

Market Potential and Value of Sustainable Freight Transport Chains



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Background

Today 20% of the total greenhouse emissions in the EU are caused by the transport sector. In its 2001 Transport White Paper the European Commission has adopted the goal of reducing greenhouse gas emissions by encouraging rail and waterway transport. However, this goal can only be achieved if shippers and operators are aware of transport's environmental impacts and convinced of the efficiency and quality of sustainable transport modes.

Goal

Many companies now consider reducing environmental impacts as a strategic marketing instrument. They place increasing weight on an environmentally sustainable value creation chain from raw material to the final product. This research seeks to underline the importance of transport in the value creation chain and thus increasing awareness of environmental problems in transport among shippers and helping to develop a market for sustainable transport chains as certified high quality products. The project's main goal is to answer the central question of whether shippers are willing to pay appropriate prices for certified environmentally sustainable transport chains. These prices must cover at least the potentially higher production costs of environmentally friendly transport.

Research Outline

The project contains the following working packages:

1. Demand analysis (shipper survey);
2. Benchmarking of the transport offer (considering energy, cost, and quality);
3. Cost-benefit-analysis/ feasibility assessment.

The methodology employed is illustrated in Figure 1:

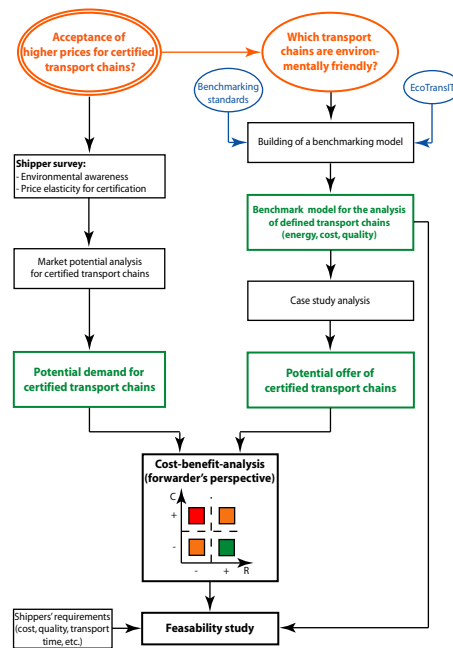


Figure 1: Project Methodology

Demand Analysis

The shippers' demand for sustainable transport solutions will be analysed using a stated preference analysis. In this analysis a list of alternative transport chains (road-only, intermodal etc.) will be presented to shippers and elasticity tests will be made on price and quality (including transport time, punctuality, information management, etc.).

Benchmarking of the Transport Offer

A model, which estimates the environmental impact, cost, and quality of transport chains in Europe, will be used for the benchmarking analysis. The existing model "EcoTransIT" providing environmental data will be used as a basis; cost and quality data will be added.

Cost-Benefit Analysis

A cost-benefit-analysis will be employed to compare the potential revenues for certified transport chains to the potential production costs and thus estimate the overall market potential for certified sustainable transport.

Feasibility Assessment

The estimated market potential for sustainable transport is only realistic if the offered transport solutions can meet the shippers' price and quality requirements.

Data Requirements

The methodology presented requires the following data input:

- Shippers' contacts (for survey)
- Environmental data (via EcoTransIT)
- Transport production cost of each mode
- Quality data (e.g. delay statistics)

IVT Contributions

- Methodological concept;
- Carrying out the shipper survey;
- Building the benchmark model; and
- Interpretation of the results.

Applied Methods

SP survey; Macro-modelling

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