

# Airport business issues

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# Contents

- Overview of the airport business
- Economic characteristics
- Airport business segments
- Airport revenues
- Airport costs
- Conclusions

# Overview of the airport business

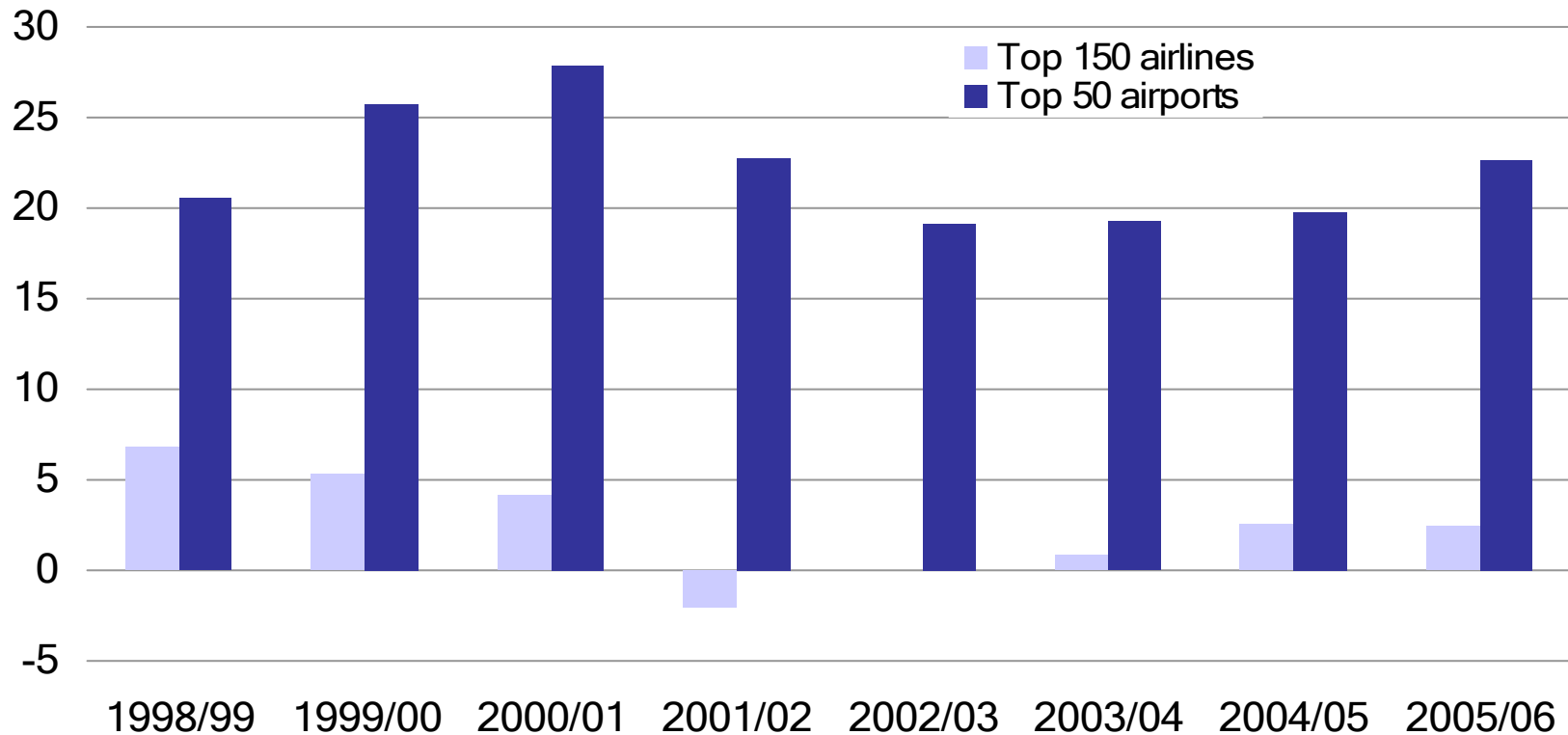
## Turnover and operating margin: top 5 airports and their largest airline customer (2006)

	Turnover €million	Margin		Turnover €million	Margin
BAA	3,965	35%	British Airways	11,465	7%
Aena	2,900	12%	Iberia	5,187	2%
Fraport	2,250	15%	Lufthansa	17,735	4%
Aeroports de Paris	2,076	17%	Air France / KLM	21,139	5%
ANA	271	24%	TAP	2,086	2%

Source: Airline Business

# Overview of the airport business

**% operating margin:**  
top 50 airports and top 150 airlines 1998/9 to 2005/6



Source: Airline Business

# Economic characteristics

- Economies of scale
- High sunk costs / inflexible use of assets
- Long-haul traffic more profitable for airport
- Market power

# Economic characteristics

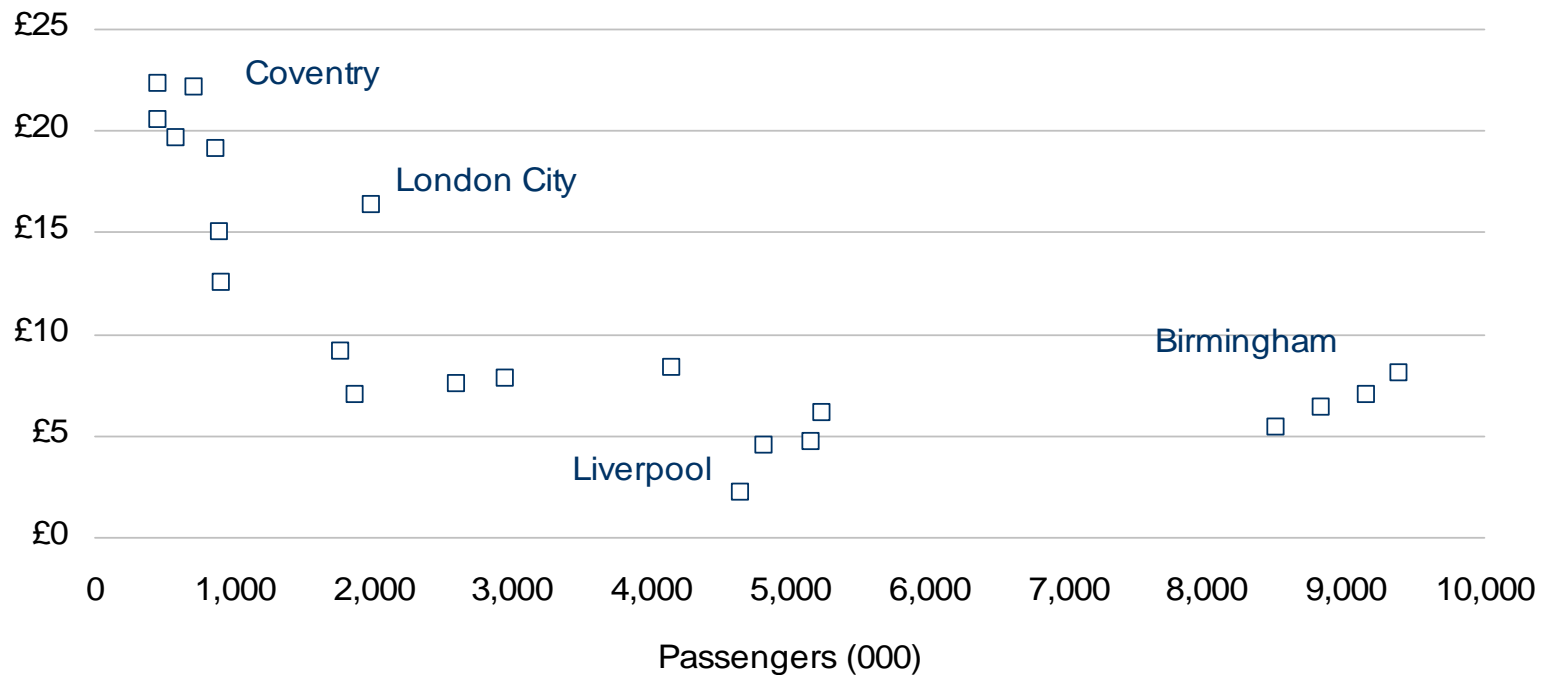
## Economies of scale

- Airports have high fixed infrastructure costs
- Airports with low traffic volumes have high unit costs (costs per passenger or aircraft movement)
  - problem of cost recovery & need for government subsidy
  - Support from larger airports
- Unit costs decline as traffic volumes rise – up to a point
- Unit revenues increase as traffic volumes rise
  - increasing diversification of revenue sources
  - higher international traffic
- Possible diseconomies of scale at very high levels of traffic

# Economic characteristics

## Economies of scale

**Average operating cost per passenger v passenger traffic  
in 2005/6 financial year  
selected UK regional airports**



Source: CRI

# Economic characteristics

## Inflexible use of assets

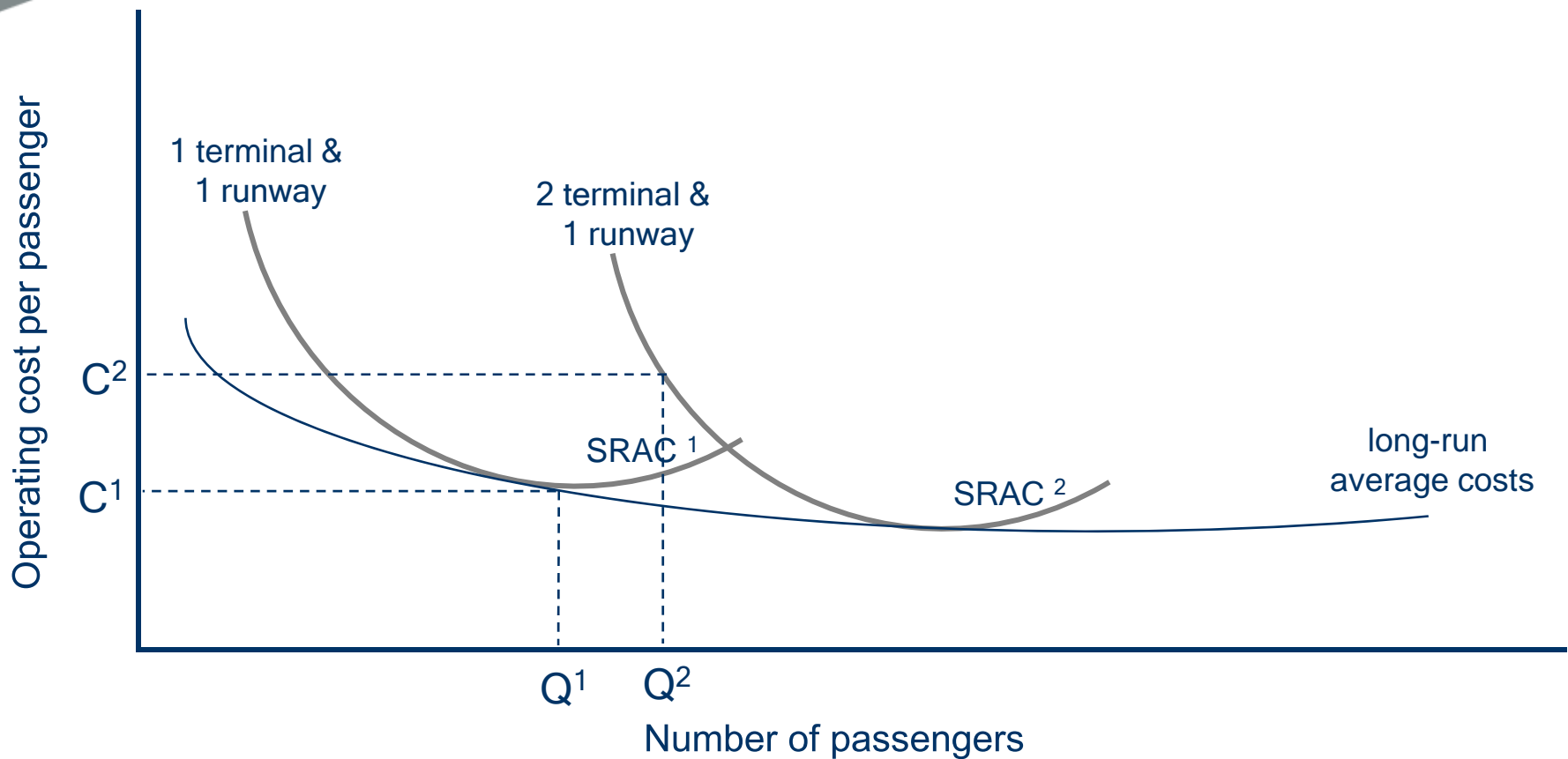
- Airports are asset intensive and subject to capital investment cycles
- Airports can increase capacity incrementally but will have to engage in large single investments at some stages in their development
- Large investments represent a considerable sunk cost – (limited alternative use)
  - Immediate impact on operating costs and profitability
- Timing is very important – decisions complicated by:
  - long planning horizons
  - 30-year asset life
  - volatility in airline markets
  - changing aircraft technology



# Economic characteristics

Inflexible use of assets

### Airport long and short-run average costs



# Economic characteristics

Long-haul more profitable

- Costs of handling long-haul traffic are higher than short-haul (BAA it is 62%)
  - Airbridges required for larger aircraft
  - More apron space and wider runway & taxiways
  - More space for departing passengers
  - Baggage system costs
  - Customs and immigration
- Revenues from long-haul traffic are higher than short-haul
  - Duty-free / retail
  - Longer passenger dwell-time
  - Higher spend from non-resident passengers

# Economic characteristics

## market power

- Market power defined as degree to which a supplier (airport) can control prices it charges to the airlines
- The airport industry is characterised by the presence of high entry barriers
  - Planning regulations restricting competing airport development
- Market power is very high where cities / regions are served by only one airport (Lisbon & Athens)
- Market power is more moderate in cities / regions served by more than one airport (London, Seoul)
  - Depends on extent to which airports are substitutes
  - Depends on existence of traffic distribution rules

# Economic characteristics

## market power

- Airport operators have monopoly of airports in multiple-airport regions / cities (e.g. Paris, Frankfurt, New York)
- Airports can have high degree of market power relative to their main airline customer (base carrier).
  - Base carriers have high sunk investments at airports (i.e. TAP in Lisbon)
  - Base carriers unlikely to shift operations because of sunk costs
  - Base carriers may react by cutting some routes or suspending further route development
- Market power can also be high in relation to network feeder carriers

# Economic characteristics

## market power

- Market power is lower for non-base carriers
- Airline reaction depends on their elasticity of demand with respect to how much they pay in charges to airports. function of:
  - The price elasticity of demand for air travel on the route to that airport
  - The % of the route operating costs attributable to aeronautical charges
  - Availability of alternative substitute airports

**Airport Catchment areas (SE England)**  
90-minute drive time



Source: UK Competition Commission

# Airport business segments

airport customers

- Airlines
- Passengers
- Visitors, employees & local residents
- Businesses (retailers)

# Airport business segments

## Airlines

ATC services  
Fire & Rescue      Baggage handling  
Baggage system      Apron services  
Check-in      Runway      Aircraft fuel  
Security & policing  
Utility services      Offices      land  
Logistics facilities      Retail space

## Businesses (retailers)

## Passengers

Left luggage  
Airside retail & duty-free  
Airside Food & Beverage

Car Parks  
Car Hire      Hotels  
Landside Food & beverage  
Bureau de change  
Landside retail & duty-free

## Employees / Visitors Local residents



Disruptive business models

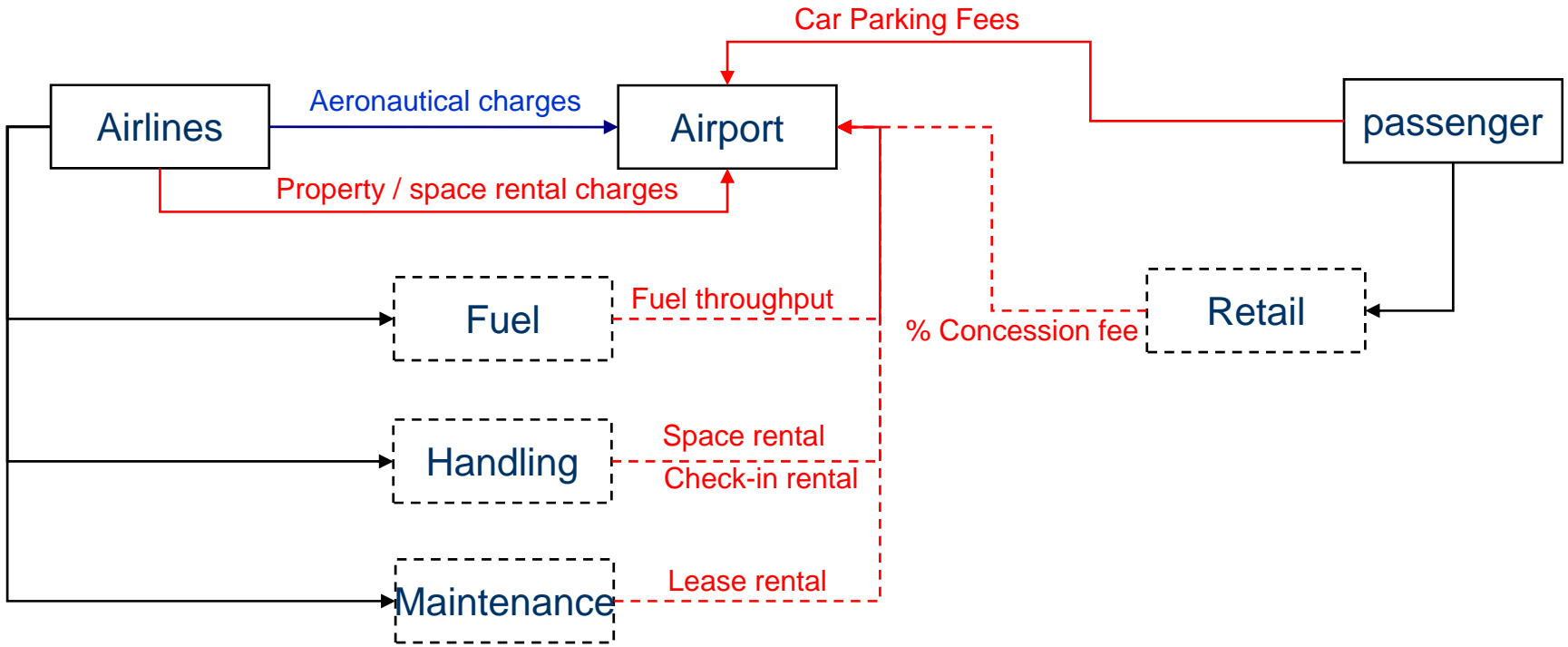
### Aeronautical facilities / services

Runway  
Taxiway  
Apron  
Ground handling  
ATC / Navigational aids  
Departure lounge  
Security / immigration  
Check-in / baggage system  
Aircraft fuel

### Commercial facilities / services

Car Park  
Duty-free  
Retail  
Food & Beverage  
Advertising  
Bureaux de Change  
Car Hire  
Hotels  
Property (Offices)

# Airport business segments



# Airport revenue

## aeronautical

- Aeronautical services / facilities – essential for processing passengers and aircraft
- Airlines pay aeronautical charges to use airport aeronautical services and facilities managed by the airport authority
- Most aeronautical services / facilities are managed / provided by the airport authority so airline cannot choose between service providers
- Airline may also be able to build its own passenger terminal
- Airline may be able to choose:
  - Fuel supplier
  - Ground handling company

## Degree of market power by aeronautical facility / service

Facility / service	Degree of airport authority market power
Runway / taxiway / apron	High
Air traffic control / nav aids	High
Passenger processing space (e.g. departure lounges)	High
Security	High
Check-in	Moderate to High
Ground handling	Low
Aircraft Fuel	Low

- Most commercial services / products are provided / offered by retailers who have a concession to trade at the airport
- Development of commercial activities allows airport authorities to spread their business risk
- Low degree of market power in airport commercial services means these activities are not subject to government economic regulation
- As traffic rises – the % of revenue from commercial services should also increase – profitability increase
- Airport commercial activities are more profitable than aeronautical

- Airports can generate locational rent from businesses – premium paid by businesses to locate on or close to an airport
- Locational rents exist for those services that require proximity to the airport (hotels, car parks, car hire, industrial parks)
- Locational rents are high:
  - if land is in short supply
  - if the airport is located some distance from the city / urban centre
- Locational rents are low if the airport is located close to the city

## Revenue by activity ANA Group 2006

	Revenue (€million)	% of total revenue
Airport charges	177	54
Retail	38	12
Security charges	33	10
Ground handling	19	6
Property	18	6
Car parks	14	4
Car Rental	10	3

Source: ANA Annual Report 2006

# Airport costs

- Focus on reducing / minimising airport costs from private shareholders
- Airports across the world facing rising cost pressures driven by regulation
  - Higher security / policing costs
  - Higher energy costs
  - Higher insurance costs
- Labour is the largest single operating cost incurred by airports
- Labour costs have risen due to increased security requirements and the need to airport expand security provision



# Airport costs

## Operating costs

- Labour
- Security & Policing
- Maintenance
- Administration
- Procurement of services
- Procurement of materials
- Energy

## Non-operating costs

- Asset Depreciation
- Interest payments
- Taxation
- Rental

# Airport costs

## labour

- Can represent between 30% and 40% of total costs
- Historically on decline due to increased out-sourcing worldwide
  - Average was 45% in 1983 to 30% today
- Labour costs are low where many services & functions are outsourced
- Labour costs determined by historic agreements and degree of trade union representation
- Security and ground handling are labour-intensive activities

# Airport Costs

## security & policing

- At Zurich airport security & policing costs are 14% of total
- Security standards set by national governments
- In some countries security provided by government agencies (USA & France)
- In many countries costs are the responsibility of airport authorities

# Airport costs

- Airport costs can be reduced through out-sourcing to third-party providers
- Typical functions out-sourced include:
  - IT
  - Security
  - Cleaning / Facility Management
- Out-sourcing will reduce costs to airports but there maybe a trade-off with:
  - Quality of service
  - Terminal operational efficiency

# Airport Costs

## capital costs

- **Fixed asset depreciation**
  - depends on age of fixed assets
  - depends on airport's stage in its investment cycle
  - asset life horizon (runways between 50 to 100 years) – (terminals between 20 to 50 years)
- **Interest payments**
  - depends on capital structure of airport authority (debt v equity)
  - high debt translates into higher interest payments
  - government owned airports can usually secure competitive interest rates from lenders due to government guarantee

# Airport Costs

rental / lease payments to government

- Airports privatised under concession and lease based-contacts often required to pay a fee to the government
- Government owns lands and leases to an airport operator
- Payment income used to support smaller airports in the system
- Fixed rental (Argentina Airports)
- Rental fee can be based on passenger throughput (Luton)
- Rental fee based on % of airport revenue (Canadian system)

## Cost breakdown and % change 2001 to 2006 BAA

	% of total in 2005/6	Average p.a. % change 2000/1 to 2005/6
Labour	35	+13
Depreciation	19	+11
Police	3	+5
Local taxes	7	+7
Utilities	7	+10
Other	29	-

Source: BAA annual reports

# Conclusions

- High margin industry
- Attractive industry for potential investors
- Airports facing rising costs (energy, security)
- Increasing competitive environment between airports
- Increasing focus on developing commercial revenues