

Price cap Regulation of airports in Continental Europe – an Overview

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Strategy and Regulation of Airport Charges at
Université Paris Panthéon-Sorbonne, 01 February 2010

Issues

- UK price cap became standard for many public utilities in Europe and to some extent also for airports
- Reform very often only first step:
 - Break with cost plus regulation achieved, but often complex systems have evolved.
- Research questions:
 1. How well are incentives redesigned?
 2. Only symbolic or real reforms?
 3. How to complete regulatory reform?

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Agenda

- I. Criteria for airport regulation
- II. How have European airports performed?
- III. Government structure of European airports:
Privatisation, Competition and Regulation
- IV. Price cap regulation in Austria and Germany
- V. Conclusions: What are the options for reform?

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I. Criteria

- Airport should
 - set prices at competitive levels
 - seek to minimize total costs
 - ration demand efficiently
 - invest an optimal amount
- Regulatory process should be
 - based on a legislative democratic mandate
 - fair, accessible and open
 - avoid high bureaucratic costs
 - applied only where necessary

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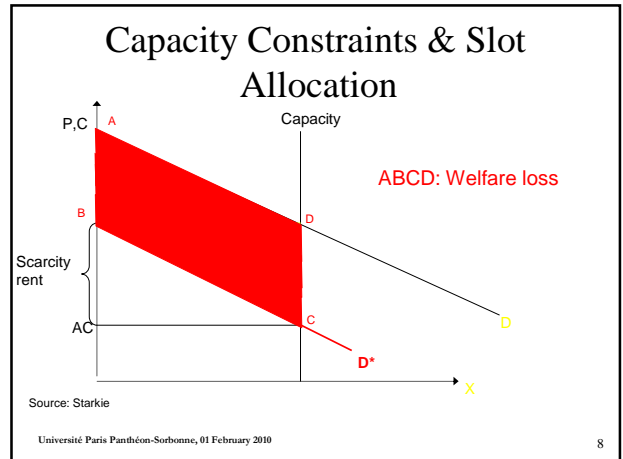
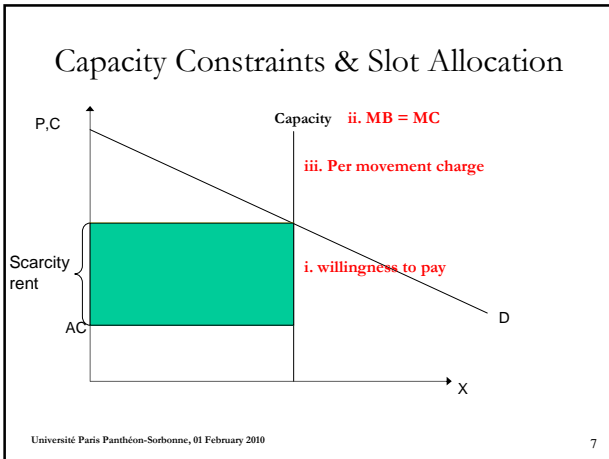
II. Airport performance

- Poor cost control particularly at partially privatised airports and vertically integrated airports.
- Allocative efficiency: misdirected pricing!
 - Ample capacity: Inefficient weight based charges
 - Capacity constrained airports
 1. No market based slot allocation
 2. Arbitrary slot limit
 3. Weight based charges discriminate
- Over investment in areas with lack of demand and underinvestment at regions with excess demand.

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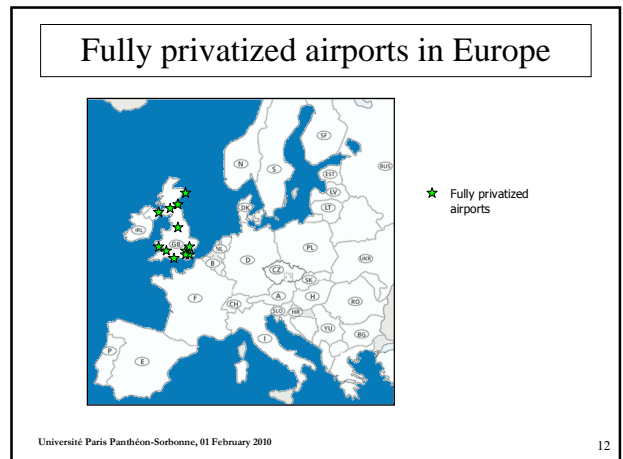
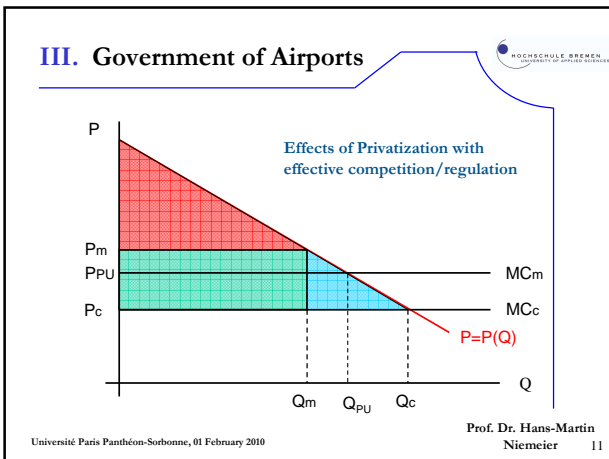
Capacity Constraints & Slot Allocation

- Level I, II and III airports
 - Level I – no slots
 - Level II – slot facilitated
 - Level III – slot coordinated
- Grandfather rights provision was introduced in the EC legislature as late as 1993
- Heavy reliance in administrative rules: Active secondary trading only in UK!

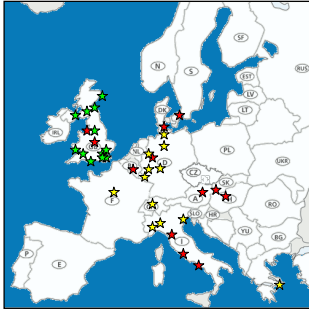


- ### Capacity Constraints & Slot Allocation
- Mott MacDonald & EU Commission (2006)**
- **Effects of secondary trading: Substitution**
 - of general aviation by commercial flights
 - of charter and cargo by scheduled flight
 - of small by larger aircraft
 - of short by long haul flights
 - **Quantitative effects:**
 - 7,2 % more passengers and 17.1 % more revenue passenger kilometers and 51.6 Mio more passengers in 2025.
 - Consumer surplus: + € 31bn at current rates in 2025
 - Producer surplus: + € 1.2 bn in 2025 (upper bound)
- Source: Mott MacDonald & EU Commission (2006)
- Université Paris Panthéon-Sorbonne, 01 February 2010
- 9

- ### III. Government of Airports
- How has the government structure changed the incentives changed for cost and allocative efficiency?
 - Effect of Privatization
 - Effects Competition
 - Effects of Regulation
 - First theoretical consideration
- Source: Prof. Dr. Hans-Martin Niemeier
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- 10



Fully and partially privatized airports in Europe



- ★ Fully privatized airports
- ★ Partially privatized airports with a majority share
- ★ Partially privatized airports with a minority share

*Malta International Airport has been partially privatized as well (Minority share privatization)

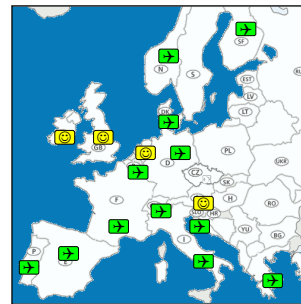
III. Airport Privatization

- Privatization has not changed the nature of the industry as it has in the UK, but it has made airports in mainland Europe more profit-oriented and cost conscious.
- The typical private airport in Europe is a partially privatized airport which tries to pursue a wider range of objectives (more emphasis on non-aviation).
- The typical public airport is not a public bureau, but a commercialized entity with private management tools for cost control and marketing. Restrained profit making becomes an objective in public airport management.

III. Airport competition

- Three Forms:
 - Hub competition (Schiphol versus ADP)
 - Hub and secondary hub (Fraport versus Munich versus Stuttgart)
 - Primary and secondary airport (Vienna and Bratislava)
- Competition currently not strong enough to make regulation completely redundant.
- Competition could be more intense
 - tradable slots
 - open skies

Regulation of European Airports

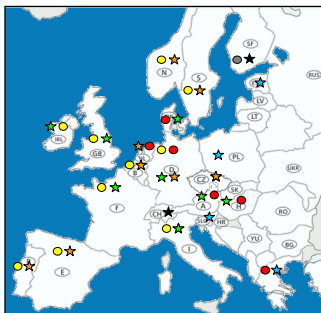


- ☐ Independent regulator (all with user consultation)
- ☐ User consultation without independent regulator

- Improved consultation
- Lack of independent regulator
- Regulatory capture

* User consultation at Malta International Airport

Type of Regulation at European Airports



- ★ Type of price cap
- ★ Charges set by airport
- ★ Cost plus regulation
- ★ No regulation

Single or dual till system

- Single till
- Dual till
- No till system

* Malta International Airport has a price cap and a dual till system in place.

III. Airport regulation

- Institution: Regulatory capture
 - Improved consultation, but lack of independent regulator
- Scope: Too narrow and too wide:
 - Regulation of charges does not include central infrastructure fees for ground handling in some countries.
 - Single till still dominates dual till systems
- Types of Regulation:
 - Cost based regulation in majority of countries
 - Some hybrid price caps. Some revenue sharing contracts
- Incentives:
 - Gold plating dominates cost cutting, except at fully private airports
 - No (strong) incentives for peak and congestion pricing
 - Airport expansion becomes a political question

IV. PC in Austria & Germany

- Information asymmetry.
 - Regulator does not know demand, costs functions, but airport does.
 - Airport does not know how the regulator behaves
- Tasks of Regulation
 - More than reducing the level of prices, because this will increase excess demand at busy airports.
 - Additional problem of rationing demand efficiently and setting incentives for investment. Hence
 - structure of charges
 - allocation mechanism and
 - incentives for investment
- How well do the price caps in Austria, France and Germany perform?

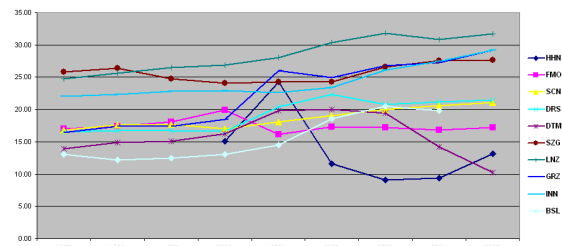
IV. Case studies: Austria

- Privatisation:
 - Vienna: In three steps 1992, 1995 and 2001 by IPO. Shares: 20% Federal State Lower Austria, 20% City of Vienna, 10% Foundation of Airport Vienna employees, and 50% free float.
 - Regional airports Graz, Innsbruck, Salzburg, Linz and Klagenfurt are corporatised and owned by city, federal states and republic of Austria.
- Competition
 - Vienna versus Bratislava
 - Vienna versus Munich
- Capacity, Investment and Pricing
 - Vienna partially slot coordinated and peak problems. Expanding capacity
 - Weight based charging

IV. Case studies: Austria

- Method of regulation
 - No clear statute: Charges should be regulate so that airports "shall be economically feasible"
 - Sliding scale for Vienna and cost plus for other airport with Transport ministry as moderator
 - Initiated in 1998 by Austrian Airlines (AUA). AUA was discontent with the distribution of profits, sought to benefit from the increasing traffic volume and decreasing average cost of airports.
 - Level of charges has always been high. See next table.
 - Vienna among the most expensive airports of the world.
 - Independent regulator in 2001 "Austro control"
 - Scope: Dual till

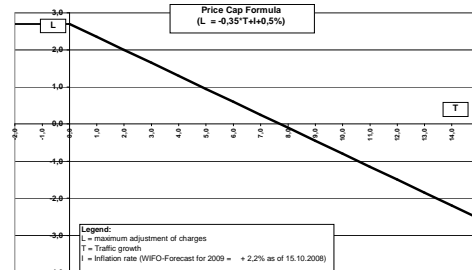
Comparison of German and Austrian Real Revenues per Workload Unit



IV. Case studies: Austria

- Method of regulation: Sliding scale
 - Formula is simple, contains traffic growth with a coefficient of 35%, Inflation coefficient and an extra increase of 0.5 percent
 - $L = -0.35 * T + I + 0.5\%$
 - L = max increase charges level, T = traffic growth, I = inflatio
 - In the case of a negative traffic growth the formula is simply: $I + 0.5$ (addend at VIE as above)
 - 0.25% is addend at Vienna International Airport

IV. Case studies: Austria



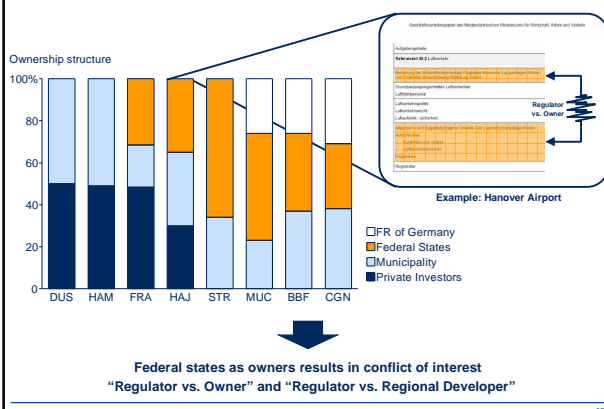
IV. Case studies: Austria

- **Assessment for Austria**
 - Limits to stability of profit sharing
 - The initial period with the contract being valid from the beginning of 2001 until the end of 2005, was followed by a three year period from 2006 to 2008.
 - The last contract could only be extended to the end of the year 2009
 - Like German sliding scales no strong incentives for cost and allocative efficiency

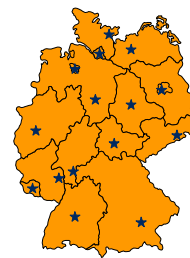
IV. Case studies: Germany

- **Partial Privatisation: Only minority share for private stakeholders**
- **Competition**
 - Low market power for airports like Bremen, Hannover Dortmund, Leipzig
 - Strong market power for Berlin, Frankfurt, Hamburg, Munich, Stuttgart,
- **Capacity, Investment and Pricing**
 - Excess demand at Düsseldorf, Frankfurt and peak problems in Munich, Tegel and Stuttgart.
 - Expanding capacity at Frankfurt and Munich
 - Weight based charging
- **Failure to reform regulation**

Independence: Federal states with significant stakes in large German airports, while they act as regulators



Cost efficiency: Regulatory power is delegated to federal state level; today, 15 different aviation authorities exist



- German law maker has **delegated regulatory power** to federal states
- Today, **15 different regional aviation authorities** exist
 - Low degree of experience sharing
 - High cost of providing expertise in all states
 - Regional institutions deal with airport charges infrequently (about 1 week per year) – no day-by-day experience

In practice, regulators, airports and airlines employ two different regulatory regimes

Rate-of-return regulation (§ 43a LuRfZO: MUC, BBF, CGN, STR)

- Approval system as **suggested by the law**
- Process designed by regulators as **"mediation"** among parties rather than an "objective examination"

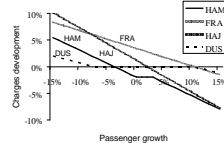


Price cap regulation (private framework agreements: FRA, DUS, HAM, HAJ)

- **Private contracts** between users and airports replace § 43a regulation
- Contracts run for **4-5 years**, based on a negotiated formula
- **Council** of users, regulator and airport **monitors charges together**

$$RO_{air} = RO_{rail} \times \left[\frac{RPI - X}{m \times PW} \right]$$

Average Charge Inflation adjustment Productivity returns Risk-/return indicator Passenger-growth



IV. Case studies: Germany

- **Failure to reform regulation**
 - Price cap with sliding scale for Hamburg is working and accepted by all stakeholders, but never copied.
 - Sliding scale agreements break with the tradition of low powered cost plus regulation, but stabilize revenues at a high level.
 - Prices move in the opposite direction of demand shifts. This can only be efficient if short run marginal costs are decreasing. Doubtful at busy airports.
 - Sliding scale agreements could not be extended in case of capacity expansion and crisis

V. Conclusions

- How well do the price caps in Austria and Germany perform?
 - German airports lack an independent regulator. Independent Austrian regulator lacks well defined statute.
 - Privatisation without regulatory reform.
 - Price cap sets incentives towards cost efficiency but these incentives depend behaviour of the partial privatised firm.
 - Revenue sharing agreements with sliding scale are not efficient and not even stable.
 - Although busy airports are slot controlled price structure has not been adjusted. It discriminates large aircrafts and leads to underutilisation of given capacity.
- Political failure to design a coherent system of privatization, regulation and competition