The Growth of Gulf Airlines - Implications for Airports, Passengers and Competitors

Wolfgang Grimme

Institute of Air Transport and Airport Research

German Aerospace Center (DLR)

DLR

Agenda

1. Introduction
2. Development
3. Implications for Airports, Passengers and Competitors
4. Challenges for Air Transport Policy
5. Some thoughts on the level playing field
6. Unfair competition or smart use of resources?
7. Outlook
8. Summary

Agenda

1. **Introduction**
2. Development
3. Implications for Airports, Passengers and Competitors
4. Challenges for Air Transport Policy
5. Some thoughts on the level playing field
6. Unfair competition or smart use of resources?
7. Outlook
8. Summary

1. Introduction

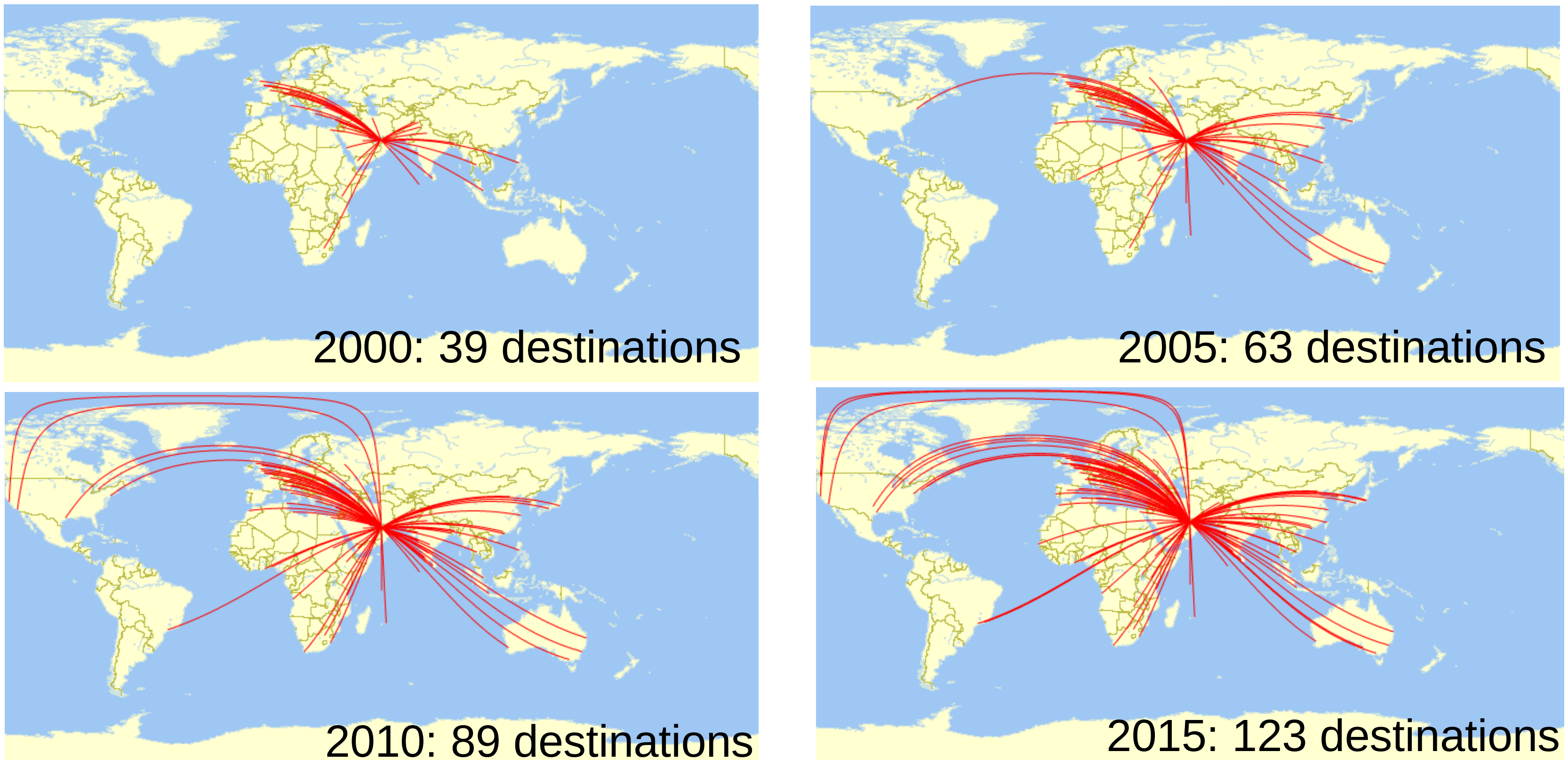
- Opportunities:
  - More choices for passengers/shippers
  - More traffic at secondary airports
- Challenges:
  - Impacts on incumbent airlines
  - How to deal with traffic rights requests?
- Questions:
  - How do passengers react to new services?
  - How has the competitive landscape changed?
  - What are the impacts for airlines and airports?
  - How should the federal government react concerning traffic rights?

Agenda

1. Introduction
2. **Development**
3. Implications for Airports, Passengers and Competitors
4. Economic Effects
5. Challenges for Air Transport Policy
6. Some thoughts on the level playing field
7. Unfair competition or smart use of resources?
8. Outlook
9. Summary

2. Development

Network Growth – Nonstop destinations out of DXB

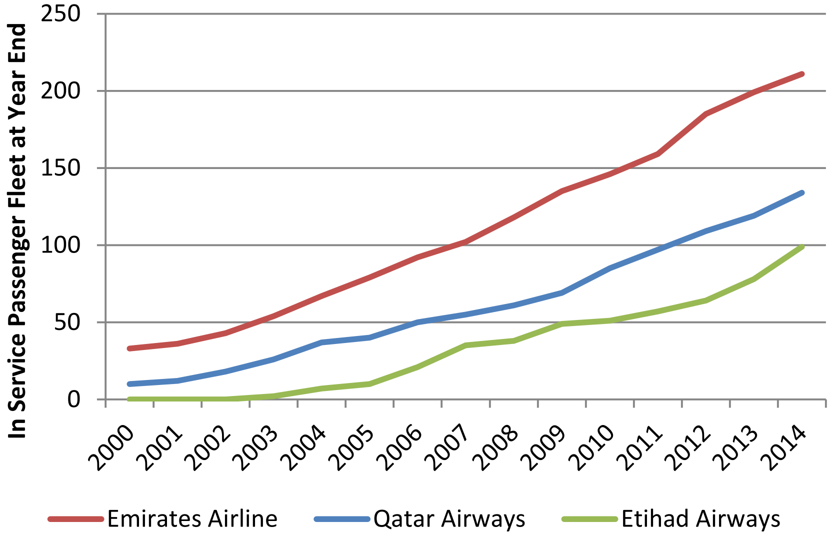


Source: gcmap.com

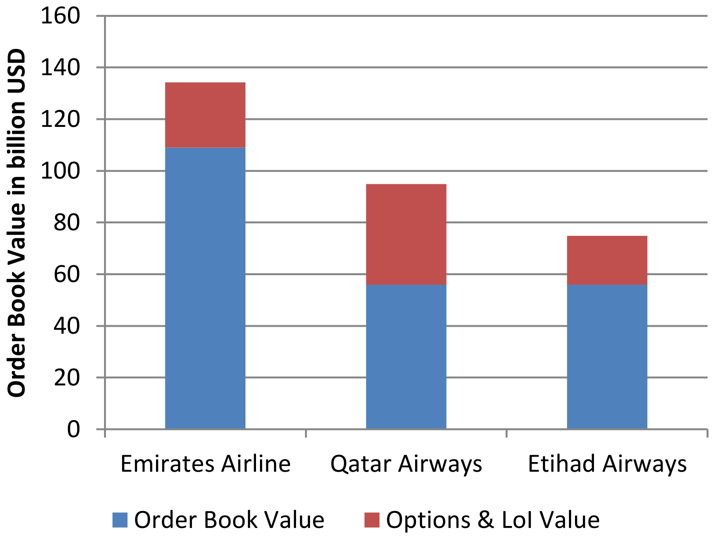
⇨ Gulf carriers have developed a global network and make extensive use of ultra-long-haul flights

2. Development

Passenger aircraft in service at year end



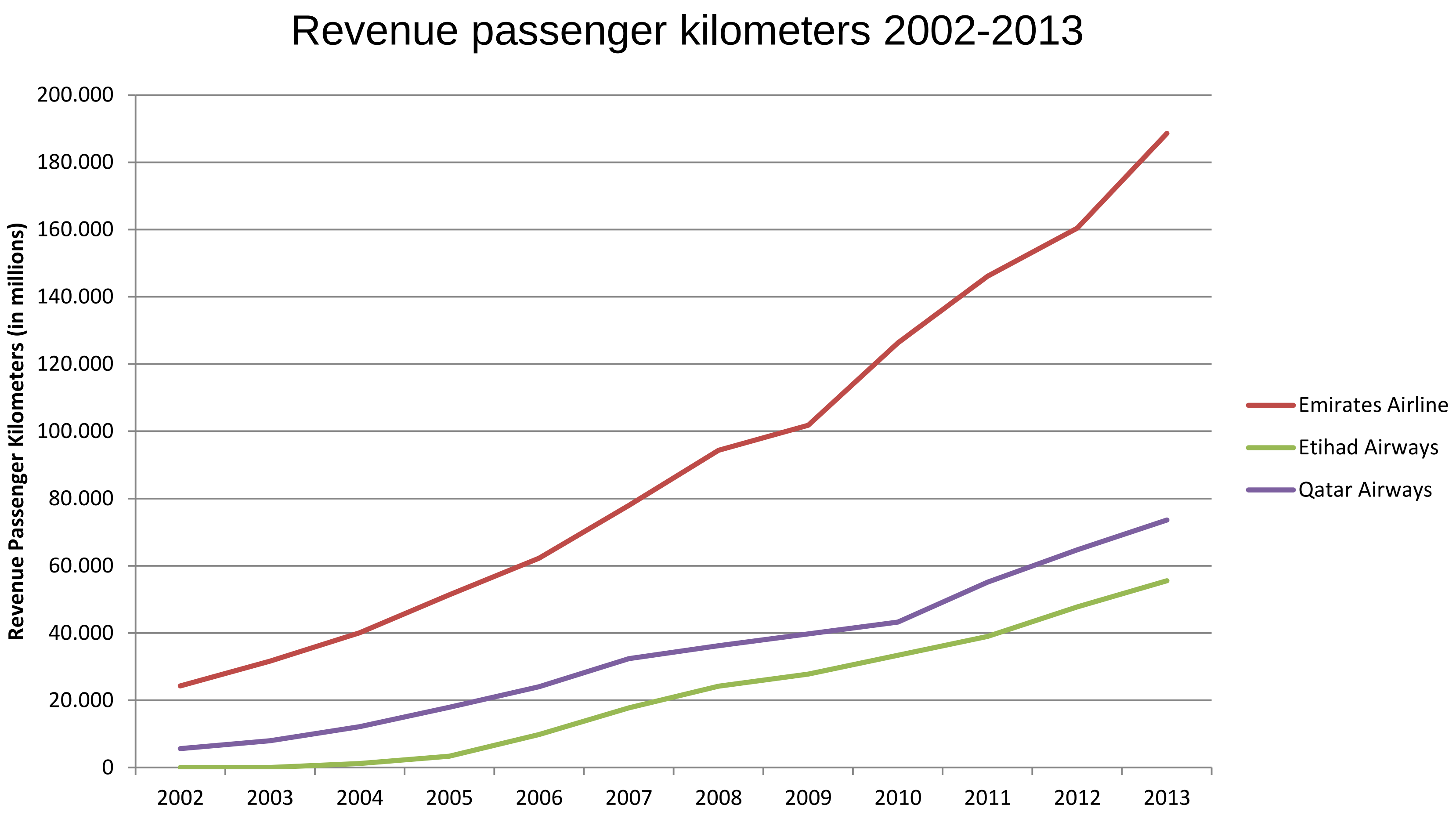
Order book value at year end 2014



Source: ASCEND Online Fleets

- ⇨ Gulf carriers have become decisive customers for the global aeronautics industry (OEM and aftersales services)
- ⇨ Without Emirates' order for 140 A380 (43% of total orders for this type), the project would have become a desaster

2. Development



Source: ASCEND Online Fleets

DLR

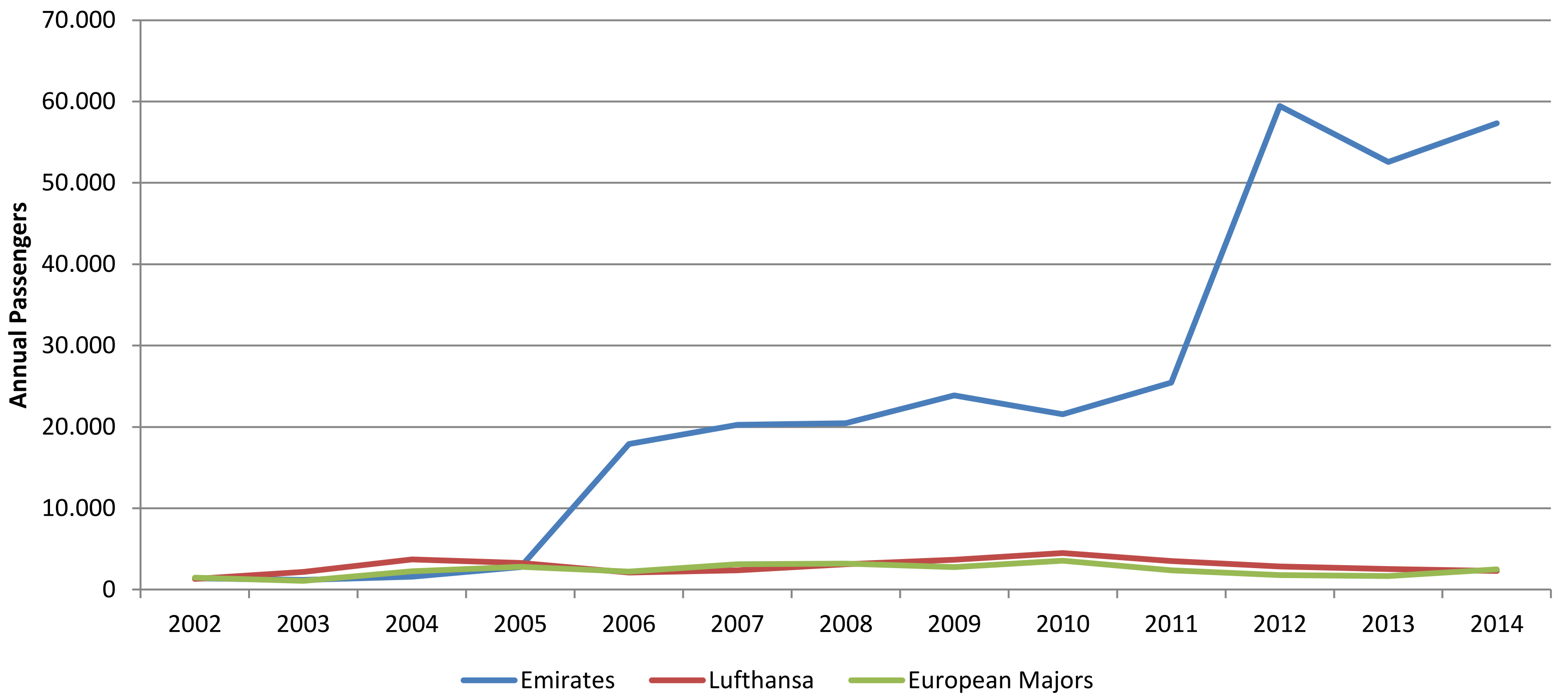
Agenda

1. Introduction
2. Development
3. **Implications for Airports, Passengers and Competitors**
4. Challenges for Air Transport Policy
5. Some thoughts on the level playing field
6. Unfair competition or smart use of resources?
7. Outlook
8. Summary

3. Implications for Airports, Passengers and Competitors

- What has happened after the market entry of Emirates in Hamburg?

Origin-destination passengers Hamburg-Dubai 2002-2014

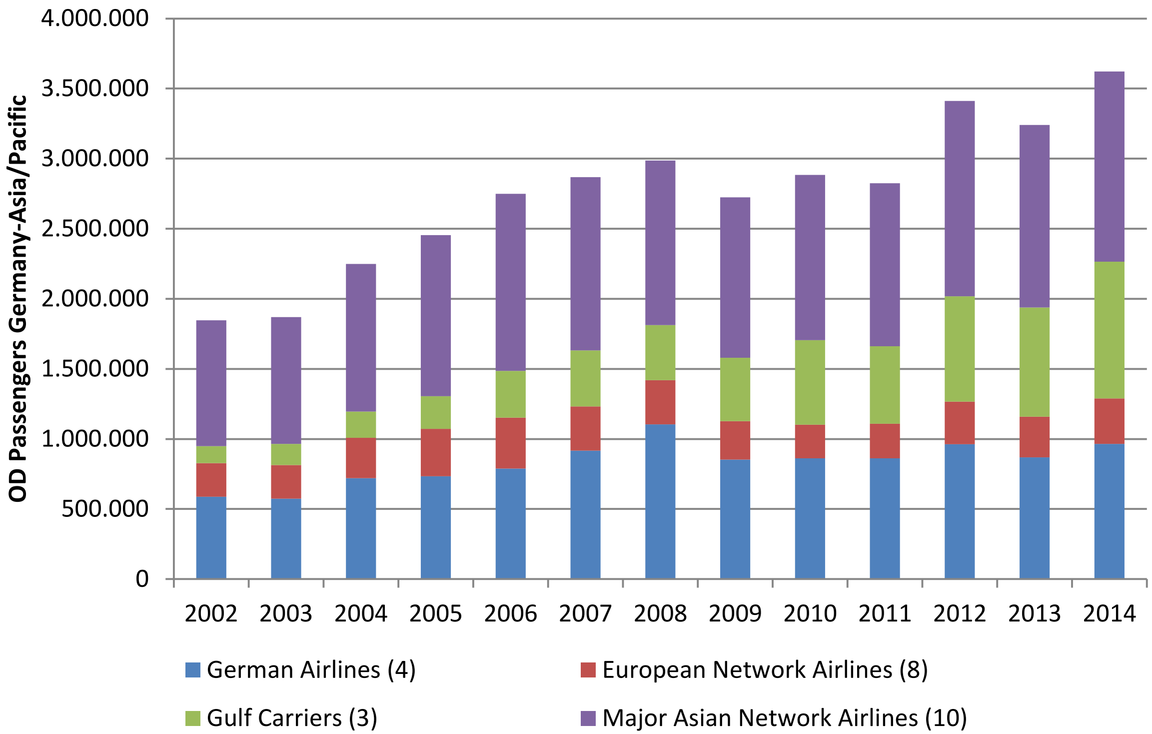


Source: Sabre ADI

⇨ The supply of Gulf carriers results in traffic stimulation effects, only comparable to the effects of Low Cost Carriers in shorthaul markets

3. Implications for Airports, Passengers and Competitors

Overall market development Germany-Asia/Pacific – Total OD Passengers



Total Growth 2002-2014

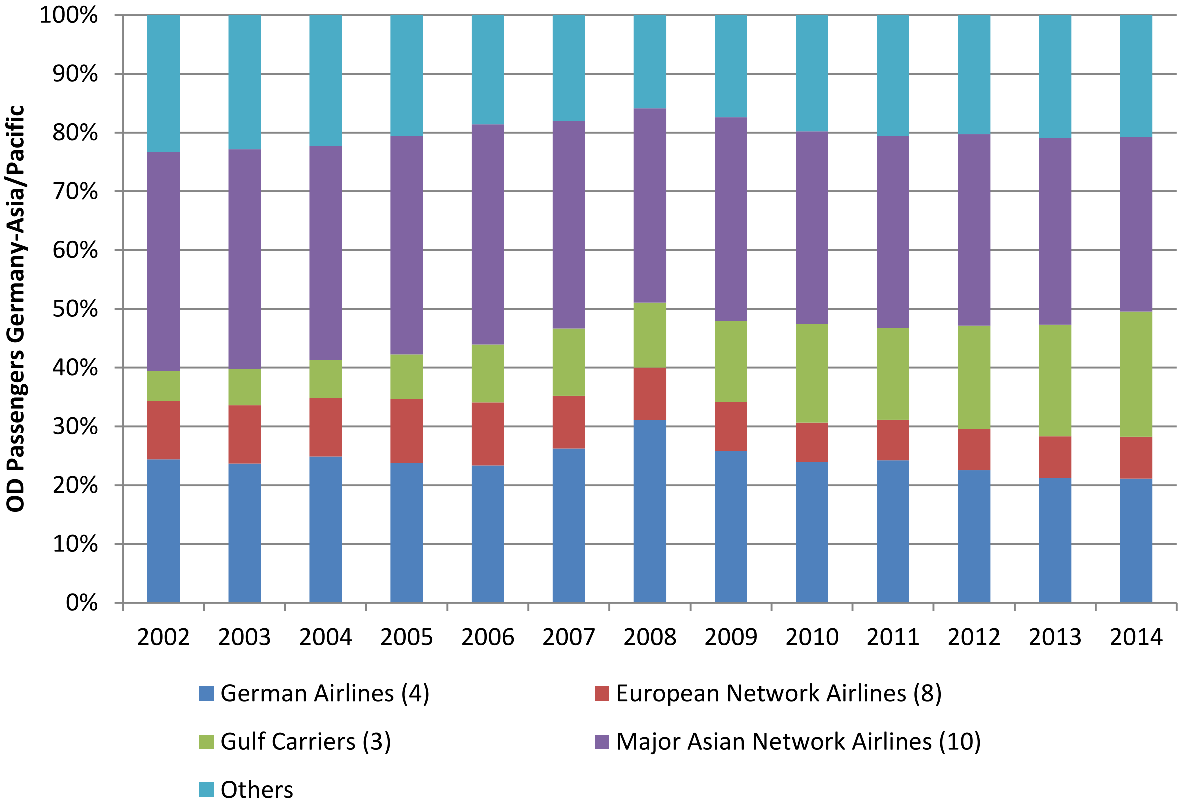
German Airlines	64.2%
European Airlines	35.9%
Gulf Airlines	694.7%
Asian Airlines	51.3%

Source: Sabre ADI

⇨ Total passengers for German carriers growing, market stimulation comes from Gulf Carriers, European network airlines face most difficult situation in the German market

3. Implications for Airports, Passengers and Competitors

Overall market development Germany-Asia/Pacific – Market Share Development



Market Share Change in percentage points 2002-2014

German Airlines	-3.3%
European Airlines	-2.8%
Gulf Airlines	+16.2%
Asian Airlines	-7.6%
Others	-2.6%

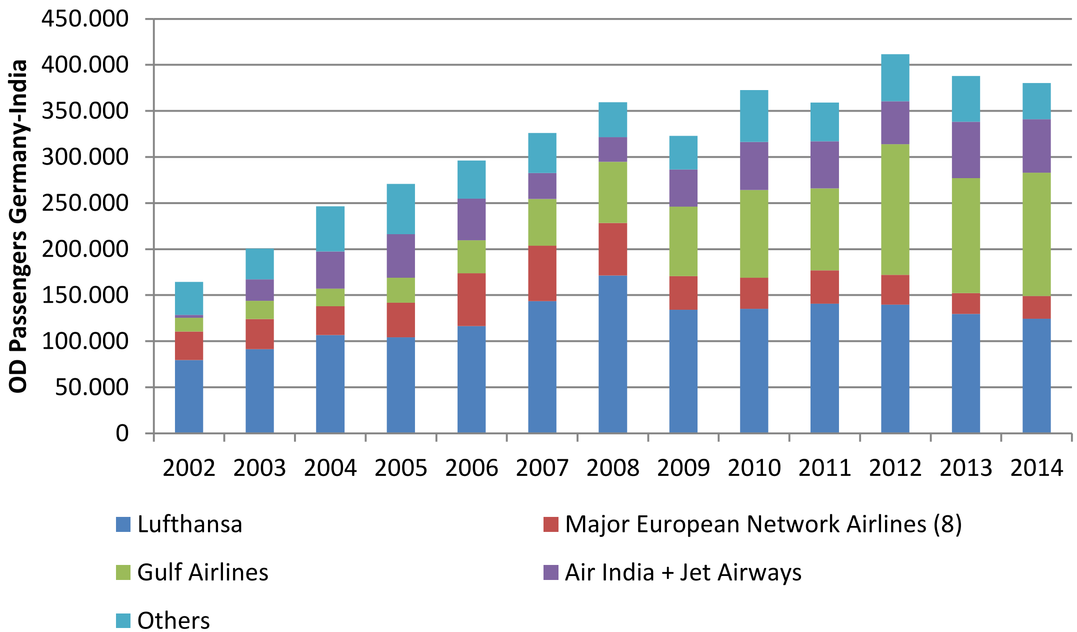
Source: Sabre ADI

⇨ German carriers have lost market share, but grown in passenger numbers

3. Implications for Airports, Passengers and Competitors

Market Share Development is highly route specific – some examples

Germany - India



Market Share 2014

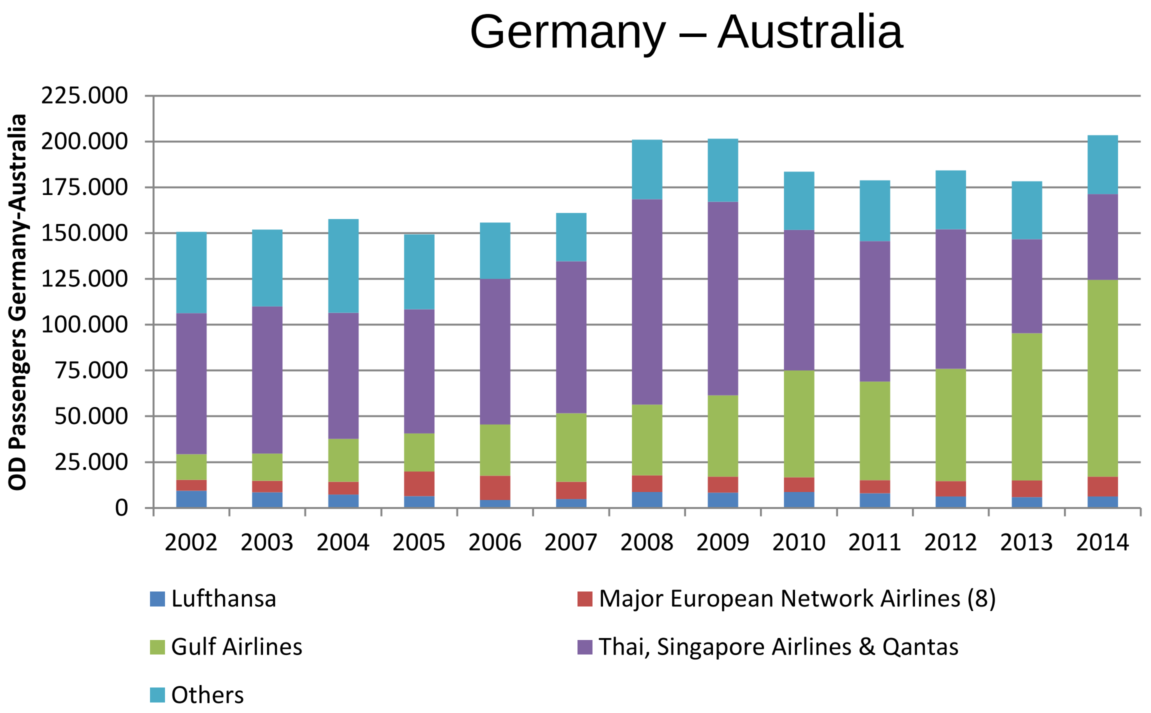
Lufthansa	32.8%
European Airlines	6.4%
Gulf Airlines	35.2%
Indian Airlines	15.3%
Others	10.3%

Source: Sabre ADI

⇨ Significant growth in passenger numbers for Lufthansa (+57% 2002-2014), but decline in market share (48% in 2002 to 33% in 2014)

3. Implications for Airports, Passengers and Competitors

Market Share Development is highly route specific – some examples



Market Share 2014

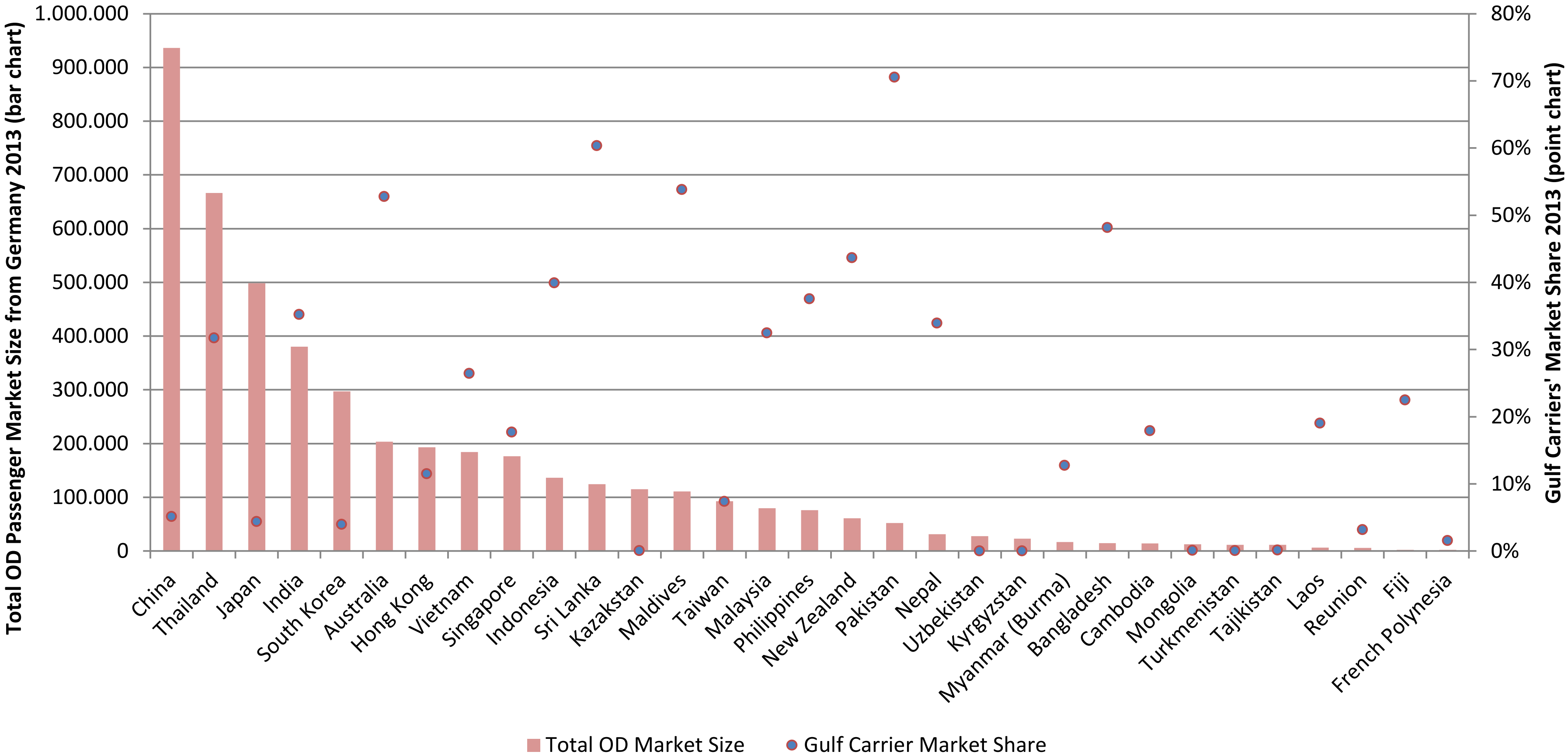
Lufthansa	3.0%
European Airlines	5.4%
Gulf Airlines	52.7%
Thai/Singapore/Qantas	23.0%
Others	15.8%

Source: Sabre ADI

⇨ Emirates/Qantas cooperation resulted in massive boost – for the first time, more than half of passengers from Germany to Australia travel via Gulf

3. Implications for Airports, Passengers and Competitors

Market Share Development is highly route specific – overview 2014

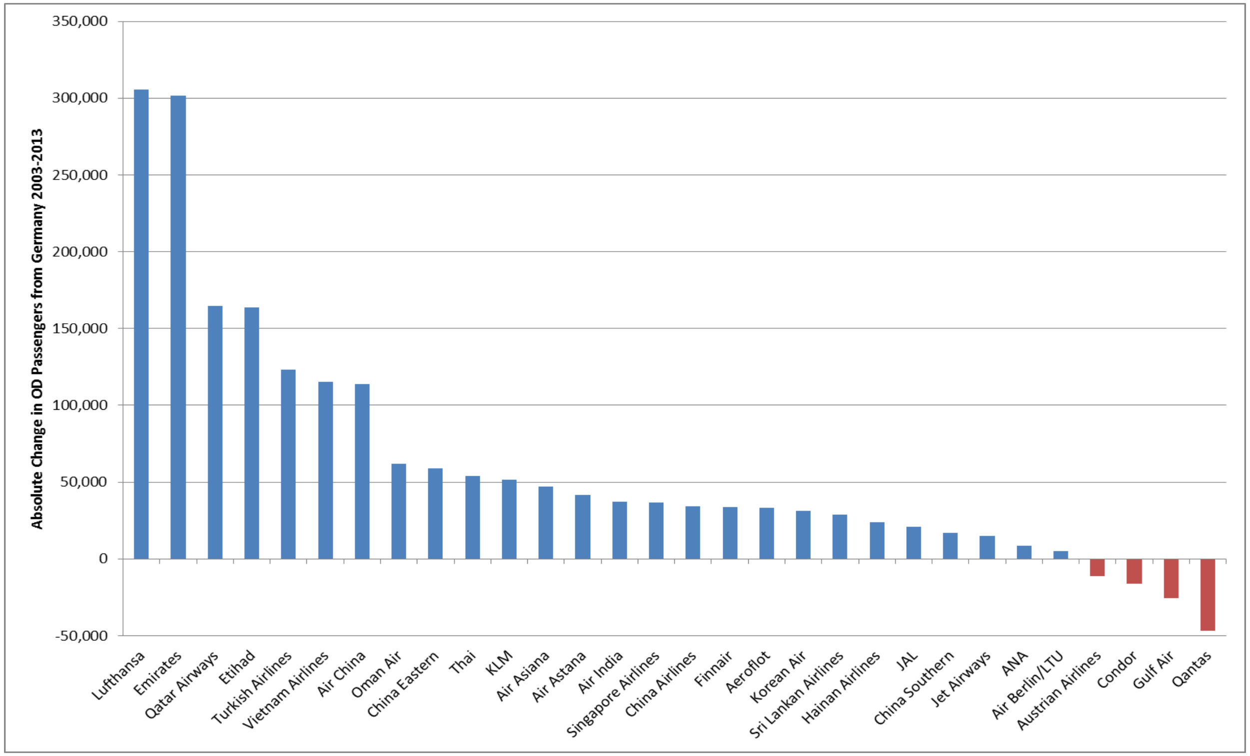


Source: Sabre ADI

3. Implications for Airports, Passengers and Competitors

Absolute origin-destination passenger growth by individual carriers between Germany and Asia Pacific between 2003 and 2013

Pax Growth 2003-2013:
+ 1.7 Mio.
+ 68.9%



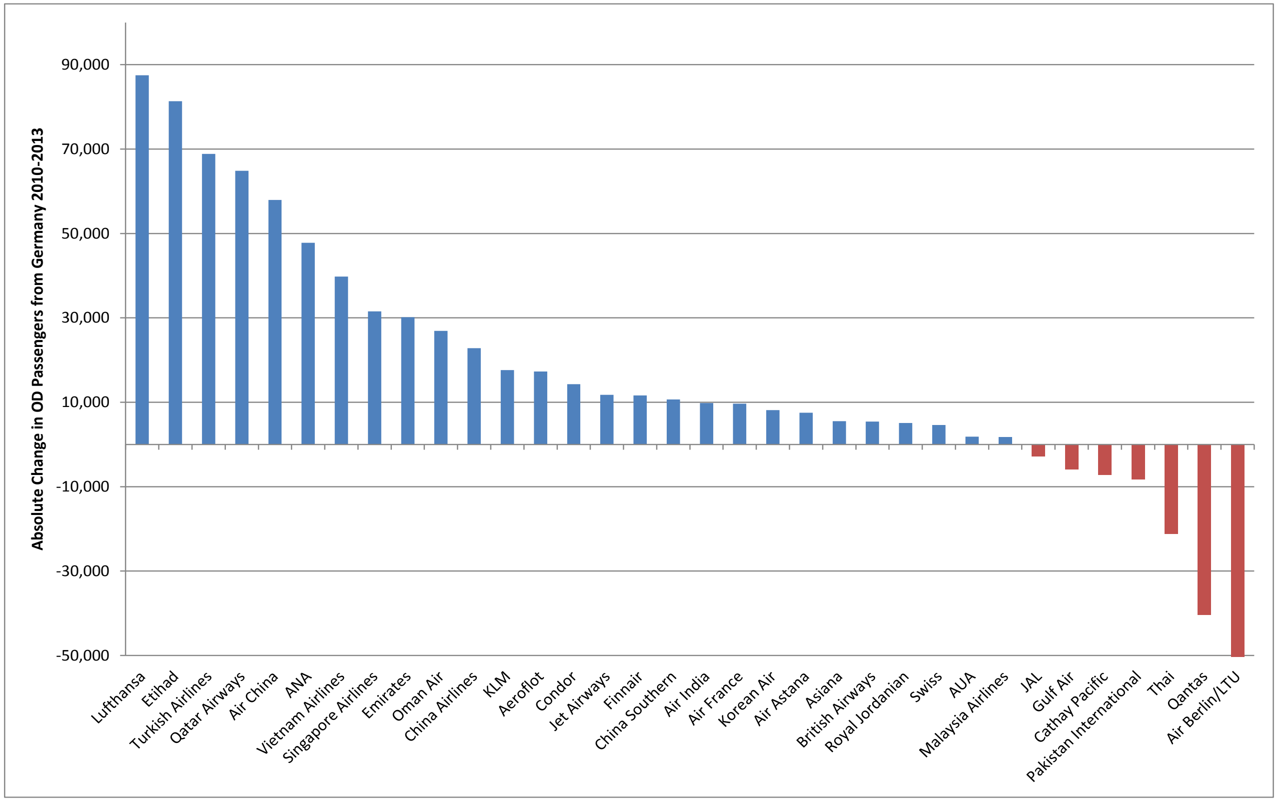
Source: Sabre ADI

Lufthansa, Emirates, Qatar Airways and Etihad Air Berlin show the highest absolute growth. About 35% of total growth attributed to Lufthansa and Emirates

3. Implications for Airports, Passengers and Competitors

Absolute origin-destination passenger growth by individual carriers between Germany and Asia Pacific between 2010 and 2013

Pax Growth 2010-2013:
+ 0.5 Mio.
+ 13.9%

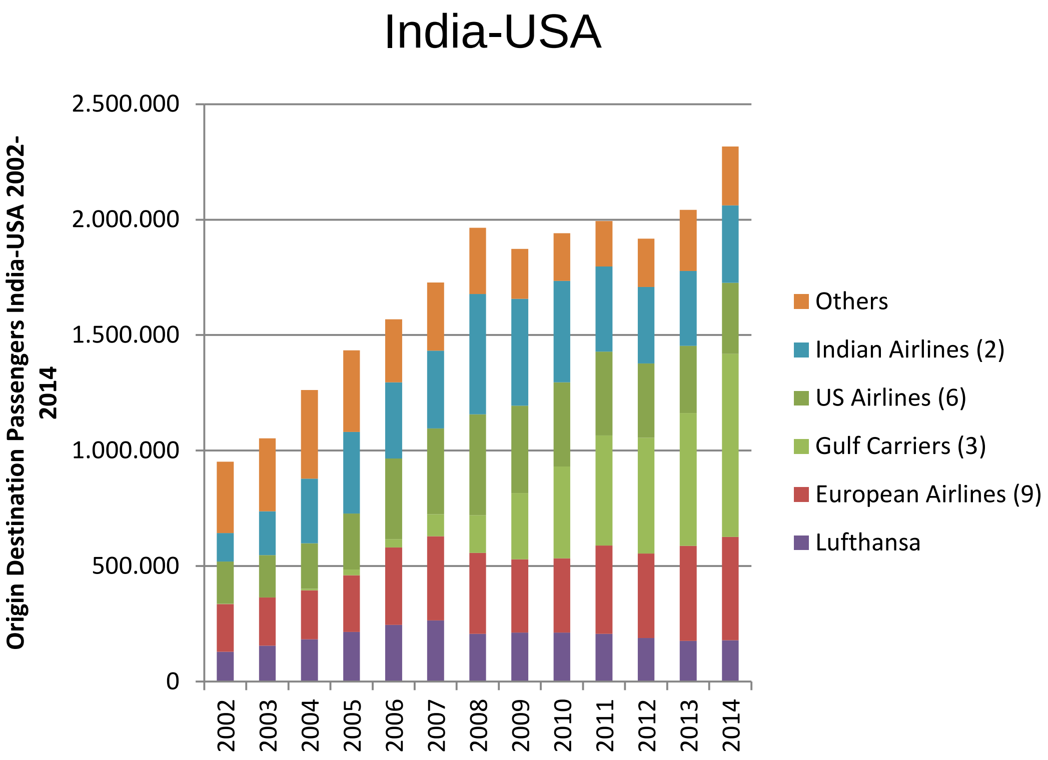


Source: Sabre ADI

Also in the short run, Lufthansa's position is strong, as well as Etihad and Turkish Airlines.

3. Implications for Airports, Passengers and Competitors

Germany is traditionally an important hub for intercontinental transfers



Market Share 2014

Lufthansa	7.7%
European Airlines	19.4%
Gulf Airlines	34.2%
US Airlines	13.3%
Indian Airlines	14.4%
Others	11.0%

Source: Sabre ADI

⇨ Lufthansa lost market share from 15.6% in 2006 to 7.7% in 2014 and passenger numbers declined from 245k to 178k

3. Implications for Airports, Passengers and Competitors

Summary on traffic data findings:

- Gulf carriers create to a large extend new demand
- Overall, Lufthansa can still grow passenger numbers in absolute terms, while market share declines
- Some routes are particularly exposed to Gulf competition, passenger numbers declining
- Several Germany-Asia markets almost untouched by Gulf carriers, e.g. Korea, Japan, China
- Both Gulf carriers and ultra-longhaul aircraft (e.g. Boeing 777-200LR) threat the competitive position of Europe as hub between (East Coast) USA and Asia
- In the short and in the long run, Lufthansa has highly participated in passenger market growth Germany - Asia

Agenda

1. Introduction
2. Development
3. Implications for Airports, Passengers and Competitors
4. **Challenges for Air Transport Policy**
5. Some thoughts on the level playing field
6. Unfair competition or smart use of resources?
7. Outlook
8. Summary

4. Challenges for Air Transport Policy

- Gulf carriers repeatedly requested more traffic rights:
  - UAE (Emirates, Etihad) limited to 3 (+1) points in Germany, no limits on frequency or aircraft size
  - Qatar limited to 35 flights/week to Germany, no limits on points or aircraft size
  - Recent conflict on code-sharing between Air Berlin and Etihad
  - German Federal Ministry of Transport denies requests for additional services
  - Comments from the German air transport industry:
  - “Komplott der Lufthansa und des Frankfurter Flughafens gegen Berlin“ (H. Mehdorn, „Conspiracy of LH and Fraport against Berlin“)
  - „Wir sind nicht dafür da, das Drehkreuz Frankfurt zu schützen“ (W. Hermann, „We are not here to protect the hub in Frankfurt“)

⇨ What is the right decision – more traffic rights or leave as is?

4. Challenges for Air Transport Policy

- German Federal Ministry of Transport denies requests for additional services
- Dutch Ministry of Transport would like to reduce Emirates' traffic rights
- UK has signed Open Sky Agreement with UAE
- Proposed approach: Cost-benefit analysis
  - Benefits for the German Economy:
    - Reduced fares
    - Travel time savings (or losses in case of network decline)
    - Employment effects (newcomer growth)
    - Expenditures from incoming tourists
    - Cost savings for exporters (reduced air cargo rates)
    - Aircraft sales & aftersales services
  - Costs for the German Economy:
    - Job losses for German airlines
    - Potential reductions in non-stop connectivity
- No study to date with a welfare rationale on traffic rights liberalisation for Germany!

Agenda

1. Introduction
2. Development
3. Implications for Airports, Passengers and Competitors
4. Challenges for Air Transport Policy
5. **Some thoughts on the level playing field**
6. Unfair competition or smart use of resources?
7. Outlook
8. Summary

5. Some thoughts on the “level playing field”

- European airlines argue that Gulf carriers benefit from unfair competition:

Expansion of the Gulf hubs: Will Europe soon be playing in the Second League?

Demand fair competition

As long as it is not possible to enforce fair competition through the WTO, then it can only be guaranteed through market access set forth in air service agreements, which, in turn, must be based on these major premises:

- **Balance of opportunities and benefits:** The aviation sector should be further liberalised only if liberalisation is beneficial to both parties, specifically if the two sides have comparable markets and sophisticated regulatory frameworks. Otherwise, caution is advised and rules must be enforced.
- **Compliance with ownership and control provisions:** Under Regulation (EU) 1008/2008, an EU airline must be more than 50-percent owned by EU nationals (“ownership”). In addition, EU nationals must have effective control over the airline (“control”). Both conditions must be met to receive an EU licence, because market participants will take responsibility for security and commercial conduct only if there is clear accountability. Is Etihad’s shopping spree in Europe in legal conformity with this provision?

Comparison of site conditions

Taxes	Germany	Dubai
Air travel tax	yes	no
Tax on earnings	yes	no
Income tax Employees	yes	no
Value-added tax on national flights	yes	no
Fees		
Airport charges	high	low
Air traffic control charges	high	low
Aviation security charges	high	low
Environment		
Emissions trading	yes	no
Noise abatement	yes	no
Noise-based fees	yes	no
Bans on night flights	yes	no
Labour market		
Unions	yes	no
Right to strike	yes	no

The commitment to home-based aviation is worthwhile

Source: Lufthansa

DLR

5. Some thoughts on the “level playing field”

The effects of liberalisation - a look at other economic sectors

- Textiles:
  - Liberalising the market for textiles has led to near extinction of textile industry in Europe
  - Largest textile exporters now: China, Taiwan, India

- Automotive:
  - Cars of the far east weren’t welcomed in countries with own manufacturing industries
  - They brought an increase of comfort, more choice of different types, at lower prices
  - Liberalising the market for cars has opened up markets for European cars abroad
  - Several German carmakers now sell more cars in China than in Germany

➪ Will European aviation suffer the fate of the textile industry or flourish as the automotive industry?

➪ Has Europe really lost economic welfare through the loss of the textile industry?

5. Some thoughts on the “level playing field”

- Does the consumer care about „level playing fields“?
- Should policy-makers care about „level playing fields“?

- Cost advantages of Gulf carriers are positive:
  - Driving efficiency of established European carriers
  - Driving down prices for consumers
  - Gulf carriers – a “classic” exploitation of Ricardian comparative advantages?
  - Economic theory: international trade increases welfare

- Why are policymakers more reluctant allowing the import of services than consumer goods?
- What is the reason of lower prices?
  - Inferior product?
  - Subsidies?

Agenda

1. Introduction
2. Development
3. Implications for Airports, Passengers and Competitors
4. Challenges for Air Transport Policy
5. Some thoughts on the level playing field
6. **Unfair competition or smart use of resources?**
7. Outlook
8. Summary

6. Unfair competition or smart use of resources?

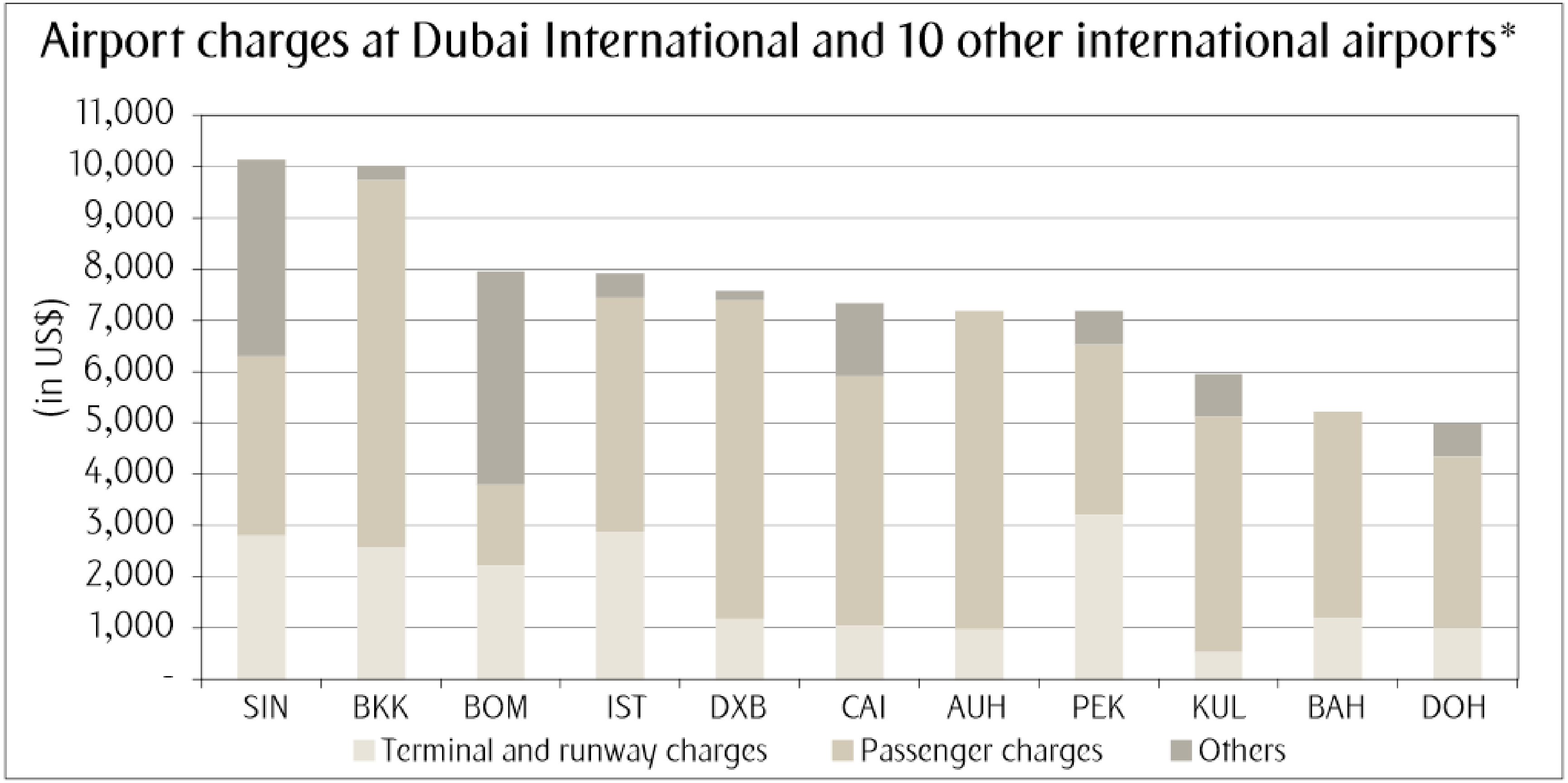
Competitors argue that Gulf carriers enjoy “unfair” advantages:

- No income tax ⇨ gross wage = net wage
- No social security payments ⇨ Gulf carriers typically pay for accommodation, schools, health insurance, retirement plans (...but Gulf countries get rid of unemployed foreigners easily...)
- Airport charges below cost ⇨ every operator enjoys low airport rates
- Fuel price below cost ⇨ at least Emirates buys fuel at market rates (see profit/loss-statement, check production of jet fuel in Gulf States)
- Gulf carriers enjoy export/import bank advantages for aircraft purchase ⇨ this is explicitly wanted by EU and US governments to support Airbus and Boeing
- Gulf carriers unfairly exploit 6th freedom traffic rights ⇨ European network carriers have been charging low fares in 6th freedom traffic for decades!

DLR

6. Unfair competition or smart use of resources?

Competitors argue that Gulf carriers enjoy “unfair” advantages:



Source: IATA

*B777-300 August 2011

6. Unfair competition or smart use of resources?

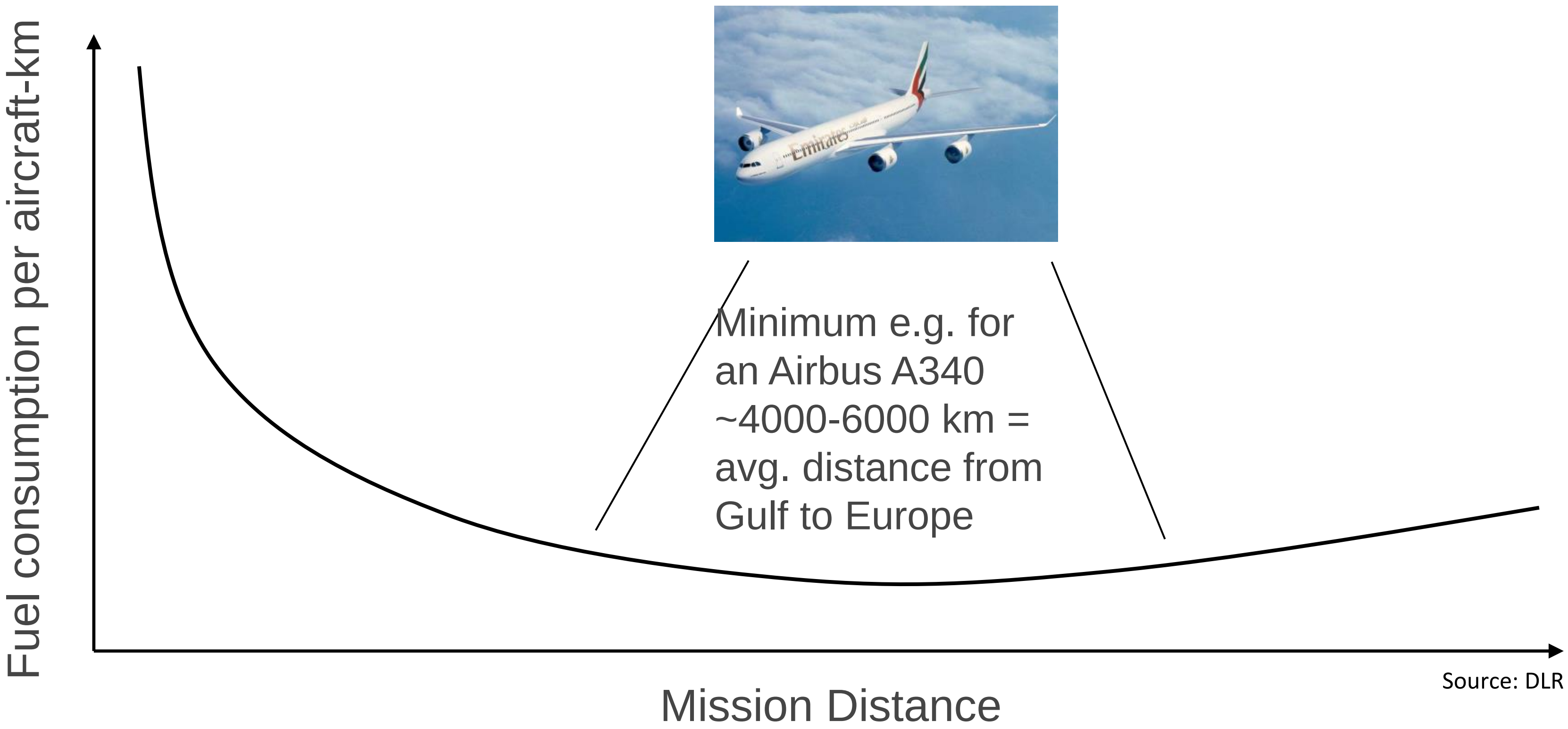
At least some aspects of the Gulf carriers business model can be attributed to smart use of resources instead of unfair competition:

- Volume discounts in aircraft orders
- New aircraft types
- Large share of widebody aircraft (lower cost per ASK)
- Lean management structures
- Lower seniority than competitors
- 24-hour hub operation
- Network effects

- James Hogan, CEO Etihad: “The only advantage I have is I’m not a legacy airline. I started with a clean sheet of paper…And I’m within three hours of huge emerging markets.“

6. Unfair competition or smart use of resources?

The physics of flight – fuel consumption per aircraft-km is dependent on mission distance:



⇨ Gulf carriers can use their widebody aircraft very efficiently

6. Unfair competition or smart use of resources?

Some indications for subsidies for Gulf Carriers:

- Start-up financing
- Low rate / free loans
- Support for Emiratisation programs
- PSO routes (two at Etihad)

- At least Emirates publishes a certified annual report

- Who paid for pension accruals at LH, airport construction in Europe?
- James Hogan, CEO Etihad: “The dominant position in their home markets is grandfathered. Their infrastructure is all grandfathered. We don’t argue about that.”

Agenda

1. Introduction
2. Development
3. Implications for Airports, Passengers and Competitors
4. Challenges for Air Transport Policy
5. Some thoughts on the level playing field
6. Unfair competition or smart use of resources?
7. **Outlook**
8. Summary

7. Outlook

Hypothesis 1: A “level playing field” has never existed, will never exist and probably should never exist...

- European major network carriers have competitive advantages over smaller countries’ airlines – but also smaller countries benefit
- Europeans should enjoy lower air fares, no matter how they are created as long as this is economically beneficial to the local economy

⇨ This requires a careful cost-benefit analysis with different time horizons

Hypothesis 2: European network airlines will not undergo the same fate as the European textile industry

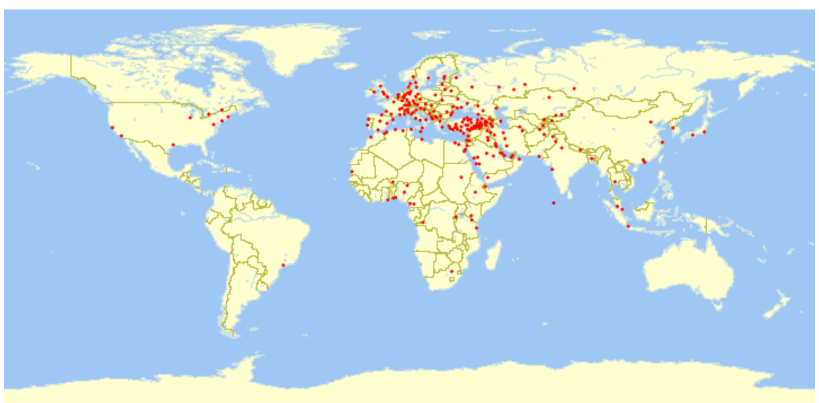
- Competitive advantage on non-stop routes – there will always be a demand for the quickest connection
- Exposed OD-relations only a small share of overall traffic
- Smaller long-haul aircraft could be used to maintain connectivity at low costs

⇨ Future of European network airlines not as bad as publicly stated, but politics should minimise negative factors (taxes, night curfews...)

7. Outlook

Another game changer: Turkish Airlines

- Capacity reserves at new Istanbul airport
- Demand in own home market
- OD-demand Europe<>Turkey
- Distances to be flown with narrowbody aircraft
- Destinations served: even tertiary airports (13 destinations in Germany)
- No constraints in bilateral air services agreement with Germany



Source: gcmap.com

236 destinations in May 2015

Source: Kalyon Group

Agenda

1. Introduction
2. Development
3. Implications for Airports, Passengers and Competitors
4. Challenges for Air Transport Policy
5. Some thoughts on the level playing field
6. Unfair competition or smart use of resources?
7. Outlook
8. **Summary**

8. Summary

Gulf Carriers show a wide range of effects:

- Stimulation of traffic, low level of diversion of traffic from other airlines
- Economic effects for European countries:
  - Benefits for the aeronautical industry
  - Growing incoming tourism
  - Lower fares/cargo rates
  - Better connectivity at secondary airports, more choice
- Incumbents fight against “unfair competition”
- Many competitive advantages come from smart use of resources and favourable policy decisions in Gulf States
- Air transport policy-makers in Europe need to assess benefits and costs and take a decision increasing economic welfare
- Future of European network airlines probably much better than stated

Backup - Development

Differences in Gulf Carriers‘ Business Models

Emirates

- Secondary-Hub-Secondary strategy – preference for “own metal”
- Only widebody aircraft
- Very limited codesharing
- Punctual, bilateral alliances, e.g. Qantas

Etihad Airways

- Equity strategy – buying into markets, use of feeder services (Air Berlin, Darwin, Jet Airways, Alitalia)
- Widespread codesharing across all alliances and with non-aligned airlines (Virgin Australia, American Airlines, Air New Zealand, JetBlue)

Qatar Airways

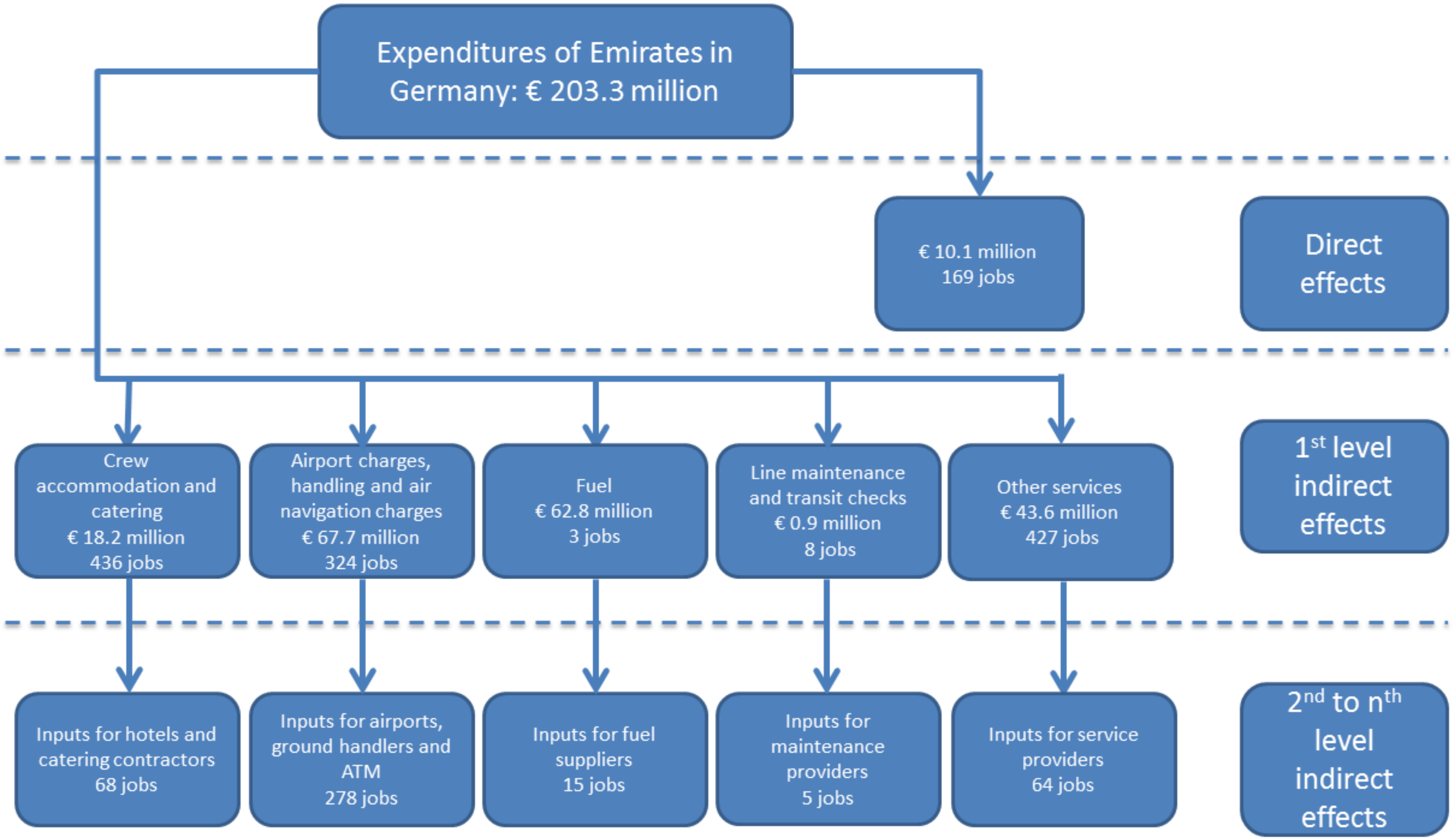
- Alliance membership (oneworld)
- Codesharing still limited

⇨ Gulf carriers have the same geographical location, but use different strategies to leverage their advantages

Backup - Economic Effects

Emirates

Employment related to Emirates' expenditures for flights to Germany 2010



Source: DLR

DLR

Backup - Economic Effects

Comparing different methodologies for the calculation of employment effects

<table>
<tr><th>Employment</th><th colspan="2">Methodology 1a</th><th>Methodology 1b</th><th>Methodology 2</th></tr>
<tr><td>Short description</td><td colspan="2">Input-output analysis, supplemented with bottom-up approach on Emirates' expenditures in Germany</td><td>In addition to 1a: Employment effects of non-aviation activities</td><td>Multiple regression of employees based at German airports as dependent variable and traffic volumes as independent variables</td></tr>
<tr><td>Direct</td><td colspan="2">Employees on Emirates' payroll</td><td>like 1a</td><td>Employees with workplace based on the airport</td></tr>
<tr><td>Indirect</td><td colspan="2">Employees at companies delivering inputs to Emirates, including full chain of inputs</td><td>In addition to 1a: Other employees benefitting from Emirates' activities (airport retailing, public authorities…)</td><td>Employees with workplace based outside the airport</td></tr>
<tr><td>Direct</td><td>169</td><td rowspan="2">1797</td><td>169</td><td>1,198</td></tr>
<tr><td>Indirect</td><td>1,628</td><td>2,271</td><td rowspan="2">2,395 (multiplier of 2.0)</td></tr>
<tr><td>Induced</td><td colspan="2">570</td><td>712</td></tr>
<tr><td>Sum</td><td colspan="2">2,367</td><td>3,152</td><td>3,593</td></tr>
<tr><td>Not included</td><td colspan="2">non-aviation airport activities (retailing etc.) and services by public authorities</td><td></td><td>off-airport employment (e.g. city ticket office)</td></tr>
</table>

Source: DLR, Klophaus

Emirates flights generate 3,152 direct, indirect and induced jobs in Germany

Backup - Economic Effects

Emirates

Expenditures and employment effects for the manufacturing industry - Benefits for German companies particularly due to A380 orders and Engine Alliance share of MTU

Area	Annual expenditures	Direct, indirect and induced employment
New aircraft orders (Airbus only)	€ 1,038.3 million	9,439
A380 engines: Production, spare parts, maintenance	€ 65.5 million	595
Cabin interiors and ground service equipm.	€ 208.8 million	1,898
Spare parts and maintenance services	€ 68.8 million	625
Total	**€ 1,381.4 million**	**12,557**
Options / Letter of intent (Airbus only)	€ 267.8 million	2,435
Total in case of conversion of options	**€ 1,649.2 million**	**14,992**

Source: DLR

Emirates is one of the largest customers of the German aeronautical industry, so far securing 12,500 Airbus-related jobs alone.
Options and letters of intent stand for another 2,500 jobs.
Jobs with German suppliers for Boeing are not counted here.

DLR

Backup - Economic Effects

Estimation of employment effects from incoming tourism

- Empirical relationship: 0.8 nights per German-Asia O&D passenger
- Emirates: 0.6 million OD passengers = ~0.49 million additional nights spent
- However, tourists could have travelled on another airline, outgoing tourism could be more attractive with new flights
- German cities with long-haul flights can become gateways

Country / Region	Total spending	Expenditures per day	Share of days	Total no. of days
Middle East	€ 24.7 million	€ 160	31.9%	154,646
China + Hong Kong	€ 11.7 million	€ 348	6.9%	33,597
India	€ 8.6 million	€ 153	11.6%	56,467
Australia, New Zealand, SW Pacific	€ 5.0 million	€ 120	8.6%	41,946
Korea	€ 3.6 million	€ 176	4.2%	20,384
Japan	€ 1.4 million	€ 335	0.9%	4,292
South/East Africa + Rest of Asia	€ 20.8 million	€ 120	35.8%	173,668
Total	**€ 75.8 million**		**100.0 %**	**485,000**

Source: DLR

Input-output analyses indicate that incoming tourist flying with Emirates spend € 76 million p.a., securing 2,583 direct, indirect and induced jobs