



# Sensitive Tourists

The effect of changes in exchange rates and income levels  
on the UK's international tourism earnings



BRITISH TOURIST AUTHORITY

Caledonian Economics Ltd



## Key Findings

The exchange rate elasticity<sup>1</sup>  
of tourism to the UK is: **-1.3**

The income elasticity  
of tourism to the UK is: **0.6**

- For every 1.0% change in the exchange rate<sup>2</sup>, the UK's international tourism earnings will change by 1.3% in the opposite direction.  
*Eg., every 1% decrease in the exchange rate will increase the UK's tourism earnings by £160m p.a. and create over 4,700 full-time jobs<sup>3</sup>.*
- For every 1.0% change in visitors' incomes, the UK's international tourism earnings will change by 0.6% in the same direction.  
*Eg., every 1% increase in visitors' incomes will increase the UK's tourism earnings by £70m p.a. and create over 2,000 full-time jobs.*

### Implication

While both cost and income levels affect overseas visitors' decisions on whether to visit the UK, changes in exchange rate cost have the greatest impact. In practice this is even more important as exchange rates are prone to greater fluctuations than rates of economic growth.

### Interpretation

Normally, increasing the price of products does not proportionately depress the sales volume and, as such, results in an increase in total sales value. However, this is not so for international tourism to the UK which is highly competitive, highly price sensitive and, it would appear, has many 'close substitutes'.

The implication of this study's findings is that a 10% increase in perceived prices through higher exchange rates will *more than proportionately* reduce the UK's total tourism earnings. This occurs because not only does the 10% perceived price increase depress visitor expenditure by 3%, but when this expenditure is then converted into sterling, the higher exchange rate reduces the UK's tourism earnings by an additional 10%.

This illustrates the 'double whammy' effect that changes in exchange rates have.

An example of this effect is the 26% depreciation in the euro/ecu against the pound since 1996. This is estimated to have reduced the UK's potential tourism earnings from the eurozone by 34% from £6bn to £4bn per annum. This £2bn difference represents almost 60,000 full-time equivalent jobs.

Given the demonstrated high price sensitivity of tourism earnings, it is important that tourism related taxes are not introduced as they would disproportionately reduce the UK's tourism earnings.

1. All elasticities contained in this document refer to changes in real (i.e. inflation adjusted) tourism expenditure, not the number and/or duration of tourism visits.

2. Trade Weighted Exchange Rate

3. It is estimated that an additional full-time equivalent job is created for every £34,000 increase in Britain's tourism revenue.





## Introduction

Accounting for 4% of value-added GDP and employing 1.9 million people, tourism and the continued health of the tourism industry are increasingly recognised to be vitally important to the UK's regional and national economic growth.

However, behind the obvious signs of success (tourism creates one in five new jobs and the UK ranks fifth in terms of world tourism earnings), there is cause for concern. The UK's share of world tourism receipts has decreased by more than 30% over the past 15 years (from 6.0% in 1985 to 4.1% in 2000) and while world tourism receipts continue to increase at over 4% per annum, the UK's receipts have shown no growth in real terms since 1996.

As a result of the falling real cost of international travel, the price of tourism products and services has become more important in influencing the comparative cost of different destinations and, hence, the pattern of international travel. International evidence suggests that, other than intrinsic characteristics of the destination, there are two key factors driving changes in tourism earnings in mature markets such as the UK:

1. The Perceived Cost of the Visit
  - the price of tourism products and services
  - the exchange rate faced by visitors
2. Visitors' Real Incomes

Price perceptions of the UK have not been significantly influenced by price inflation in tourism services and products over the last ten years, as the UK inflation rate has been low and has not diverged markedly from rates in key competitor markets. However, large fluctuations in the value of the pound against most other currencies have greatly influenced price perception during this period.

Adverse changes in the exchange rate (i.e., the pound becoming stronger) have a particularly devastating effect on inbound tourism earnings. Not only do visitors experience higher prices, leading to a 'price effect' on visitor numbers and on their spending patterns, but their resulting expenditure is further diminished in value when converted into sterling.

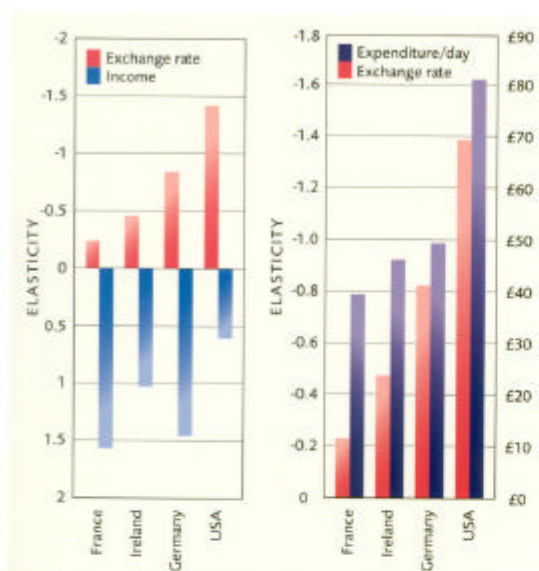
BTA was keen to understand how influential recent changes in exchange rates have been, and commissioned Caledonian Economics to explore – using econometric modelling techniques – the effect on inbound tourism earnings of changes in sterling exchange rates and of income levels in other countries over the last 25 years. The UK's Trade Weighted Exchange Rate and the OECD GDP were used as proxies for changes in the cost of visiting the UK and overseas visitors' incomes.

The results of this study enable us not only to quantify the impact of recent exchange rate movements on inbound tourism to the UK, separating it from the effect of other factors, but also to predict the impacts of future changes in exchange rates on the UK's tourism earnings and employment.



## Other Results

### 1. Main Inbound Markets



Modelling of the impact of changes in the cost of visiting the UK and income levels was conducted for each of the UK's four main tourism markets: France, Ireland, Germany and the USA. Two relationships were common to all markets:

- The UK's tourism earnings decrease as the cost of visiting the UK increases, with American visitor expenditure decreasing by 1.4% for every 1.0% increase in the exchange rate.
- The UK's tourism earnings increase as incomes increase, with French visitor expenditure increasing by 1.57% for every 1.0% increase in GDP.

#### Finding

The UK's tourism earnings are more sensitive to changes in visitors' incomes in the short-haul markets, but more sensitive to changes in the cost of the visit in long-haul markets.

#### Implication

Changes in the cost of visiting the UK will have a proportionately greater impact on the UK's high value long-haul visitors. This is important as these visitors stay longer and have a higher level of daily expenditure, thereby spending more per visit than short-haul visitors.

### 2. Purpose of Visit



Inbound tourism comprises three main segments: Holiday, Business and Visiting Friends and Relatives (VFR). The Business and VFR segments have been the fastest growing segments over the last five years (+23%) and now account for 50% of the UK's total tourism revenue. Modelling of the sensitivity of each segment to changes in income levels and the cost of visiting the UK produced a range of income and exchange rate elasticities from which the comparative sensitivities of the different segments could be determined.

#### Finding

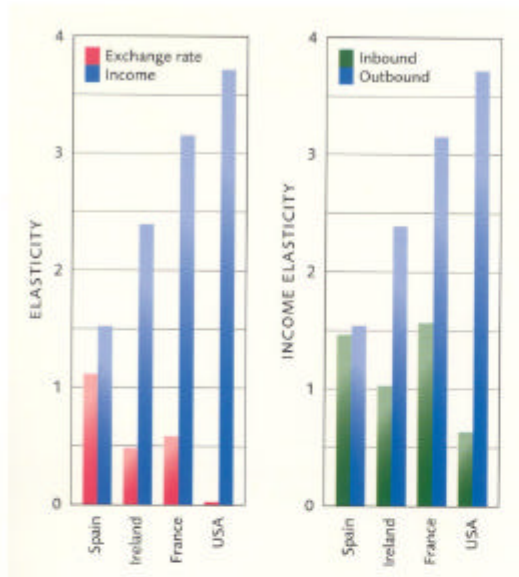
Holiday visitors are the most sensitive to changes in the cost of the visit, while Business visitors and VFR visitors are the most sensitive to changes in income levels.

#### Implication

The UK's tourism earnings from Business and VFR visitors are strongly influenced by economic growth in their home countries, whereas the UK's exchange rate is of greater significance to Holiday visitors.



### 3. Main Outbound Markets



Britain's outbound tourism expenditure was modelled for each of the four most popular countries visited by the British (Spain, Ireland, France and the USA). The sensitivities of Britain's outbound travellers to changes in the cost of visiting these countries and to British income levels was then compared to those calculated for inbound visitors from those countries.

#### Finding

Changes in income levels in the UK have a greater impact on British outbound tourism expenditure than changes in income levels in other countries have on expenditure by overseas visitors in Britain.

#### Implication

If Britain's GDP grows at the same rate as the OECD average and exchange rates remain stable, outbound tourism will increase faster than inbound tourism. Unless the cost of Britain's tourism products and services decreases to compensate, this will adversely affect domestic tourism.

### Methodology

A dynamic econometric modelling technique was employed to estimate the exchange rate and income sensitivities of real tourism earnings. The equilibrium solution to the dynamic model of Britain's real tourism earnings was:

$$7.57 + 0.55 \times \text{Income} - 1.28 \times \text{Cost} + \text{seasonal variations} = \text{BRITAIN'S TOURISM EARNINGS}$$

Where:

**Income** = natural logarithm of Real OECD Gross Domestic Product

**Cost** = natural logarithm of the Trade Weighted Exchange Rate

The multiple correlation coefficient ( $R^2$ ) of the underlying dynamic equation was 0.98, meaning that the equation explains 98% of the variation in Britain's international tourism earnings over the last 25 years.





### British Tourist Authority

The British Tourist Authority is a Non-Departmental Public Body that, in addition to its primary role of encouraging people to visit Great Britain, also has a statutory duty to advise Government and public bodies on issues that affect inbound tourism.

This study was undertaken for the British Tourist Authority by Caledonian Economics and overseen by a working group comprising representatives of the British Tourist Authority, the English Tourism Council, VisitScotland, the Wales Tourist Board, the Northern Ireland Tourist Board and the Department for Culture, Media and Sport.

For a copy of the full report, or further information on other policy issues, please contact:

**Kurt Janson, Head of Policy**

Tel: +44 (0) 20 8563 3395

Fax: +44 (0) 20 8563 3350

Email: [kjanson@bta.org.uk](mailto:kjanson@bta.org.uk)

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Published by the British Tourist Authority  
Thames Tower  
Black's Road  
London W6 9EL  
Britain

Tel: +44 (0) 20 8846 9000  
Fax: +44 (0) 20 8563 0302