

The price of tourism in the context of global oil prices

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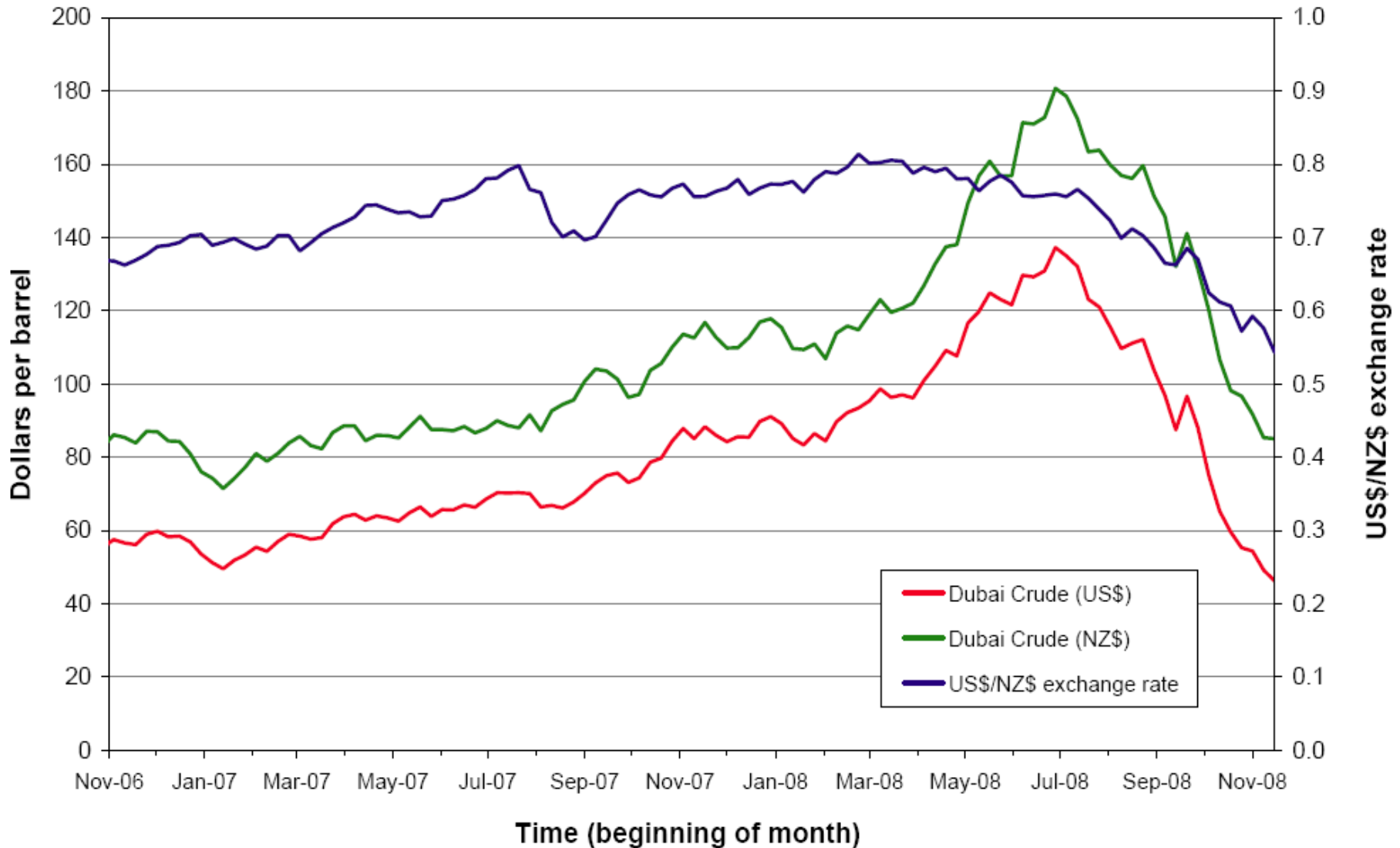




Background

- 3-year FRST-funded project on Tourism & Oil
- Aim: to help manage tourism's vulnerability to global oil prices
- Three objectives:
 1. Modelling tourist behaviour IN and TO New Zealand
 2. Analysing economy-wide effects (CGE)
 3. Adaptation measures for the sector

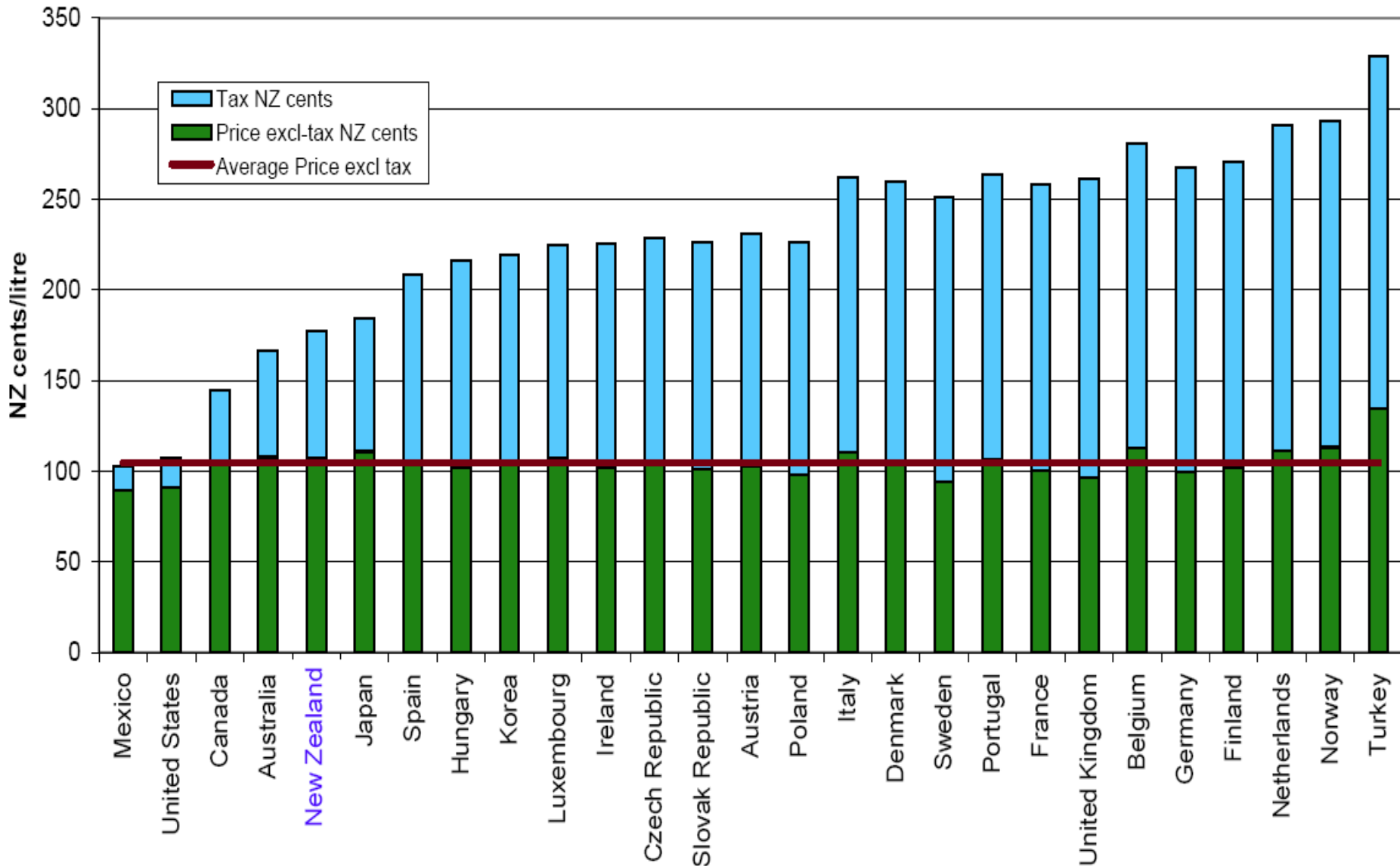
Weekly Average Dubai Crude and NZ Exchange Rate



Source: Ministry of Economic Development (Dec. 2008)

Petrol Prices and Taxes in OECD Countries

March Quarter 2008



Source: Ministry of Economic Development (Dec. 2008)



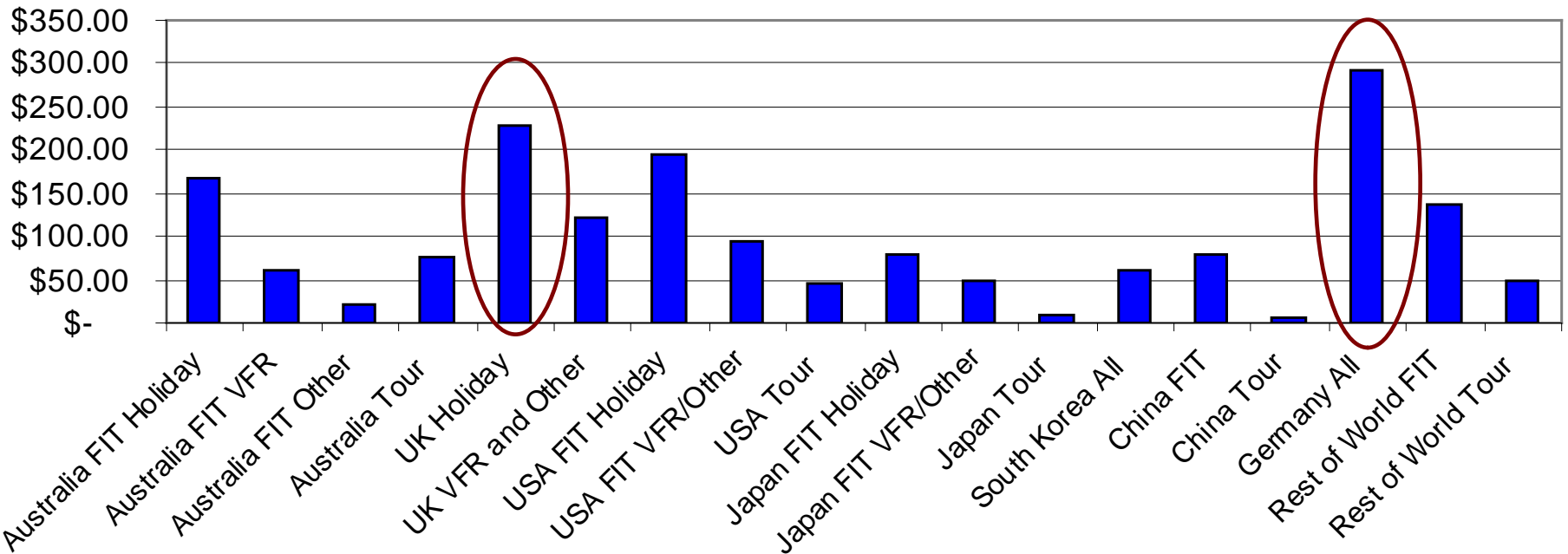
Segments used in this research

Segment	Sample size in 2007	Market share in 2007	Total Adults arrivals in 2007
Australia FIT Holiday	312	13.0	291,087
Australia FIT VFR	296	12.7	286,005
Australia FIT Other	252	8.7	195,029
Australia Tour	79	3.9	86,823
UK Holiday	305	6.3	141,995
UK VFR and Other	257	5.6	126,081
USA FIT Holiday	265	4.2	93,247
USA FIT VFR and Other	226	2.9	64,537
USA Tour	97	1.6	35,032
Japan FIT Holiday	107	1.4	30,509
Japan FIT VFR and Other	138	1.2	26,957
Japan Tour	161	2.5	56,418
South Korea All	238	3.8	85,592
China FIT	174	1.2	27,000
China Tour	217	3.7	82,995
Germany All	182	2.5	55,082
Rest of World FIT	1760	22.4	503,736
Rest of World Tour	180	2.5	55,862
Total	5246	100.0	2,243,987

Fuel purchase

The average amount spent on fuel (directly) by a tourist in each segment

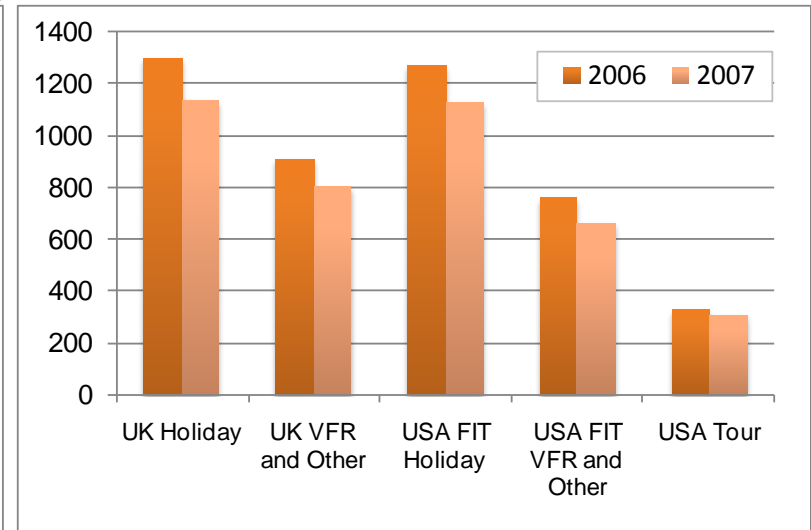
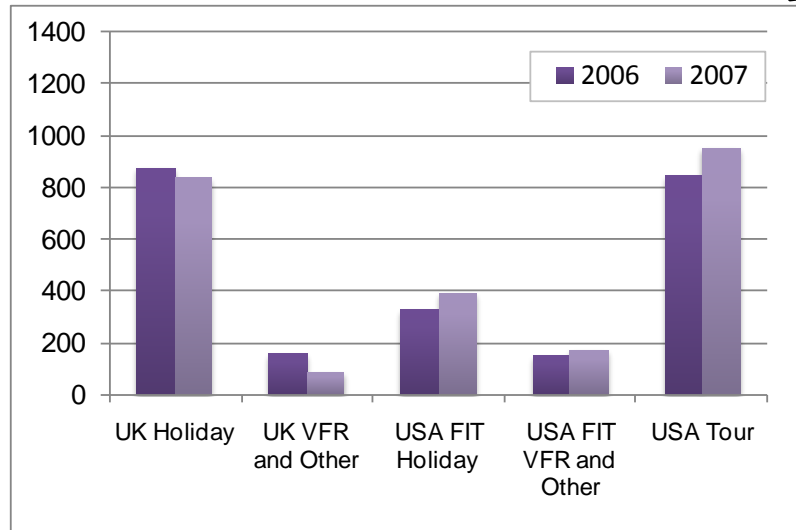
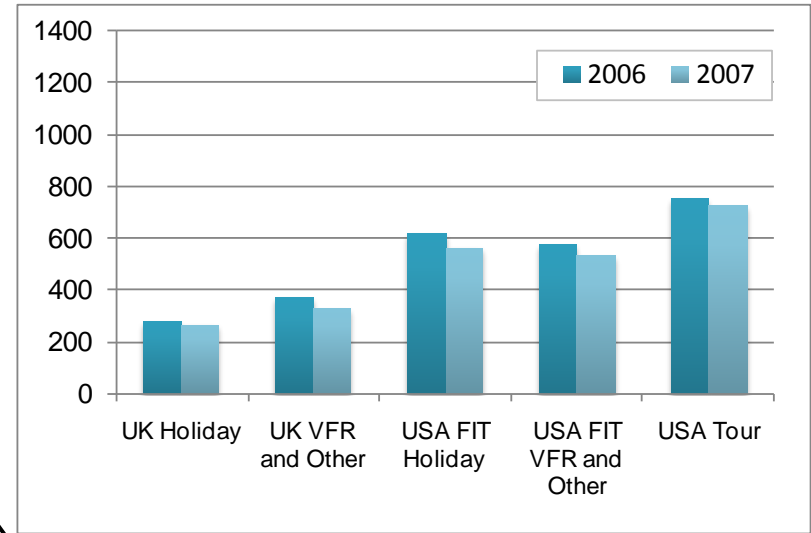
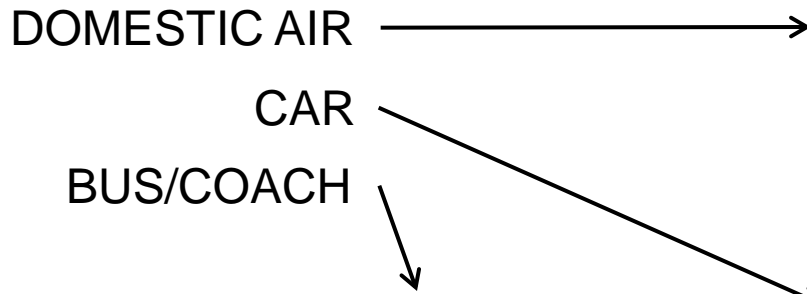
Spend per trip on fuel, based on Car+Campervan kms





Comparisons across segments and change over time

Example:
UK and USA segments



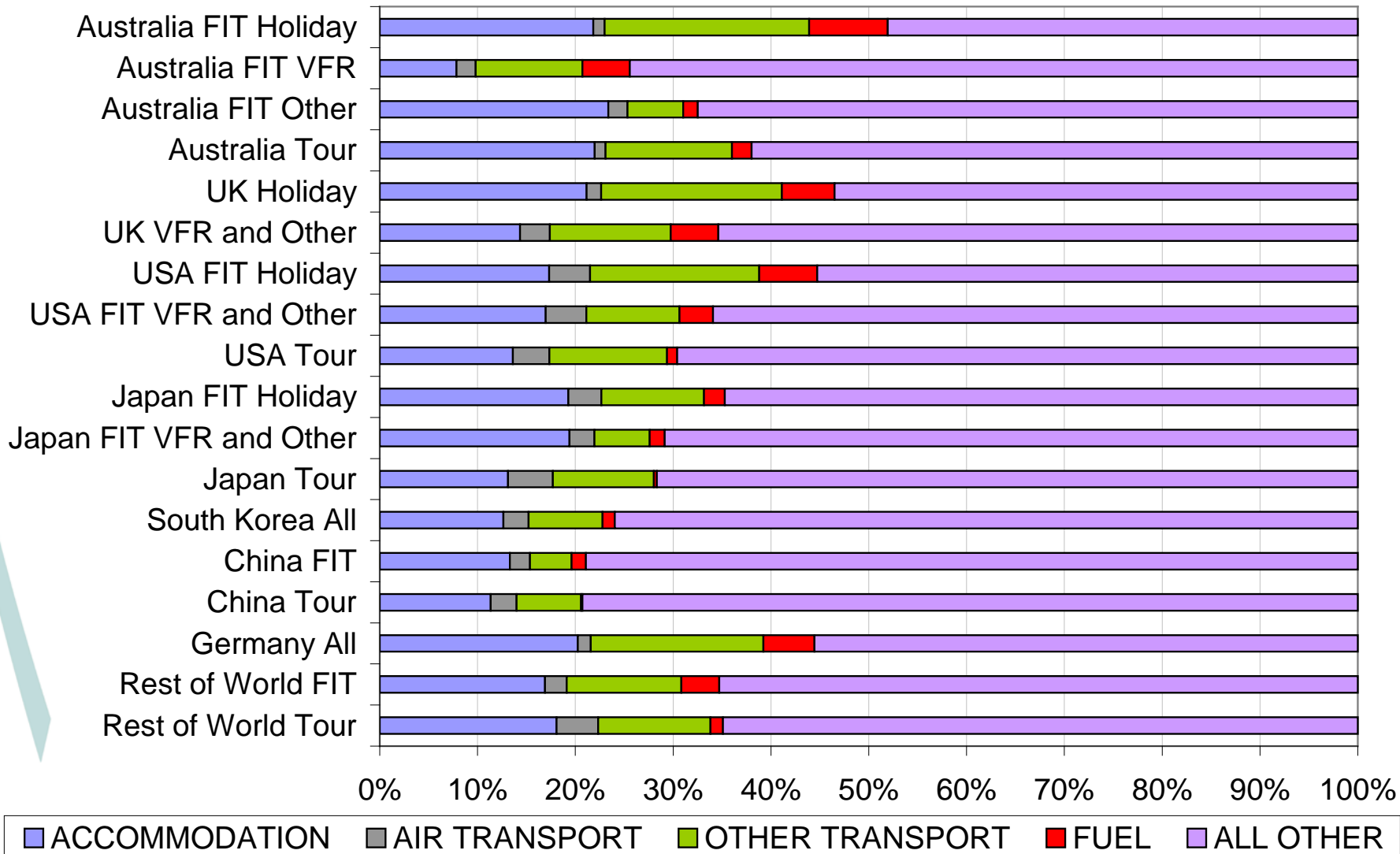


Consumption bundles and Price Indices

- We determined the consumption bundle for each segment based on:
 - Accommodation
 - Road and air transport
 - Fuel (petrol)
 - Other
- We have calculated price indexes (based on Statistics NZ) to represent the price of the bundle of tourism products consumed by tourists in each market segment.
- We fixed consumption bundles at their 2006 levels, and apply that pattern to price indices.

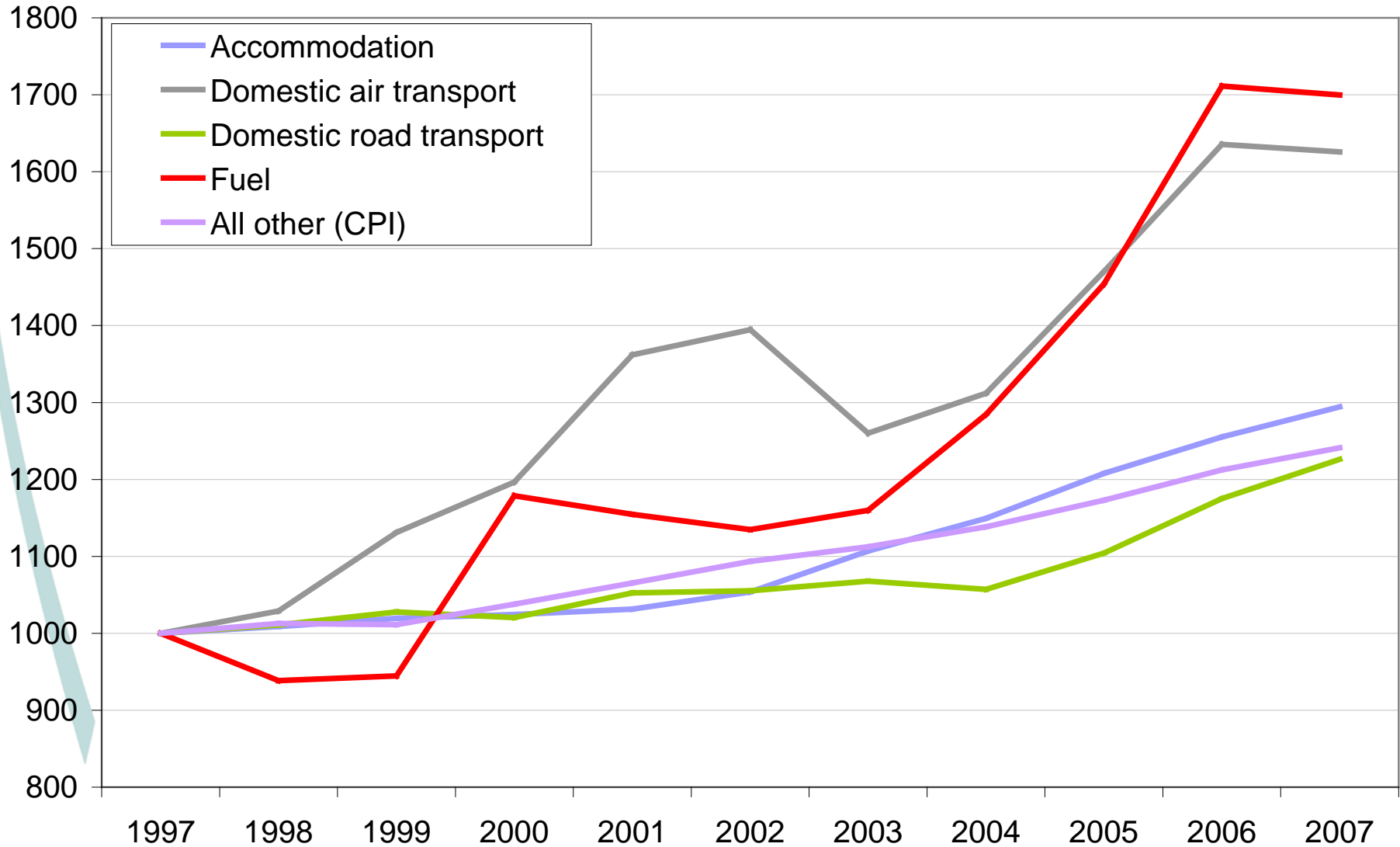


Consumption bundles



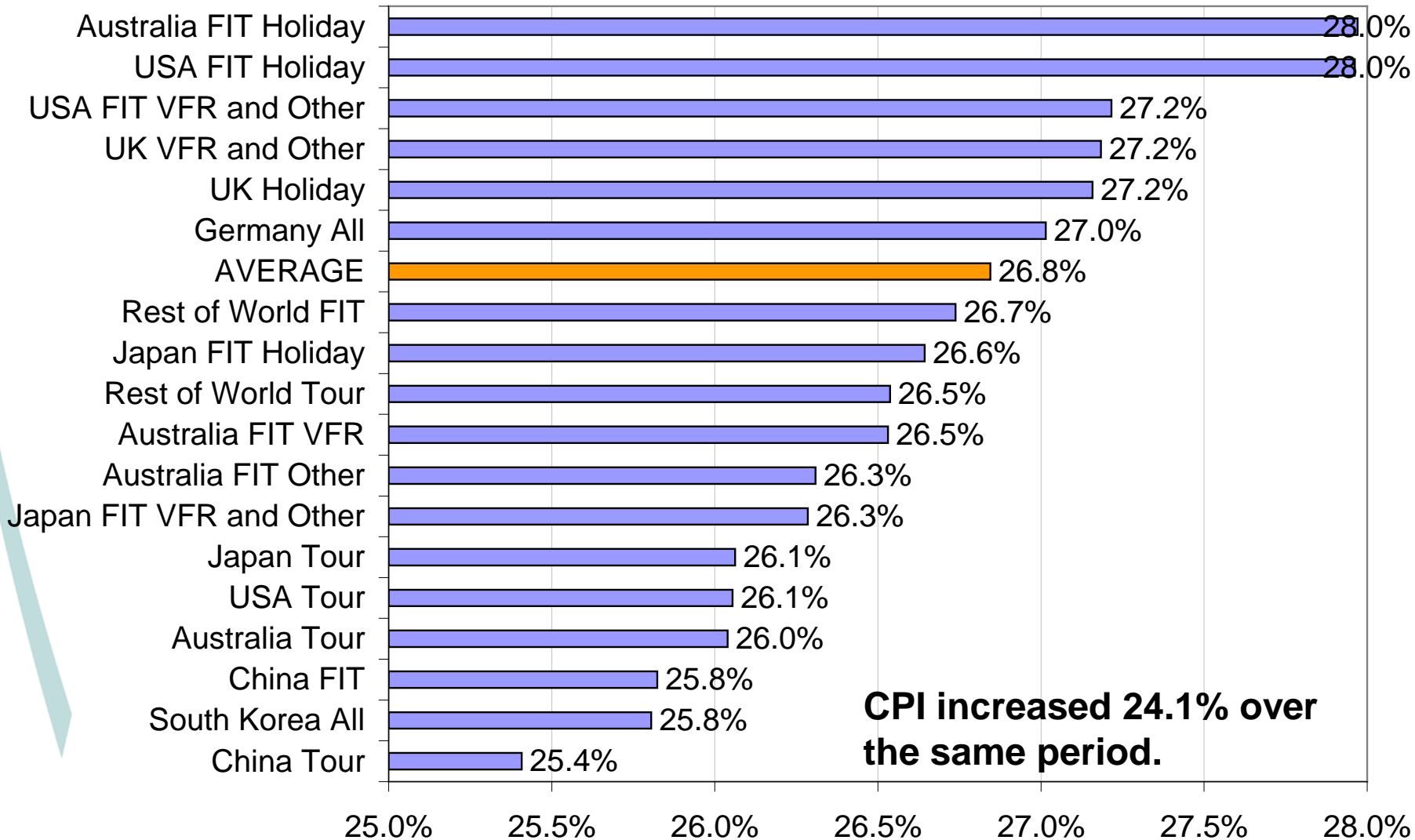


Underlying NZ Price Indices





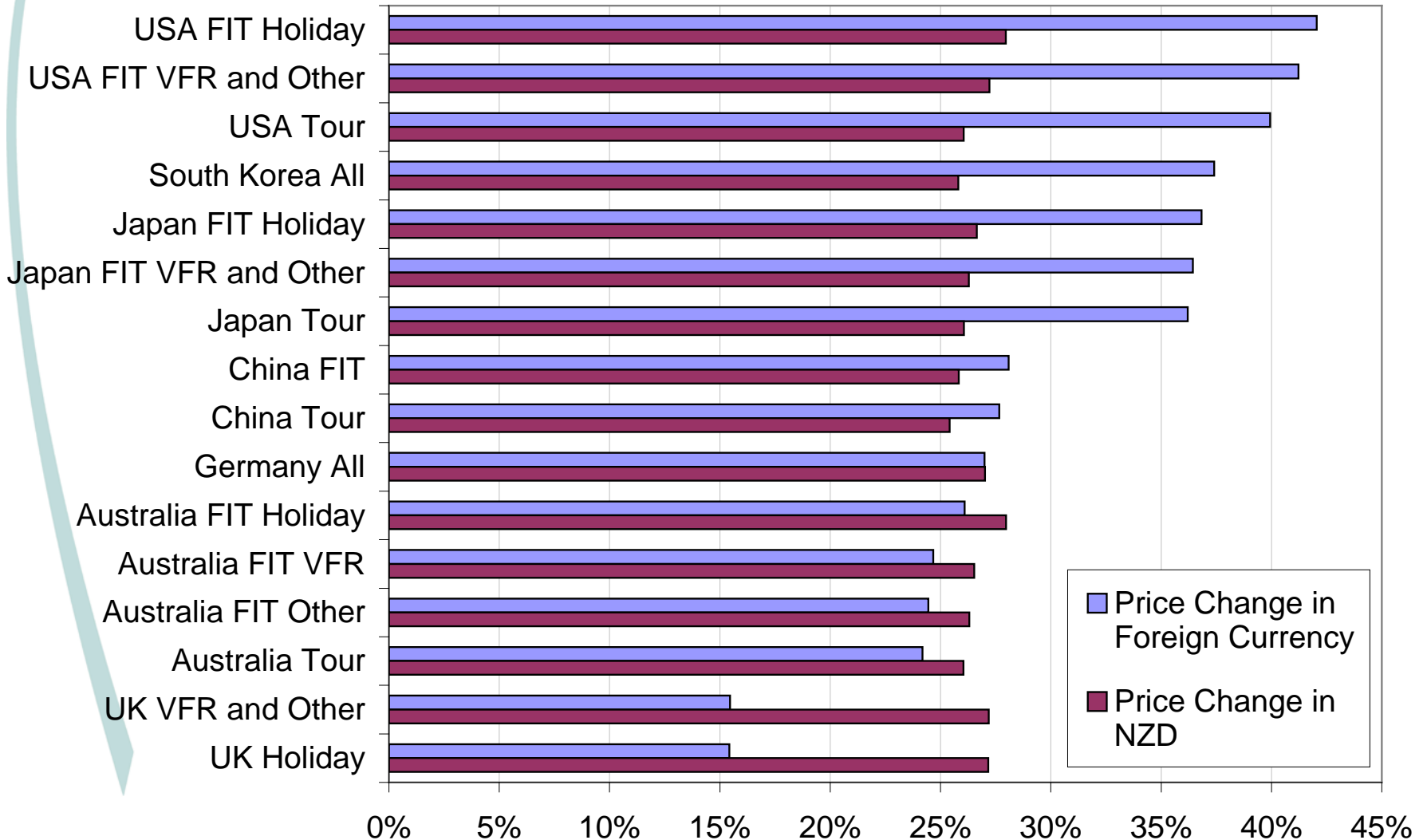
Price Change in NZD 1997-2007





Exchange Rate Effects

Total price change 1997 – 2007

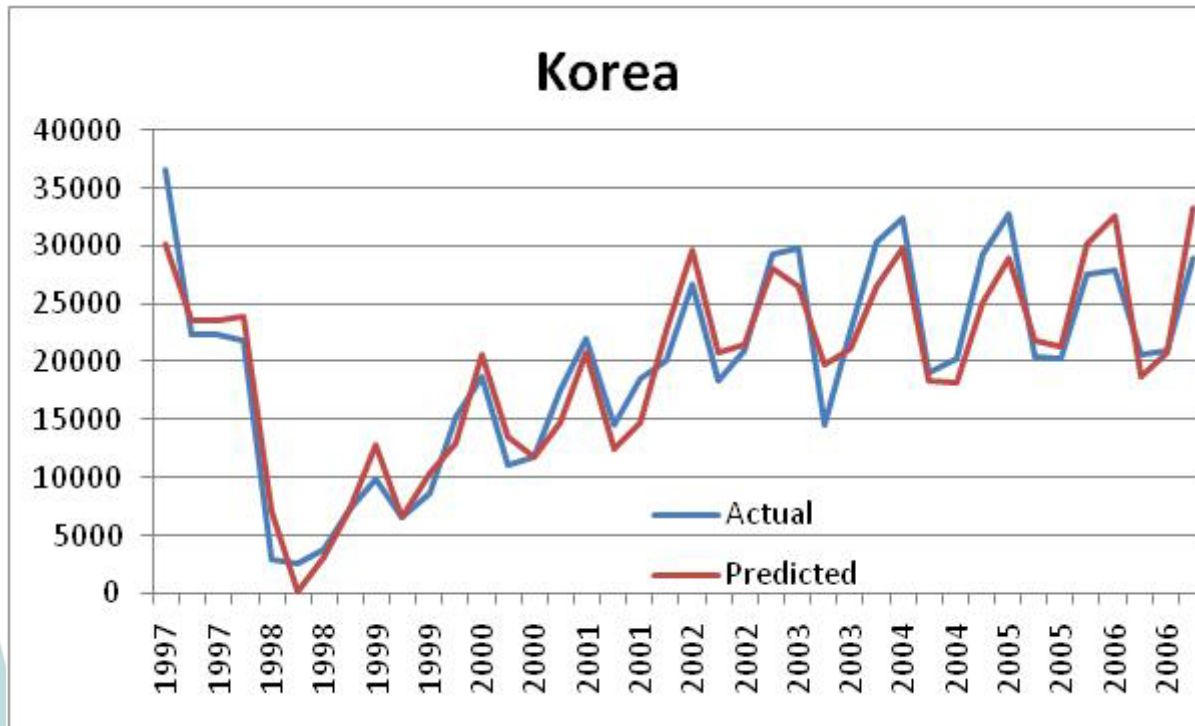




International Arrivals

- Linear regression
- Quarterly data 1997-2006
- General – to – specific model selection process
 - Real consumption per capita (foreign)
 - Real GDP per capita (foreign)
 - CPI (foreign)
 - Exchange rate (foreign with \$NZ)
 - Oil price (world price)
 - OTG price index (in foreign currency)
 - Airfare (in foreign currency)
 - Quarterly dummy variables

For example: Korea



Variable	Coefficient
Consumption	0.05
CPI	-2827
Exchange Rate	-364
OTG Price	0.45
Oil Price	-215
q1	7626
Constant	215032

Outlook

- More work on price elasticity
- Input into Computable General Equilibrium Model
- Research on energy behaviour in tourism businesses (published)
- Tourist behaviour
- Identifying at risk destinations, products and markets