



**Bournemouth
University**

PRICE IN MODELS OF INTERNATIONAL OUTBOUND TOURISM

**3rd Conference of IATE
Bournemouth University
July 2011**

**Dr. Neelu Seetaram
SCHOOL OF TOURISM**

<http://www.bournemouth.ac.uk/tourism>

Email: nseetaram@bournemouth.ac.uk

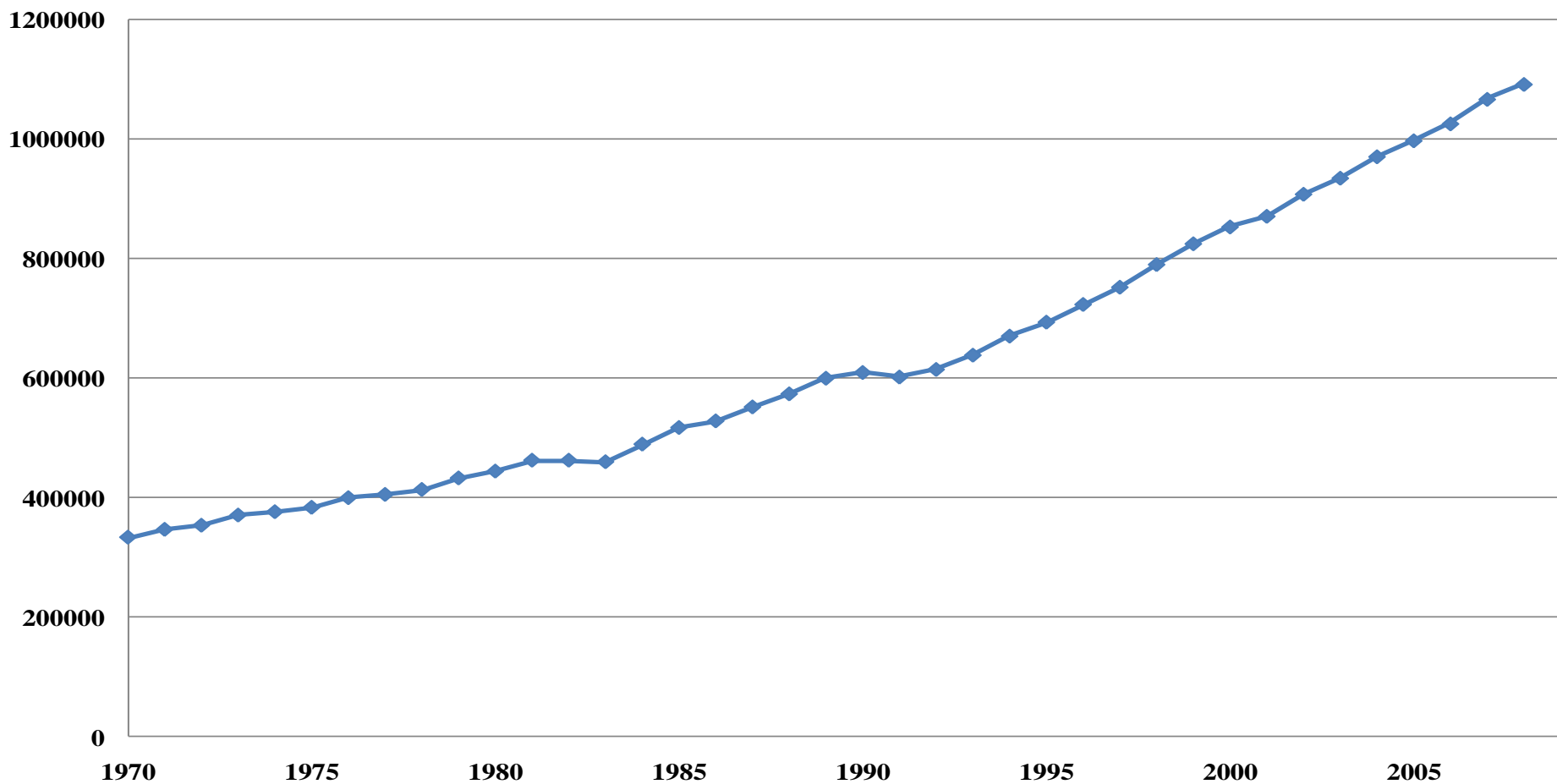
- **Australia as a generating country**
- **Outbound Tourism**
- **Trends in outbound tourism from Australia**
- **Real exchange rate as a proxy for prices**
- **Competitiveness index**
- **Methodology**
- **Results**
- **Conclusion**



Australian Economy – GDP

\$ (Million)

Source – Australian Bureau of Statistics





AUSTRALIAN ECONOMY (1970 – 2008)

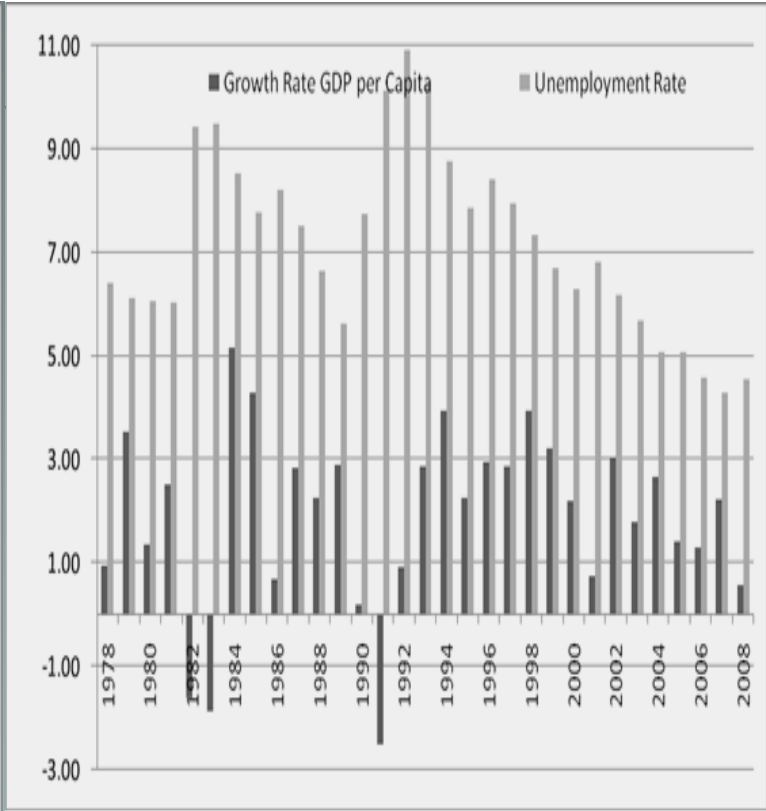
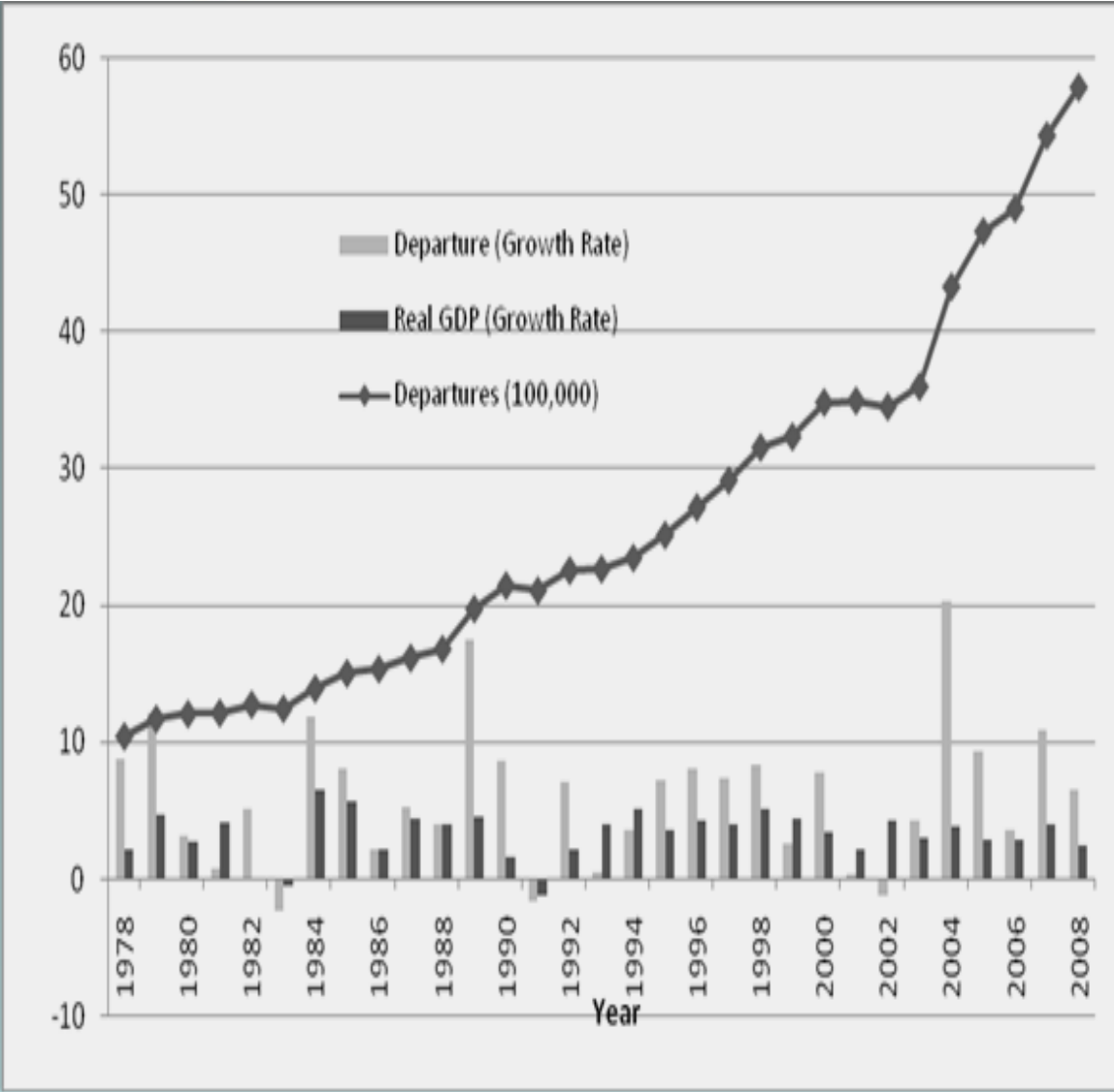
	1970	1980	1990	2000	2008
Real GDP PPP		443 803	609 167	853 195	1 092 192
Employment					
Agriculture		6.5	5.5	5	3.4
Manufacture		31.0	25.0	21.8	21.2
Services		62.4	69.5	73.3	75.1
GDP per Capita (\$)		30 137	35 645	44 474	50 884
Disposable Income (\$ million)		6 662	24 819	69 286	177 765
C as a % Y_d		77.8	79.6	83.8	92.0
Export (\$ million)		4 765	22 016	60 842	128 435
Imports (\$ million)		4 871	21 444	68 771	141 389
Trade Openness		-	0.10	0.22	0.33
					0.52



AUSTRALIA DEMOGRAPHY (1970 – 2008)

	1970	1980	1990	2000	2007
Population, total	12 507 000	14 692 000	17 065 100	19 153 000	21 015 000
Population growth (<i>annual %</i>)	2.0	1.2	1.5	1.2	1.5
Birth rate, crude (<i>per 1,000 people</i>)	20.6	15.3	15.4	13.0	13.6
International migrant stock (<i>% of population</i>)	19.6	19.7	21.0	21.0	24.1
Population density (<i>people per sq. km</i>)	1.6	1.9	2.2	2.5	2.7
Life expectancy at birth, Total (<i>years</i>)	71.0	74.3	77.0	79.2	81.3
Female (<i>years</i>)	74.4	78.0	80.2	82.0	83.7
Male (<i>years</i>)	67.8	70.9	74.0	76.6	79.0
Age dependency ratio, old (<i>% of working-age population</i>)	13.3	14.8	16.8	18.8	19.6
Public spending on education, (<i>% of government expenditure</i>)	..	15.0	12.7	13.3	n.a.
HDI ¹		0.87	0.90	0.95	0.97

Trends in Outbound Tourism



Source – ABS

Most popular destinations

1991

2008

Destination	Number	%	Destination	Number	%
1. New Zealand	353 400	15.01	1. New Zealand	864 700	17.50
2. USA	288 400	12.25	2. USA	440 300	8.91
3. UK	254 400	10.80	3. UK	412 800	8.36
4. Indonesia	214 100	9.09	4. Thailand	288 000	5.83
5. Hong Kong	130 600	5.55	5. China	251 000	5.08
6. Singapore	91 600	3.89	6. Singapore	210 900	4.27
7. Malaysia	84 600	3.59	7. Fiji	202 400	4.10
8. Fiji	83 000	3.53	8. Hong Kong	196 300	3.97
9. Thailand	71 900	3.05	9. Indonesia	194 900	3.94
10. Philippines	47 300	2.01	10. Malaysia	168 000	3.40
11. Italy	45 200	1.92	11. Viet Nam	125 400	2.54
12. Japan	42 700	1.81	12. Italy	108 800	2.20
13. Canada	39 700	1.69	13. India	106 100	2.15
14. China	39 200	1.66	14. Japan	100 300	2.03
15. Papua New Guinea	33 900	1.44	15. Canada	90 400	1.83

- **Income generated in home country**
- **Estimation of net benefits from the industry**
- **Import – consumption of local residents**

Evaluation of fiscal and monetary policies

- **Substitute to domestic tourism (?)**
- **Source of arrivals**

Australia is the main source of arrivals for countries such as New Zealand, Fiji, Singapore and Indonesia

**Bureau of Transport and Communication Economics (1995),
Dwyer et al. (1992), Hollander (1982), Philips and Hamal
(2000), Smith and Toms (1978), Seetaram (2010).**

**No satisfactory - price elasticity of demand – real exchange
rate is insignificant.**

- **Income generated in home country**
- **Estimation of net benefits from the industry**
- **Import – consumption of local residents**

Evaluation of fiscal and monetary policies

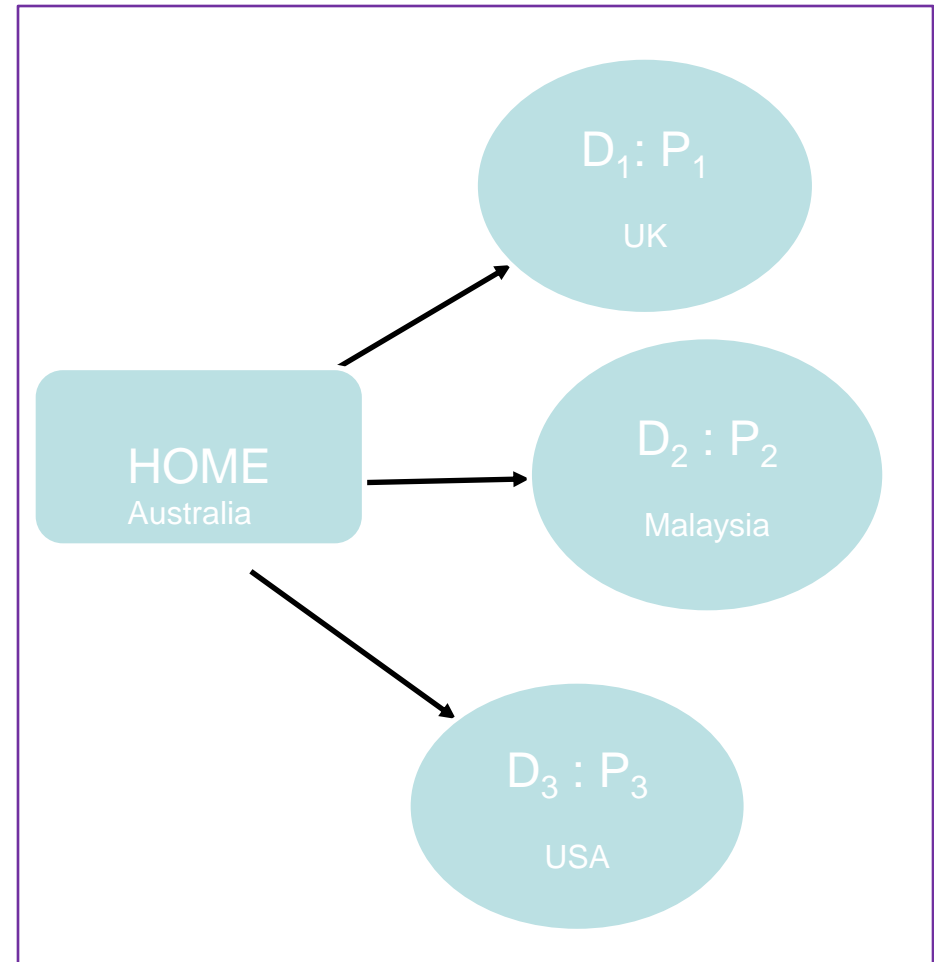
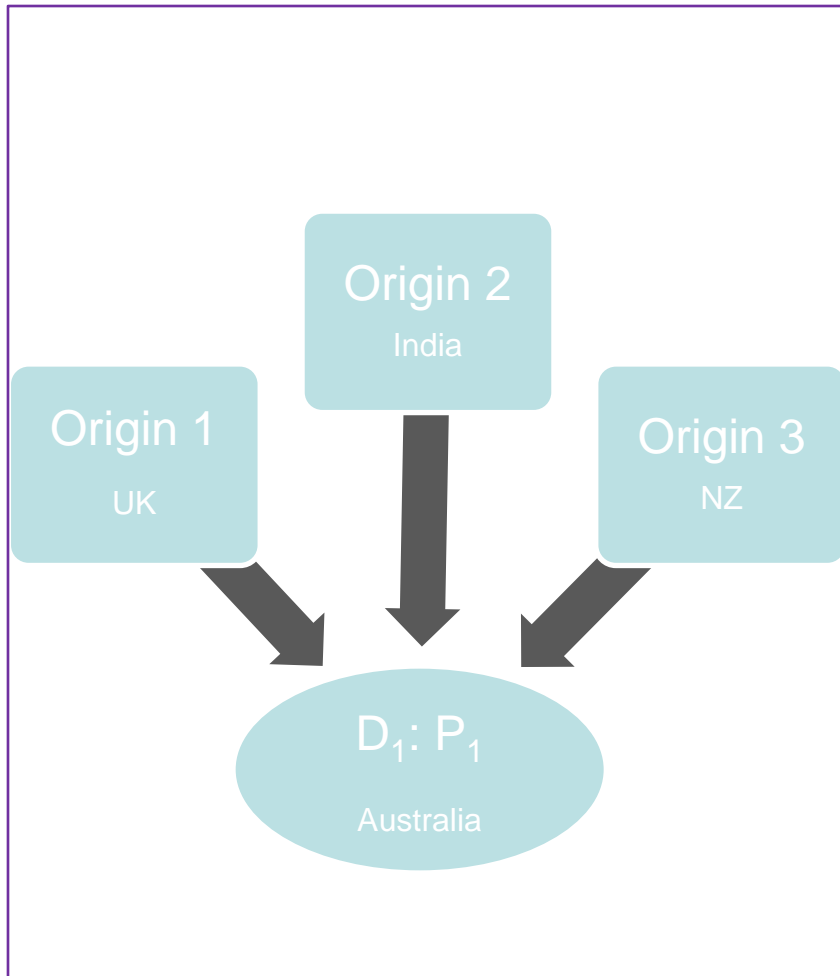
- **Substitute to domestic tourism (?)**
- **Source of arrivals**

Australia is the main source of arrivals for countries such as New Zealand, Fiji, Singapore and Indonesia

REAL EXCHANGE RATE

- **Why is RER not significant?**
- **Visitors not aware of RER?**
- **Visitors react with a lag?**
- **Open economy – where RER and Income are influenced by Volume of Trade.**
- **Asymmetry in model of inbound and outbound tourism.**

ASYMMETRY



Base year : 1990 → Price = 100.

Inbound – British and Indian traveller face price 100.

Intertemporal comparison of price for each market.

Outbound – Australian traveller faces same price for UK and Malaysia?????

- **Level or changes?**
- **If \$ depreciate by 10% against £ and 5% against MR**
- **UK become relatively cheaper than Malaysia – Will consumer alter their choice of destination?**
- **Most probably not as UK in absolute term is still more expensive.**

Not reflected by RER!

- Let Y_{it} be the real GDP per capita of Country i in US\$
- Y_{itp} is the real GDP per capita of Country i in US\$ at purchasing power parity (PPP)
- A rise in Y_{it} shows that per capita GDP is rising either due to and increase in volume of production / price levels / appreciation of the exchange rate (US\$)
- A rise in Y_{itp} shows that the volume of production has increased (does not incorporate xrate or price movements)

- if in year T, $Y_{it} = Y_{itp}$ year

$$\frac{Y_{it}}{Y_{it}^p} = 1$$

- If in T+1, Y_{it} rises faster than Y_{itp} ,

$$\frac{Y_{it}}{Y_{it}^p} > 1$$

indicating that the value of goods and services has increased due to a change in price / xrate

- Let $P_{it} = \frac{Y_{it}}{Y_{it}^p}$

- $P_{ita} > P_{itb}$ implies that country A is less competitive than country B.
- Measure of destination competitiveness.
- Since in this paper the data is from Australia,
- P_{it} is normalised by $P_{itaustralia}$
- Use to proxy price in a demand model

$$LD_{it} = \beta_0 + \gamma LD_{it-1} + \beta_1 LY_t + \beta_2 LP_{it} + \beta_3 LM_{it} + \beta_4 LAF_t + \beta_5 LDH_t + \beta_k \sum D_k + e_{it} + h_{it}$$

- **LD** is the number of short term departures.
- **LY** is the income variable.
- **LP** is the price variable.
- **LM** is the migration variable.
- **LAF** is the transportation cost from Syd. to destination.
- **LDH** is the cost of a domestic holiday in Australia.
- **D_k** are dummy variables representing years 2001 and 2002.

RESULTS

	Model 1	Model 2
LD_{t-1}	0.696	0.624
D_{2001}	-0.054	-0.055
D_{2002}	-0.076	-0.097

Model 1- With RER

Model 2 with PCI

RESULTS

	M1		M2	
	S R	L R	S R	S R
LY	1.04	3.42	1.19	3.61
LEX	0.004 ^a	0.00		
LPCI			-0.913	-2.43
LAF	-0.204	-0.67	-0.137	-0.36
LM	0.138	0.45	0.166	0.44
LDH	0.101 ^a	0.33	0.114 ^a	0.30

CONCLUSION

- **REX – insignificant in explaining international departures.**
- **PCI - outperforms real exchange rates.**
- **Price elasticities of demand : -0.913 (SR) and 2.43 (L**

Thank you