ECONOMIC APPRAISAL OF PRICING POLICIES IN THE EUROPEAN UNION

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Or :
How to reconcile the two roles of infrastructure pricing:

- In supply management
- In demand management

Outline

- The concerns of the European Union about Infrastrcture Pricing
- The Benchmark: the Short Run Social Marginal Cost (SRSMC) Pricing Principle
- The Variety of Standpoints and Doctrines
- The Concerns of Decision-Makers
- The Teachings of Economic Analysis
- Conclusion: How to reconcile?

The Concern of the European Union about Infrastructure Pricing

- A sound infrastructure pricing is deemed to be:
  - a prerequisite for setting up fair and efficient eompetition withing and between modes,
  - .. Which is a basis for enhancing European integration and growth
  - A major tool for achieving sustainable transport policy and coping with externalities and congestion
- The European Commission has addressed this problem a long time ago
- Yet, the achievements are poor:
  - No real agreement on the principles
  - No full implementation
- Why? What are the subjects of dispute? How to reach an agreement?

The Benchmark: the SRSMC Pricing Principle

- Expressed by the Commission of the European Union in many documents:
  - For instance the 2001 White Paper
- Subject of many studies and research programs:
  - CAPRI, DESIRE, AFFORD, MC-ICAM, IMPRINT, UNITE, REVENUE

The Benchmark: the SRSMC Pricing Principle

- The SRSMC includes:
  - the marginal cost of infrastructure damages
  - the marginal external cost of congestion and scarcity,
  - the marginal external cost of pollution,
  - the marginal external cost of accidents,
- It is a short run cost, including no investment cost
- It is a marginal cost, including no fixed costs

The Benchmark: the SRSMC Pricing Principle

- Its main aknowledged virtue:
  - It maximizes efficiency
- Its main aknowledged draw-back:
  - It leads to deficits for the infrastructure manager
  - That is why the Commission allows for various devices to fund new infrastructures (two parts tariffs, Ramsey pricing, …)

The Variety of Standpoints and Doctrines

- A survey has been achieved in the framework of the UNITE research program
- Its scope:
  - What are the current teaching and theoretical ideas developped in the academic circles?
  - What are the doctrines expressed by political authorities and professional groups?
  - What is the real situation of infrastructure pricing?

The Variety of Standpoints and Doctrines

- The outcome:
  - Other pricing principles are advocated:
    - Average cost (AC)
    - Full economic cost (FEC)
    - Long run marginal social cost (LRMSC),
    - ….sometimes called Development cost (DC)
  - In academic circles: differences between the specialities of universities:
    - Standard economic theory (SRMSC with its limits) is taught only in advanced economic courses.
    - Schools of engineers teach less sophisticated methods, based on accounting procedures, using AC or FEC

The Variety of Standpoints and Doctrines

- Among political decision-makers and pressure groups: differences between countries
  - Generally, no firmly expressed doctrine
  - France and the UK in favor of marginal cost pricing, but under the shape of LRMSC or DC
  - Germany, Switzerland, Austria in favour of AC or FEC, with a hint of polluter-payer principle
  - In many other countries, focus on AC

The Variety of Standpoints and Doctrines

- The current situations, differences between modes:
  - The result of historical evolution
  - No coherency
  - Road :
    - they generally achieve an approximate break-even between expenses and revenues, with large discrepancies between zones (urban roads, motorways, rural roads), and large differences between infrastructure pricing and SRMSC
    - Tolls have mainly a financial purpose; congestion pricing is rare (London charges, time differentiation for some motorway tolls)
  - Airports and seaports : they are run by independant firms, which achieve break-even (sometimes with subsidies…)
  - Rail and inland waterways : for different reasons, a large variety of situation ; in some countries charges are very low, in other ones, they are above marginal costs and average costs

The Concerns of Decision-Makers

- Politician decision-makers are not much concerned by efficiency
- They are more concerned by acceptability
- They dislike deficits
- They consider that SRMSC
  - Is complicated, not easy to understand, and subject to possible manipulations
  - Leads to deficits
  - Would be badly accepted by public opinion, and does not cope with equity concerns
- They are more in favour of AC or LRMSC, which are deemed to avoid these draw-backs

The Teachings of Economic Analysis

- Economic analysis goes in opposite directions to the conventional wisdoms
- The supposed draw-backs of SRMSC are not that important:
  - Deficits? The results of the FiFi Study « Revenue from efficient pricing:.. »
  - Complexity? Calculations of LRMSC or AC imply a lot of complications, arbitrary assumptions and possible manipulations
  - Equity concerns? Depends on political point of views

Large possible gains

- Exemple : « Efficient transport taxes and charges », ECMT, 2003

Changes from optimising charges in 2000

	Britain	France	Germany	Netherlands	Finland
Welfare gains (Billion Euro / year)	**17**	**10**	**9**	**1**	**0.3**
Revenue changes (Billion Euro / year)	**+ 39**	**+ 28**	**+ 42**	**+ 6**	**- 1**
Air pollution and CO_2 emissions costs (Result of optimising emissions control technology as well as traffic)	- 54%	- 50%	- 37%	- 33%	- 42%
Congestion Average increase in metropolitan rush-hour road traffic speed	+ 11%	+ 9%	+15%	+ 9%	+ 9%

The Teachings of Economic Analysis

- The efficiency virtues of SRMSC are not that simple:
  - They depend on several assumptions which are not fulfilled:
    - The rest of the economy is priced according to the same principle
    - No monopoly
    - No equity concern
    - …
  - The economic analysis provides solutions to these imperfections
    - These solutions are based on SRMSC (ex : Ramsey pricing)
  - The full efficiency of SRMSC needs an extreme differentiation of charges, mainly to cope with the divesity of congestion costs over time and space

The Teachings of Economic Analysis

- Furthermore privatization and institutional arrangements lead to new problems,
- Due to relationships between operators and regulators: divergence of objectives,assymetric information and incentives
  - AC seems to avoid some draw-backs such as the tendancy of the operators to underestimate SRMSC in order to increase the subsidy
  - But institutional arrangements can be found to reconcile efficiency concerns and proper incentives (to set up links between expenses and revenues), in the framework of a SRMSC based pricing

The Teachings of Economic Analysis

- But new technical devices, based on the new technologies of information and communication, allow to enhance the positive effects of SRMSC through a better differentiation

Conclusion : How to Reconcile?

- Economic Analysis shows that the conventional wisdom leads to many misinterpretations about infrastructure charges:
- SRMSC has neither the virtues nor the draw-backs usually quoted
- But a sound infrastructure charging system should be SRMSC based

Conclusion : How to Reconcile?

- Its design should take into account the institutional arrangements between the infrastructure provider and the regulation body
- Its virtues will be dramatically enhanced by the use of NTIC which allow for a more accurate differentiation.of charges