

Cooperation

Scientific Partners

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Prof. David Gillen, Strategic Airport Management
Prof. Tae Oum, Airport Performance Measurement
www.sauder.ubc.ca/cts/faculty/index.cfm

Monash University, MEL

Prof. Peter Forsyth, Airport Regulation
www.buseco.monash.edu.au/depts/eco/staff/peterforsyth.php

University of Amsterdam, AMS

Prof. Jaap de Wit, Benchmarking and European Airport Strategies
www.aaeconomics.com

University of Westminster, LON

Dr. Anne Graham, Airport Management
www.wmin.ac.uk

University of Kiel, KEL

Dr. Hartmut Wolf, Airport Regulation and Privatization
www.uni-kiel.de/fiw/staff/wolf.htm

University of Turin, TRN

Prof. Giovanni Fraquelli, Benchmarking of Public Utilities
www.hermesricerche.it

University of Belgrade, BEG

Prof. Vojin Tosic, Air Transport and Traffic Engineering
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Transport Research Laboratory, LON

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www.trl.co.uk

German Aerospace Center (DLR), CGN

Dieter Wilken, Forecasting for Air Transportation
Prof. Johannes Reichmuth, Airport & ATC Performance
www.dlr.de/fw

BIPE, PAR

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www.bipe.com

Other Partners

German Airport Association (ADV)

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Dr. Hartmuth Becker, Economic Affairs
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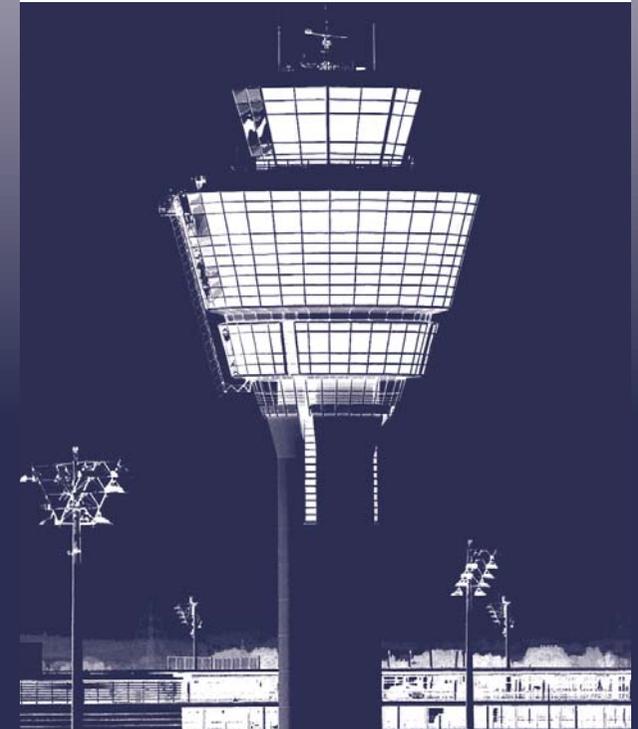
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GERMAN AIRPORT PERFORMANCE



A joint research project of:

University of Applied Sciences Bremen
Berlin School of Economics (FHW Berlin)

International University of Applied
Sciences Bad Honnef

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Project Objectives

To investigate the changing nature and performance of airports, their commercialization and competitive environment, as well as the need for further financial and environmental regulation.

Why Benchmark German Airports?

→ Changing Institutional Structure

- _ From public utilities to partially privatized airports
- _ New strategies & organizational structures
- _ Incentive versus low powered cost-plus regulation

→ Lack of National Benchmarking Studies on German Airports

→ Small and Medium Sized Airports are Neglected

Who Can Benefit from Airport Benchmarking?

Airports can identify gaps and adapt best practices.

Airlines are interested in efficient airports.

Regulators can assess performance and estimate adequate prices.

The Federal States need airports for an efficient infrastructure.

Communities and Municipalities need well functioning airports for regional development.

Investors could increase investment in privatized airports.

The Following Questions will be Addressed

→ Liberalization

Has intensified airline competition led to more competition between airports and thereby to improved performance?

→ Competition

How does market structure influence competition between airports and their performance? Airports in northern Germany which are near monopolies will be compared to airports with overlapping catchment areas, such as the Cologne-Düsseldorf or the Berlin region. This analysis can be extended to other European regions.

→ Ownership

How can ownership (i.e. public, partially and fully private) influence the performance of an airport? We plan to compare German airports with airports that have different ownership structures in other countries.

→ Regulation

How does regulation affect performance? Regulatory economics predicts that incentive regulated airports would outperform cost-based regulated airports. We hope to collect enough data to test this prediction.

→ Resource Allocation

Are airports allocating their resources efficiently? How do differentiated airport charges affect allocative efficiency?

→ Environmental Policy

How do different environmental instruments influence the efficiency of airports and what are the trade-offs between airport efficiency and environmental effects?

→ Management Strategies at Airports

How do different management strategies affect performance? Airports are progressively developing new strategies in aviation and non-aviation business. These developments will be analyzed in case studies.

→ External Factors

What are the effects of external factors (e.g. Air Traffic Control and Security Rules) on airport efficiency?

→ Benchmarking as a Management Tool

How widely do airports use benchmarking as a management instrument to optimize their performance? What are the strengths and weaknesses of this instrument?

→ Comparison with other Regulated Industries

What can we learn from benchmarking studies on other public sectors (e.g. gas, water, electricity, telecommunication, postal services)?

Variables

In our project we plan to collect data on an aggregated and disaggregated basis which will take place in cooperation with airports. This will help to identify gaps to best practice airports. The following table will give an idea of the data to be collected:

	OUTPUTS	INPUTS	
Traffic Data	Passengers Total Pax Int./Dom./Intra-EU Pax Scheduled/Non-Scheduled Pax Terminal/Transit Pax Cargo Freight (in t) Mail (in t) Movements Air Carrier/Commuter/General Aviation Domestic/International Movements Passenger/Cargo Movements Small/Big Aircraft Movements Commercial/Non-Commercial Movements	Staff Costs (e.g. Marketing, Finance, IT) Operating Costs (e.g. Maintenance, Insurance) Depreciation and Amortization Subsidies Received Dividends Payed Capital Expenditure Balance Sheet Data	Financial Data / Costs
	Aviation Revenues Passengers Charges Landing Charges Terminal Charges Aircraft Parking Charges Handling Charges Apron Charges Centralized Infrastructure Fee Security Charges Airport Development Fee Non Aviation Revenues Terminal Side Concessions (e.g. Retail, Restaurants, Car Rental) Airside Concessions (e.g. Ground Handling, Fueling) Car Parking Other Operating Income	Terminal Side Check-in-Counter Gates Pax Screening Units Baggage Claim Units Terminal Size (in sqm) Terminal Capacity per Hour/Year Departure Lounge (in sqm) Parking Spots Airside Total No. and Length of Runways Runway Capacity per Hour Loading Bridges Remote Stands Area Size of Apron Runway & Airport Noise Related Operation Restrictions Carriers Destinations Distance to City Centre Misc.	Physical Assets / Capacity Utilization
Financial Data / Revenues			Other Data

Methodology

The data will be analyzed by measuring the efficiency and productivity with several techniques. Investigations will be undertaken on an aggregated and disaggregated level using methods like Data Envelopment Analysis (DEA) and Total Factor Productivity (TFP) as well as measuring partial productivities (e.g. Labor and Capital Productivity). For further research, Regression analyses will be done to indicate the effects of factors that are beyond managerial control.