CASE STUDY - Manchester Airport

Economic Regulation & Airport Competition In The UK

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UK Economic Regulation & Airport Competition

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Agenda

- UK Economic Regulation
  - Regulation Methodology
  - Regulatory Mechanism
  - Regulatory Goal & Purpose
- Herfindahl-Hirschman Index of Concentration
- Main Arguments Against Market Share = Market Power
- Airport Competition
  - Product Market
  - Geographic Market
  - Competition for Airlines
  - Competition for Passengers
- Conclusions

Overview of Manchester Airport

The Manchester Airports Group

The Manchester Airports Group (MAG)
2003 RESULTS
26 Million Passengers // Revenue: US$ 700 million

Manchester Airport
- 20 million PAX
- 2 Runways
- 3rd Largest UK Airport
- 19th Largest Intl Airport in the world (ACI 2000)

East Midlands Airport
- Approx. 4.8 million PAX
- 1 Runway
- UK's Largest Cargo Airport
- UK Hub for FedEx, UPS

Humberside Airport
- 0.5 million PAX
- 1 Runway
- Predominantly Business Airport

Bournemouth Airport
- Approx. 0.5 million PAX
- 1 Runway
- No Frills Operations

UK Economic Regulation

UK Regulation Methodology

•METHODOLOGY

- 5-Yearly Review by The Competition Commission and Civil Aviation Authority (CAA) of 4 Regulated UK Airports **;
- CAA Sends Issues of Recommendations to the Competition Commission for Consideration & Enters Into Discussions With Airports, Airlines, etc;
- Airports, Airlines and Other Parties Responds Through Oral Discussions and by Submitting Memoranda;
- Competition Commission Considers CAA Issues Alongside Responses by Airports, Airlines and Others And Makes Recommendations to CAA
- CAA Makes Final Decision On The Form Of Regulation for next 5 years.

** Heathrow, Gatwick, Stansted & Manchester

UK Regulation Mechanism

•REGULATORY MECHANISM

- Price-Cap Regulation Through RPI-X Formula Levied on:
  - (a) Aircraft Landing (b) Departing Passengers & (c) Aircraft Parking
- Revenue Yield Price-Cap (i.e.set revenue yield per PAX)
  - Airport mandated to refund airlines in the event of "Over Recovery".
- *"Single Till" *versus* "Dual Till" Regulation
  - *i.e. Regulated+Non-Regulated Commercial Activities in one Basket
- Mandatory Airport-Airline Consultation on CAPEX
  - Airport AOC is mechanism through which consultation is held
- "Allowed" Rate of Return (%) on Regulated Asset Base

UK Regulation Objective

REGULATORY GOAL & PURPOSE

- Constrain **Airport Market Power Through Price Regulation
  - Herfindahl-Hirschman Index/HHI (market share = market power)
- Ensure Airports Deliver Reasonable Quality of Service;
  - Assumes airport costs may be saved through deterioration in quality
- Pre-determined Rate of Return on Regulatory Asset Base
  - Typically 5%-8.5%
- Reward Efficiency & Penalize Poor Service Quality at Next Review;

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Market Power & Herfindahl-Hirschman Index

Market Power

- HHI Premise: Market Share = Market Power
- Market share can exist in a variety of contexts and market power is not an absolute term but a matter of degree .
- An extreme case is a monopolist or single supplier of a product in a market
- Regardless, what a monopolist can charge in the short run depends on price elasticity of demand

Herfindahl-Hirschman Index (HHI) of Concentration

- HHI is a commonly used test for evaluating market concentration. Has largely replaced the 4-Firm Concentration Ratio Test.

$$HHI = \sum_{i=1}^{N} q_i^2$$

- where N is number of participants
- q_i is percentage market share
- In HHI testing, because small shares don't add up to much even when squared, it is safe to ignore them.

Applying HHI Methodology

- In a Monopolist Industry HHI = 10,000 (i.e $100\%^2$)
- Industry with 4 Firms market share of: 35%, 30%, 20% & 15%

$$HHI = \sum_{i=1}^{N} q_i^2$$

  - If N=4 - $q_1=35\%^2$, $q_2=30\%^2$, $q_3=20\%^2$, $q_4=15\%^2$ then HHI = 2750

- In Monopolist & Merger Analysis Cases in the USA:
  - HHI below 1000 is deemed to be unconcentrated
  - An HHI of 1800 is deemed concentrated

Market Power Is Not Always a One-Way Street

Market Power Can Sometimes Be Self-Defeating

- Market power can sometimes lead to decreased prices in the long run:
  - Higher prices can act as a catalyst, quickening entry by NEW entrants into a market (e.g. Low Cost Carriers and tertiary airports entry into European short haul market)
  - Process & Technology INNOVATION (e.g. wide adoption of the Internet for distribution by airlines and others).
- Some market power abuses are actually self-inflicted by consumers:
  - Consumers are sometimes RELUCTANT to respond to favorable prices offered by new vendors in deregulated markets

Market Power Prognosis

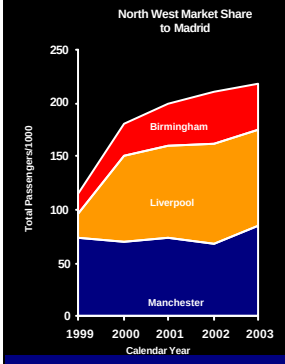
- Manchester Airport argues that HHI test alone is NOT sufficient proof of Market Power. It is merely a preliminary indication.
- Proper analysis of Market Power requires consideration of 3 key factors:
  - IDENTIFY relevant "product" market
  - DEFINE relevant geographic market
  - EVALUATE market concentration

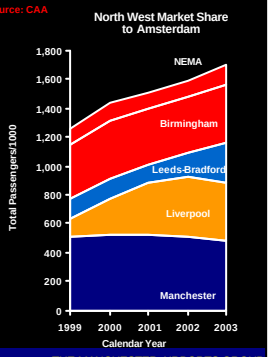
Main Arguments Against Market Share Equals Market Power

Arguments By Manchester Against Market Share = Market Power

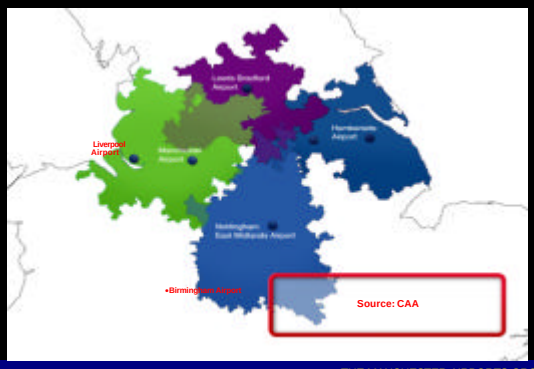
- SIZE IS NOT EVERYTHING
- Manchester accepts it has high Market Share but not Market Power because:
  - Competitive market forces are operating on Manchester, locally, nationally and internationally
  - Relevant product and geographic markets too narrowly defined by regulator
  - Manchester's share of overall UK market predicted to fall in the long term by DfT
  - Airport competition is often undermined by the behaviour of incumbent airlines for valid commercial reasons
  - Lack of evidence or absence of 'pricing misbehaviour'

Some Evidence of Competitive Market Forces





NORTH WEST: NARROWLY DEFINED MARKET



UK: THE RELEVANT MARKET

LONG TERM GROWTH TREND IS NON-EXPONENTIAL

- Short & Long term growth trends inconsistent with market power

DfT Long Term National Forecast

Source: CAA	Low	High
DfT Forecast in 2002/2015	34.8	42.3
DfT Forecast in 2003/2015	32.1	32.9
Difference	-2.7	-9.4

Short/Medium Term Regional CAGR Trend

Sector	Total UK	Competing Airports	MAN	LPL	LBA	BHX	EMA
	CAGR 99-03	CAGR 99-03	CAGR 99-03	CAGR 99-03	CAGR 99-03	CAGR 99-03	CAGR 99-03
Total Domestic	6.9%	6.5%	3.3%	13.2%	4.2%	5.1%	22.7%
IS Short haul	7.1%	14.3%	7.7%	33.1%	15.7%	9.7%	43.5%
IS Long haul "	0.3%	6.9%	5.4%	-	-	14.6%	-
Total Int Sched	4.7%	13.1%	7.1%	33.1%	15.7%	10.2%	43.5%
Charter Short Haul	1.3%	1.9%	0.5%	18.5%	3.8%	3.7%	2.3%
Charter Long Haul "	-5.5%	-4.2%	-3.0%	-	-	-11.0%	-37.5%
Total Int Charter	0.5%	1.3%	0.1%	18.8%	3.6%	2.6%	2.2%
Total pax	4.4%	6.6%	2.9%	25.0%	8.4%	6.5%	17.6%

AIRPORT COMPETITION UNDERMINED BY BEHAVIOUR OF INCUMBENT AIRLINES

- Switching costs for airlines, restricts the movement of airlines between airports limiting further opportunities for competition between airports.
  - Entire movement of operation between airports involves substantial COST and RISK to an airline.
  - Partial movement of operation between airports involves a loss in ECONOMIES of SCALE & SCOPE for the airline.
  - Establishment of NEW AIRLINE ROUTES in a new airport location represents a HIGH RISK for an airline.
  - Dominant airlines at airports have market power which are sometimes used to RAISE ENTRY BARRIERS to new entrants.

ABSENCE OF PRICING MISBEHAVIOUR

- LCC and Charter markets are highly price sensitive consequently airlines constantly pushing for cost reduction to published tariff;
- Manchester undertakes annual review of its aeronautical pricing policy in line with market reality. Recent examples of discounts offered to airlines include:
  - Off Peak Slot discounted by as much as 50%
  - New Route Incentive
  - Capacity Growth Incentive in the form of discounts
  - Non-Stop Service Incentive
  - Standby Aircraft Incentive

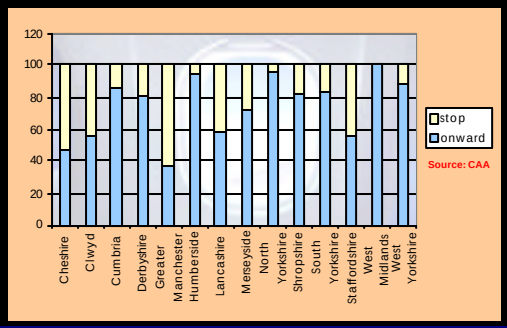
AIRPORT COMPETITION

AIRPORT COMPETITION: Product Market

- Product Market definition is a key step in competition analysis
- Manchester's product portfolio or route network (184 destinations) means it competes on three levels:
  - Locally against neighboring airports: e.g. LPL, LBA, BHX:
    - For short haul (includes LCC) scheduled & charter services
  - Nationally against Heathrow, Gatwick, Stansted, etc
    - For long haul scheduled & charter services
  - Internationally against European airports: e.g AMS, FRA, CDG et
    - For long haul scheduled services

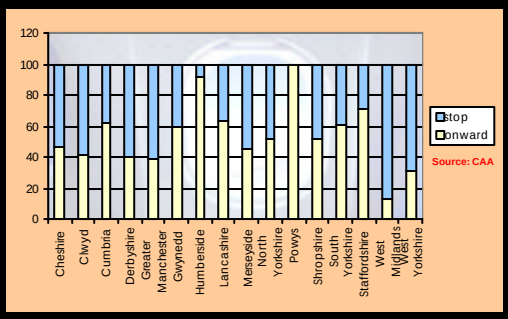
NATIONAL COMPETITION: Geographic Market

PAX By County From Manchester Catchment, Originating/Terminating LHR



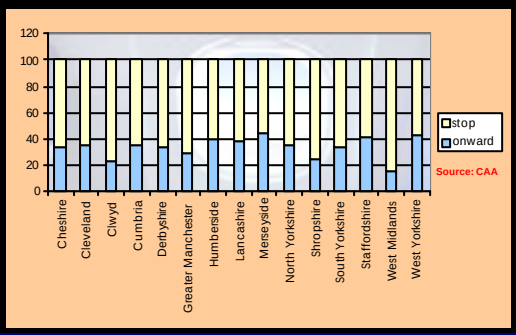
INTERNATIONAL COMPETITION: Geographic Market

PAX By County From Manchester Catchment, Originating/Terminating AMS



INTERNATIONAL COMPETITION: Geographic Market

PAX By County From Manchester Catchment, Originating/Terminating CDG



REGIONAL COMPETITION: PAX & Airlines

Impact on Manchester of LCC Competition from Neighboring Airports (LPL, etc)

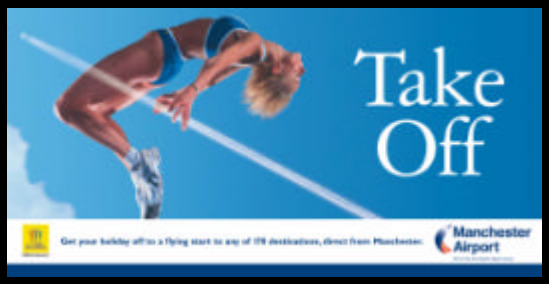
Destination	Airline	Reduction in Annual Seat Capacity	Change in Aircraft Size and Daily Weekday Frequency
Aberdeen	British Airways	46,765	6xDH8 to 3xDH8
Amsterdam	British Airways	80,392	3x737 to 3xERJ
Amsterdam	KLM	65,259	9xF100 to 7xF100
Brussels	British Airways	38,666	4x737 to 3x146
Brussels	Sabena/SN Brussels	119,913	3x737+2x146 to 1x146
Paris	British Airways	42,913	5x737+1xERJ to 4x146+1xERJ
Copenhagen	SAS	33,262	3xMD80+1xDC9 to 3xMD87
Dublin	Ryanair	53,950	5x737 to 3x737
Edinburgh	British Airways	25,767	1x737+3xDH8+1xATP+1xERJ to 2xDH8+4xERJ
Frankfurt	British Airways	41,302	3x737+1xERJ to 1x146+4xERJ
Frankfurt	Lufthansa	27,961	2x737+2xA320 to 3xA320
Glasgow	British Airways	43,294	2x737+4xDH8 to 3xDH8+3xERJ
Hamburg	Lufthansa	14,953	1x146+1xCRJ to 2xCRJ
Jersey	British Airways	30,171	3xATP to 3xDH8
Heathrow	British Airways	65,389	1x737+10xA320/A319
Milan	British Airways	19,934	2x737+1xERJ to 2x146
Zurich	Swissair/Swiss	21,616	2x146 to 3xERJ

Source: MAN Analysis

- Airline capacity lost due to reduced aircraft size , reduced frequencies & relocations
- Circa 2.1 million passengers lost due to airport competition for airlines

CONCLUSION

- High market share do not of necessity confer market power. Rather, it is a preliminary but not a conclusive indication of the degree of competition in a market.
- Manchester operates in a competitive market where it experiences varying degrees of competition regionally, nationally & internat ionally
- The airport disputes that it has market power given the disparate nature of competition & chains of substitution present in its market
- The relevant market definition (PRODUCT & GEOGRAPHIC) is critical to competition analysis
- LCCs and tertiary airports are substitutable alternatives to the Manchester offer of charter & scheduled air services



Thank you!
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QUESTIONS & ANSWERS