International Workshop on Measuring Investment in Transport Infrastructure
ITF/OECD

9-10 February 2012
IEA, Paris

The importance of data in public & private assessments of transport projects

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Programme Officer
Statistics & Data
• IRF Presentation
• Data Collected – World Road Statistics
• Initiatives: Road Financing & Economics
• Economic Evaluation (private and public project data)
• A method: Cost-Benefit Analysis
• Conclusions
Not-for-profit organisation - Established in 1948.

Our vision: To improve road networks worldwide
Our mission: To be the voice of the road infrastructure industry
Our values: Commitment to safe, smart and sustainable roads

Our private sector members benefit from worldwide exposure for their products and services among key decision makers in over 115 countries.

Better roads, better world
IRF’s flagship product: World Road Statistics

Edited yearly since 1964.
Data compendium 1963-2009, raw data, no analysis.
Financed by member contributions and data sales.
WRS 2011 TABLE OF CONTENTS

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Section 8: Road Expenditures
Section 9: Energy
Road expenditures

1. Road Expenditures Levels & Categories

2. Responsible entity:
   - Government
     - Central
     - Regional
   - Private sector

3. Purpose of expenditures:
   - Investment
   - Maintenance
   - Research
   - Others
Total road expenditure per administrative levels - countries abstract (US$ million)

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Central</th>
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<th>Private</th>
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Source: IRF WRS 2011
### Total road expenditure per nature - countries abstract (US$ million)

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<th>Country</th>
<th>Year</th>
<th>Construction</th>
<th>Maintenance</th>
<th>Others</th>
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</table>

Source: IRF WRS 2011
Total transport investment by region and year (US$ million) low and middle income countries - private sector

Source: PPI World Bank
IRF knows the economic value of roads and the importance of sound asset management.

IRF provides you:

• Access key information on road investment programmes
• Meet future consortium partners for your next project bid
• Guide governments with policy advice on sustainable levels and mechanisms for funding for roads
• Put road maintenance on the political agenda
• Be part of thought-leaders on road financing & economics
• Access key, fact-based direct and indirect economic impact analysis for road investment.
Private Projects use a Private Evaluation

- Private Costing
- Market Prices
- Market Discount Rate
- Private Benefits

Public Projects use a Social Evaluation

- Social Costing
- Social Prices
- Social Discount Rate
- Social Benefits

Discounted Present Value

Better roads, better world
1) Costing Analysis

PRIVATE COSTING

- Construction & Contingencies Costs
  - Materials
  - Labour
  - Energy
  - Equipments

- Maintenance & Operation Costs
  - Materials
  - Labour
  - Energy
  - Equipments

- Other Recurrent Costs
  - Administration
  - Training
  - Promotion & Education

SOCIAL COSTING

Opportunity cost of resources, because of scarcity, to the national economy investing in infrastructure:

- Construction & Contingencies Costs
- Maintenance & Operation Costs
- Other Recurrent Costs

Indicators:

- AEC. Annual equivalent cost
- AIC. Average incremental cost

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1) Costing Analysis

Project Data

- Construction data (materials, labour, energy, equipments)
- O&M data (materials, labour, energy, equipments)
- Other recurrent data (training, administration, promotion & education)

LEVEL OF DATA DISAGGREGATION
1) Costing Analysis

**MARKET PRICES**

- Actual market prices involve distortions arising from market imperfections
  - Minimum wage labour
  - Control of exchange currency
  - Subsidies, taxes, quotas
  - Asymmetric information between lenders and borrowers

**SOCIAL PRICES**

- These prices are those prevailing in a competitive market
  - Social Discount Rate
  - Unskilled Labour Wage
  - Foreign Rate of Exchange
  - Land, water, energy, etc.

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2) Benefit Analysis

PRIVATE BENEFITS

- Estimated by Road Users Charges
- Direct Toll
- Indirect Fuel Tax
- Others

SOCIAL BENEFITS

- Estimated by Econometric Analysis (in monetary values)
  - Willingness to Pay
  - Beneficiaires’ Surplus
  - Saving costs
  - Others
Conclusions

• The valuation of transport projects becomes a multidisciplinary discipline

• Data remains a necessary factor to assess private and public transport projects

• Road Financing & Economics Initiative is key in providing policy guidance as well as a platform for the exchange of experience

• The use of shadow factors are crucial for a social valuation

• Econometric analysis can help in the monetary assessment of social benefits – An important non-monetary factor in transport projects
Thank you

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Programme Officer
Statistics & Data

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