Economic Impact of Tourism - Measurement Tools

Tourism is recognised by many regional communities as an important economic driver. It has the capacity to provide additional income and jobs. However, quantifying its economic value to a region, particularly one within a local government boundary, has always been difficult.

**Economic Impact in Victoria**

Tourism is one of Australia’s fastest growing industries. Domestic tourism visitor nights are forecast to grow 0.3% per year until 2012, with international tourism forecast to have an annual average growth rate of 4.8% to 2012.

Within Victoria alone, tourism contributes $8.5 billion to the Gross State Product, employing over 6% of Victoria’s workforce.

**Local Government Supports Tourism**

Through the provision of infrastructure and services, local government is a significant contributor to regional tourism. A Tourism Alliance Victoria survey of 48 local councils in Victoria revealed a conservative estimate of local government expenditure on tourism as $13,133,797 in 2001/02.

**Measuring Tourism’s Economic Impact**

Measuring tourism’s economic impact to a Local Government Area (LGA) requires the application of a suitable model that multiplies visitor numbers x visitor spending x regional multiplier. Generally the outcomes will only be accurate if there is a research and development culture within local government and accurate data at an LGA level.

The collection and collation of accurate local level data is often the most difficult aspect of measuring economic activity, yet it is the basis of an accurate measure of tourism’s economic impact to an LGA.

**Measuring Visitor Numbers**

Measuring visitor numbers requires a clear definition of what a tourist is and what units tourism activity is measured in (for example day trips, visitors nights).

**Measuring Visitor Spending**

Visitor spending is usually calculated in visitor spending studies. Spending varies considerably between segments - holiday and leisure, visiting friends and relatives and business travel - therefore a segmented approach is therefore required. (The National Visitors Survey’ provides spending patterns on a state level across various segments).

**Regional Multipliers**

Multipliers (and economic ratios) can be used to convert visitor spending to income and jobs as well as to capture secondary impacts of visitor spending (multiplier effects). A sales multiplier of 2.0, for example, means that for every dollar received directly from a visitor, another dollar in sales is created within the region through indirect or induced effects.

Lengthy academic dissertations discuss the use and misuse of tourism multipliers in calculating the economic impact of tourism. Generally the concern lies in ensuring the multiplier is used only on that component of a sale that is captured within the local area.

Most models should avoid using multipliers altogether and focus on obtaining sound estimates of visitor numbers and visitor spending and their direct effects on the region’s economy. It is also important to note that tourism is a complex dynamic system and therefore measuring its activity level is a complex task that takes time, dedicated resources and usually the input of researchers, statisticians or economists.

Unfortunately, there is no quick fix solution and as yet no agreed industry standard on measuring tourism’s economic impact to an LGA.
Economic Analysis Models
A number of models have been used in the Australian market place to measure the economic impact of tourism to LGAs. These include the CSIRO Tourism Futures Simulator Model, the Tourism Research Australia (formerly Bureau of Tourism Research) Model, and other models applied by private consultancy firms.

Option 1: CSIRO Tourism Futures Simulator Model
The Tourism Futures Simulator (TFS) was developed in 1997 by the CSIRO. It serves two primary purposes: a) to evaluate the benefits and impacts of tourism and b) to provide stakeholders with the option to explore how a destination can be managed to achieve sustainable tourism in the long term. The TFS establishes a local data set, then simulates their impact over a 50 year period.

The TFS involves:
- Researching all ecological, economical and social information to use in determining sustainability of future developments
- Identifying all present and future issues and opportunities with the region
- Identifying ways employment might be expanded
- Increasing awareness and potential economic benefits of tourism visitation
- Expanding tourism product and packages through linkages
- Developing research and measurement techniques to track impacts and changes over time

The TFS has been applied to the Port Douglas Shire in far north Queensland, the Tapestry region of south-west Western Australia (encompassing a total of seven shires) and to Alice Springs, Northern Territory.

Examples of Outputs
The following statistics represent examples of the detailed information gained by the TFS about visitors to an area and their consumer behaviour.
- 56% of visitors to Port Douglas are domestic with 26% coming from Victoria
- Most visitors to Port Douglas in 1999 were aged between 25-34 years, in 2000 most visitors were aged 45-54 years
- 40% of Asian visitors spend more than $250 per night
- 62% of all visitors to Port Douglas Shire spend an average of $120.90 on diving
- In 1999, 1% of visitors were extremely dissatisfied with their visit and 46% of visitors were very satisfied with their visit. By 2001, there were no visitors extremely dissatisfied with their visit and 48% of visitors were very satisfied with their visit. (Satisfaction was based on 11 experiences including “undisturbed rainforest and river, experience of remote wilderness, seeing few other people, wood walking tracks”)

Evaluation
The TFS is possibly the most accurate and sophisticated tourism economic analysis model currently in the market place largely because it establishes a local data set. Not only does it provide detailed data, it expands the use of the data to identify social, economic and environmental consequences of actions or decisions. This allows communities to plot pathways towards a sustainable future for tourism in their region.

As with all models, it is time consuming to develop and implement. (Its implementation in the Tapestry Region occurred over three years and included 130 community workshops and focus groups). It requires a very high level of commitment from direct and indirect beneficiaries from tourism and involves a high degree of community consultation. It usually requires a dedicated co-ordinator to guide its application.

Option 2: Tourism Research Australia Model
The Tourism Research Australia (formerly Bureau of Tourism Research) Model considers the relationship between tourism expenditure and employment in regions to provide an insight into how tourism-related jobs are generated.

The model has been applied in a number of places including Perth (WA), Katherine (NT), South Coast (NSW) and Geelong (VIC).

The BTR model is based on available regional data. It applies a previously developed model for calculating tourism generated employment at a national level, to a regional level.

Examples of Outputs
- In 1998, tourism generated employment equalled 4000 employed persons in Geelong accounting for 5.4% of all employment to that region
- $105,000 of tourist expenditure in Geelong (excluding international visitor expenditure on airfares and packages) results in one tourism job in the region

Evaluation
The BTR model relies on regional data which, as previously discussed, is not readily available or is not applicable to all regions particularly smaller ones. However, the model places visitor expenditure and employment information into a broader regional context providing a better understanding of the avenues through which tourism-related jobs are generated.
Option 3: Independent Models

Surf Coast Shire, Victoria, had an independent assessment of their visitor numbers, spending and employment. The assessment acknowledges the lack of local level data and derives estimates of visitor numbers, spending and employment available data from the National Visitors Survey, the International Visitors Survey data (1998-2000), and the Survey of Tourist Accommodation - Small Area Data (2000-2001).

Examples of Outputs
- In 2001 the number of people visiting the Surf Coast Shire totalled an estimated 2.2 million people
- An estimated 55% of all visitors are day trippers totalling some 1.2 million persons
- An estimated 45% of all visitors are overnight visitors totalling an estimated 1.0 million people
- An estimated 3060 jobs are directly created from tourism within the shire with a further 1850 jobs indirectly generated as a result of employment multiplier

Evaluation
The independent model makes use of available data which it acknowledges is limited. The resulting outcomes, therefore, should be used with caution given the limitations to the methodology. The inclusion of confidence levels would add weight to the model’s accuracy. However, the model is useful for comparative purposes.

Option 4: Tourism Impact Model

In 2004, the Australian Government through its Department of Industry Tourism and Resources Tourism Division launched the Tourism Impact Model (TIM). Designed for use by local councils, the TIM is a combination of a financial model developed into a piece of software which operates in Microsoft Excel. Allowing for the full economic impact of tourism, the TIM calculates the impact on the operating expenses and income of councils in the absence of the existing tourism industry.

Evaluation
TIM was developed in consultation with a number of councils and was successfully applied by the Wellington Shire Council in Victoria. The application of the model required the engagement of a dedicated resource. Understanding of accountancy is thought to be beneficial in applying the model. The model has little applicability for metropolitan councils as estimates for these areas are likely to be highly inaccurate.

Examples of Outputs
- Visitor spending in Wellington Shire per year: $81.4 million
- Number of full time equivalent jobs: 619 direct employment, 928 total employment
- “If tourism were to cease today in Wellington Shire, it would lose 2507 residents or 5.9% of the population” (Based on the Tourism Impact Model)

Did you Know?

Facts about Tourism
- In 2002/03 tourism injected $10.6 billion into the economy, making up to 5.5% of Victoria’s Gross State Product (GSP)
- Of the $10.6 billion generated in 2002/03, interstate visitors contributed $2.8 billion, international visitors contributed $2.7 billion and Victorians travelling within the State made a $5.1 billion contribution
- In regional Victoria alone, tourism is worth $3.3 billion and responsible for employing 61,000 people
- If it weren’t for tourism, around 156,000 Victorians would be without jobs. This represents a 16% increase since 1997-1998 when 134,000 people were employed in the tourism sector
- For every $99,000 spent by tourists, it is estimated that one additional job is created in Victoria and an extra $58,000 is injected into Victoria’s economy
- Interstate tourism grew more than the national average over the five years to 2004. Visitor numbers were up 16% in Victoria compared with national growth of 11%

Source: Tourism Victoria, What Tourism Means to You, 2005
Other Tourism Alliance Victoria Reference Material Includes:

- www.tourismalliance.com.au
- Functions of a Local Tourism Association
- Functions of a Regional Tourism Organisation
- Best Practice Touring Routes
- Visitor Information Centre Frequently Asked Questions
- Planning for Tourism
- Local Government Tourism Health Check
- Planning a Tourism Direction Case Study: Hepburn Shire Council
- Significance of Tourism
- AAA Tourism Star Rating versus Tourism Accreditation
- Establishing a Municipal Tourism Policy

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Further Information
For further information regarding Economic Impacts of Tourism in your Local Government Area, contact:

Tourism Alliance Victoria
PO Box 18136
Collins Street East
Melbourne Victoria 8003
Tel 03 9650 8399
Fax 03 9650 8543
Email info@tourismalliance.com.au
www.tourismalliance.com.au

Sources
CSIRO Sustainable Ecosystems-Port Douglas Shire Tourism, 1999-2000 Visitor Survey Statistics
Economic Impacts of Recreation and Tourism – Michigan State University. www.msu.edu/course/prr/840/econimpact
Tourism Impact Model for Australian Local Government
2004 Commonwealth of Australia.
Wellington Shire Council, Victoria, Tourism Impact Model Results.
World Tourism Organisation,(2001) Guide for Local Authorities on Developing Sustainable Tourism
Philippine National Statistical Co-ordination Board
www.nscb.gov.ph
Travel By Australians, Quarterly Results of the National Visitors Survey December 2004

Footnotes
1 A tourist can be defined as a person who travels to a country other than that in which they usually reside, or within their country but outside their usual environment for a period not exceeding 12 months and whose main purpose of visit is classified as either holiday (recreation, leisure, sport and visit to family, friends or relatives), business, official mission, convention, or health reasons (World Tourism Organisation).

2 The National Visitors Survey is Australia’s major source of information on the characteristics and travel patterns of domestic tourists. It is produced by Tourism Research Australia with funding from the Australian Government (World Tourism Organisation).