

The art of ART: measuring efficiency for growth, development, and better quality in transport

Turin, 21 September 2018

Advisory Board report on benchmarking

Introduction and application to roads

Chris Nash

Institute for Transport Studies, University of Leeds

Co-chair

Outline of report

1. Introduction
2. Methodology
3. Applications
 - Highways
 - Rail
 - Local public transport
 - Seaports
 - Airports
4. Relevance to Italy
5. Overall conclusions

Outline of presentation of the draft report

1. Introduction and examples from road - Chris Nash
2. Benchmarking methodology and examples from rail-
Andrew Smith
3. Benchmarking local public transport and application to Italy
- Giovanni Fraquelli
4. Benchmarking seaports and airports and application to Italy
– Eddy van de Voorde
5. The relevance of benchmarking as a policy instrument in the
Italian context –Ginevra Bruzzone and Marco Ponti

Benchmarking

- A process through which practices are analysed to provide a standard measurement ('benchmark') of effective performance within an organisation (HEFCE)

Our report concentrates on benchmarking costs or efficiency, but quality is also important to regulators.

Benchmarking is an essential input to yardstick competition, under which price is regulated to the costs of an efficient firm, rather than those of the firm being regulated.

Why is benchmarking needed?

Most needed when competition in or for the market is not practicable or has serious problems.

e.g. transport infrastructure, such as roads

-Competition in the market wasteful.

-Competition for the market more feasible, but often confined to particular functions e.g. maintenance.

-May lead to problems such as lack of co-ordination, loss of economies of scale

-So regulation needed, with benchmarking the basis for setting efficiency targets.

Further uses of benchmarking

Benchmarking studies must control for factors such as contract requirements, contract size, length etc

This may yield valuable information for contract design.

e.g.

- US evidence that performance based contracts not more efficient than traditional contracts
- British, Finnish and Italian evidence that economies of scale in road maintenance and renewals are exhausted at moderate sizes
- Finnish evidence of lack of economies of scope between maintenance and renewals

Key problems in benchmarking

1. Heterogeneity of outputs

e.g. roads vary in capacity (number of lanes), quality of road surface, curvature, number of bridges and tunnels etc.

Cannot simply compare cost per road kilometre – need a model which allows for these differences.

2. Often have to look overseas for comparators

Different wage rates, health and safety processes etc

3. Data may not be comparable

e.g. toll road company may undertake maintenance or may be responsible just administering tolls.

Problems with yardstick competition

1. What are the penalties for failing to achieve targets?

Bankruptcy often not feasible.

Management incentive schemes?

2. Is yardstick competition susceptible to regulatory capture or collusion?

3. Targets for costs may provide incentives to cut quality and investment, so these have to be regulated as well.