Tourism Forecasting Applied to Destination Strategy

ETC-UNWTO Forecasting Seminar
Vienna, 12 September, 2008
Outline

1. Introduction
2. Why forecast?
3. Examples of forecasting approaches
4. Translating forecasts into strategy
Oxford Economics is a world-leader in quantitative economic analysis forecasting, and in evidence-based business and public policy advice.

Our reputation is built on:

- **The calibre of our staff**: over 50 professional economists in the UK, US and France

- **Our quantitative approach to issues**, including our range of models and scenario tools to answer practical questions

- **Our ability to answer the 'So what?' questions**, helping our clients to understand, challenges and strategic choices they face
Regular quarterly, monthly, weekly & daily reports include:

- World Economic Prospects Monthly Review
- Euro Zone and US Weekly Briefs
- Commodity Price Monitor
- Emerging Markets Watch

These reports are based on the Oxford Global Economic Model

- 10-year forecasts provided quarterly
- Flexible and powerful software – easy to run simulations
- Rigorous and consistent structure for forecasting and scenario analysis
- Most widely used International Macro Model
- Clients include the IMF, World Bank, ADB, Finance Ministries, central banks, investment banks, fund managers and multi-national companies
Tourism Economics

- **Tourism Economics** is a subsidiary of Oxford Economics founded to tailor our international analysis for multinational businesses in the travel & tourism sector.

- By combining global economic expertise with an understanding of the real world issues facing tourism development, we assist our clients with:
  - Market opportunity assessments
  - Tourism demand forecasting and scenario analysis
  - Economic impact studies
  - Policy analysis
## Recent clients

<table>
<thead>
<tr>
<th>Abu Dhabi Tourism Authority</th>
<th>Tourism Malaysia</th>
<th>Travel Industry Association</th>
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<tbody>
<tr>
<td>Dubai Tourism &amp; Commerce Marketing</td>
<td>Tourism Authority of Thailand</td>
<td>Travel Business Roundtable</td>
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<td>New York City and Company</td>
<td>Discover America Partnership</td>
<td>Grand Bahama Promotion</td>
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<td>London Tourism Authority</td>
<td>US Office of Tourism Industries</td>
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<td>Kerzner International</td>
<td>Israel Ministry of Tourism</td>
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Why forecast?

- The goal is not accuracy for its own sake. (On this basis alone, forecasting is rarely useful.)

- Purposes of forecasting:
  - Setting political expectations
  - Guiding industry’s decisions on capacity and investment (including public sector investments)
  - Provide an input into marketing strategy (to guide prioritization and allocation)
Essentials of a forecast model

- **Origin market drivers** (demographic, economic, travel patterns and preferences)
- **Destination factors** (new supply, policies, exchange rates)

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<table>
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<th>ORIGIN MARKET</th>
<th>DESTINATION</th>
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<td>outbound forecast</td>
<td>inbound forecast</td>
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<td>Policy</td>
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<td>Economics</td>
<td>Product</td>
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<tr>
<td>Travel</td>
<td>Economics</td>
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**FUTURE TOURISM DEMAND**
Recent examples: TDM

- Tourism Decision Metrics (TDM) is based on a 180-country model which predicts origin-destination visits and nights as well as inbound and outbound spending.
- Its primary advantage is that each destination’s visitor forecasts are constrained as one piece of the origin demand pie.
- Capable of scenario analysis by changing key economic assumptions and introducing external shock variables to reflect positive/negative changes in policies or events.
TDM Model Format

Oxford Economics Macroeconomic Model (180 Countries)

- Real GDP
- Consumer Spending
- Exchange rates (bi-lateral)

For each origin market:

- Consumer Spending

Outbound Spending by Market (180)

- Business
- Leisure

Global Tourism Market

Inbound Spending by Market (180)

- Business
- Leisure

Inbound Visits by Market (180)

- Business / Leisure
- Air / road / sea
- Overnight / day

Origin-Destination Travel Flows (180 Countries)

- Visits
- Nights

Destination Competitiveness Indices

- Policy
- Infrastructure
- Attractiveness
TDM: Destination

- Built on Oxford Economics’ global macroeconomic model
- Forecasts of origin market economic growth and currencies drive outbound spending and visits projections.
- Destination forecasts are predicted on the basis of their weighting of origin markets and a “tourism competitiveness index” developed by the World Economic Forum / Oxford Economics and adjusted by Tourism Economics.

Components of Tourism Competitiveness Index

Sub-index A: Regulatory framework
- Pillar 1: Policy rules and regulations
- Pillar 2: Environmental regulation
- Pillar 3: Safety and security
- Pillar 4: Health and hygiene
- Pillar 5: Prioritization of tourism strategies

Sub-index B: Tourism infrastructure
- Pillar 6: Air transport infrastructure
- Pillar 7: Ground transport infrastructure
- Pillar 8: Tourism infrastructure
- Pillar 9: ICT infrastructure
- Pillar 10: Price competitiveness

Sub-index C: Human, cultural, natural resources
- Pillar 11: Human resources
- Pillar 12: National tourism perception
- Pillar 13: Natural and cultural resources
Model relationships – Outbound Spending

Exchange Rate and Tourism Spending

% Growth in International Tourism Spending (US$) 2002-2007

% Appreciation in currency, 2002-2007

Source: Tourism Economics, IMF

\[ y = 0.656x + 57.765 \]
Economic Activity and Tourism Spending

% year

International Tourism Spending (US$)

World GDP (US$)

Source: Tourism Economics, Haver Analytics, IMF
France: Outbound Spending

- R-Squared = 0.97
- Model equation tracks both the trend and cyclical movements of French outbound spending well.
- Peak and trough years are well identified. The magnitude of growth in such years is not exactly determined, but there is not bias or systematic error. For example, growth for the latest trough in 2006 is overestimated while other troughs are underestimated.

Source: Tourism Economics
- R-Squared = 0.98
- Trend and cycles are well determined for UK outbound spending
- However, data was significantly stronger than equations suggest in 1998 while growth is weaker than suggested by equations in 2004, possibly due to a strong weight in US exchange rates.
R-Squared = 0.75

The cycle of French inbound visits is tracked accurately, but volatility is not fully captured, especially in recent years when sentiment has been a key factor on this relationship. This is hard to quantify in model equations. But such factors are taken into account when compiling forecasts.

Source: Tourism Economics
US Inbound Visits: UK

- R-Squared = 0.87
- Equations track fluctuations well in determining cyclical movements as well as the magnitude of cycles over the cycle.

Source: Tourism Economics

Estimated growth
Recent examples: TIA

Travel Industry Association of America semi-annual domestic travel forecast

● Business Travel
  ■ Business travel is a function of business activity (profits etc).
  ■ This is important for origin as well as destination markets

● Leisure Travel
  ■ Leisure is a function of income and spending
  ■ Costs are a more important here than for business
  ■ Costs cover travel (especially day visits), lodging (for overnight) as well exchange rate costs for international
Recent examples: TIA (business)

Business visits, investment and profits

% growth

Source: Tourism Economics
Recent examples: TIA (leisure)

Leisure visits, income and costs

% growth

Real incomes

Domestic cost relative to international costs (inverted - rhs)

Leisure visits

Source: Tourism Economics
Example: Using external events for scenario analysis

**Temporary impacts**

<table>
<thead>
<tr>
<th>Event</th>
<th>Year of Impact</th>
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<td>Health crisis in destination market</td>
<td>2010</td>
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<tr>
<td>Events in competing markets</td>
<td>2010</td>
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<tr>
<td>Events in destination market</td>
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<td>Airfares</td>
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**Sustained impacts**

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<td>Change in marketing budget</td>
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<td>Air service (new carriers / service cancellations)</td>
<td>2010</td>
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<tr>
<td>Attractiveness of competing markets</td>
<td>2010</td>
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</table>
Example: Using external events for scenario analysis

Inbound Visitor Forecasts

Temporary impacts
- Health crisis in destination market: 2010
- Events in competing markets: 2010
- Events in destination market: 2010
- Airfares: 2010

Sustained impacts
- Change in marketing budget: 2010
- Air service (new carriers/service cancellations): 2010
- Attractiveness of competing markets: 2010
Putting forecasts to work: global tracking

- Good analytical tools can help translate forecasts into strategy.
- The Tourism Decision Metrics forecast database is housed in a visualization software.
- This enables ad hoc analysis of forecasts to assess:
  - Overall growth of key markets
  - A destination’s market share of a key market
  - Competitor tracking for a destination
  - Track economic trends by market
Example: Overall growth of key markets

<table>
<thead>
<tr>
<th>Origin-Destination Metrics</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
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The chart below shows the growth trends for various origin-destination metrics.
Example: Track origin market trends

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<td>5.26</td>
<td>5.35</td>
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Income, personal disposable, nominal (ECU bn) - GERMANY
Income, personal disposable, nominal (ECU bn) - ITALY
Total Departures (000s visits) - GERMANY
Total Departures (000s visits) - ITALY
Example: Destination market share
Example: Tracking competitors
Example: Cartographic analysis
Destination marketing strategies are typically based on current market size. However, the goal is to attract new visitors so growth forecasts matter.

By combining forecasts with market indicators we can prioritize marketing.

TE has developed the “Market Analysis Platform” (MAP) which incorporates a broad range of metrics—including growth forecasts—to provide a consistent measurement of market opportunity.
Example: Market strategy using MAP

Growth alone is misleading, other factors affect strategy
Example: market strategy using MAP

Select Outlook and Risk

Current Outlook: Long-term
Risk: Balanced

Country List Select Outlook and Risk Year: 2008

Opportunity
Market Size
Country Size
Growth
Saturation

Propensity
Sentiment
Alignment

Value
Purchase Power
Visitor Value
Affordability
Presence

Constraint
Risks
Accessibility

Country List Select all
Australia
Canada
China
Egypt
France
Germany
India
Italy
Japan
Lebanon
Qatar
Russia
Saudi Arabia
UK
US

Select or de-select components.
Select all

Market Analysis Platform International
MAP: How does an origin market score?

Germany - Market Overview

Score Summary
MAP: How do origin markets compare?

**Market Comparisons**

Compare component score for Germany with scores for up to 3 other markets

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Size</th>
<th>Growth</th>
<th>Saturation</th>
<th>Sentiment</th>
<th>Alignment</th>
<th>Purchasing Power</th>
<th>Visitor Value</th>
<th>Market Affordability</th>
<th>Market Presence</th>
<th>Risk</th>
<th>Accessibility</th>
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**Score Comparison across Markets**

- Germany
- France
- Italy
- UK
MAP: comparing origin markets

Top Markets according to following criteria:

(Select Criteria)

Top Markets according to: Growth

Top markets lie in the upper right-hand quadrant (listed to the right)

- Yield

Expected outbound spending growth

Expected GDP growth for each market
MAP: comparing origin markets

Top Markets according to following criteria:

(Select Criteria)

Top Markets according to: Real Potential
Top markets lie in the upper right-hand quadrant (listed to the right)

Markets in upper right quadrant
UK
Lebanon
Saudi Arabia
Qatar
Egypt

Bubble size:
Yield (value & purchasing power score)
Conclusions

- The goal of forecasting is not accuracy for its own sake.
- To maximize the value of forecasting:
  - Tell the story of what is driving the forecast (income, exchange rates, labour markets, supply disruptions)
  - Effectively analyse the results in concert with other indicators of opportunity
  - Present the results in ways to guide strategy
Thank you!

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