Cruise Sector as a Global Tourism Player
‘Mass Class’ under the ‘Magnifying Glass’

Prof. Dr. Alexis Papathanassis

ICTR Conference – Peniche, Portugal 07.11.2012
CRUISE SECTOR DEVELOPMENTS

Growth... Of What? For How Long?
What is your image of the typical cruiser? This...
Carnival Cruises' Boobiedecks May or May Not Disappoint

February 1, 2007 at 11:52 AM | by djk | Comments (2)
Cruises are becoming more differentiated, appealing to a wider population of holiday makers.
Source Market Perspective: Cruise Sector Growth & Pax Developments

**European Pax Development**

- UK; 1622
- Germany; 1219
- Italy; 889
- Spain; 645
- France; 387

**German Pax Development ('000)**

- 2003: 537
- 2004: 583
- 2005: 639
- 2006: 705
- 2007: 763
- 2008: 907
- 2009: 1027
- 2010: 1219
- 2011: 1388

**European Average Growth Rate**

- 2008-2011 = 11.8%
- 2010-2011 = 13%

**German Average Growth Rate**

- 2006-2010 = 15.2%
- 2010-2011 = 14%

* River Cruises are not included in the data

Base data: European Cruise Council (2012 Online)
Cruises equal a licence to print money!
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)

Beginning of the 2030’s the German market will start to experience stagnation with a penetration rate of 6.7%
The only form of continuous growth is taxation... but not for cruises!
Leverage over suppliers & destinations

Economies of scale

Risk-spreading & financial reserves

Difficult for new entrants due to shipbuilding sector concentration

Capacity Development

*Mega-Ship Trend... Why?*

► 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
Competition on land monopoly at sea
Balance Sheet Analyses (RCL & Carnival) 2007*

Dependence on Onboard Revenue

Billions of US$ (nominal)

- Ticket Revenue
- Other operating
- Commiss./transport
- Marketing
- Payroll
- Depreciation
- Food
- Onboard Revenue
- Onboard expenses
- EBIT

Billions of US$ (nominal)

- Ticket Revenue
- Other operating
- Commiss./transport
- Marketing
- Payroll
- Depreciation
- Food
- Onboard Revenue
- Onboard expenses
- EBIT

© Alexis Papathanasssis

* Source: Vogel (2008)
Balance Sheet Analyses (RCL & Carnival) 2011*

Dependence on Onboard Revenue

Revenue per PCD (real US$) -2.2% p.a.

Passenger cruise days (PCD) +13.1% p.a.

Revenue per PCD (real US$) -1.8% p.a.

Passenger cruise days (PCD) +8.5% p.a.

* Source: Vogel (2012)
Balance Sheet Analyses (RCL & Carnival) 2011*

Cost-Saving Pressures?!

Costs per PCD 2001 vs. 2011 excluding cost of onboard sales

Cost reduction excluding fuel: -25%

Cost reduction excluding fuel: -21%

Fuel
Food
Deprec.
Payroll
Marketing
Other
Commission & transp.

Fuel
Food
Deprec.
Payroll
Marketing
Other
Commission & transp.

© Alexis Papathanassis

* Source: Vogel (2012)
Profit margins have decreased by approx. 4% over the last decade and are following a downward trend.
ECONOMIC IMPACT

... And Externalities
The Cruise Economy 2012: 
Direct Economic Impact of Cruise Tourism in Europe

Cruise Line Purchases in Europe (€6.4 Billion)
- Business Services: 21%
- Transport: 22%
- Manufacturing: 24%
- Petrochemicals: 13%
- F&B: 9%
- Other: 11%

Cruise Line Purchases 42%
- Shipbuilding: 26%
- Pax & Crew Purchases: 23%
- Other: 13%

Pax & Crew Spending Breakdown (€3.4 Billion)
- Visit Spending (Shopping, F&B, Tours): 50%
- Embarkation Spending (mainly airfares): 47%
- Crew Spending: 3%

Cruise Employee Compensation Shares (€1.3 Billion)
- Italy: 35%
- Germany: 8%
- Norway: 6%
- Spain: 2%
- Portugal: 2%
- Rest: 5%
- UK: 40%

Shipbuilding Expenditures In Europe (€3.8 Billion)
- Italy: 32%
- Germany: 35%
- Other: 13%
- Finland: 13%
- France: 17%

Base data: European Cruise Council (2012: Online)
Cruise Income is primarily created by production at the source markets; not by consumption at the ports!
### 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

*Source: Ross (2009)*
## Friends of the Earth: 2010 Cruise Ship Report Card*

<table>
<thead>
<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>
</tr>
</thead>
<tbody>
<tr>
<td>Holland America Line</td>
<td>B+</td>
<td>C-</td>
<td>B+</td>
<td>✓</td>
<td>↓</td>
<td>B-</td>
</tr>
<tr>
<td>Norwegian Cruise Lines</td>
<td>A</td>
<td>C-</td>
<td>C+</td>
<td>✓</td>
<td></td>
<td>B-</td>
</tr>
<tr>
<td>Princess Cruises</td>
<td>C+</td>
<td>A-</td>
<td>D+</td>
<td>X</td>
<td>↓</td>
<td>C+</td>
</tr>
<tr>
<td>Cunard Cruise Line</td>
<td>A</td>
<td>F</td>
<td>no Alaska voyages</td>
<td>X</td>
<td></td>
<td>C-</td>
</tr>
<tr>
<td>Disney Cruise Line</td>
<td>A</td>
<td>F</td>
<td>no Alaska voyages</td>
<td>X</td>
<td></td>
<td>C-</td>
</tr>
<tr>
<td>Regent Seven Seas Cruises</td>
<td>C+</td>
<td>F</td>
<td>A</td>
<td>X</td>
<td></td>
<td>C-</td>
</tr>
<tr>
<td>Celebrity Cruises</td>
<td>A</td>
<td>F</td>
<td>n/a</td>
<td>✓</td>
<td></td>
<td>D+</td>
</tr>
<tr>
<td>Royal Caribbean Int’l</td>
<td>D+</td>
<td>F</td>
<td>A-</td>
<td>✓</td>
<td>↑</td>
<td>D+</td>
</tr>
<tr>
<td>Carnival Cruise Lines</td>
<td>F</td>
<td>F</td>
<td>A</td>
<td>X</td>
<td></td>
<td>D-</td>
</tr>
<tr>
<td>Silversea Cruises</td>
<td>F</td>
<td>F</td>
<td>B-</td>
<td>X</td>
<td></td>
<td>D-</td>
</tr>
<tr>
<td>Crystal Cruises</td>
<td>F</td>
<td>F</td>
<td>no Alaska voyages</td>
<td>X</td>
<td></td>
<td>F</td>
</tr>
</tbody>
</table>

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

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

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

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

### Social Responsibility
- Tax avoidance – Flags of convenience
- Image issue (‘Sweatships’)
- Intl Transport Workers’ Federation (ITF)
- International Labour Organisation (ILO)
- Crew living & employment conditions
- Criminality on board (Balancing security with recreation)
Sailing on ‘mainstream open sea’ is different than sailing on the niche lakes’...
There are ‘undercurrents’ and ‘large waves’!
Greek Proverb:

“Only the rough sea can prove a good captain”.

“Ο καλὸς ο καπετανίος στη φουρτουνα φαινεται”
Thank You for your Attention

Research Functions:
- Founder & Chairman of the Cruise Research Society (http://www.cruiseresearchsociety.com)
- Co-Director of the Institute for Maritime Tourism (IMT) (http://www.imt.hs-bremerhaven.de/)
- Editorial Board Member of the Journal of the European Journal of Tourism, Hospitality and Recreation (EJTHR) – (http://www.ejthr.com/)
- Reviewer of the Tourism Management Journal (http://journals.elsevier.com/02615177/tourism-management/)

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


