitation Techniques	 Qualitative information on the project's economic contribution Quality of Life Index and other qualitative information on the project's environmental contribution Environmental Impact Assessment (EIA) and other qualitative information on the project's environmental contribution.
Multi-Criteria Analysis	Qualitative impact score

In which sectors is CBA performed? Evidence from OECD



Specific requirements in terms of content of the CBA Evidence from OECD



Typical items included in a CBA



Typical items included in the economic analysis







Demand analysis in transport project appraisals

For its relevance in transport project appraisal, demand analysis has been singled out as a separate aspect within the technical dimension of the assessment

Elements included

• Forecasting techniques: What kind of forecasting models (deterministic/stochastic, static/dynamic, analytical/simulation) and techniques are used?





Standard transport model structure adopted in the UK for transport



Source: UK Government



Results of transport project appraisals

Elements included

- Use of results: How are the results of the project appraisals used? Is project appraisal used to provide a justification for individual project selection/decision in the feasibility phase or does it enable a prioritisation of projects?
- Selection criteria: Is it possible to select project with a negative economic result? How is alignment with strategies ensured? How are qualitative and quantitative evidence combined in the final assessment?





The role of CBA in the feasibility study stage Evidence from OECD



The conceptual framework developed for this study





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Follow up of transport project appraisals and learning

Elements included

- Monitoring: Is basic completion review performed? Do rules exist regarding obligations and requirements of completion reviews to identify forecasting errors or managerial problems? Is project appraisal constantly updated as monitoring and management tool to improve project resilience?
- **Ex-post evaluation:** Is ex-post evaluation of project carried out? If yes, when it is usually carried out? Is ex-post evaluation carried out periodically on a sample of investments or rather on a selective basis? If in-itinere and ex-post project appraisal is performed, how are they used as a learning mechanism?





The Netherlands

- 1. No legal requirement, but CBA is recommended by the government and used
- 2. CBA for public projects is outsourced to private consultants and subject to reviews by second opinions (mostly by the Bureau for Economic Policy Analysis)
- **3.** Transport-specific guidelines for CBA have been developed and are routinely updated. They include indications on:
 - Structure of the CBA
 - Step-by-step plan for economic project assessment
 - Market and competition analysis
 - Indirect and external effects
 - Reference parameters





The Netherlands

- 4. The assessment of effects in a CBA is done on the basis of well-identified steps: analysis of the problem; zero alternative option; estimation of the effects; monetisation; discounting; qualitative information about additional effects; sensitivity analysis
- 5. Different traffic and transport models are used, whose quality is constantly monitored through actualisations and periodic independent audits
- 6. CBA results are not the only criterion in the decision making about transport projects. In recent years, however, projects with a low Benefit/Cost Ratio are not selected
- 7. Ex-post evaluations are an important source of information for ex-ante assessment of similar projects





United Kingdom

- The obligation to carry out CBA for most capital investment projects does not derive from a legal requirement, but from government recommendations
- 2. The Treasury has a coordinating role. In order to ensure an independent approach, appraisals should be performed by teams who have had no involvement in the project proposal
- **3.** The "Green Book" provides guidance, methods, and recommended tools for developing options. Individual departments may develop specific methods for evaluations
- 4. Transport appraisal provides information on a wide range of impacts – on users and providers, but also on environment, wider society and government. WebTag appraisal tables provide guidance for option analysis and assessment of effects





United Kingdom

- 5. WebTag provides guidance on modelling techniques as well. It covers subjects such as forecasting future levels of demand and modelling the impacts that a proposal will have on travel choices such as route choice, choice of destination and choice of mode
- 6. Appraisal is used to inform decision-makers throughout the development of a project, from the early stage of alternative generation to the final approval
- 7. Monitoring and evaluation of all proposals should be planned, costed and provided for as an integral part of the proposed intervention under consideration





International Organisations

- The World Bank (WB) has the obligation to assist governments in achieving their national objectives, primarily by making the best use of their own resources, to which WB lending is a supplement. For this reason, emphasis is placed on the institutional and regulatory environment. The European Union (EU) has a strong legal basis on the appraisal of major investment projects (total cost exceeding 50 Million Euro)
- 2. A formal review process is provided in major project appraisals in EU cohesion policy 2014-2020. The procedure can take two different forms. The first one is an assessment of the project by independent experts, followed by a notification to the European Commission. The second one is to send the project documentation directly to the Commission, which provides an internal assessment





International Organisations

- 3. The WB and the Asian Development Bank have developed Guidelines for project appraisal. The European Union has developed Guidelines for CBA of major projects, and set up the Jaspers initiative together with the European Investment Bank (EIB), providing technical assistance to member states and accessing countries in preparing high quality projects
- 4. According to WB guidelines, a project appraisal should contain: 1. Strategic Context, 2. Project Development Objectives, 3. Project Description, 4. Implementation, 5. Key Risks and Mitigation Measures, 6. Appraisal Summary. A WB Handbook also describes analytical tools for the economic evaluation of effects of transport projects. Cohesion policy in the EU represents a significant example of harmonisation of methodologies in a multi-level governance framework.





International Organisations

- 5. The WB Handbook states that the most important step in estimating the benefits of transport projects is demand forecasting. Possible methods to estimate demand are suggested in the Handbook. ADB's guidelines suggest three approaches for demand analysis: surveys, trend extrapolation and forecasting models
- 6. The net present value (NPV) of a project is the standard economic criterion that the WB uses for accepting or rejecting a project. ADB's guidelines identify 4 indicators for making investment decisions: NPV, internal rate of return (IRR), B/C ratio and cost-effectiveness ratio. For major projects, the EU provides funding when the application shows not only that the project provides net benefits to the society, but also that it is in need of co-financing





International Organisations

7. About 25% of WB funded projects are subject to a Performance Audit Reports, assessing if objectives are achieved effectively, efficiently and economically. In an investment project by ADB, the design and monitoring framework (DMF) is key, setting out the long-term strategy for a project, the medium-term goal and the outputs which the project must target, along with the inputs and activities necessary to achieve these. In EU cohesion policy, much emphasis is placed on ex-post evaluation of programmes.





An 'ideal type' project appraisal system

Alternative solutions do exist, provided that some 'must-have' ingredients are included in the framework:

- a legal requirement to evaluate all investment initiatives;
- a system of "checks and balances" defining clear and separate roles;
- multistage evaluations with various filters and supervisory and quality control mechanisms;
- a system of norms, procedures and methodological support including the centralized definition of accounting prices;
- ex-post evaluation to identify forecasting errors or managerial problems.

Source: Gómez-Lobo, 2012



THANK YOU!

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Source:





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