

Oil, the Global Economy and Tourism

Susanne Becken

Lincoln University

Potchefstroom, 12-16 Sep 2010



Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



**Lincoln
University**
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university

Background



- Tourism inherently dependant on oil
- No substitutes readily available for aviation
- Oil is also an essential input factor into other economic activities (that determine wealth and travel propensity)
- Oil prices have been fluctuating substantially



Centre for Land
Environment
& People

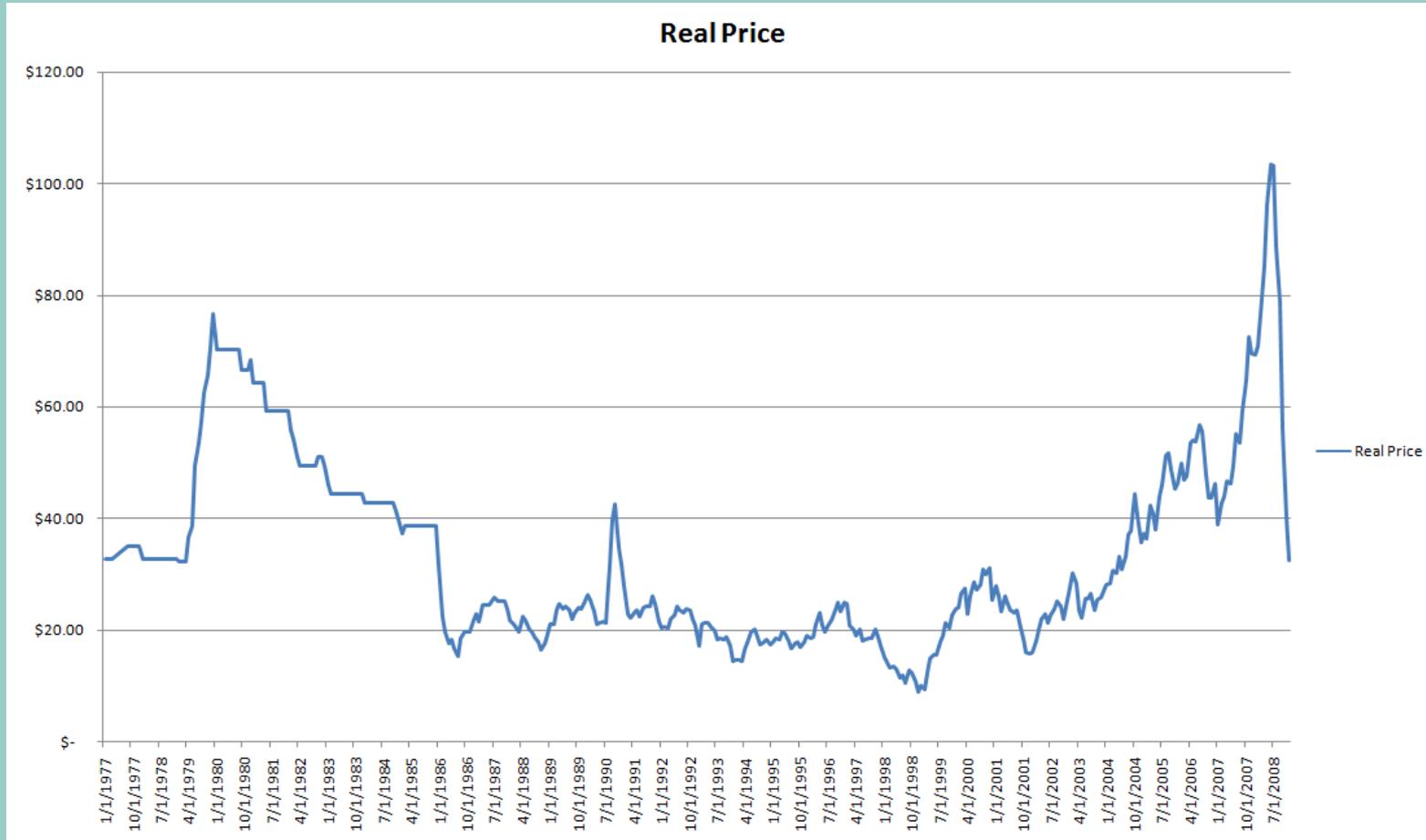
A Lincoln University Research Centre.
New Zealand's specialist land-based university.



**Lincoln
University**
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university

Oil prices



Source: http://www.leetobey.com/2008_12_01_archive.html



Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



Lincoln
University
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university

Methodology

Four phases:

- Fact finding analysis (2007)
- Importance of oil to parts of the tourism system (2008)
- Impacts of oil price changes on the whole tourism system and the New Zealand economy (2008-09)
- Addressing oil vulnerability (2010).



Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



Lincoln
University
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university

Specific components

Phase	Method	Research Objectives
1	Literature Review	Overview of relationship between oil and tourism, and price sensitivity of tourists
	Stakeholder Interviews (N=10)	Understand perceptions of oil and possibly supply challenges held by tourism stakeholders
	Campervan Tourists Survey (N=1121)	Explore tourists' perceptions of oil and reactions to higher oil prices with respects to travel
2	Tourism Arrivals Model	Econometric analysis to relate oil prices to tourist arrivals by market
	Elasticity Analyses	Econometric modelling to understand elasticities of 18 segments
	Distance Models	Econometric modelling to analyse transport and petrol prices in relation to transport behaviour in
	Business Energy Survey (N=417)	Understand operators' perceptions of energy use and saving initiatives
3	Computable General Equilibrium Model	CGE model to assess effects of changes in oil price on the economy
4	Dissemination and Communication	Engagement with industry and policy makers to inform decision making and assist energy saving initiatives



Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



Lincoln University
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university

Importance of oil for tourism

- In theory extremely important
(Becken, S. (submitted). A Critical Review of Tourism and Oil. Annals of Tourism Research)
- Very little specific research in tourism
- Some recognition by stakeholders but little priority
- Very limited response by tourists, most likely to reduce spending on restaurants

(Becken, S. & Wilson, J. (2008). Environmental attitudes and fuel saving behaviour by KEA Campers Customers. LEaP Report 6. Lincoln University. Available <http://www.leap.ac.nz>)





Tourism demand for NZ

- Oil prices affect macro economy and income
- Income is a key driver for tourism, esp. long haul
- Price effects (airfares)
- Distinguish oil-importing and exporting countries

NZ visitor arrivals price elasticity estimates for those segments where a statistically significant relationship could be established

Segment	Price Measure	Price Elasticity
South Korea	Total price	-1.75
China FIT	Total price	-1.65
Japan Tour	Total price	-1.55
China Tour	OTG prices	-1.09
Australia FIT VFR	Airfare	-1.05
Germany all	Airfare	-0.87
USA Tour	Total price	-0.78
UK Holiday	Total price	-0.52
Australia Tour	Airfare	-0.31
USA FIT Holiday	Total price	-0.29
Australia FIT Holiday	Airfare	-0.26

Note: FIT means free independent traveller; Tour stands for tour group visitors; VFR means visiting friends and relatives; for more information on the tourist segments please see Becken et al., 2008.

Schiff, A. & Becken, S. (2010). Demand Elasticities for Tourism in New Zealand. Tourism Management.



Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



New Zealand's specialist land-based university

Destinations within NZ



- Constructed a 'distance model' (1997 to 2007)
- Only the propensity to travel by car for Australians and travel distance by car for British and Japanese tourists was significantly negatively affected by fuel prices.
- Apart from that other variables are more influential (e.g. length of stay, repeat visitation)
- Still possibility that more remote businesses are more vulnerable

(Becken, S. & Schiff, A. (2010). Distance Models for New Zealand International Tourists and the Role of Transport Prices. Journal of Travel Research)



Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



Lincoln
University
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university

Vulnerability of Products and Businesses



- Vulnerability influenced by 1) Exposure, 2) Substitution options, 3) Market mix, 4) Diversification, 5) Geography, 6) Competition
- Energy makes up in the order of 5-10% of operating revenue (depending on business)

(Becken, S. & Carboni, AJ. (2008). *Managing Energy Use in Tourism Businesses – Survey Results*. LEaP Report 4. Lincoln University. <http://www.leap.ac.nz>)

- Avg savings potential in accommodation: 20%
- Online *Vulnerability Assessment Tool*



Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



Lincoln
University
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university

CGE Model – whole-of-economy

- Effects on overall economy rel. small
- Tourism effects substantial
- Differences in market segments (e.g. UK decreases substantially)

	<i>100% increase in oil price</i>
Real GDP	-2.3%
Labour force	-1.3%
Real wage	-6.7%
Total imports (value)	1.9%
Total exports (value)	0.1%
Tourism exports (value)	-10.3%
Overall tourism consumption (quantity)	-7.1%
Accommodation (quantity)	-5.7%
Rental vehicles (quantity)	-14.7%
Domestic air transport (quantity)	-3.3%





Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



**Lincoln
University**
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university

Conclusions

- Increasing oil prices present a major risk for tourism
- Tourism is ill-prepared (not sufficiently aware of risks and implications)
- Oil, tourism and the global economy are intimately interwoven
- Inelastic behaviour provides buffer to some extent
- Some destinations, industries and segments are more vulnerable than others



Questions?



Centre for Land
Environment
& People

A Lincoln University Research Centre.
New Zealand's specialist land-based university.



**Lincoln
University**
Te Whare Wānanga o Aoraki
CHRISTCHURCH • NEW ZEALAND

New Zealand's specialist land-based university