



Assessment of economic barriers

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Technology Needs Assessments

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Assessment of economic barriers

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Africa

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TNA Team

UNEP Risoe Centre, Denmark, and ENDA, Sénégal

Introductory remarks

why is it important to identify economic barriers?

- Splitting the cost (to end users) into its component parts, for example facilitates better understanding of the restraining impact of income.
 - (i) setup cost, and
 - (ii) operating cost
- facilitates better understanding of investments needed
- the restraining impact of income
 - Setup costs may seem low – but relative to per capita income they might be high and constitute an essential barrier!
 - Low per capita income may therefore continue to be a major barrier to diffusion of a technology to diffusion

Introductory remarks

- High cost technology!
 - in comparison to what?
 - baseline (traditional technology)
 - number of beneficiaries
 - GHG/vulnerability reduction potential
 - technology lifetime

Example

For individual households a solar kit may be competitive to other alternatives such as a small generator with battery back up, which has a higher electricity production price.

- but kwh price for a solar PV kit is high compared to small scale hydro, which means PV is not competitive to small scale hydro in a mini-grid solution.

Economic and financial barriers: an overview

1. Lack or inadequate access to financial resources

1. Lack of financing instruments and institutions
2. Under-developed or distorted capital market (poor creditworthiness, poor recovery regulations)
3. Lack of venture capital
4. Lack of access to credit for certain consumers

2. High cost of capital

- Scarcity of cheap capital (high interest rates due to high risk perception by financial institutions)
- Government policies on cost of capital (e.g., high tax on profits)

3. Financially not viable

- High modification and implementation costs (material, labour, capital)
- High discount rates
 - (strong preference for the money today over the same amount of money tomorrow or ten years; in particular, private manufacturers and very poor people have a short economic horizon, while utilities have a longer horizon; discount rates for climate technologies may be higher than usual due to risk or uncertainty being perceived as high)

Economic and financial barriers: an overview

4. High transaction costs

- high costs related to gathering and processing information (feasibility studies; due diligence)
- Bureaucracy, procedures and delays

5. Inappropriate financial incentives and disincentives

- Taxes on climate technologies (high import duties on equipment, duty exemption limited to small products, other direct or indirect taxes on climate technologies)
- Non-tariff barriers on import/export of climate technologies

6. Uncertain financial environment

- Uncertain electricity tariffs (Mitigation technologies)
e.g., non-transparent tariff adjustment procedure

Economic and financial barriers: an overview

7. Uncertain macro-economic environment

- Unstable currency and exchange rates
- Balance of payment problems and uncertain economic growth
- level of political stability exhibited by developing countries also exerts an influence on cost of access. Political stability in most cases correlates with economic stability and creates an environment that is conducive for growth and is attractive to investment.
- The more politically stable a country is, the greater would be its chances of attracting investment capital for the development of its infrastructure and services.

Concluding remarks

- Fact sheets should include cost estimates of technologies, preferably based on local studies and expert knowledge
- The cost information feeds into the barrier analysis
- Barrier analysis: opportunity to make a more thorough analysis of the few prioritized technologies
- The Barrier Analysis and Enabling Framework report has to include analysis of economic barriers.
 - This should be based on local studies if possible, or information gathered from local experts

Thank you !