TOURISM ECONOMICS

AN OXFORD ECONOMICS COMPANY

Tourism Forecasting Applied to Destination Strategy

ETC-UNWTO Forecasting Seminar
Vienna, 12 September, 2008

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Outline

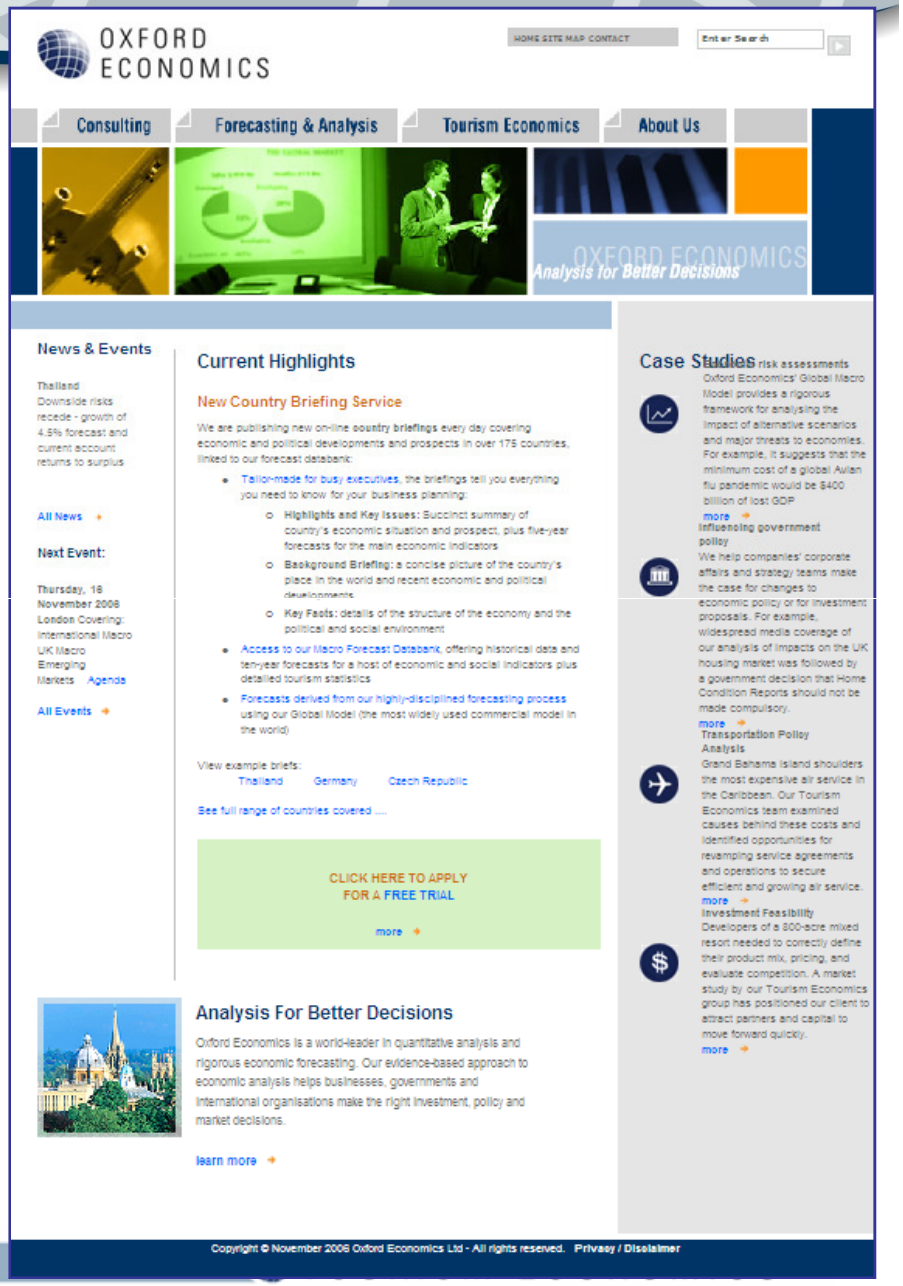
1. Introduction
2. Why forecast?
3. Examples of forecasting approaches
4. Translating forecasts into strategy

Oxford Economics

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



Oxford Economics

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

Abu Dhabi Tourism Authority
Dubai Tourism & Commerce Marketing
New York City and Company
Singapore Tourist Board
Tourism Malaysia
Tourism Authority of Thailand
Discover America Partnership
London Tourism Authority
Travel Industry Association
Travel Business Roundtable
Grand Bahama Promotion
US Office of Tourism Industries

Gulf Air
Etihad Airways
InterContinental Hotels Group
Airbus
Hong Kong Tourist Board
World Travel & Tourism Council
Bahamas Ministry of Tourism
Visit Britain
Tourism Ireland
Canadian Tourism Commission
Hungary Ministry of Tourism
Kerzner International

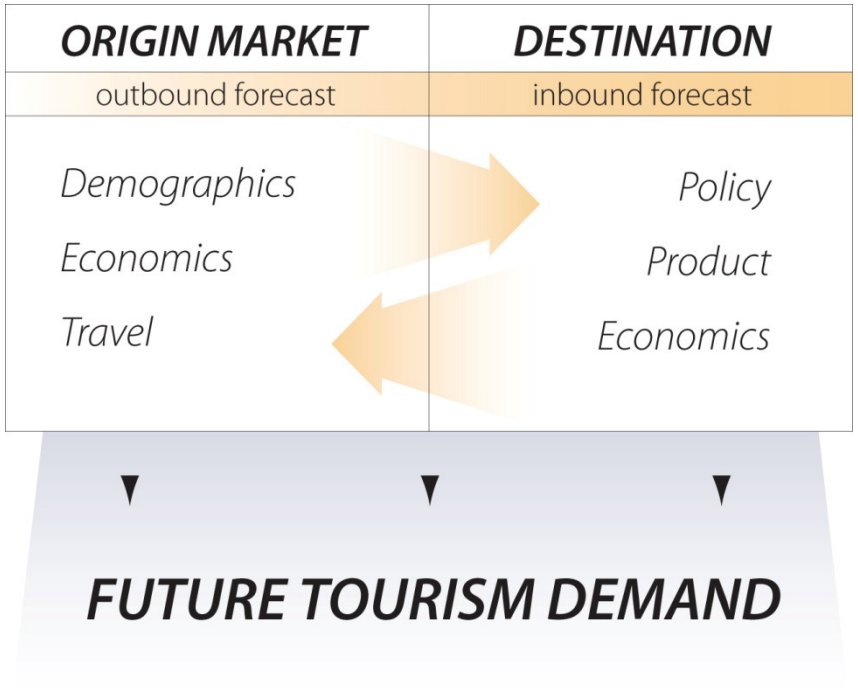
Saudi Tourism Commission
Visit Scotland
Israel Ministry of Tourism
Marriott
Washington DC CVB
Alaska Tourism Office

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

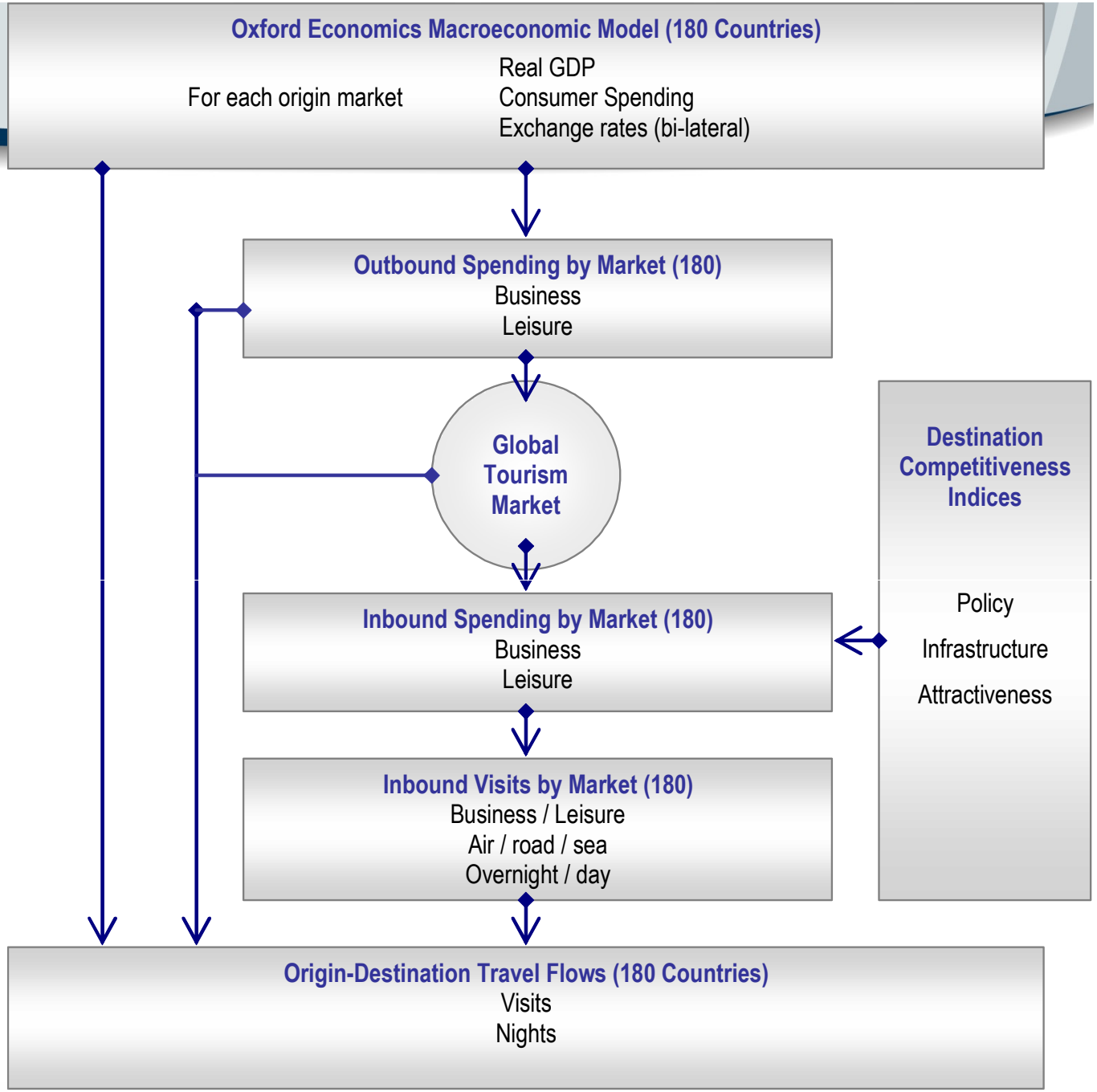
- **Origin market drivers (demographic, economic, travel patterns and preferences)**
- **Destination factors (new supply, policies, exchange rates)**



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



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

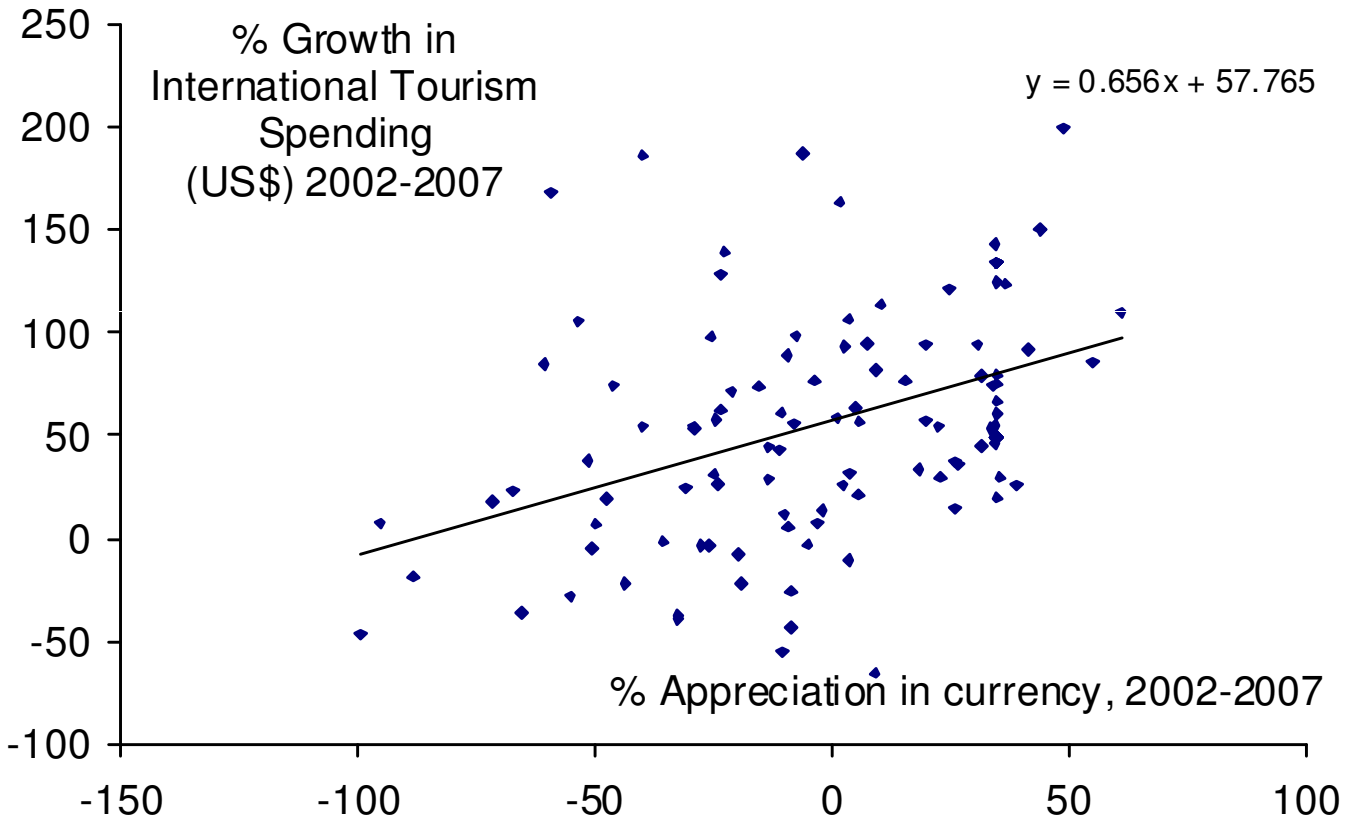
- Pillar 6: Air transport infrastructure
- Pillar 7: Ground transport infrastructure
- Pillar 8: Tourism infrastructure
- Pillar 9: ICT infrastructure
- Pillar 10: Price competitiveness

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

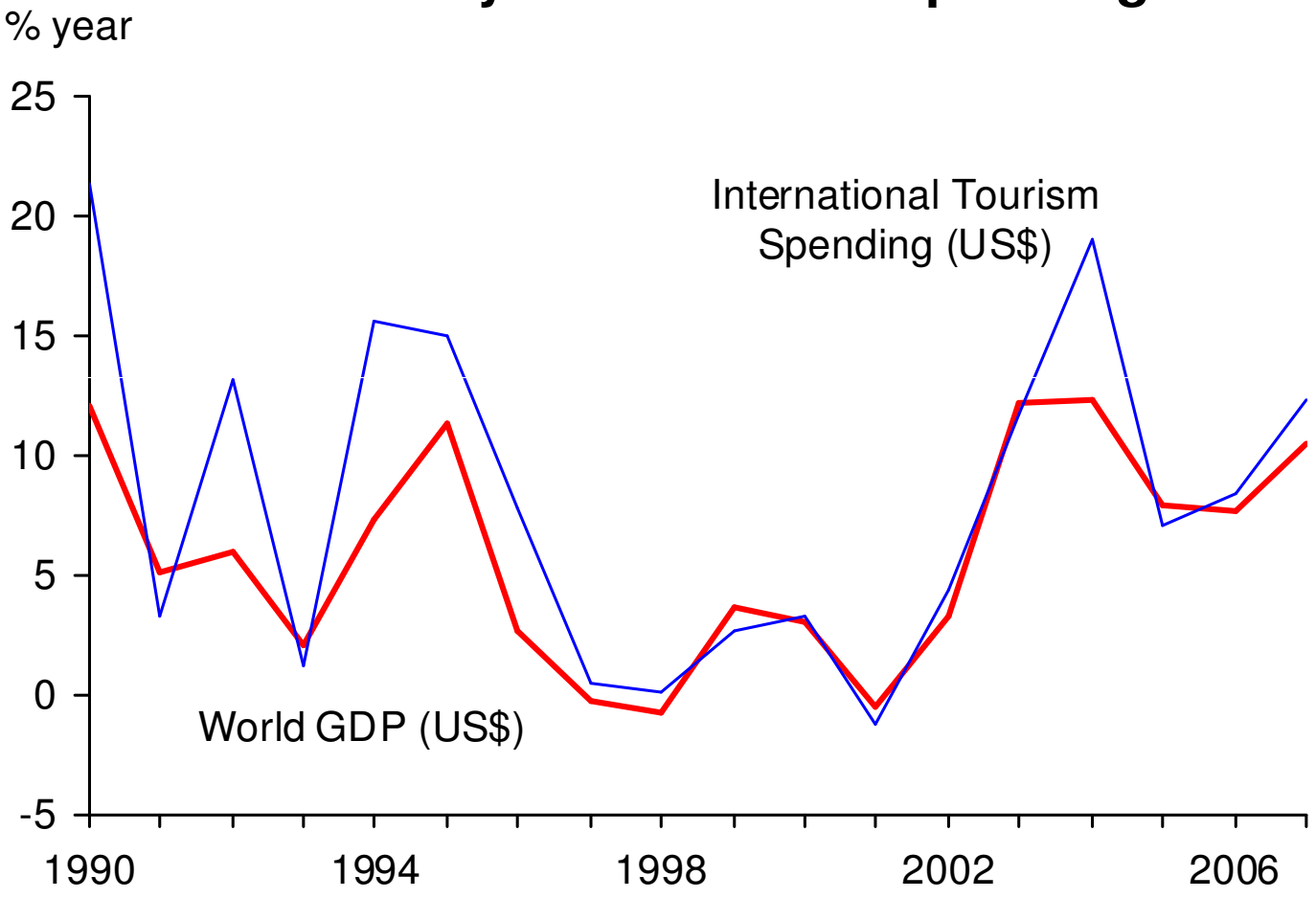
Exchange Rate and Tourism Spending



Source : Tourism Economics, IMF

Model relationships – Outbound Spending

Economic Activity and Tourism Spending



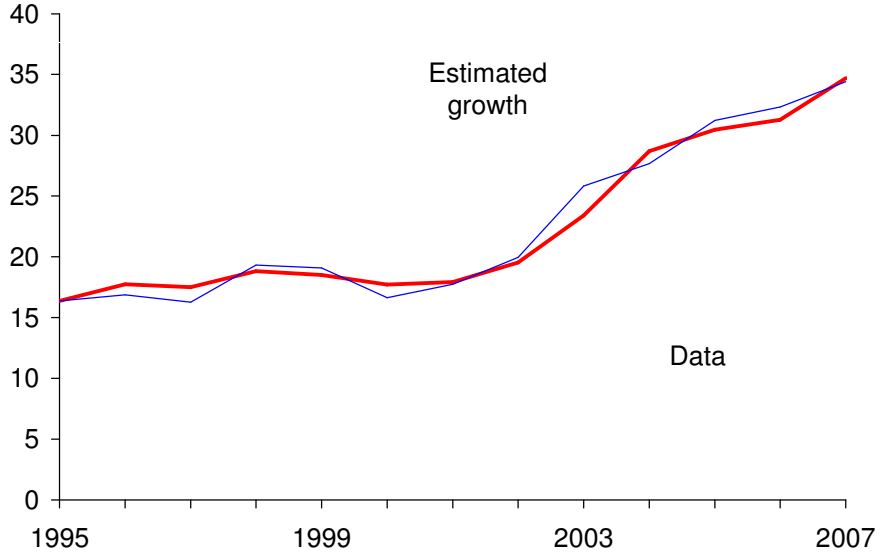
Source : Tourism Economics, Haver Analytics, IMF

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.

France: Outbound spending

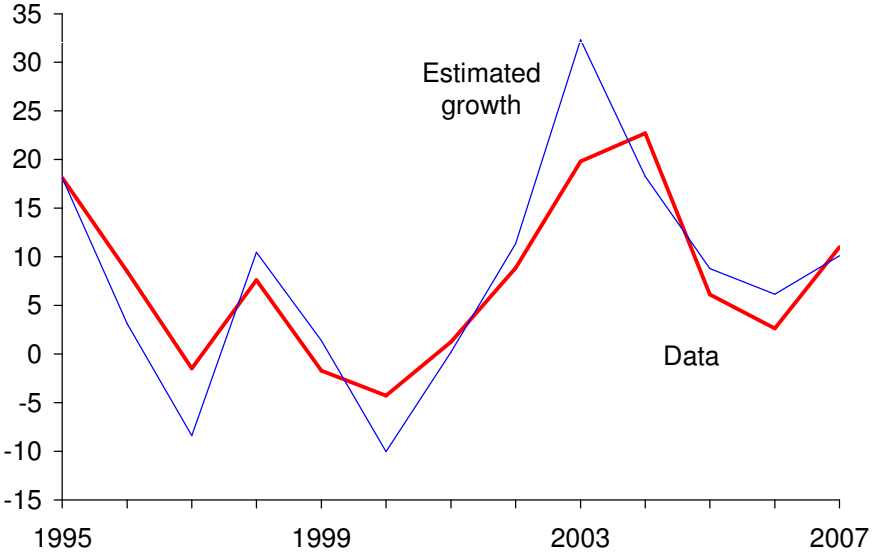
US$ mn



Source : Tourism Economics

France: Outbound spending

% growth



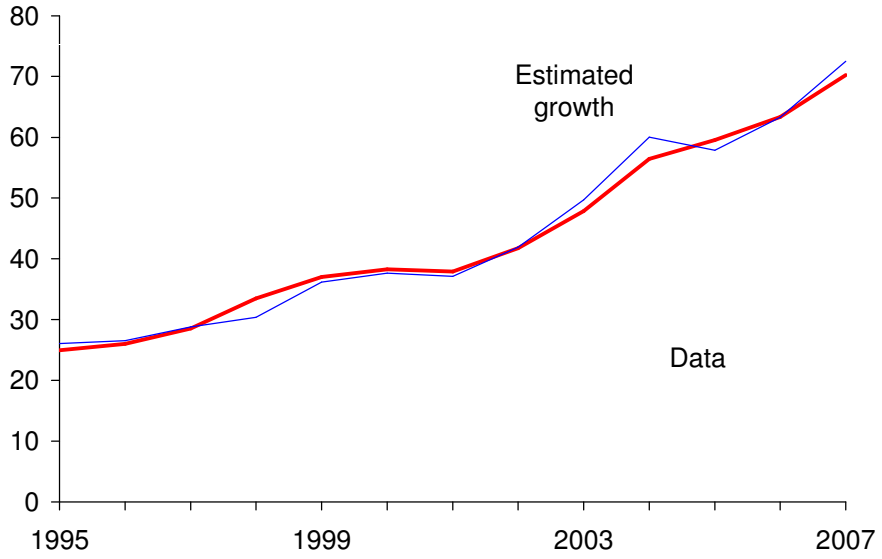
Source : Tourism Economics

UK: Outbound Spending

- 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.

UK: Outbound spending

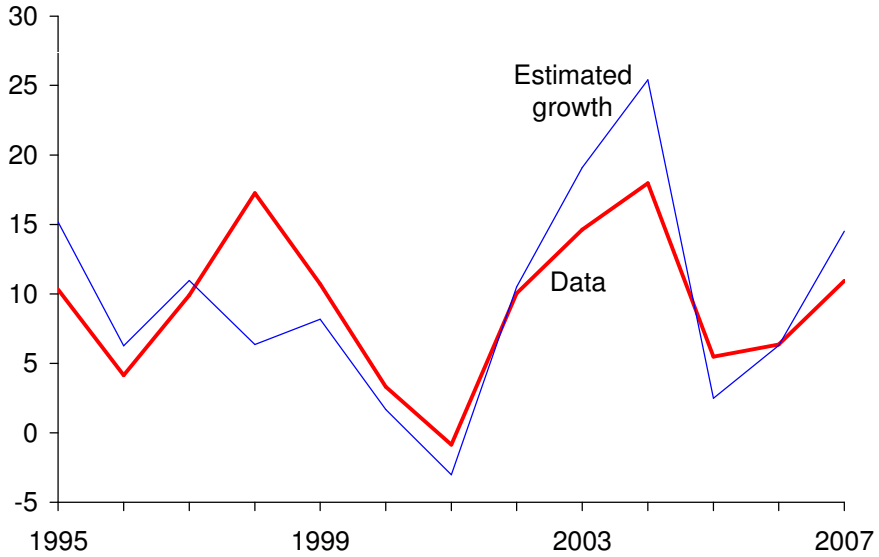
US$ mn



Source : Tourism Economics

UK: Outbound spending

% growth

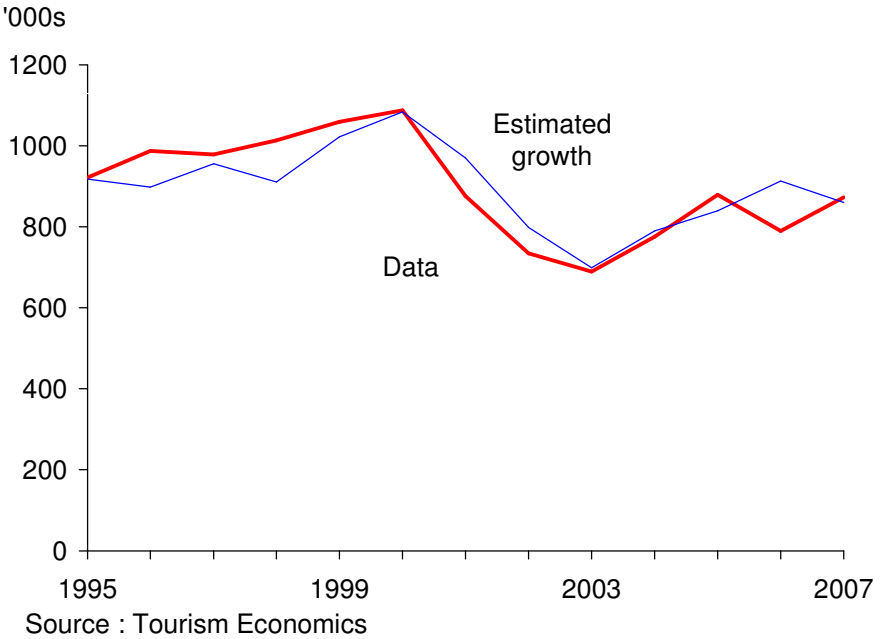


Source : Tourism Economics

US Inbound Visits: France

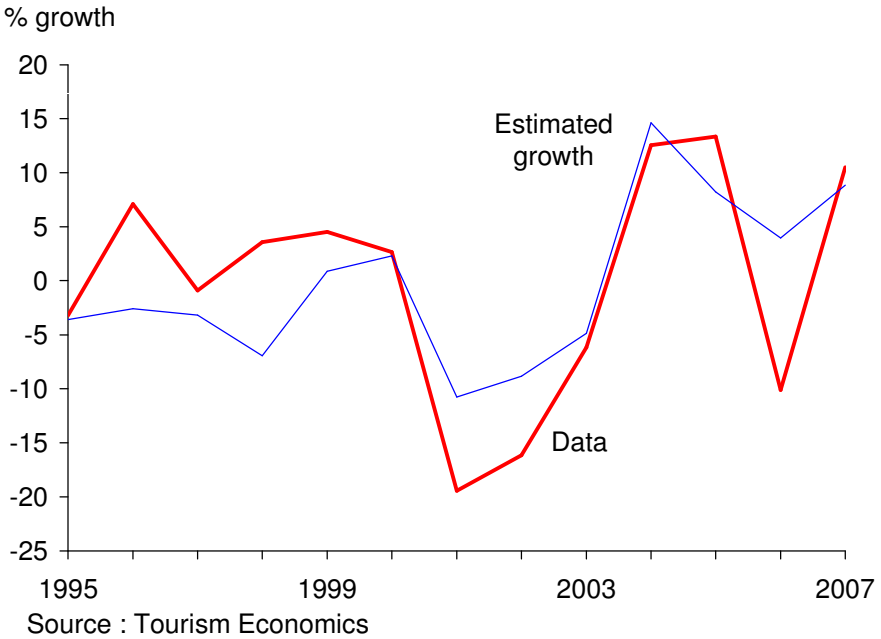
- R-Squared = 0.75
- The cycle of French inbound visits is tracked accurately, but volatility is not fully captured, especially in recent years when sentiment has been a key factor on this relationship. This is hard to quantify in model equations. But such factors are taken into account when compiling forecasts.

France: US Inbound visits



Source : Tourism Economics

France: US Inbound visits

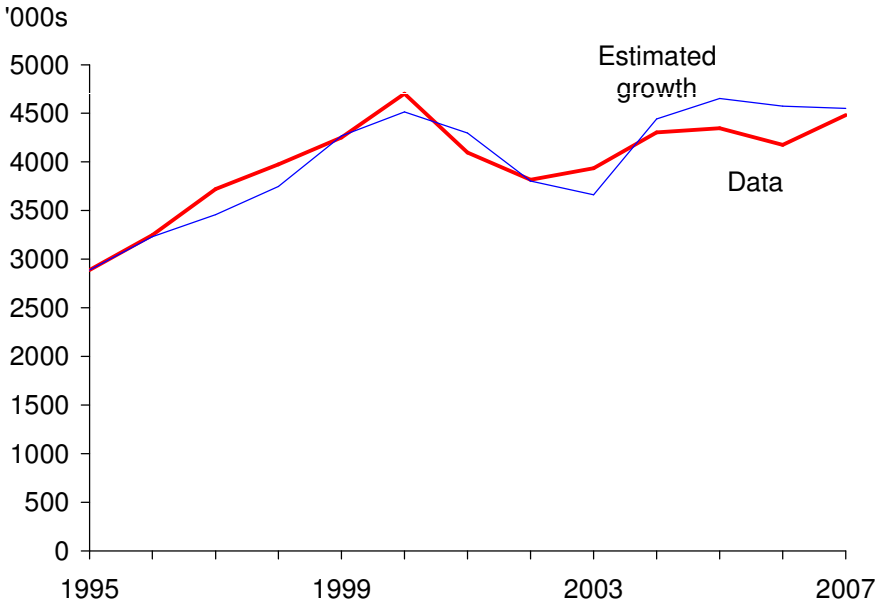


Source : Tourism Economics

US Inbound Visits: UK

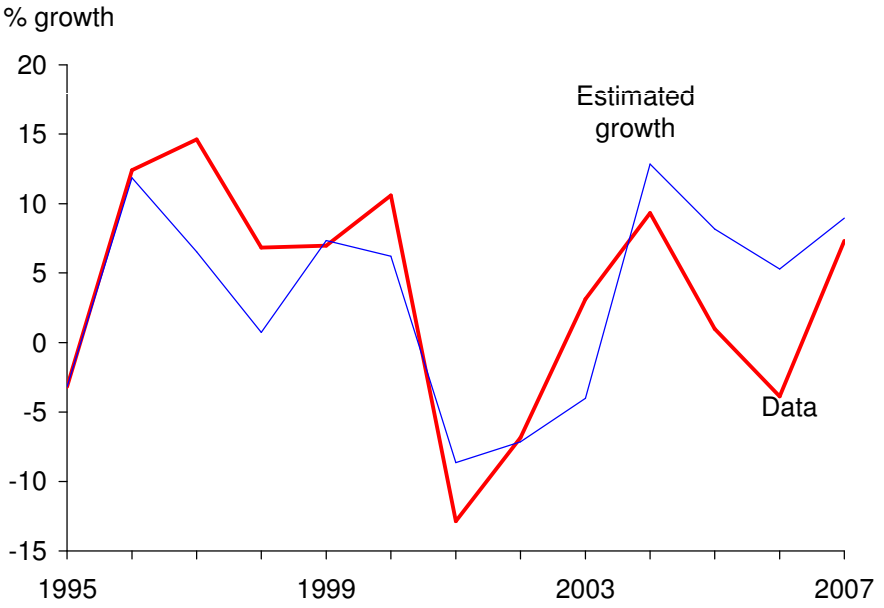
- R-Squared = 0.87
- Equations track fluctuations well in determining cyclical movements as well as the magnitude of cycles over the cycle.

UK: US Inbound visits



Source : Tourism Economics

UK: US Inbound visits



Source : Tourism Economics

Recent examples: TIA

Travel Industry Association of America semi-annual domestic travel forecast

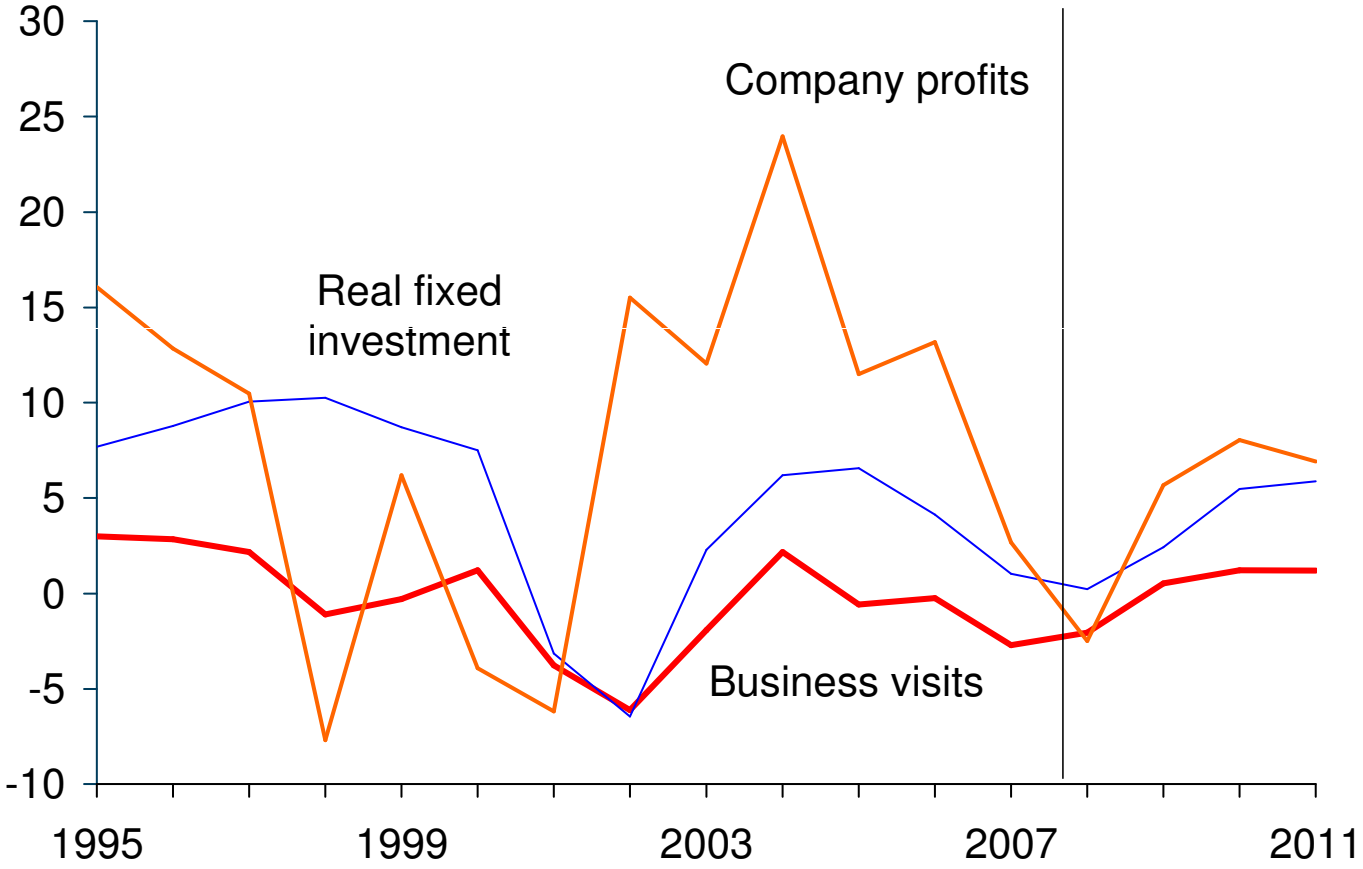
- **Business Travel**
  - Business travel is a function of business activity (profits etc).
  - This is important for origin as well as destination markets

- **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

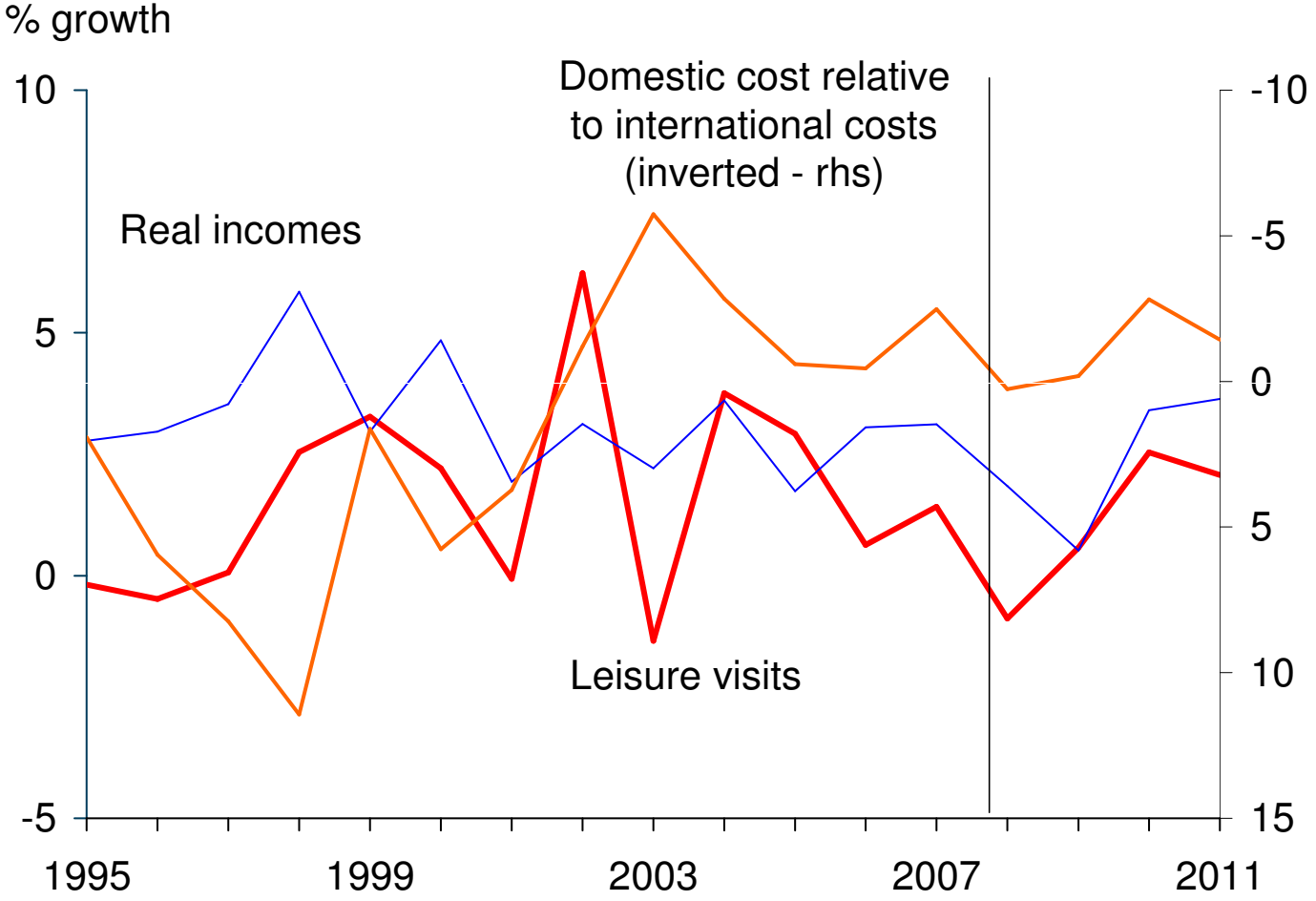
% growth



Source : Tourism Economics

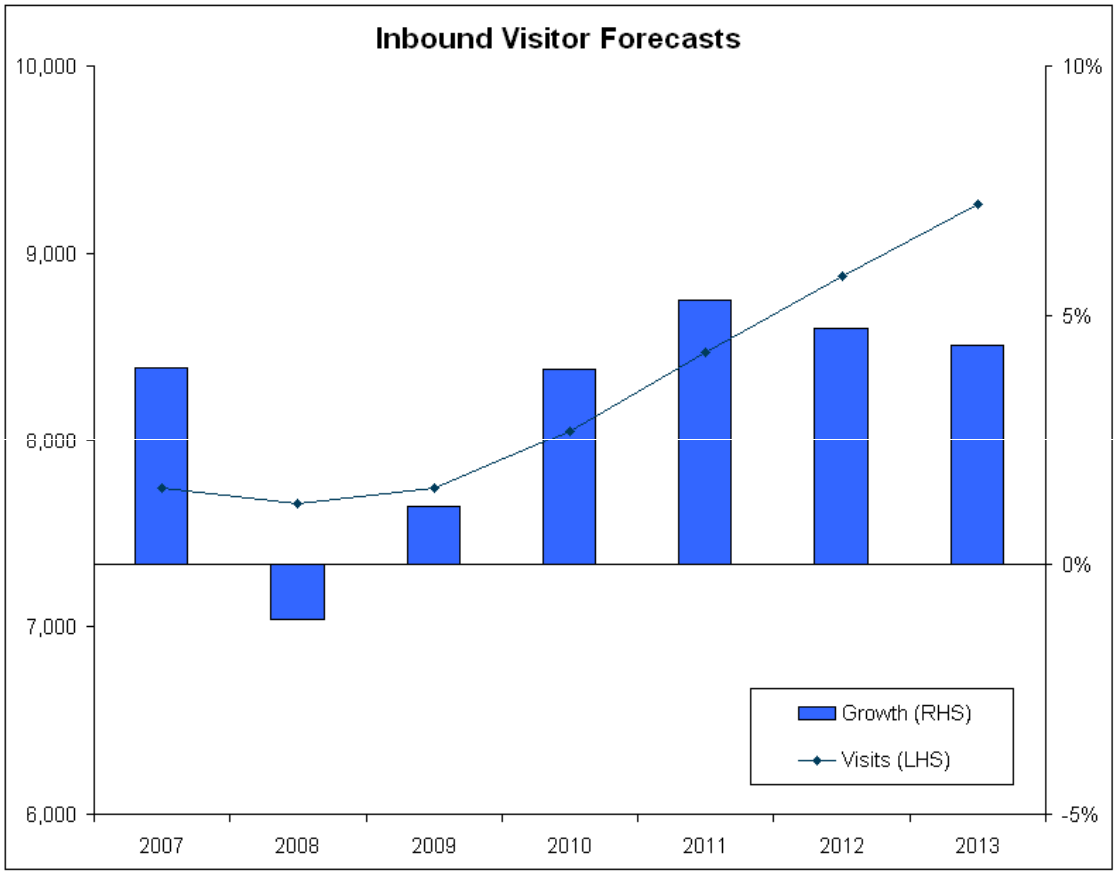
Recent examples: TIA (leisure)

Leisure visits, income and costs



Source : Tourism Economics

Example: Using external events for scenario analysis



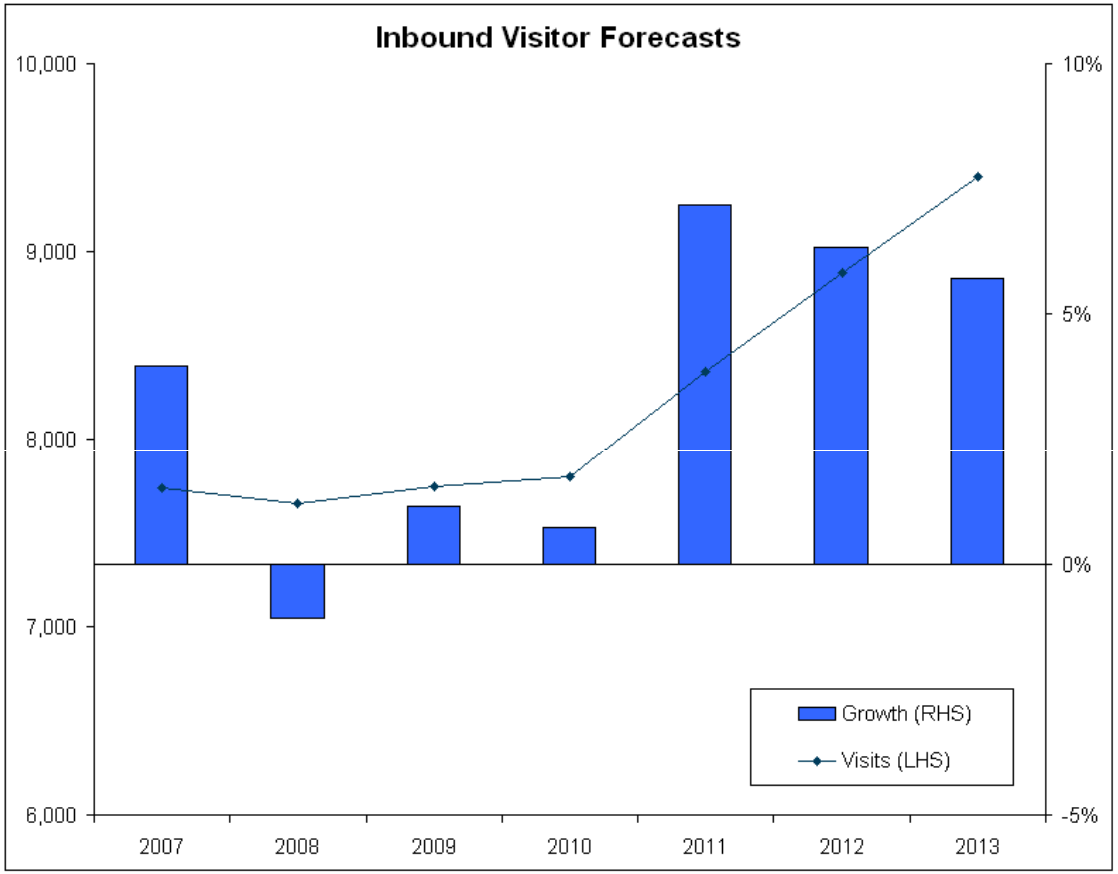
Temporary impacts

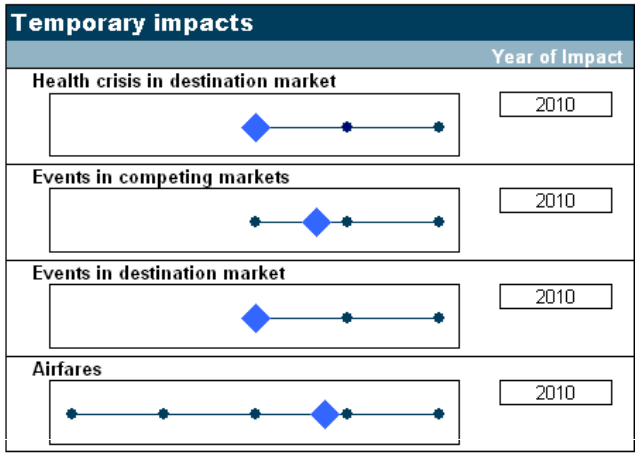
	Year of Impact
Health crisis in destination market	2010
Events in competing markets	2010
Events in destination market	2010
Airfares	2010

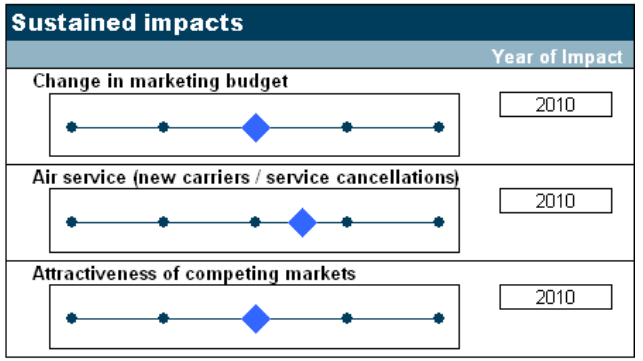
Sustained impacts

	Year of Impact
Change in marketing budget	2010
Air service (new carriers / service cancellations)	2010
Attractiveness of competing markets	2010

Example: Using external events for scenario analysis







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

Key market growth - SWE - Origin-Destination Metrics

File View Grid Chart Help

Header

Indicators (1 selected):
Visits

Top

Calendar (8 selected):
2003 ... 2010

Left

Destination (1 selected):
SWEDEN

Origin (5 selected):

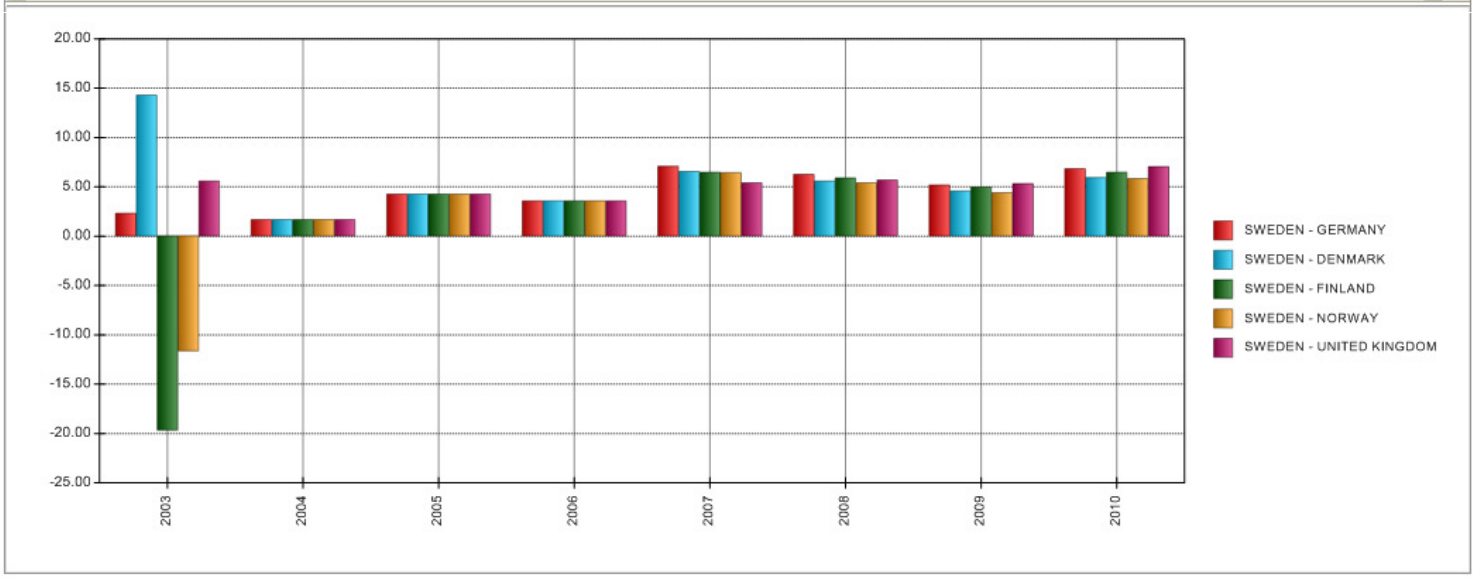
- World
  - Asia
  - Europe
    - Western Europe
      - AUSTRIA
      - BELGIUM
      - DENMARK
      - FINLAND
      - FRANCE
      - GERMANY
      - GREECE
      - ICELAND
      - IRELAND
      - ITALY
      - LUXEMBOURG
      - NETHERLANDS
      - NORWAY
      - PORTUGAL
      - SPAIN
      - SWEDEN
      - SWITZERLAND
      - UNITED KINGDOM
    - Emerging Europe

Data

Origin-Destination Metrics

Display: Annual % change; Header: Indicators = Visits
Top: Calendar
Left: Destination, Origin

		2003	2004	2005	2006	2007	2008	2009	2010
SWEDEN	GERMANY	2.36	1.70	4.30	3.59	7.14	6.28	5.22	6.85
	DENMARK	14.33	1.70	4.30	3.59	6.58	5.63	4.61	5.98
	FINLAND	-19.62	1.70	4.30	3.59	6.52	5.93	5.01	6.52
	NORWAY	-11.58	1.70	4.30	3.59	6.49	5.44	4.44	5.88
	UNITED KINGDOM	5.61	1.70	4.30	3.59	5.45	5.72	5.37	7.09



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Example: Track origin market trends

Track Economic Trends - AUT - Market Metrics

File View Grid Chart Help

Header

Top

Calendar (12 selected):
2002 ... 2013

Left

Indicators (5 selected):
GDP, real (LC bn) ... Total Departures (000

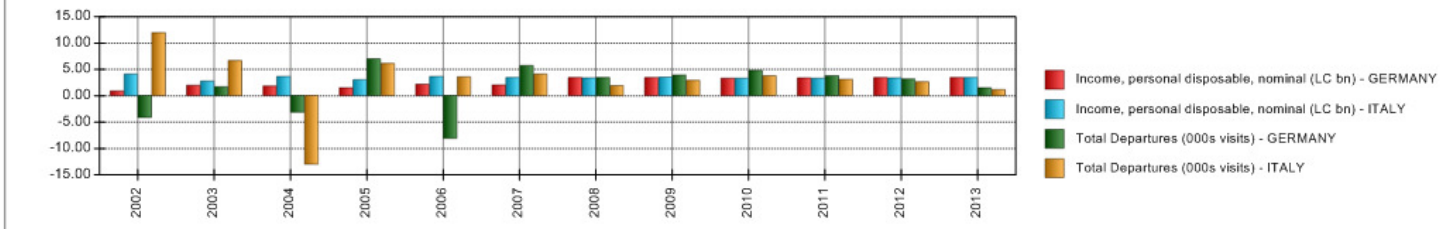
Countries (5 selected):
GERMANY ... UNITED KINGDOM

Data

Market Metrics (EURO)

Display: Annual % change; Header:
Top: Calendar
Left: Indicators, Countries

		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	UNITED KINGDOM	1.57	2.74	3.27	1.88	2.84	3.14	2.43	2.85	2.94	2.69	2.60	2.60
Income, personal disposable, nominal (LC bn)	GERMANY	0.95	2.07	1.92	1.59	2.25	2.13	3.48	3.49	3.39	3.44	3.49	3.49
	ITALY	4.17	2.83	3.74	3.09	3.73	3.51	3.46	3.56	3.41	3.39	3.46	3.50
	NETHERLANDS	2.74	1.03	1.71	1.84	-0.35	3.39	3.46	3.63	3.37	3.32	3.34	3.36
	SWITZERLAND	-0.68	1.35	1.27	2.95	4.91	4.30	2.80	2.97	2.96	2.98	2.99	2.99
	UNITED KINGDOM	3.31	4.42	3.42	5.53	3.49	3.34	5.01	5.44	5.63	5.18	5.14	5.14
Exchange rate, PPP	GERMANY	0.29	0.97	2.31	2.26	1.29	0.91	0.54	0.72	0.62	0.44	0.62	0.70
	ITALY	-1.63	-0.91	-0.08	0.50	0.75	1.16	0.49	0.57	0.32	0.24	0.48	0.40
	NETHERLANDS	-1.99	0.00	1.74	0.95	0.85	1.21	1.01	1.19	0.90	0.63	0.80	0.88
	SWITZERLAND	-0.16	-0.85	-1.98	-2.90	-1.80	-2.29	-1.29	-1.49	-1.21	-0.98	-1.23	-1.25
	UNITED KINGDOM	-1.28	-1.05	0.31	0.68	0.43	0.49	0.49	0.67	0.54	0.30	0.54	0.59
Outbound travel, total (bn)	GERMANY	-3.01	2.77	-0.74	4.11	0.23	13.66	8.73	6.88	5.96	5.83	5.63	5.54
	ITALY	8.44	1.60	-9.61	9.23	2.58	10.85	4.50	2.95	2.67	2.78	2.76	2.81
	NETHERLANDS	2.55	-1.75	-2.60	-1.38	5.18	6.03	3.15	4.67	5.80	5.74	5.58	5.55
	SWITZERLAND	1.48	-6.62	7.00	5.40	8.97	3.07	5.52	4.62	4.58	5.09	5.26	5.39
	UNITED KINGDOM	4.32	-4.25	7.29	5.37	5.42	3.51	4.96	8.58	8.80	8.39	8.02	7.87
	GERMANY	-4.06	1.77	-3.08	7.05	-8.01	5.78	3.54	4.01	4.83	3.88	3.24	1.58



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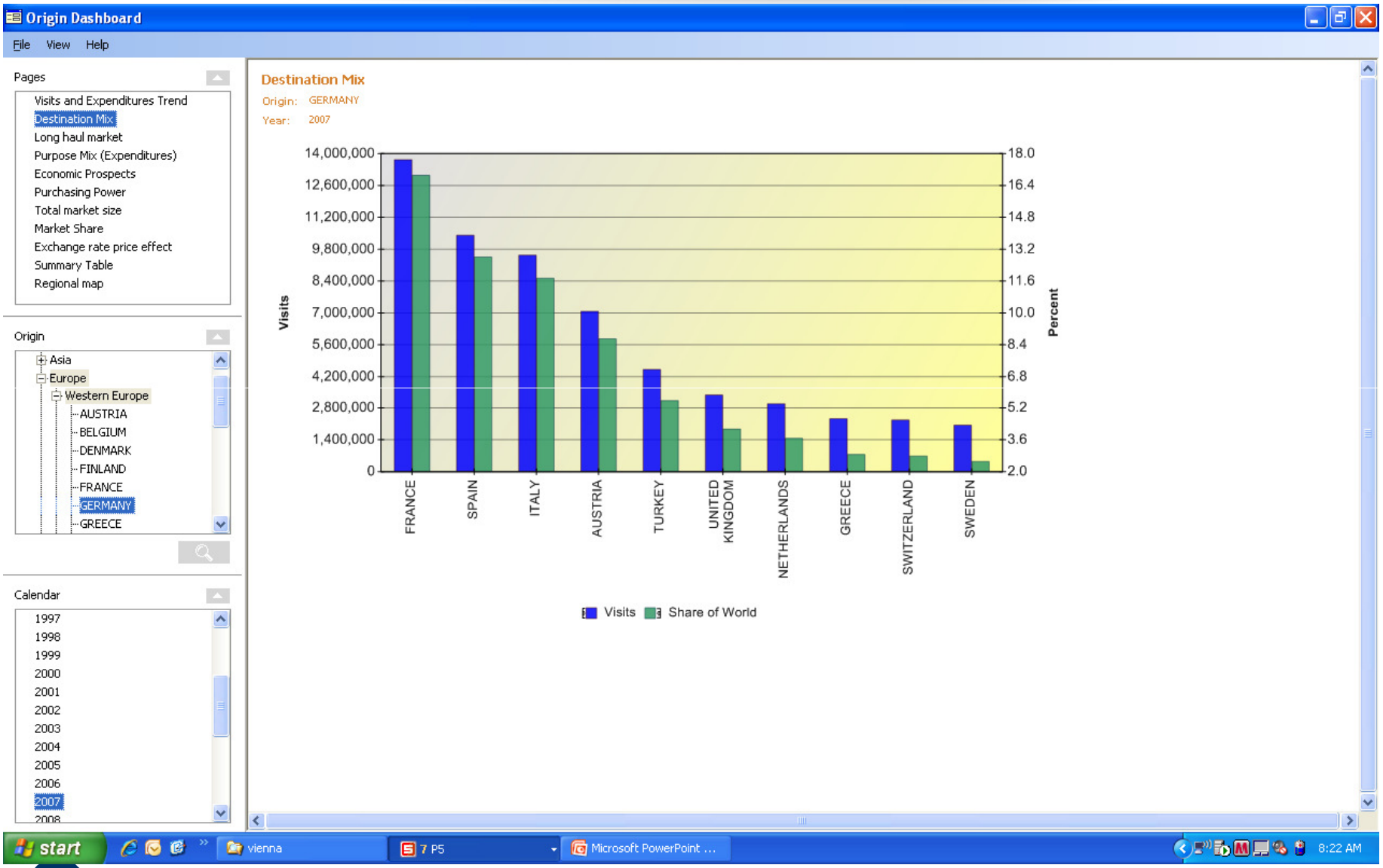
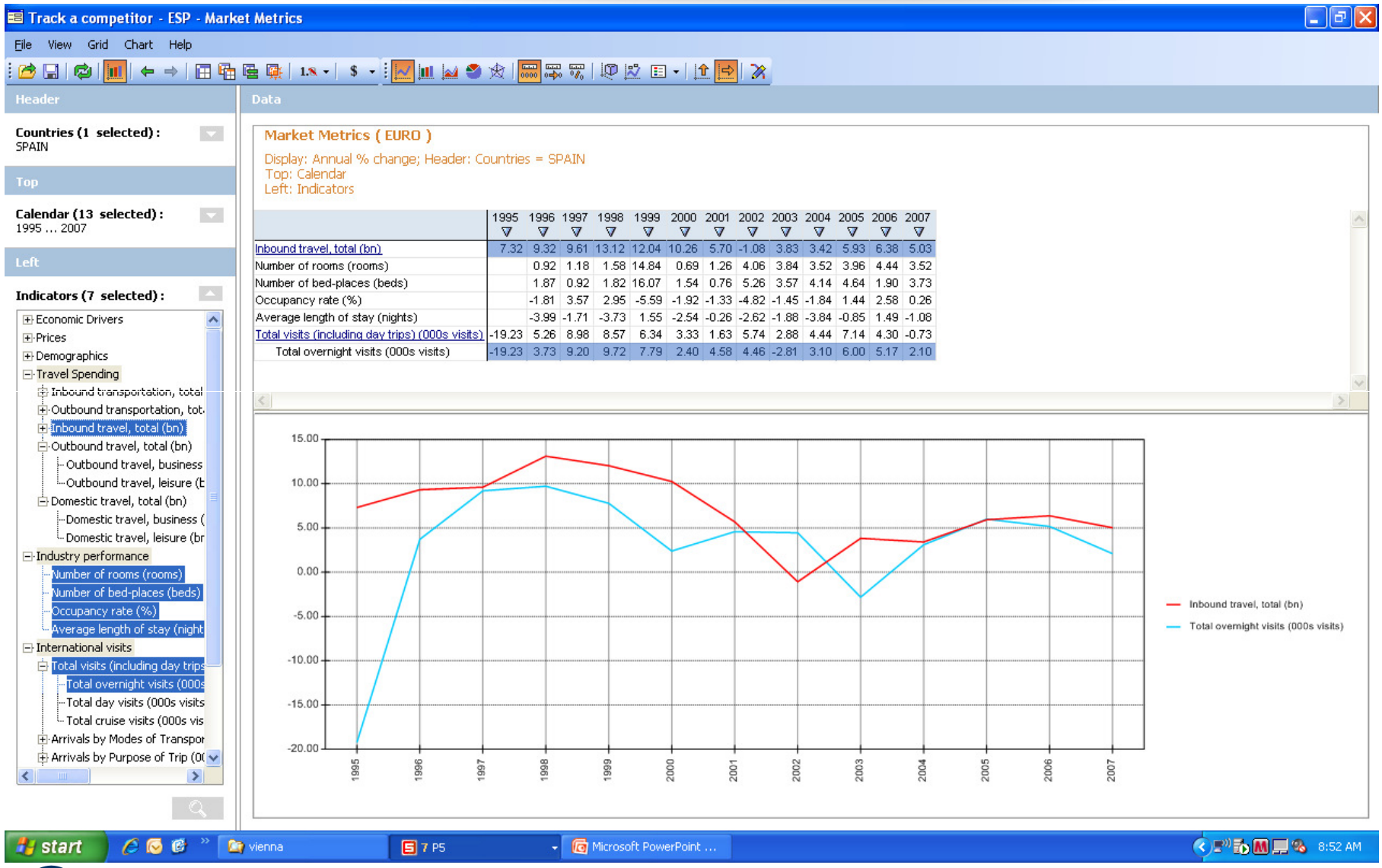
Example: Destination market share



Example: Tracking competitors



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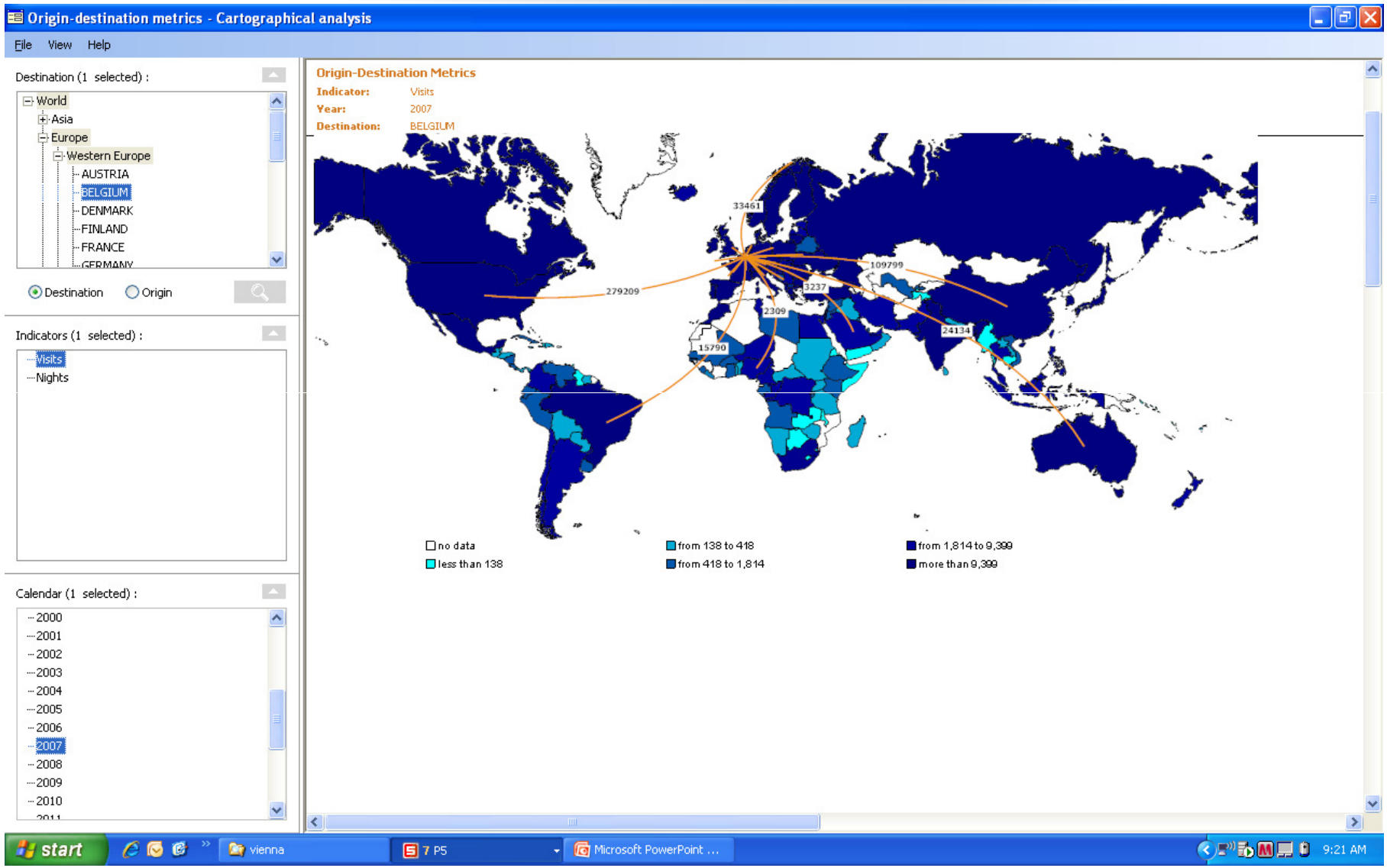
Example: Cartographic analysis



Putting forecasts to work: market strategy

- 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

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Market Analysis Platform
International

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Select Outlook and Risk **Year: 2008**

Current Outlook: Long-term {Please select Outlook}

Risk: Balanced {Please select Risk}

Select or de-select components. Select all

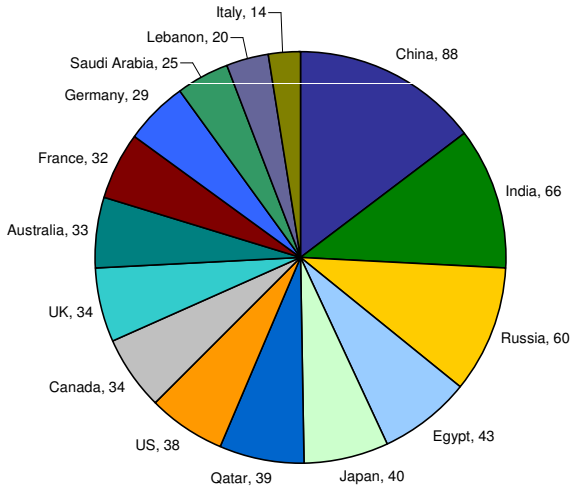
Opportunity
- Market Size
- Country Size
- Growth
- Saturation

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



Example: market strategy using MAP

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ABU DHABI TOURISM AUTHORITY

Market Analysis Platform International

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www.tourismeconomics.com

Select Outlook and Risk **Year: 2008**

Current Outlook: Long-term {Please select Outlook}

Risk: Balanced {Please select Risk}

Select or de-select components. Select all

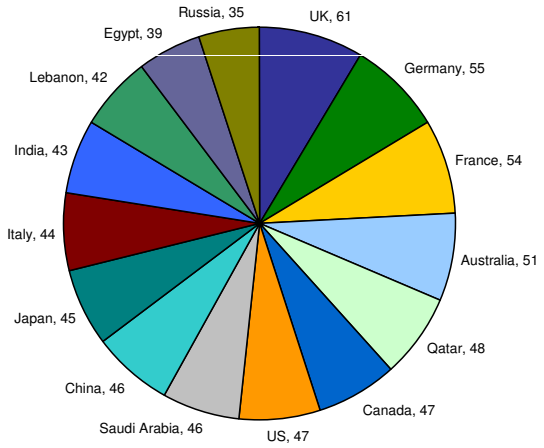
Opportunity
- Market Size
- Country Size
- Growth
- Saturation

Propensity
- Sentiment
- Alignment

Value
- Purchase Power
- Visitor Value
- Affordability
- Presence

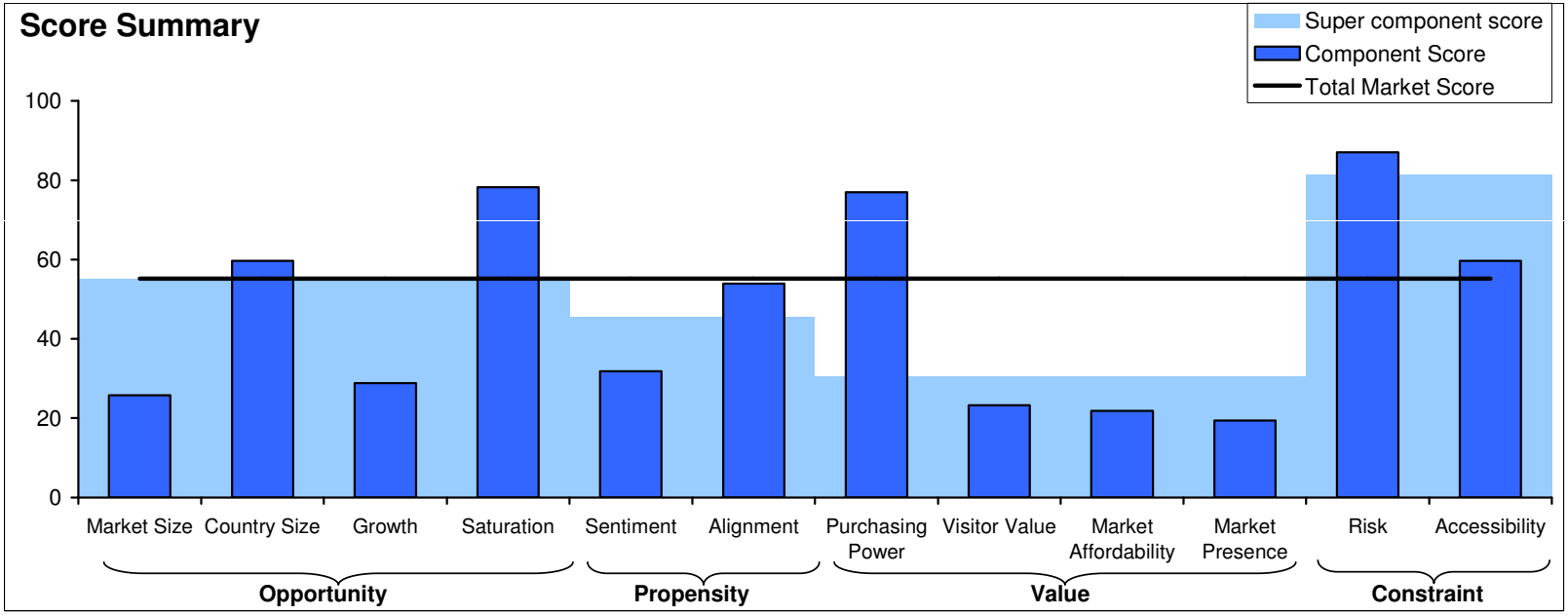
Constraint
- Risks
- Accessibility

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



MAP: How does an origin market score?

Germany - Market Overview

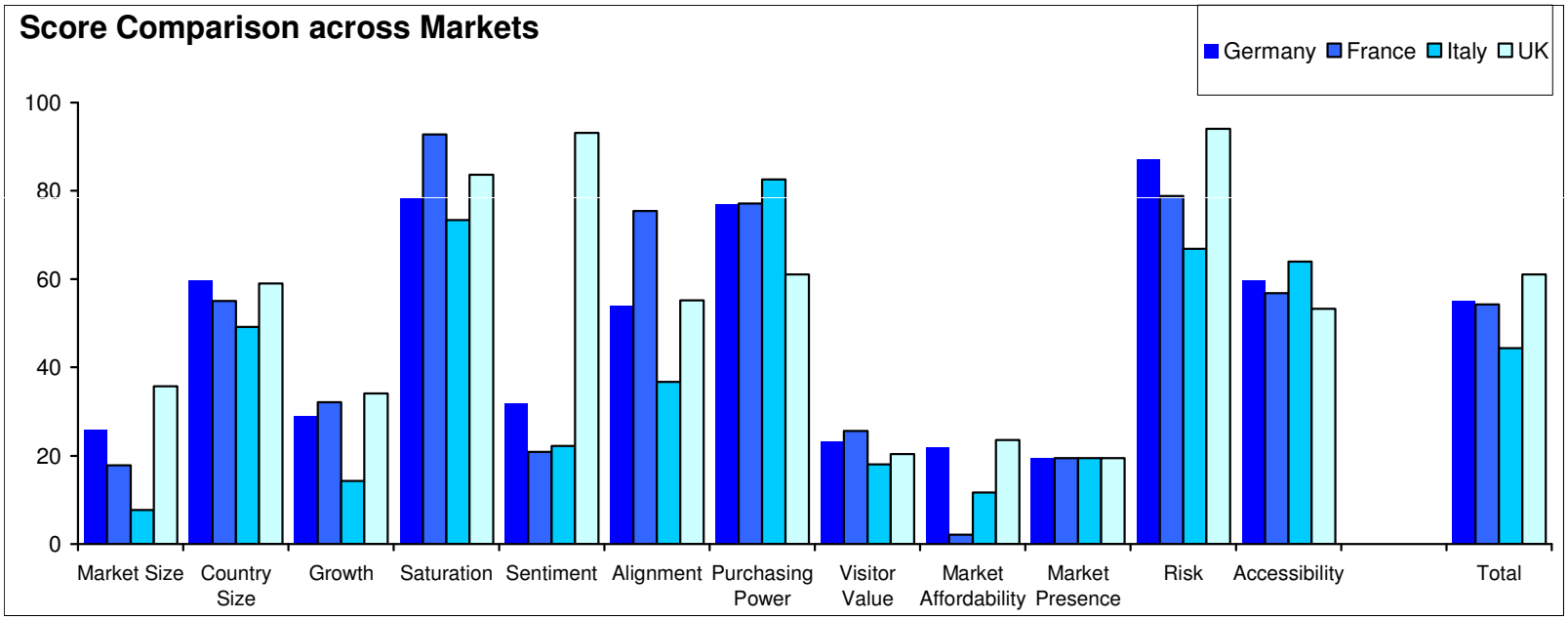


MAP: How do origin markets compare?

Market Comparisons

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

{Select 1st market} {Select 2nd market} {Select 3rd market}



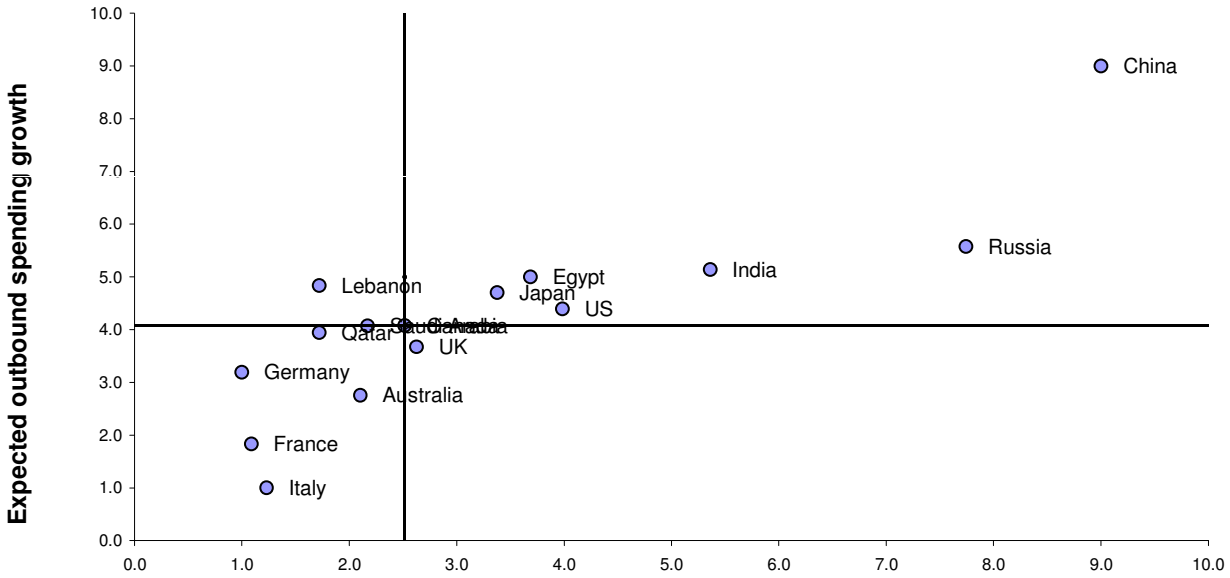
MAP: comparing origin markets

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)



Markets in upper right quadrant

China
Russia
India
Egypt
US
Japan
Canada
-
-
-

Bubble size=

-

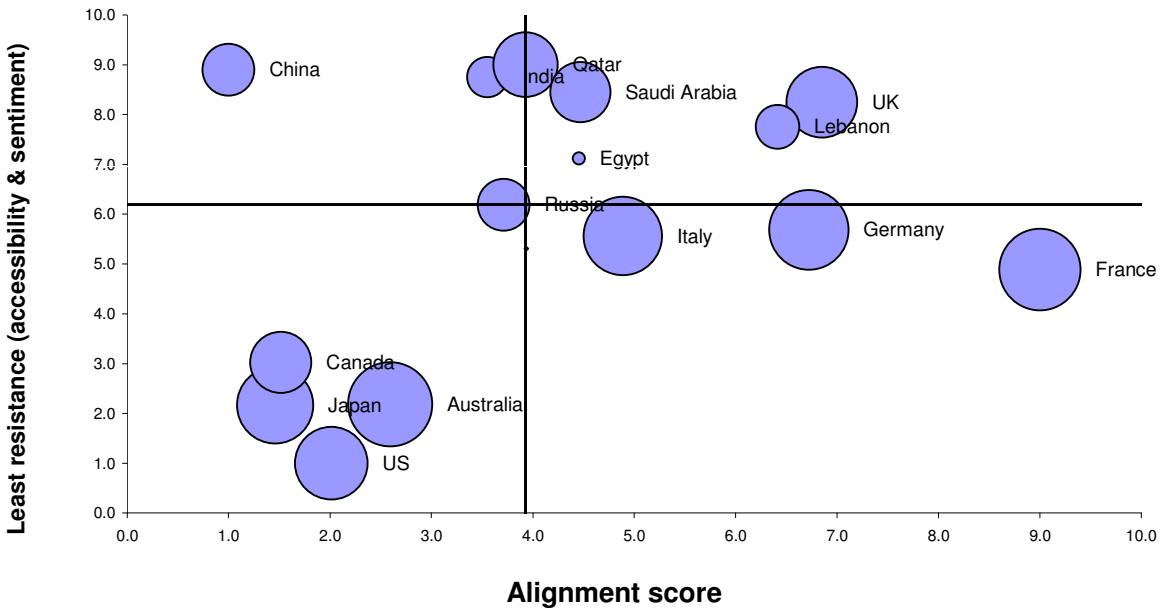
MAP: comparing origin markets

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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