Globalisation at Sea: Cruise Sector Growth and its Externalities

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Table of Contents

- Cruise Sector Dynamics & Structural Trends
  - Growth forecasts
  - Capacity Developments
  - Concentration

- Globalisation at Sea?
  - Externalities: Overcrowding, Environmental Pollution, Employment Conditions
CRUISE SECTOR GROWTH

“A look into the crystal ball”
Source Market Perspective: Cruise Sector Growth & Pax Developments

**European Pax Development (‘000)**

- **Cruisers = 1.3% of Total Population**
- UK: 1622
- Germany: 1219
- Italy: 889
- Spain: 645
- France: 387

**German Pax Development (‘000)**

- **Cruisers = 1.5% of Total Population**
- 2003: 537
- 2004: 583
- 2005: 639
- 2006: 705
- 2007: 763
- 2008: 907
- 2009: 1027
- 2010: 1219

**European Average Growth Rate**

- 2006-2010 = 11.8%
- 2009-2010 = 10%

**German Average Growth Rate**

- 2006-2010 = 13.9%
- 2009-2010 = 19%

Base data: European Cruise Council (2010: Online)

* River Cruises are not included in the data
German Cruise Market

German Market Potential (Source: ADAC Reisemonitor)

- 2010: 4.3% of the German population plan to take a cruise
  - 2009 & 2008: 3.9%
  - 2007: 3.2%

- Every 3rd German could imagine to take a cruise over the next 5 years
  - Potential 31%

Product-Related Preferences

- German-speaking cruise brands
- Popularity of club cruises
- Focus on itinerary
- Dominating distr. channel is the stationary travel agency
- Above average day rates (2009: €183 / EU Average: €149)
- Above average cruise duration (2009: 9.3 nights / EU Average: 9.0)

Itinerary-Related Preferences

- 35% Med
- 16% Scandinavia
- 15% Caribbean
- 14% Atlantic Islands
- 9% Baltic

Market Developments

- Deployment of US cruise products in Northern Europe (2009: 25 Vessels / 35345 LBs), representing a cruise supply increase of 58%
German Cruise Market

Key Indicators

Revenue
- 2010: € 2.1 B.
- 2009: € 1.9 B. (+ € 0.2 Bil. / + 10,05%)
- 2008: € 1.7 B. (+ € 0.2 B. / + 11,7%)
- AIDA:
  - 2010: € 883 Mil. (42% of the total German Cruise Revenue)
  - 2009: € 722 Mil. (38% of the total German Cruise Revenue)

Average Ticket Price
- 2010: € 1,696
- 2009: € 1,881 (- € 185 / - 9%)
- 2008: € 1,868 (+ € 13 / + 0.7%)

Passengers
- 2010: 1.219.473
- 2009: 1.025.968 (+193,505 / +18%)
- 2008: 906.620 (+119,348 / +13%)
- AIDA Pax
  - 2010: 511.000 (41.9% of the total German Cruise Pax)
  - 2009: 414.000 (40.3% of the total German Cruise Pax)

Average Cruise Duration
- 2010: 9,3 Days
- 2009: 9,7 Days (- 0,4 Days / - 4.1%)
- 2008: 9,37 Days (+ 0,33 Days / + 3.5 %)

Quelle: DRV 2009; 2010
A Critical View on Growth: Extrapolation of Historical Data

Linear Extrapolation

- Least data fit (R² = 94%)
- 30 Million Pax by 2041
- Indefinite growth assumption

Quadratic Extrapolation

- Second best data fit (R² = 98%)
- 69 Million Pax by 2041
- Indefinite growth assumption

Cubic Extrapolation (S-Shaped Curve)

- Best data fit (R² = 99%)
- Compatible with the Product Life Cycle concept
  - Historically applicable for tourist destinations (Butler 1980, 2006) and
  - Tourism segments (Zimmermann 1997)

Forecast Implications?

Weak signals (e.g. ticket price reductions; mega-ships / onboard revenue)
Validity of forecasting demand on the basis of supply?

Source data: CLIA (2010)
Bass Diffusion Model (1968):

- Represents an S curve – Just like the Product- or Destination-Life Cycle
- Can be used for forecasting the slope of the S curve, on the basis of the market potential and the degree of imitation and innovation

Assumptions:

- Market Potential in Germany approx. 5 million
  - Travellers spending more than €1700 on a vacation
  - Demographic structure remains the same
- Innovation and imitation coefficients are calculated from the historical data (currently demand is determined by imitators – cruise market has left the introduction phase)
CRUISE SECTOR STRUCTURES

“Duopoly?”
Concentration through M&A
“Cruise Sector Duopoly?”

- Leverage over suppliers & destinations
- Economies of scale
- Risk-spreading & financial reserves
- Difficult for new entrants due to shipbuilding sector concentration

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2010*: 
- Global cruise fleet 298 vessels amounting > 400,000 berths
- About half operate in Europe

2012-2016**: 
- Total Ships: 20
- Total Berths: 57,751
- Total Order Book Value: $13,468,000,000.00
- Average Price Per Berth: $273,183

* Source Data: Cruisecommunity.com, Accessed: 10.10.2011
CRUISE SECTOR EXTERNALITIES

“Globalisation at Sea?”
Cruise Sector and the Environment
“Clean Ships?”

Main Sources:
- Incinerators
- Engines

An average cruise ship’s daily emissions
- = 12,000 automobiles

401g of CO2 is emitted per Cruise Pax / Km
- 36 times more than a Eurostar Pax / Km
- 3 times more than a Boeing 747 Pax / Km
- An estimated 60,000 people die worldwide each year as a result of under-regulated shipping air emissions
- This estimated to grow by 40 percent by 2012

Black Water:
- Human Waste (Toilets, Medical Facilities)
- 30 Litres per Cruise Pax / day

Gray Water:
- Wastewater from sinks, showers, galleys, laundry, and cleaning activities
- 340 Litres per Cruise Pax / Day

Solid Waste:
- Plastic, paper, wood, cardboard, food waste, cans, glass, etc.
- 1990s: 3.5 Kg per Cruise Pax / Day
- 2010: 1.7 Kg per Cruise Pax / Day

Oily Bilge Water
- Water containing fuel, oil, wastewater from engines and other machinery
- Average cruise ship produces 8 tons in 24 hours of operation

Ballast Water:
- To stabilize the vessel during transport
- Often taken on in one location after a ship discharges wastewater or unloads cargo and then discharged at the next port of call
- Contains a variety of biological materials, including non-native plants, animals, viruses and bacteria

© Alexis Papathanassis * Source: Ross (2009)
Cruise Employment
“24/7 for 500 Dollars a month!?"

Costs of getting a Cruise Job*
Applicants from poor countries (Philippines, Indonesia, India)
Between $1500-2000 to get the job
Job start with a credit
Money sent home = $300 / month (7 months’ work + 2-3 months’ lay-off)

Indicative Wage levels**
F&B: Low paid, non-customer facing staff = $350-500 / month
Housekeeping: Low paid, non-customer facing staff = $600-800 / month
Cruise staff: Staff organising activities for passengers = $1800-2100 / month

Working Conditions:
Long-working hours
• ... But tax free income!? Private quarters & crew facilities – quality of life
• ... But no extra living costs (accomm & catering)
Long absence from family & friends

* ITF (2001)
Cruise Sector Challenges & Externalities
“Globalisation at Sea?”

- Image issue (‘From Paper to Practice’)
  - Friends of the Earth Scorecard
  - Cruise Operators’ sustainability reports
  - Integration of new technologies on existing fleets

- Customer satisfaction deterioration
- Relationship between locals & tourists (Antagonism)
- Destination limitations (Seasonal, infrastructural)

- Rising fuel prices
- Safety & security regulations
- Personnel costs
- Fusion packaged tourism – cruise tourism (extended competitive scope)

- Overcrowding & Itineraries
- Environment
- Cost Pressures & Competition
- Social Responsibility

- Image issue (‘Sweatships’)
  - Intl Transport Workers’ Federation (ITF)
  - International Labour Organisation (ILO)
  - Crew living & employment conditions
  - Criminality on board (Balancing security with recreation)
Thank You for your Attention

- **Research Functions:**
  - Founder & Chairman of the Cruise Research Society ([http://www.cruiseresearchsociety.com](http://www.cruiseresearchsociety.com))
  - Co-Director of the Institute for Maritime Tourism (IMT) ([http://www.imt.hs-bremerhaven.de/](http://www.imt.hs-bremerhaven.de/))

- **Administrative Functions:**
  - Dean of Studies – Faculty of Business & Economics
  - Chairman of the CIM Examinations Committee
  - Member of the CIM Study Affairs Committee
BACKUPS

- References
## Friends of the Earth: 2010 Cruise Ship Report Card*

<table>
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<tr>
<th>Cruise Lines</th>
<th>Sewage Treatment</th>
<th>Air Pollution Reduction</th>
<th>Water Quality Compliance</th>
<th>Web Enviro Info*</th>
<th>Change From 2009</th>
<th>2010 Final Grade</th>
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<td>C-</td>
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</table>

- **Whether a cruise line has installed the most advanced sewage and wastewater treatment systems available instead of dumping raw or minimally treated sewage directly into the water.**
- **Whether a cruise line has retrofitted its ships to “plug in” to available shore-side electrical grids instead of running polluting engines when docked.**
- **To what degree cruise ships violated 2009 water pollution standards designed to better protect the Alaskan coast.**
- **How easy the cruise lines have made it for the average consumer to find information on their websites about cruise industry environmental practices and technology.**

* Source: Friends of the Earth – http://www.foe.org/cruisereportcard

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* Source: Gisnås, Holte & Wergeland (2008)


