

# **THE CALCULATION OF ECONOMIC SPIN-OFFS: AN ESSENTIAL EXERCISE, A NECESSARY EVIL OR A BUBBLE WAITING TO BURST?**

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## Effects of Tourism

- ❑ Tourism is regarded as an economic development lever
- ❑ Destination managers anticipate that tourism can - - -
  - boost business sales and output
  - income, value added
  - government receipts
  - employment
  - foreign exchange
  - reduce poverty
  - etc
- ❑ **But - - - what measurement tools are most appropriate to use to assess tourism's economic significance?**

**Answer = horses for courses**

# Tourism and the Economy: Four Tools of Analysis

## ❑ Tourism Yield Measures

- expenditure measures popular but limited

## ❑ Tourism Satellite Accounts

- measures economic contribution of tourism

## ❑ Economic Impact Analysis

- estimates the effects of shocks (+ or -) to tourism demand and supply
- changes in output, GDP/GSP, employment etc

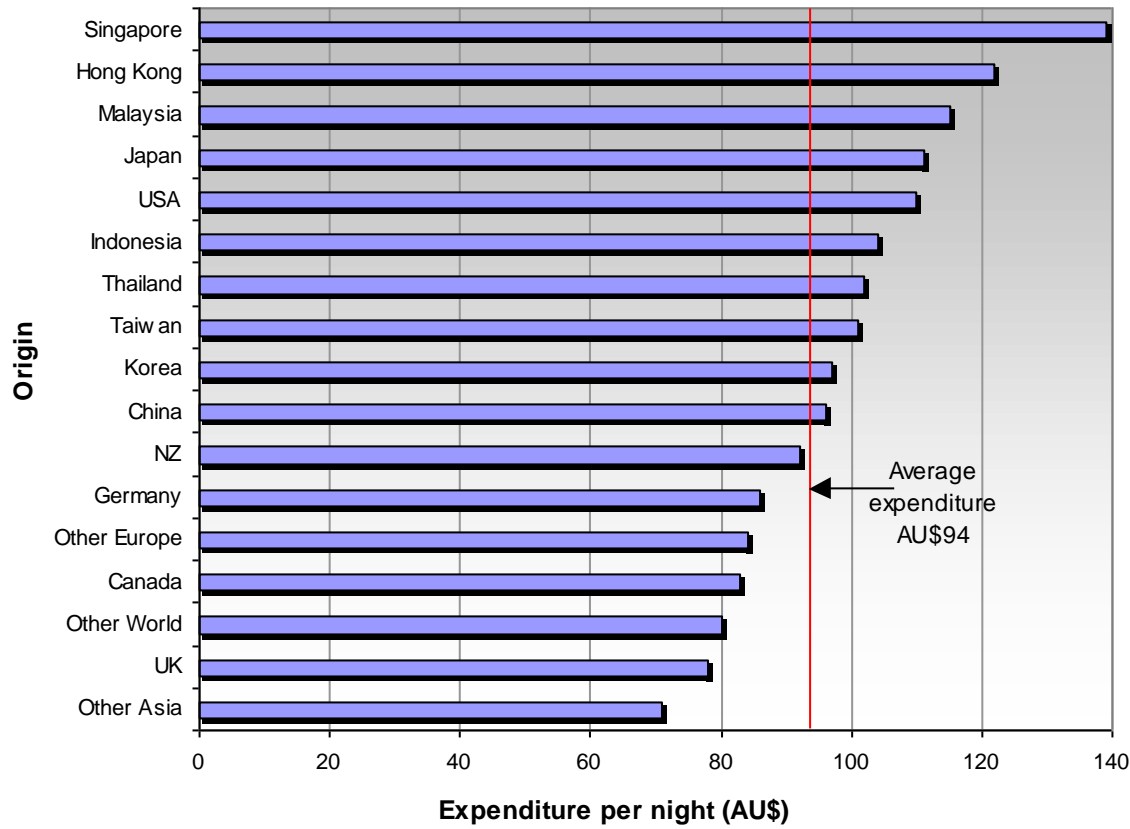
## ❑ Cost-Benefit Analysis

- estimates change in economic welfare from a policy or investment proposal

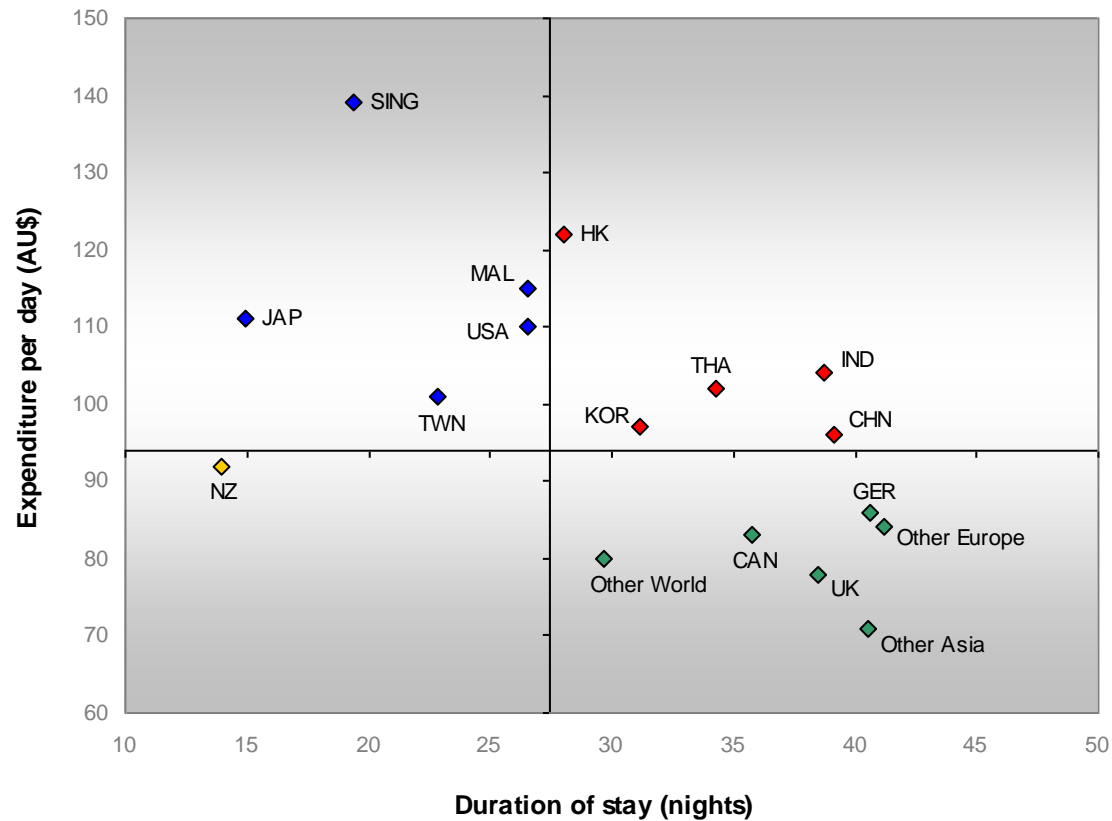
## Tourism Yield

- ❑ **Standard measure** is expenditure injected by type of visitor by trip and by visitor night
- ❑ Often form **basis of destination marketing effort**
- ❑ Measures of tourism yield can **guide destination stakeholders** both as to
  - the origin markets that should be promoted
  - the types of products and services that should be developed to attract 'high yield' visitors
  - Important for assessing relative importance of '**mature**' and '**emerging**' source markets (BRIC plus many others)

# Expenditure per night: Countries



# Expenditure Matrix: Countries



# Expenditure Yields - - of limited value to destination managers!!!

- ❑ gross expenditure data **does not in itself provide information on what products tourists purchase** and so gives no indication of the business sectors that receive the sales revenues.
- ❑ tourist expenditure is **not an indicator of profitability to firms**. Profit comprises only a small proportion of visitor expenditure and is **not uniform across industries**.
- ❑ gross tourist expenditure does not inform us about **the import content of the goods and services purchased by tourists (leakages)**
- ❑ gross tourist expenditure does not inform us about the **contribution of expenditure** to tourism output, tourism gross value added, tourism employment (need a TSA)
- ❑ Expenditure measures **ignore the economic impacts of tourist expenditure such as** contribution to Gross Domestic (or regional) Product, Gross Value Added, and employment. (need an economic model)
- ❑ Does not provide information on the **geographic spread of revenues** or impacts to the wider destination
- ❑ expenditure injections *per se* **tell us nothing about the social or environmental costs and benefits associated with different visitor market segments.**

- - - But expenditure yield is important to SME !!

- ❑ Profits = total revenue – total cost
- ❑ Sales revenues important to market share
- ❑ Sales revenues important to return on investment
- strong, continuing tourism investment is vital to a successful tourism industry
- ❑ Yield management.
- Tourism businesses have developed price setting techniques to maximize revenues, varying price according to the product, customer segment and time of purchase.



# The Economic Significance of Tourism

- ❑ Ongoing problem for policymakers is **lack of information concerning economic significance of tourism**
- tourism not a single 'industry' in the national accounts
- tourism activity is **'hidden'** in other industry activities (accommodation, transportation, shopping etc)
- Developing countries in particular have national statistics that often are of **limited scope and doubtful accuracy**
  
- ❑ **RESULT =**
- lack of appreciation of tourism's economic significance
- dubious (exaggerated) claims about tourism's economic significance (eg 'tourism reduces poverty', 'creates employment')
- poor basis for policy making

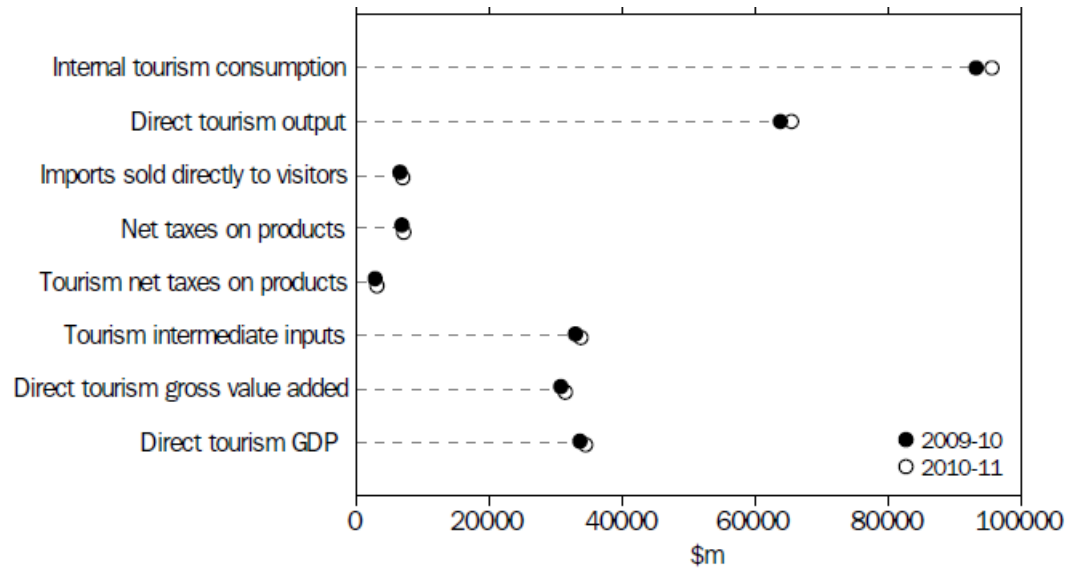
## Things have changed with development of Tourism Satellite Accounts - - -

- ❑ Tourism comprises a **proportion of the outputs** of a range of industries which are explicitly recorded in the national accounts.
- ❑ Thus tourism might account for 90% of “Air Transport”, 80% of “Accommodation”, 30% of “Ground Transport” and say, 10% of “Retail Trade”
- ❑ The outputs of these industries which can be attributed to “Tourism” are estimated and aggregated, to obtain **an estimate of the output of “Tourism”**.
- ❑ In a similar way, the **Gross Value Added associated with tourism, Tourism GDP, Tourism employment and other aggregates** can be calculated.
- ❑ **Result** is a set of accounts documenting output, value added, employment etc for the tourism industry, **consisting of the sum of the various parts of other industries which are attributable to tourism.**

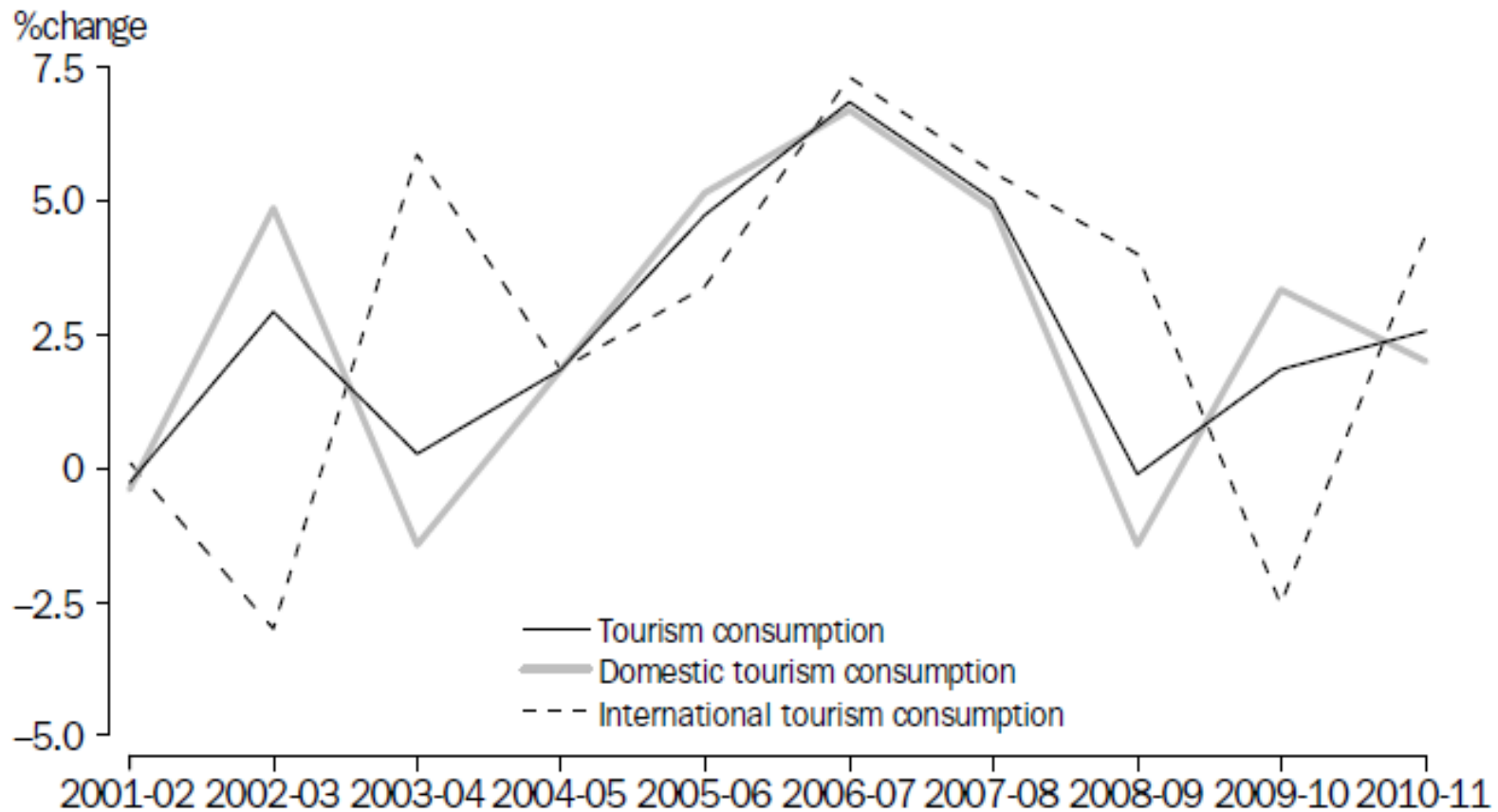
## Advantages of TSA

- ❑ **identify a Tourism 'industry'** (characteristic, connected)
- ❑ **measure the key economic aggregates** associated with tourism
- ❑ **measure tourism's interrelationship with other industries**
- ❑ **support inter-industry comparisons**
- ❑ **support international comparisons**
- ❑ **give 'credibility'** to estimates of the economic contribution of tourism
- ❑ **provide a tool for tourism research and policy analysis**

# Selected Tourism Aggregates: Australia



## Growth in total, domestic and international tourism consumption

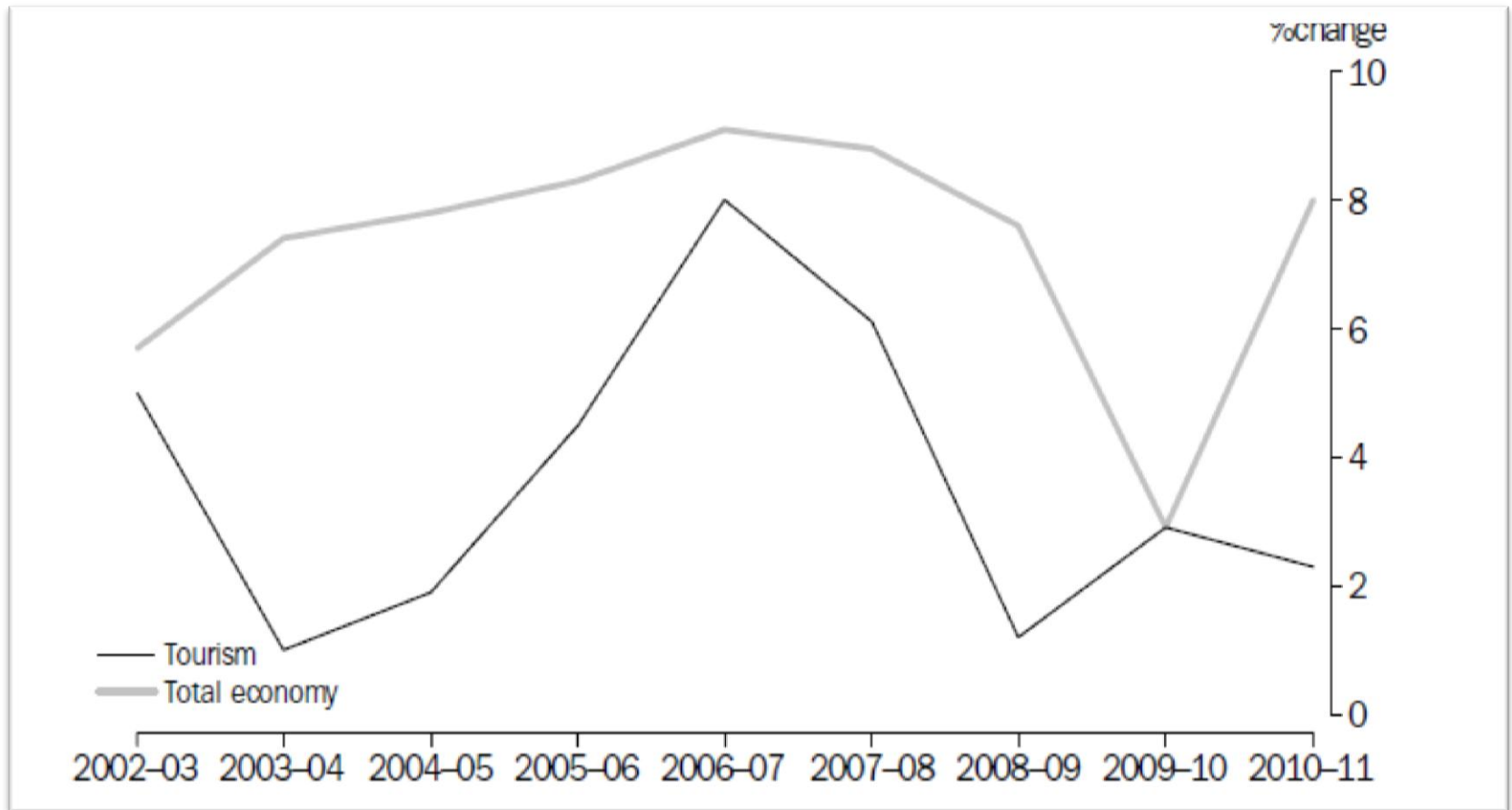


# Some Results from Australian TSA

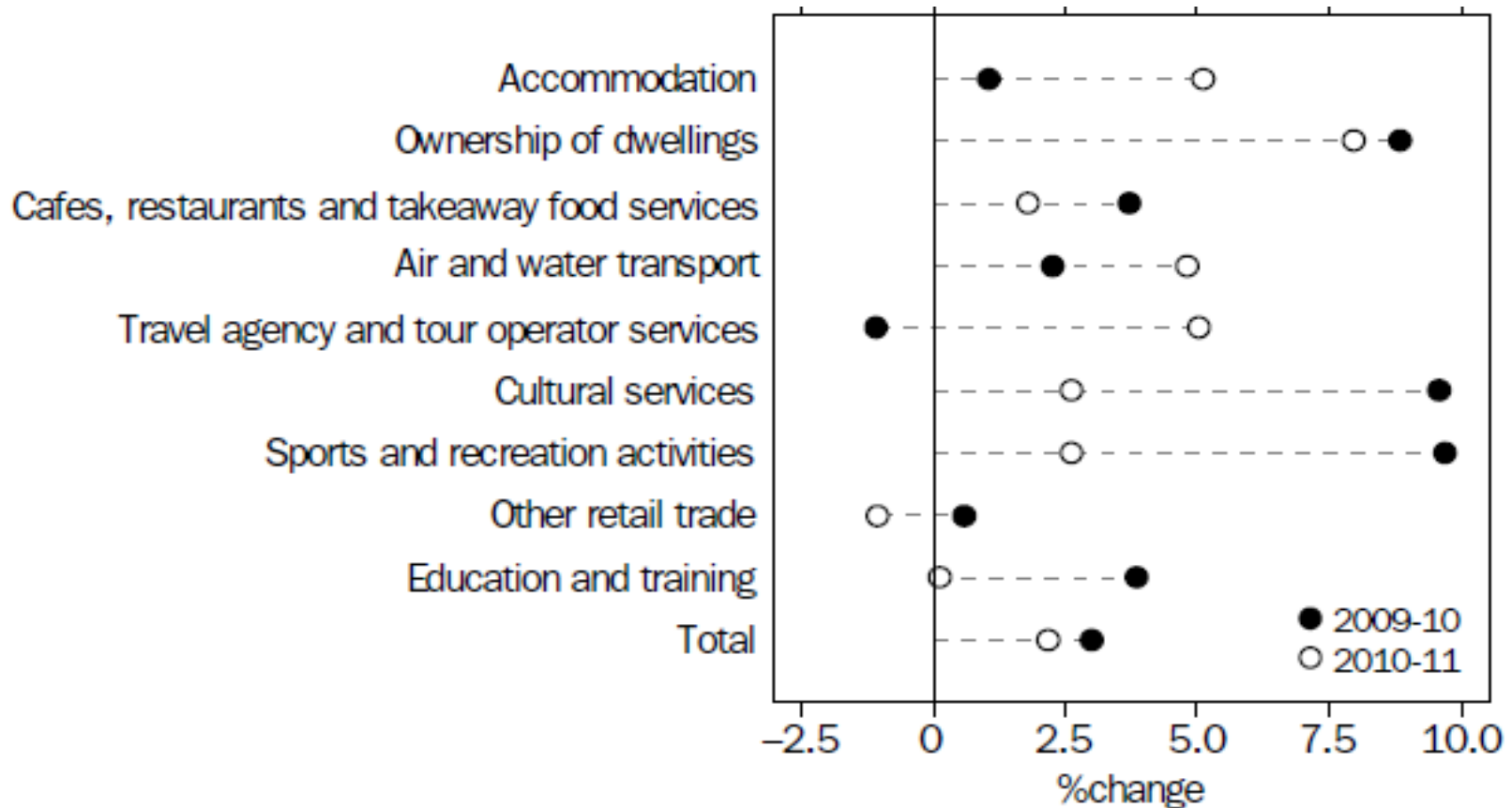
SELECTED TOURISM AGGREGATES



## Growth in industry gross value added, current prices



## Growth in tourism value added, selected industries

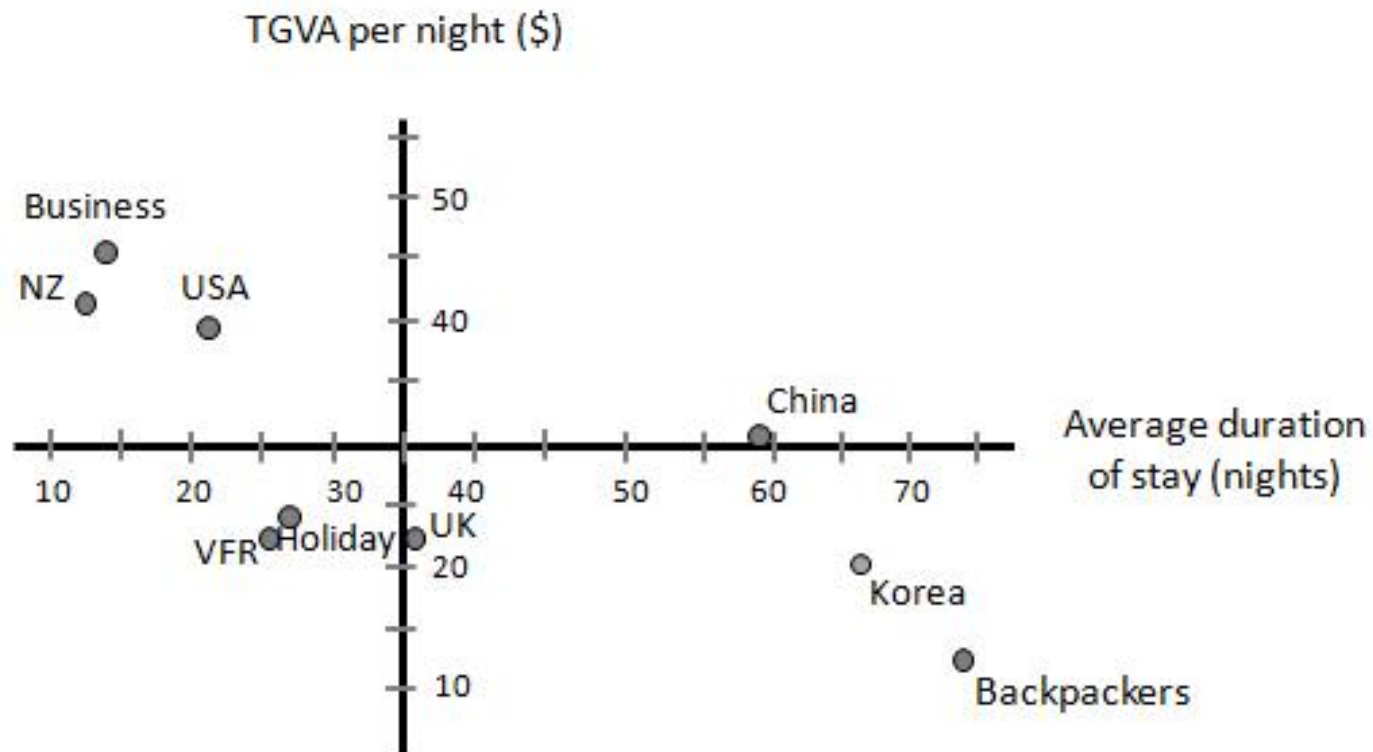




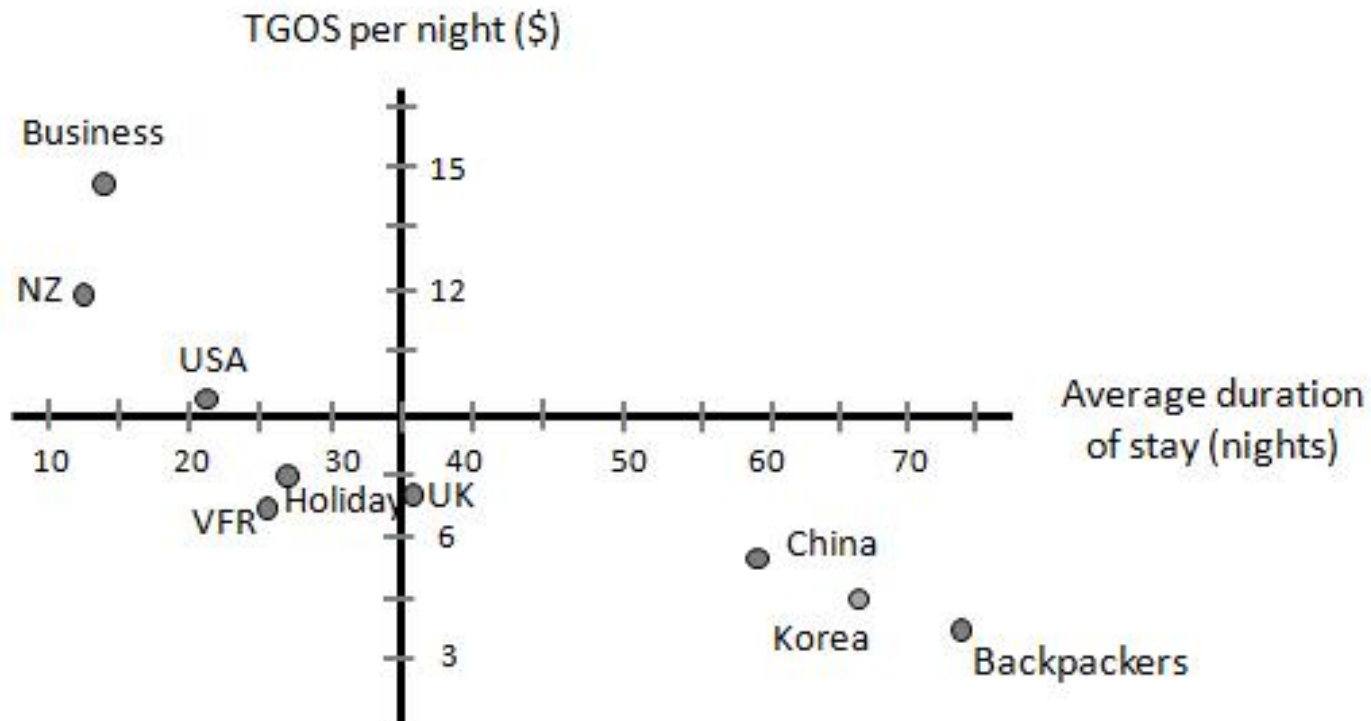
## TSA and Tourism Yield Measures

- An innovative use of TSA is in the estimation of measures of **tourism yield**.
- Yield measures can be estimated from TSA data.

# Tourism Gross Value added selected markets, Australia, 2009-2010



# Tourism Gross Operating Surplus per night and length of stay, selected niche markets, Australia, 2009-2010



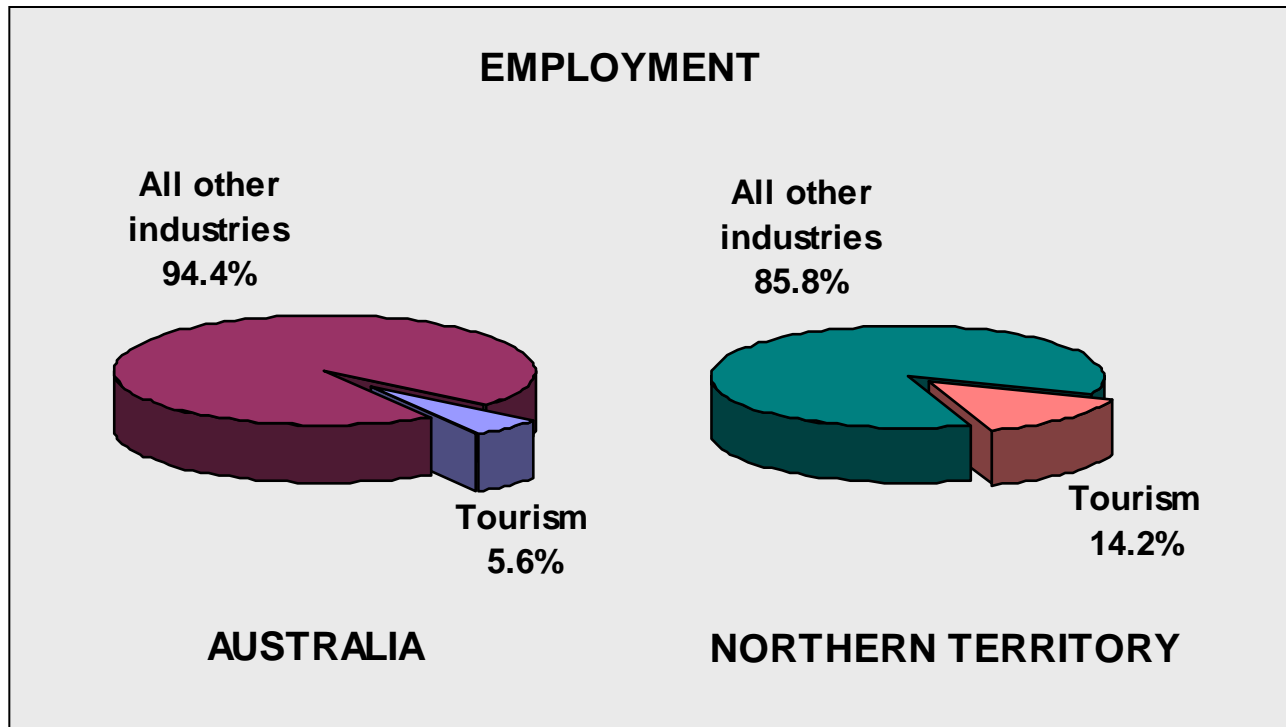
## TSA can be developed at regional level

- ❑ Tourism activity tends to be unevenly concentrated within countries
- ❑ Worldwide, **regional governments** are developing tourism plans to maximize the opportunities for income and employment growth from tourism
- ❑ The extensive involvement of governments in tourism planning, infrastructure provision and marketing at a **state, regional or local level**, has led to a strong demand for better economic statistics at the state or regional level.
- ❑ Thus, a **regional TSA** may be more relevant to regional destination management organizations and local businesses than a national level TSA.
- ❑ TSA are now being developed at regional (State/Province) level
- ❑ TSA have been developed for every state/territory of Australia
- ❑ **Where is TSA for Quebec?**

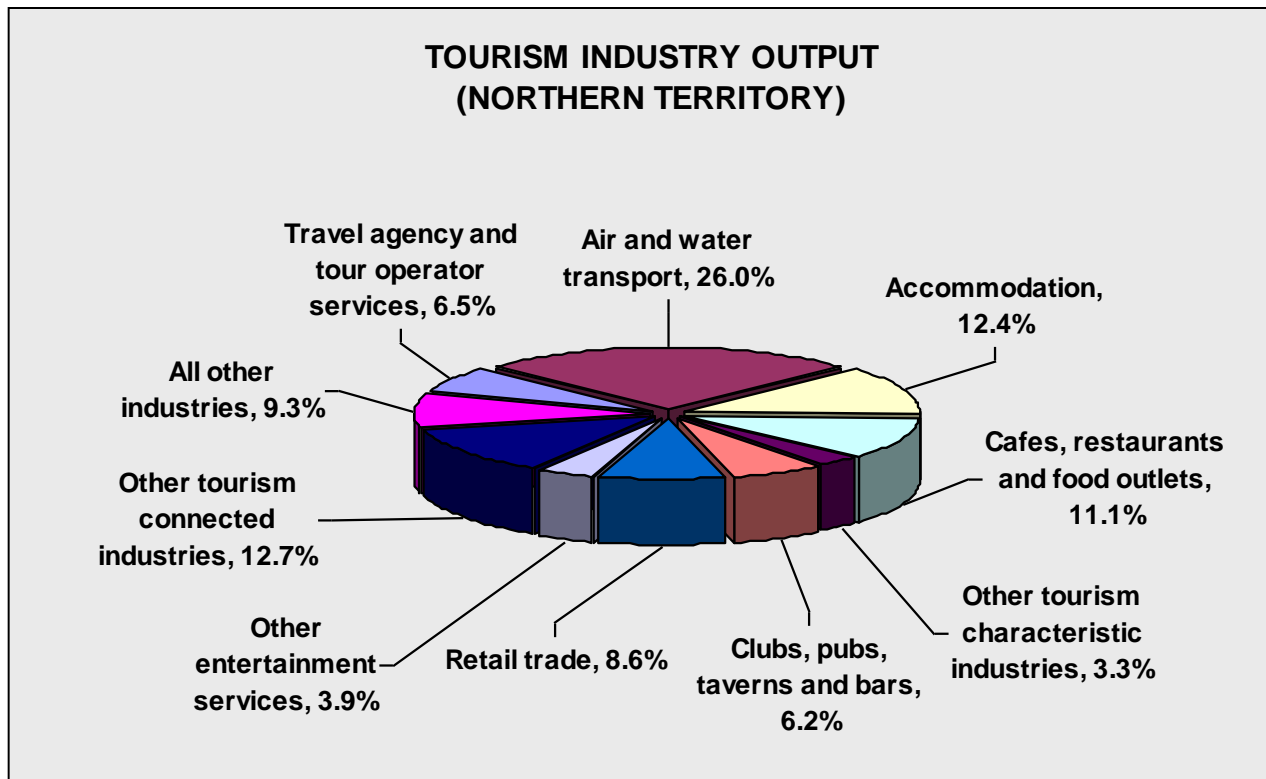
# Regional TGVA



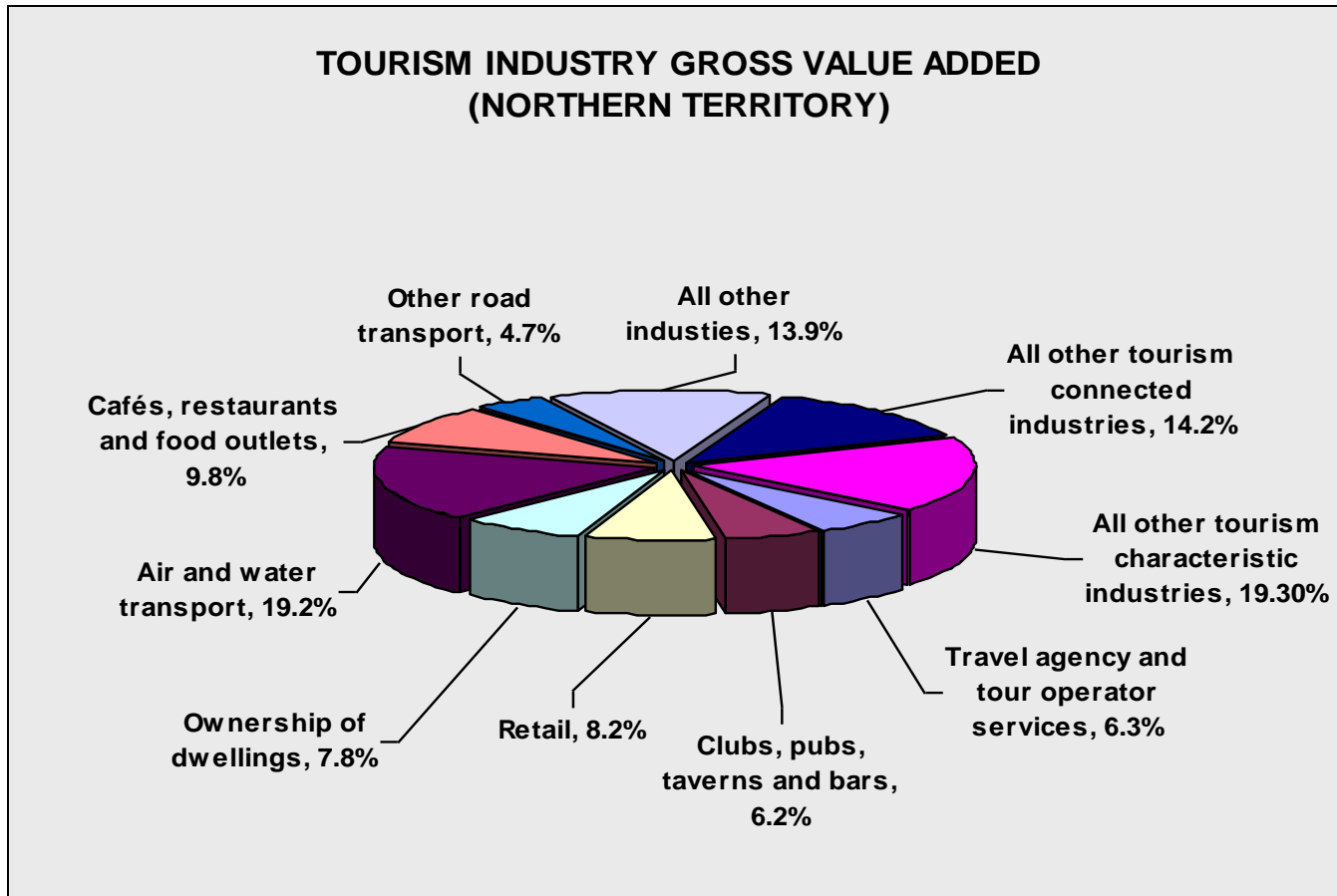
# Regional Tourism Employment



# Regional tourism industry output

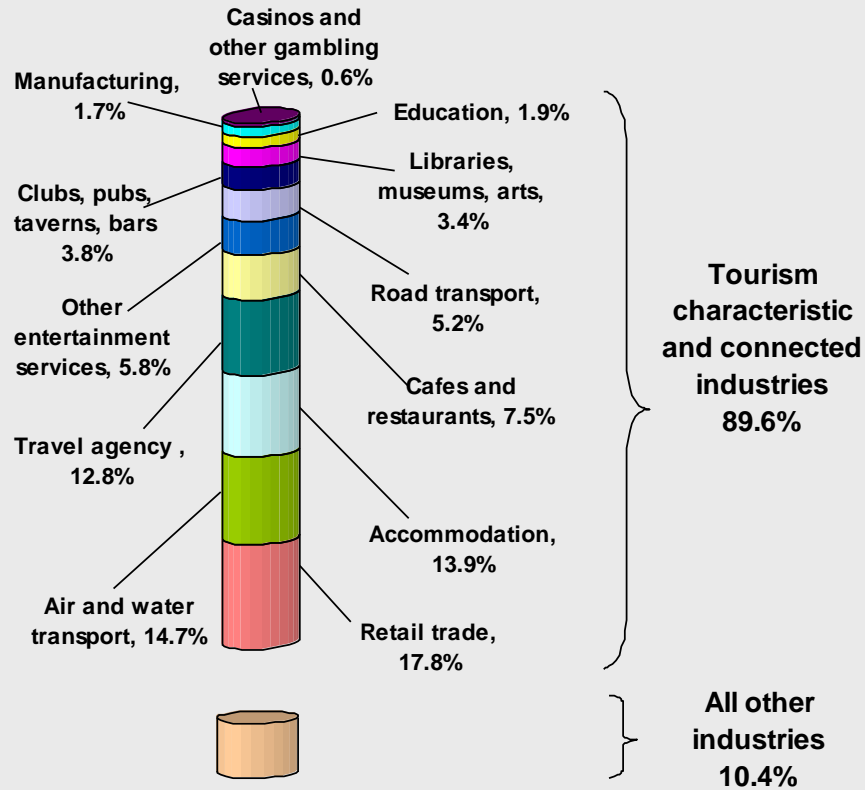
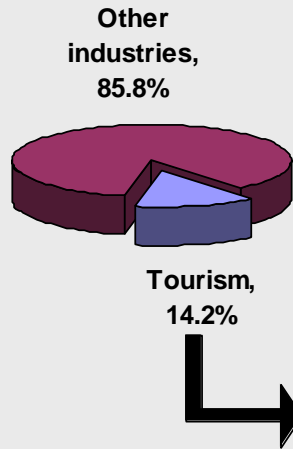


## Regional TGVA, breakdown by sector

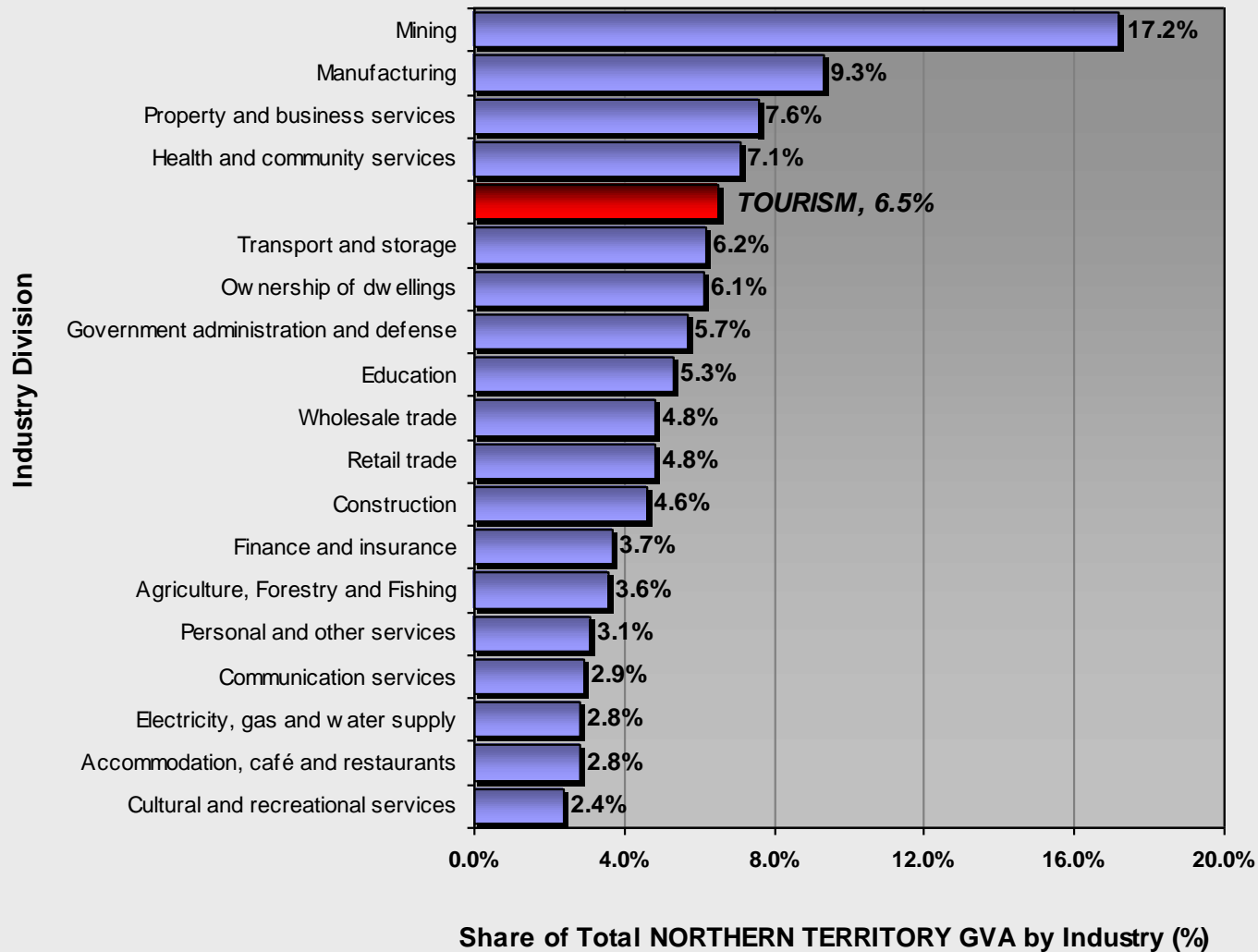




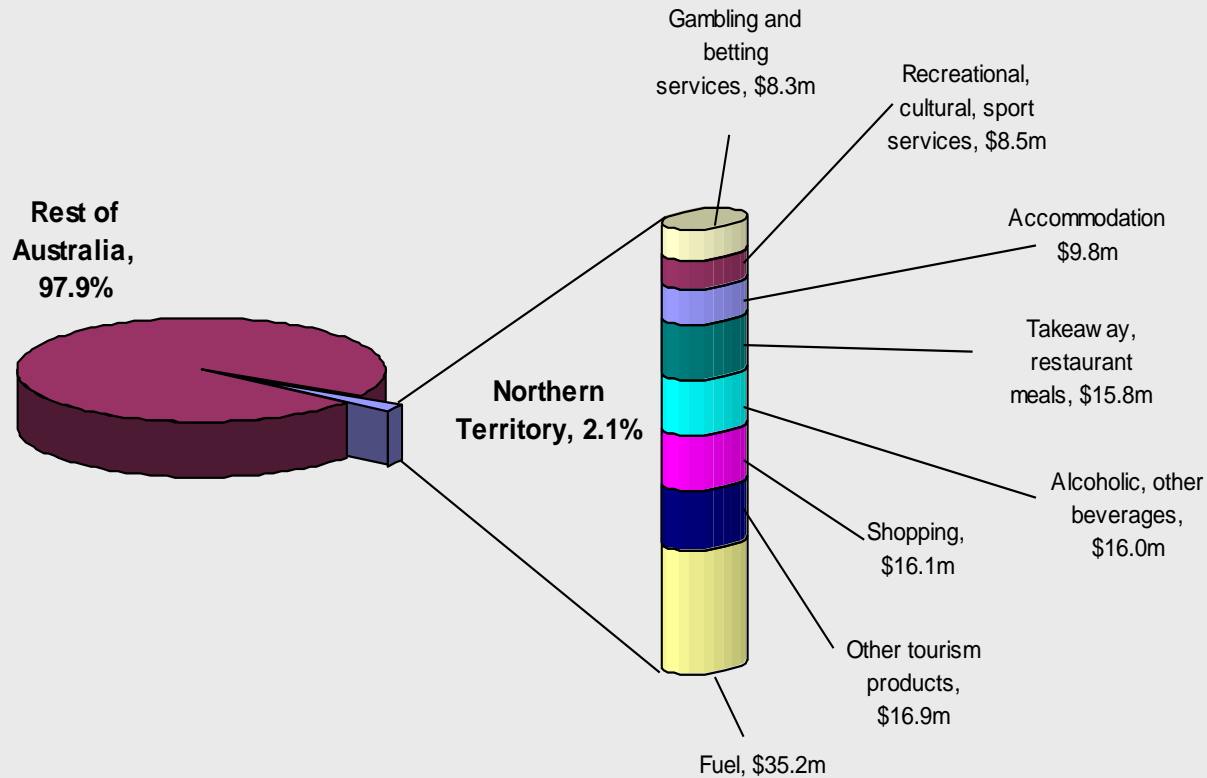
### TOURISM EMPLOYED PEOPLE



### TOURISM GROSS VALUE ADDED COMPARISON WITH 'NON-TOURISM' INDUSTRIES (NORTHERN TERRITORY)



## NET TAXES ON TOURISM PRODUCTS



## TSA measure the **economic contribution** of tourism

- ❑ TSA estimate the **direct effects** of additional tourism demand on the contribution of the tourism industry to the economy (eg., tourism GDP or employment)
  - But - - do not estimate the **indirect effects of tourism demand**
  - Nor do they estimate the **economy wide impacts** of shocks to tourism demand
  - TSA represents a **snapshot** or **description** of the significance of direct tourism demand within an economy at a particular time
  - TSA **do not contain any behavioural equations** specifying how each sector responds to external shocks, or shocks transmitted through inter-sectoral linkages, via changing prices, wages, exchange rates and other variables.
  - TSA **take no account of the possible factor constraints** that may present barriers to tourism growth in response to an increase in tourism demand, or the impacts that **changing prices and wages** might have on other (non tourism) industries

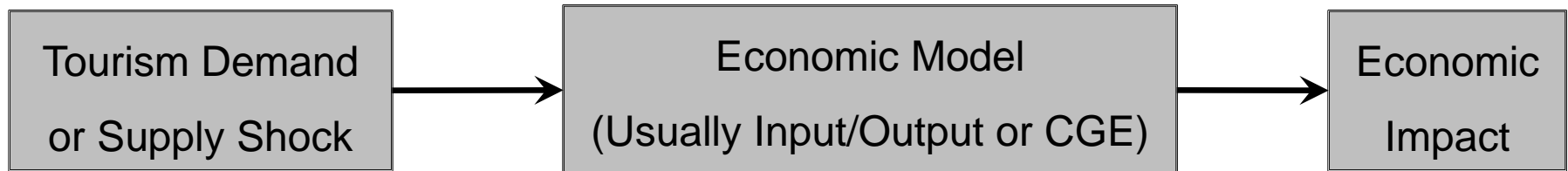
## Important !!! TSA don't assess economic impacts

- *Economic contribution* measures the size and overall significance of the industry within an economy
- *Economic impact* refers to the *changes* in the economic contribution resulting from specific events or activities that comprise 'shocks' to the tourism system

# Economic impact analysis

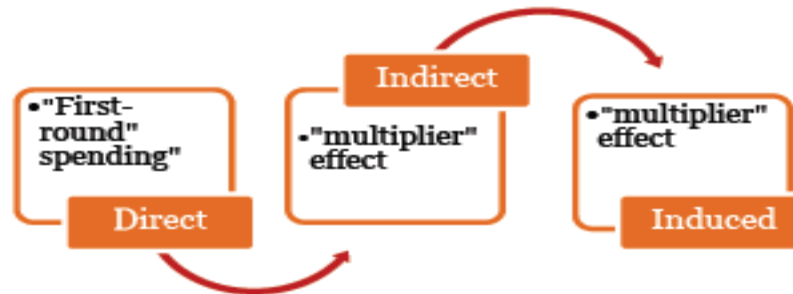
- - - - **estimates the changes to an economy following a shock to tourism demand (+ or -) due to some project, action, event or policy**
- - - - **traces the flows of spending associated with tourism activity in an economy to identify the resulting changes in economic variables such as sales, output, government tax revenues, household income, value added and employment.**

## Economic impact analysis requires a model to project the effects of tourism shocks



## Standard View: The Multiplier Effect

- ❑ **Direct Spending:** Direct spending relates to purchases of goods and services directly attributable to tourist activity.
- ❑ **Indirect spending** Firms that sell G&S to tourists purchase inputs from other firms and these other firms (suppliers) purchase inputs from other firms (suppliers) and so on - -
- ❑ **Induced spending** Induced effects arise when the recipients of the direct and indirect expenditure-firm owners and their employees- spend their increased incomes.
- ❑ This in turn sets off a process of successive rounds of purchases by supplier firms, plus further induced consumption - -





## Assumptions of Multiplier analysis based on I-O

- ❑ No constraints on economy's supply of land, labour, capital to produce output to meet additional demand (expanding tourism industry does not draw resources from other sectors)
- ❑ No changes in prices and costs (including exchange rates) in response to increased tourism demand
- ❑ Resources used in meeting the demands of tourists have no opportunity cost or value in alternate use. (that is, resource costs of supplying tourists needs is zero)
- ❑ government fiscal policy is irrelevant
- ❑ Result = exaggerated multiplier effects



**Direct spending by visitors  
is only the tip of the  
iceberg**

**Relatively easy to  
measure:** visitor  
numbers, expenditure

**The indirect  
impact of tourism  
is much larger**

**Hard to measure:**  
subsequent spend by  
suppliers, induced  
effects, investment etc

**Huge Economic Impact**

## In the real world however - - -

- ❑ **Leakages.** Additional inputs and final products may be **imported** due to domestic shortages
  - reduces the multiplier effect
- ❑ **Factor supply constraints**
  - economies experiencing an increase in tourism expenditure face labour, land and capital constraints.
  - tourist expenditure thus results in **increased prices** rather than increases in output, income and employment
  - **factor constraints lead to interactive industry effects** which change the industrial composition of an economy
- ❑ **Real exchange rate appreciation.**
  - **Increased inbound** tourism will **strengthen the real exchange rate** leading to a **reduction in other exports and/or increase in demand for imports** at the expense of the demand for domestic import competing commodities
- ❑ **government fiscal policy**
  - expansionary or restrictive?
- ❑ Does Quebec cross-sectoral model recognise these issues?

## CGE modelling to estimate economic impacts of tourism

- consist of a **set of equations** characterizing the production, consumption, trade and government activities of the economy
- treat the economy as a whole, **allowing for feedback effects** of one sector on another
- represent the economy as a system of flows of goods and services between sectors
- Recognises that tourism growth may change more the **composition of industry** rather than its overall size
- the increased output of the tourism industry may be more than **offset by contractions in output** elsewhere in the economy
- gainers and losers
- allow for the **inclusion of constraints** absent from I-O calculations
  
- CGE modelling shows the effects of tourism growth **cannot be anticipated *a priori***
- CGE models enable '**what if**' **scenarios** to be developed so that policymakers can more clearly understand the economic effects of different changes that may affect the tourism industry.

## Economic Impact Analysis using CGE: Recent studies

### ❑ Economic impacts of changes in inbound tourism by origin market

➤ country, motivation, special interest - - -

### ➤ Economic impacts of tourism crises

➤ SARS, GFC,

➤ Bali Bombing, 9/11

➤ FMD

### ❑ Economic impacts of special events (Olympic Games)

### ❑ Evaluation of economic policy

➤ yield measures

➤ returns to marketing expenditure

➤ air services agreements, expanded air routes

➤ globalisation policies

➤ effects of taxes

➤ Does tourism reduce poverty?

➤ etc

## Example 1. Increased tourism to all Australian states: a study using a CGE model

- ❑ Researchers projected the impacts on each of Australia's six States of an assumed 10% increase in the national rate of growth of inbound tourism
- ❑ The increased tourism numbers were assumed to be distributed across the different States according to their existing market shares
- ❑ **Expectation: each state will gain since it receives more tourism**
- ❑ **Surprise !!!!!!!**
- **Queensland**, Australia's most tourism-oriented State, and a host destination to over 20% of Australia's international visitor nights, is a **net loser** from an across-the-board expansion of international tourism
- **Tasmania** and **Western Australia** also lose
- Why ? These states are heavy exporters. - - - they suffer a decline in traditional export industries and import competing industries
- ❑ **Implications for Quebec???**

## Industry Gainers and Losers

### Gainers

*Service industries catering directly to international tourists* (eg, air transport, restaurants and hotels). Strongly stimulated by tourism growth

*Industries indirectly supplying tourism-related activities* (eg, aircraft maintenance and construction). These are also stimulated by the additional expansion of tourism. But some construction may be crowded out.

### Losers

*Non-tourism exporters* (eg, agriculture, mining, food and metals processing). Growth prospects in these industries are reduced by the appreciation of the real exchange rate produced by additional tourism expansion.

*Import-competing industries*. Prospects in these industries are reduced by the tourism induced appreciation of the exchange rate.

## Example 2: London Olympics 2012 an ex ante study

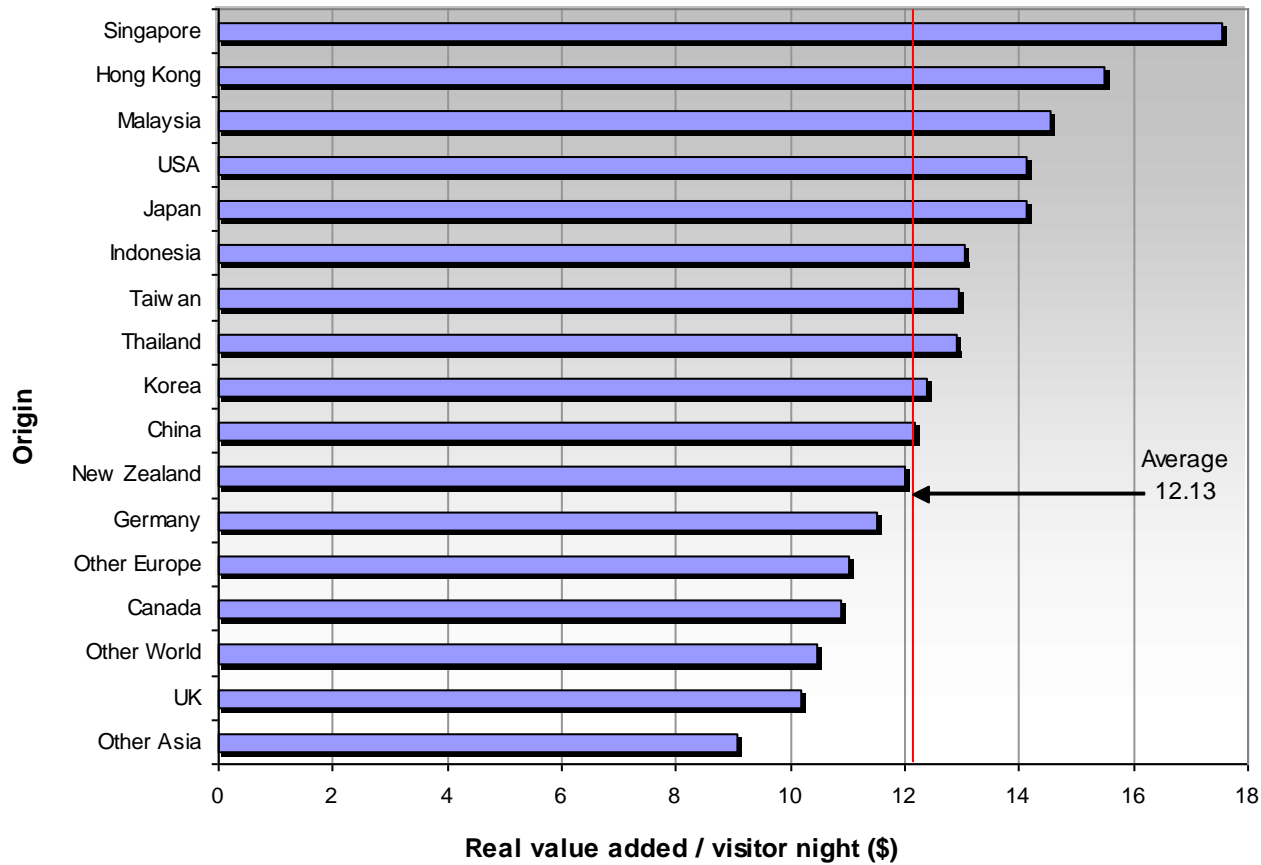
- ❑ The London 2012 Olympics projected to have an **overall positive effect on the UK and London economies**, with an increase in GDP between 2005-2016 of £1,936 million and an additional 8,164 full-time equivalent jobs created for the UK
- ❑ However, there is a **loss of GDP and employment in the areas outside London**. Reasons for this include: spending in London by UK residents from outside London visiting the Games; movement of workers into London because of higher wages; provision of Lottery funding, which in effect transfers money to London.
- ❑ The impact of the Games **varies significantly across different sectors of the UK economy**.
  - Sectors that **expand** include construction, passenger land transport, business services, hotels and restaurants.
  - Sectors that are not directly related to the Games may **contract** in size indirectly as a result of hosting the Games. These include manufacturing, agriculture, fishing and other services.
  - These results are relative to the 'No Games' scenario. While no sector is predicted to contract in the time span modeled, **some will grow less because of the impact of hosting the Olympics**.
- ❑ **any changes to the UK economy associated with the Olympics 2012 will be comparatively small**. Even in the Olympic year, the total economy wide effect for the UK is only 0.066% of total UK GDP at 2004 prices.



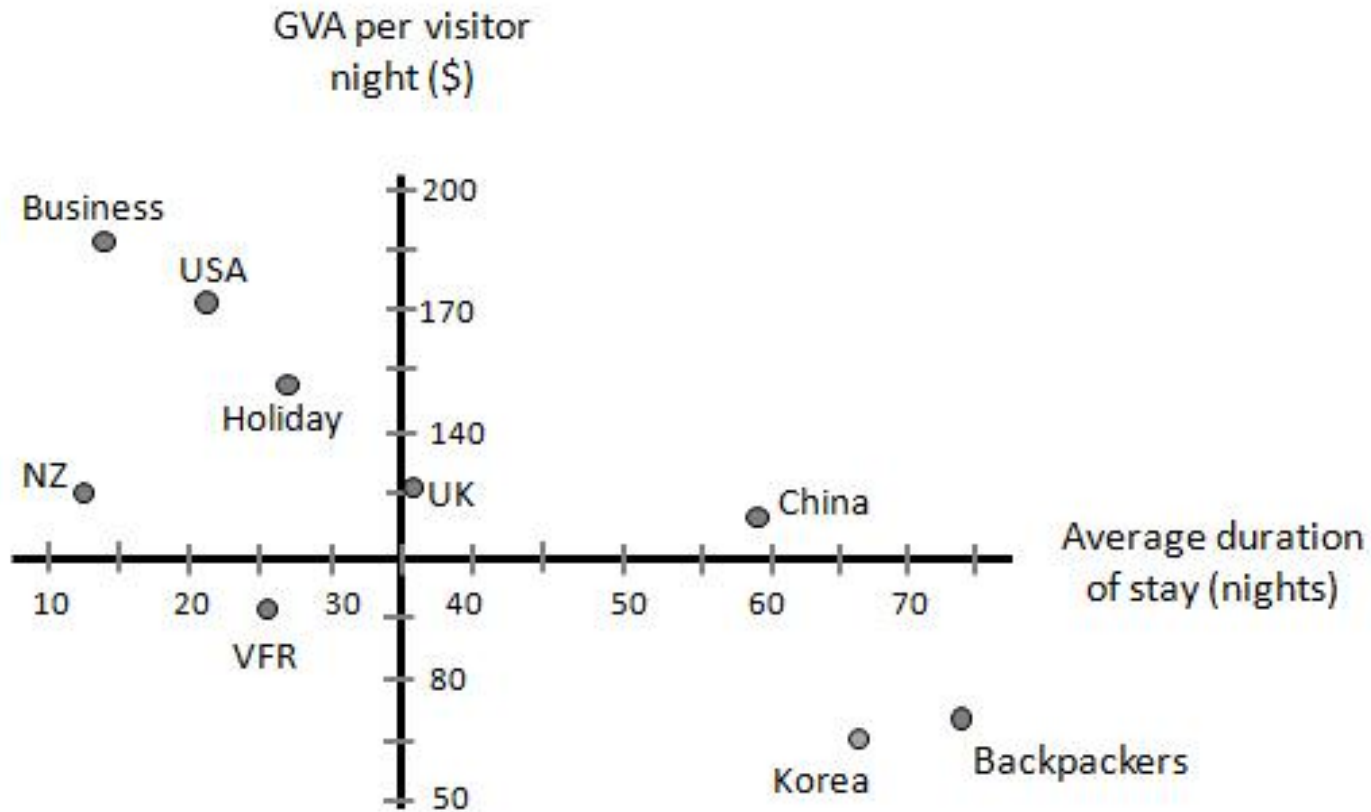
## Example 3: Economy wide Yield Measures

- ❑ **Economy wide Yield measures** can be estimated using CGE models
- ❑ estimate how an additional tourist from a market impacts on national value added, employment, and profits of all industries in the economy, **after accounting for all inter-industry effects**
- ❑ CGE based Yield measures can inform organisations in both the private and public sector about **effective allocation of marketing resources** and **types of tourism development** that meet operator and destination objectives.

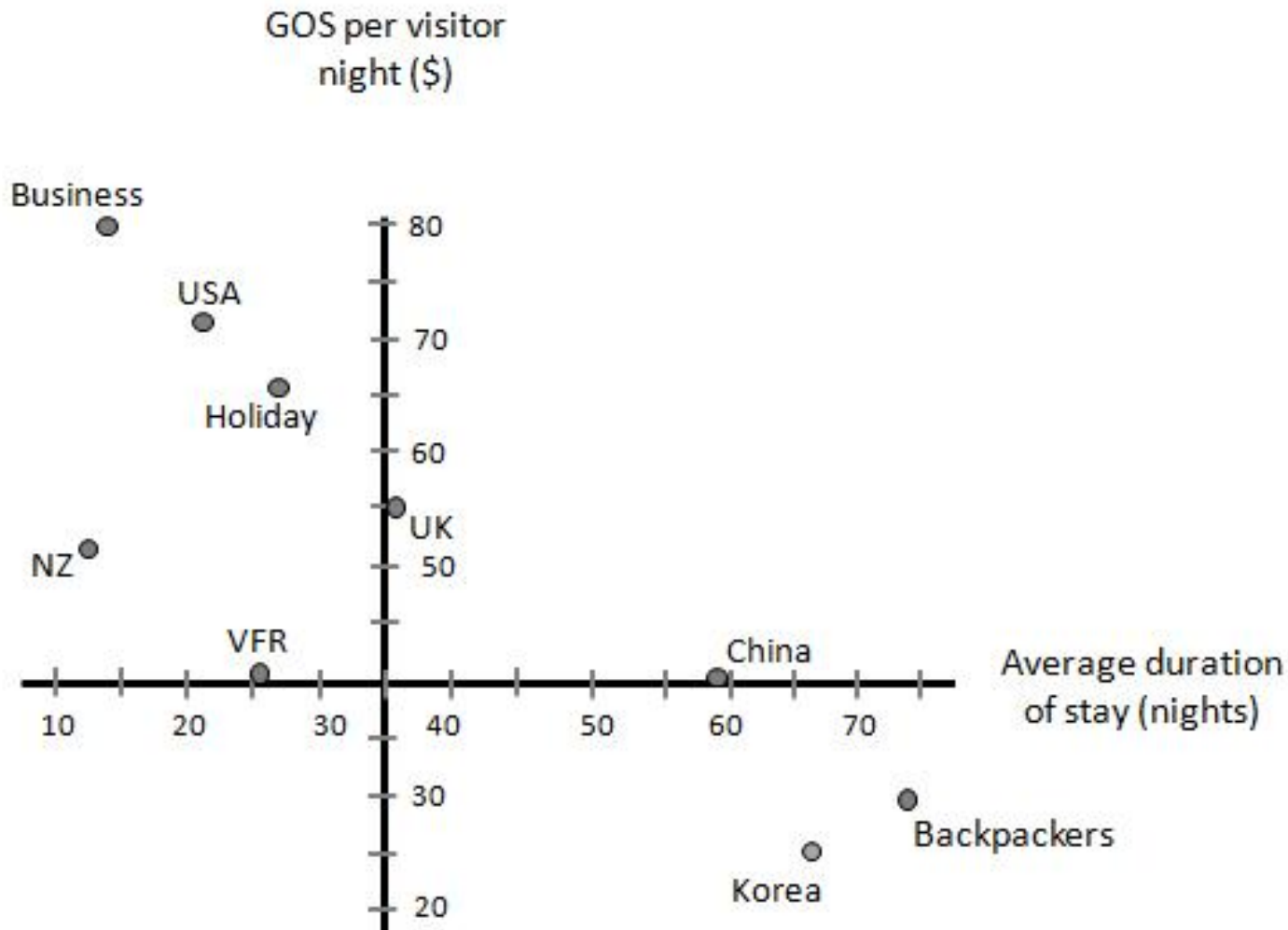
# Real Value added per visitor night



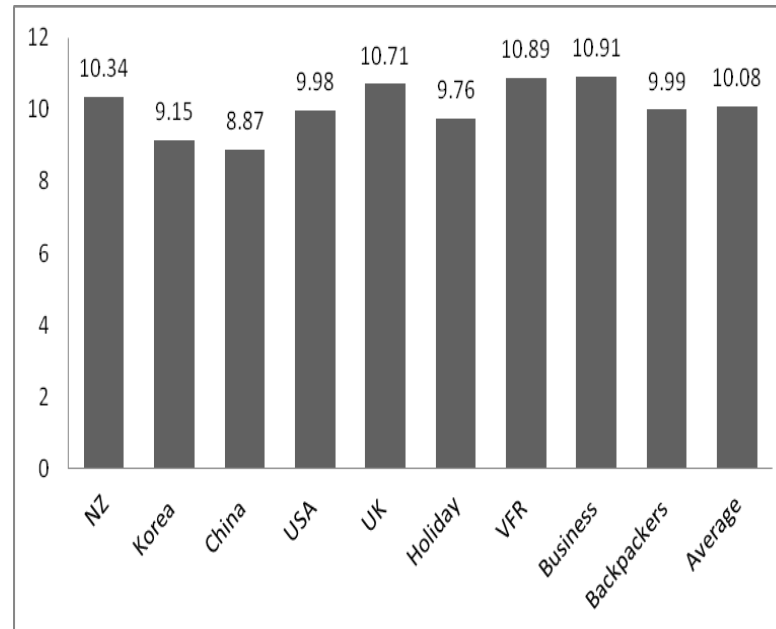
# GVA per night and length of stay, selected niche markets, Australia, 2009-2010



# Gross operating surplus per night and length of stay, selected niche markets, Australia, 2009-2010



# Estimated economy wide jobs generated by \$1 million inbound tourism, Australia



## Will tourists keep coming??

- ❑ Consumer attitudes and values are changing
- ❑ Destinations need to understand these changes and the implications for future visitation
- ❑ Destinations need to provide the types of goods and services that tourists want to purchase
- ❑ This has implications for the types of tourism investment that must be undertaken

## Under-investment in Australian tourism

- ❑ Greater investment in tourism plant and infrastructure will build productive capacity, drive long-term profitability, innovation and growth in the sector.
- ❑ **a history of low rates of return:** Financial institutions unwilling to invest in tourism because it is perceived to be a high risk venture with inadequate returns. Tourism investment opportunities are often viewed as speculative. This problem is most pronounced in regional and remote areas. Low returns also make it difficult for the tourism industry to attract and retain well-trained staff.
- ❑ **a lack of basic market data:** Lack of understanding at the regional level of positive economic benefits of tourism.
- ❑ **Cautious investors:** willingness of local entrepreneurs to invest in tourism is low. Limited investor awareness about investment opportunities, poor understanding of the tourism sector and its needs in government planning processes.
- ❑ **the inherent cyclical and/or seasonal nature of tourism:** Tourism has seasonal demand cycles and is subject to external factors outside the control of the industry. This can reduce annual revenues, return on investment and profitability of tourism facilities.
- ❑ **complexities dealing with multi-level government project approval processes:** The different levels of government in Australia present regulatory challenges to businesses. Complex and lengthy approvals processes add to costs and increase the uncertainty associated with a tourism project.
- ❑ **a lack of a coherent vision and direction by governments:** Tourism businesses depend on surrounding public and private infrastructure and amenities to provide a quality tourism experience to visitors. This need for supporting infrastructure, which is outside the scope or control of tourism operators, often adds an extra complication and increases the uncertainty associated with tourism investment proposals.

## Possible Solutions for Australia (and Quebec??)

- Need to **increase tourism industry productivity**. Increased productivity can enhance the rate of return on tourism investment and lift the profitability and competitiveness of the industry.
- Productivity increases in tourism will require a **more highly skilled tourism workforce** in each sector. Tourism training and education important and crucial to enhancing industry productivity.
- the tourism industry needs to shift from a **cost leadership strategy** to one of **product differentiation**. This will require the development and delivery of high standard products and services
- needs a larger **investment in research and analysis of market data** to connect product with the needs of new and emerging markets and traditional visitor bases.
- **Transport access must remain competitive**. Tourism related transport infrastructure (road, aviation/airports, cruise/ports; inter-modal hubs; long distance passenger rail), provide a critical element of tourism service provision as a whole.
- Need to analyse **influence of local, state and regional government policies and planning instruments in encouraging/attracting tourism innovation and investment**. **Regulatory reform** is needed to provide transparency and certainty for investors and business.
- **Since tourism is dominated by SMEs with limited capacity to invest** in building a greater understanding of their product or to find ways of delivering it more productively, the actions and policies of governments of all levels are integral to the success of the development of the sector.
- Large investments require **Cost Benefit Analysis** - - -



## Cost Benefit Analysis

- ❑ economic impacts are not benefits (Vancouver Winter Olympics)
- ❑ CBA is the most comprehensive of the economic appraisal techniques.
- ❑ CBA is a systematic process for identifying and assessing all costs and benefits of a proposal (project, program, policy) in monetary terms, as they are expected to occur through the life of the project.
- ❑ CBA is particularly important in evaluating tourism policy, programs, regulations, projects and developments, since there is often a clear trade off between economic benefits and social costs.
- ❑ Tourism projects which might be economically beneficial may be rejected because of their adverse environmental and/or social impacts.

## Classifying incremental costs and benefits

- ❑ *Effects which can be readily identified and valued in money terms* (eg. ticket sales to residents for a special event, revenues generated from restaurant meals, costs of waste disposal).
- ❑ *Effects which can be identified and measured in physical terms but which cannot be easily valued in money terms because of the absence of market* (eg, the value of preserving a wilderness area, the cost of noise from airport or hotel construction, time savings to travelers from a new transport link, or greenhouse gas emissions from motor coaches).
- ❑ *Effects that are known to exist but cannot be precisely identified and accurately quantified, let alone valued* (eg. crime prevention effects of police programs, outcomes of a publically funded tourism and hospitality training program, aesthetic effects of streetscape beautification programs, or loss to humans from species extinction).
- Costs and benefits that cannot be valued in money terms are often called *'intangibles'*.

## Advantages of CBA

- ❑ CBA promotes the efficient use of resources.
- ❑ CBA makes proponents consider costs and benefits that are external to the proponent
- ❑ CBA forces the decision-maker to think inclusively about all the costs and benefits of alternative actions.
- ❑ CBA encourages clear consideration of the true *value added* from a proposal by focusing on incremental net benefits.
- ❑ Its emphasis on the quantification of costs and benefits on a comparable basis can provide a useful 'hard edge' to an evaluation strategy.

## When to use CBA

- ❑ CBA can guide a wide range of decisions on types of tourism development, especially within the following four broad contexts.
- ❑ **Analyzing capital expenditure**
  - eg. airport construction or expansion, the development of cruise shipping terminals, a resort development or highway construction, special event (Vancouver Olympics 2010)
- ❑ **Analyzing a policy option**
  - eg. the costs and benefits of some policy regarding requirements for tourist visas, bilateral aviation agreements, tourism and hospitality training programs, or restrictions on the use of migrant labour
- ❑ **Retaining or disposing of an existing asset**
  - government agency may be considering retaining a rail link to a tourist region or closing a museum, cruise terminal facilities or zoo.
- ❑ **Evaluation of a project or program**
  - eg. Review of tax concessions offered to resort developers, or evaluation of financial support given to organisers of special events

## Upshot

- ❑ Each of the economic approaches discussed are **important to policy, planning and the development of tourism**
- ❑ Expenditure measures of tourism yield are of **limited policy significance**
- ❑ **TSA measures the direct economic contribution of tourism** but not the indirect contribution. TSA not a tool for economic impact analysis
- ❑ Estimation of economic impacts of shocks to tourism demand require an **economic model**
- ❑ **CGE models** represent state of the art approach to estimating economic impacts
- ❑ The **economy wide impacts of tourism growth** must be acknowledged
- ❑ But - - **economic impacts do not have the policy significance** they are commonly thought to have
- ❑ **Resource allocation** to support tourism development must be underpinned by estimates of the **net benefits** of projects, policies and programs
- ❑ **Future research and policy** discussion needs to better understand the advantages and limitations of the different approaches

*Thank You*  
*Merci*