



# An Evaluation of Benchmark Regulation for Airports

G.A.R.S. Junior Researchers'  
Workshop, Amsterdam

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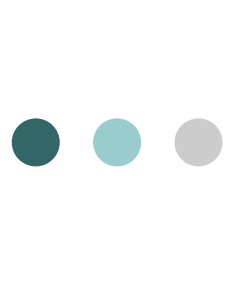
# Introduction

- Monopolistic bottleneck at airports (infrastructure)
- Incentive regulation (cost efficiency and allocation of scarce resources)
- Up to now ROR and PC
- Yardstick regulation and airports (theoretical and practical examples)



# Yardstick Competition in Theory

- Shleifer 1985
- Comparing cost levels of identical firms to determine price and investment of particular firms
- No link between costs of the firm and price level
- Exogenous, heterogeneous characteristics can be adjusted for
- Different forms of yardstick regulation



# Yardstick Competition in Theory

- Benchmarking methods
  - Data Envelopment Analysis (DEA)
    - Non-parametric
    - Multiple inputs and outputs
  - Stochastic Frontier Analysis (SFA)
    - Parametric
    - More detailed specification of the model



# Yardstick Competition in the Airport Sector

- Airport-specific features
  - Cost complementarities
  - Network externalities
  - Capacity constraints
  - Slot allocation
- Comparability of airports
  - Structural and institutional environment
  - technical/ quality differences
  - Size
  - Commercial activities



# Yardstick Competition in the Airport Sector

- Collection of airport data
  - Reporting techniques
  - Output parameters
  - Multi-product firms
- Choice and plausibility of benchmarking methods
  - Transparency
  - Treatment of inefficiencies



# Yardstick Competition in the Airport Sector

- Different interest groups
- Benchmarking partial processes
- International experience
  - Dublin Airport (DAA)
  - UK (BAA)



# Yardstick Competition in the Airport Sector

- Unique features of every airport have to be assessed
- Data availability
- Simple benchmarking approaches to detect large inefficiencies



# Electricity industry

## ○ Germany

- Revenue cap with hybrid elements
- Benchmarking of network operator costs, direct translation into efficiency guidelines
- Complimentary use of DEA and SFA

## ○ Great Britain

- Modified revenue cap
- Benchmarking of OPEX and LRMC to determine yardstick revenue cap
- DEA

## ○ The Netherlands

- Revenue cap for transmission companies, yardstick competition for regional distribution companies
- International benchmarking
- Simplified version of DEA



# Conclusion

- Airports will be judged according to benchmarking results
- Beneficial use of benchmarking
- Regulatory regimes combine different methods
- Use simple approaches to detect large differences in costs
- Supplementary informational tool
- Further evaluation of the implementation of yardstick competition