



TOURISM

IN THE
TABLELANDS
SUB-REGION
OF
TROPICAL NORTH
QUEENSLAND

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1. INTRODUCTION

1.1 General

This report has been prepared at the request of Tourism Tropical North Queensland to provide information about the economic impact of tourism in the Tablelands sub-region of the Tropical North Queensland (TNQ) region. It follows on a similar study completed earlier covering the whole of the Tropical North Queensland region.

1.2 Methodology

Tourism is an industry defined by the customer rather than the product and this complicates its measurement using the Australian Bureau ANZIC (Australian and New Zealand Standard Industrial Classification) codes in which most statistics about industry output and employment are assembled. Thus, if a tourist buys a pawpaw at a road side stall, the purchase income and consequent employment generated in agriculture should be included as part of tourism income and employment.

To deal with the problem at national level, the Australian Bureau of Statistics creates what are termed Tourism Satellite Accounts at national level. State-wide satellite accounts are also prepared.

For this, research is carried out to determine the percentage of relevant activities that are tourism related. A good example is taxis where estimates are researched at national level of the proportion of taxi output and employment that relate to tourism.

However such ratio would not necessarily be accurate at a regional level. Obviously in a region with little tourism, the ratio will be lower and in regions with high tourism (like TNQ), the ratio is likely to be higher. The pattern of expenditure will also be affected by visitor type, eg. more international and longer stay.

In smaller regions outside of the metropolitan area, some elements of expenditure may not be available in that region. For instance, if a tourist purchases fuel, the retail element is involved in the calculation, but the fuel itself is imported from outside the region. So estimates at a national level will account for a proportion of fuel production being for tourism (see further notes, [Appendix 1](#)). At a regional level, there will be no fuel production.

1.3 Accuracy

Users of the statistics developed in this paper should be aware of limitations to accuracy.

In the following, the national ratios are identified but modified for regional application to appropriate levels informed by total employment patterns.

The pattern of tourism expenditure at regional level is only available by broad classifications and allocating it to the industry classifications involves some degree of estimation based on local knowledge.

To translate expenditure through to Gross Regional Product (GRP) and employment and then to include flow-on effects, uses standard input/output multiplier procedures that are subject to limitations due to a need to render national coefficients into regional coefficients that take into account the lower availability of some types of inputs at regional level.

The procedures are based on broad classifications and a range of assumptions.

Thus, the figures need to be regarded as informed estimates only and care taken in attributing to them an unwarranted degree of accuracy.

Appendices 2, 3 and 4 gives further comment on sources of data and limitations.

1.4 Timing

Figures are based on the latest available information including 2011 Census data for visitor counts and industry employment, Year-End September 2014 for estimates of Tourism Expenditure, 2013-14 Tourism Satellite Accounts and 2009-10 National Accounts Input/Output Tables and Coefficients..

1.5 Areas Covered

This report covers the Tablelands sub-region of the Tropical North Queensland region defined currently as the Local Government Areas of:

- Tablelands Regional Council.
- Mareeba Shire Council.

2. VISITOR NUMBERS AND EXPENDITURE

2.1 Visitor Numbers, Census Count

Table, [Appendix 2](#), gives details of visitor numbers at the time of the 2011 Census in the wider Tropical North Queensland region.

Visitor numbers are usually composed of numbers for different purposes, mainly:

- Leisure / holiday
- Visiting friends and relatives
- Education
- Health
- Work

The indications are that for the Tablelands sub-region, the following visitors were present.

	<u>No.</u>	<u>Percent</u>	<u>(cf TNQ)</u>
Within Queensland.....	2,195.....	56%.....	(35%)
Interstate	1,171.....	30%.....	(39%)
Overseas	581.....	15%.....	(26%)
Total.....	3,947.....	100%.....	(100%)

The numbers from within Queensland can include some visitation within the region.

The sub-region has substantial numbers of interstate and overseas visitors but not as high as TNQ as a whole.

Visitors from within Queensland can include substantial numbers for:

- Visiting friends and relatives,
- Visitors for business purposes.

They will include some fly-in/fly-out (FIFO) workers although most mining activity in the sub-region is residential.

Interstate visitors can be expected to be mainly leisure / holiday but with significant business and visiting friends and relatives.

International can be expected to be almost all leisure / holiday with a small proportion of visiting friends and relatives, business and education.

On any given day, residents can be away. At census time in August, visitor numbers are likely to be above average for the year but not peak numbers.

The following illustrates the impact on the regional population.

Table #1: Visitor Impact on Region's Population, Tablelands Sub-Region, Census 2011

Residential population	45,117
Residents away from their home area	4,272
Residents in home area	40,845
Visitors	3,947
Census count population	44,792

Source: Cummings Economics from ABS Census 2011 Data.

Visitors added an extra 3,947 to on-the-ground residential population at census time, ie. 9.7 percent. The additional visitor number less residents away caused actual on-the-ground population to be slightly lower than the residential population. It can thus be expected that impact on the economy of the region will be up in the 5-10 percent range.

For provision of many goods and services, it is effectively the on-the-ground population including visitors that is relevant.

2.2 NVS and IVS Visitor Numbers and Expenditure

The following gives data for visitor expenditure in the Tablelands sub-region from the National Visitor Survey (NVS) and the International Visitor Survey (IVS).

Table #2: Visitor Expenditure, Tablelands Sub-Region, 2013-14

	<u>Number</u>		<u>Expenditure</u>		
	<u>Mareeba</u>	<u>Tablelands</u>	<u>Mareeba</u>	<u>Tablelands</u>	<u>Total</u>
<u>Overnight</u>					
Domestic	75,500	143,300	\$22.8 m	\$44.3 m	\$67.1 m
International	10,300	15,000	\$10.3 m	\$10.6 m	\$20.9 m
Total overnight	85,800	158,300	\$33.1 m	\$54.9 m	\$88.0 m
<u>Domestic day trips</u>	174,800	371,300	\$12.2 m	\$22.8 m	\$35.0 m
Overall Total	260,600	529,600			
Total expenditure			\$45.3 m	\$77.7 m	\$123.0 m

Source: Cummings Economics from Tourism Research Australia National Visitor Survey and International Visitor Survey.

In construction of the Tourism Satellite Accounts at national level, a further element of expenditure is included - the spending within Australia of residents traveling overseas. Major components of this include spending on travel agency services, insurance, travel to exit airport/seaport and at exit-airports/seaports

Total in the National Satellite Accounts for 2013-14 for domestic travel overseas was \$6,669 million. Population of the Tablelands sub-region is 0.2 percent of total Australian population. At Australian per capita averages, total for the Tablelands sub-region would be \$13.3 million

It is likely that the Tablelands sub-region will have a lower per capita expenditure because of average incomes lower than national averages and much travel overseas from the region would be via southern international gateway cities.

Substantial research would be needed to calculate an accurate figure. As an estimate, a figure of \$10 million is used, ie. based on an average of about 75 percent of national average. Including this, results in total estimated expenditure for 2013-14 is \$133 million.

3. ESTIMATED DIRECT TOURISM IMPACTS

The following sets out detailed calculations to estimate Tourism GRP for the Tablelands sub-region.

The National Tourism Satellite Accounts measuring the nation's Tourism Gross Domestic Product are constructed by identifying proportions of industry demand accounted for by tourism consumption.

The proportion at regional level is likely to be higher in an area where there is a high visitor population relative to residential population.

Differences in composition as between origins and purpose of visit are also likely to result in variations from the national averages in per capita spending on various categories.

Appendix 3 sets out methodology for estimating proportions that would be appropriate to allocate for the Tablelands sub-region. Appendix 4 sets out the basis for calculation of Tourism Gross Regional Product.

The following table estimates how tourism output is distributed by broad industry groups.

Table #3: Direct Tourism Output by Industries ⁽¹⁾ - Tablelands Sub-Region

<u>Industry group</u>	<u>\$m</u>
Agriculture, Forestry and Fishing	\$27.60
Mining	0.00
Manufacturing	\$2.26
Electricity, Gas and Water	\$0.00
Construction	\$0.00
Wholesale	\$7.01
Retail	\$30.84
Accommodation, Food and Drink	\$41.52
Transport	\$14.74
Communications	\$0.15
Financial services	\$1.64
Professional services	0.00
Administrative support services	\$0.00
Defence and safety	\$0.00
Education and training	\$0.25
Health and Community services	\$0.25
Cultural, Sport and Recreation	\$0.56
Other services	\$0.17
Total	\$133.00

⁽¹⁾Note: Excludes a proportion for competing imports.

The following table gives estimates of Tourism GRP by broad industry groups.

Note: Gross Regional Product equals the sum of "Value added" plus net indirect taxes paid by tourism entities in the region. "Value added" for an entity equals their income less what they spend on inputs bought from other entities. The major components for "Value added" by entities are wages – salaries paid, plus the gross operating surplus.

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Table #4: Estimated Direct Tourism Gross Regional Product, by Industry Groups and Total Gross Regional Product – Tablelands Sub-Region, 2013-14

<u>Industry group</u>	<u>Tablelands Tourism GRP \$m</u>	<u>Tablelands GRP \$m</u>	<u>Percent Tourism %</u>
Agriculture, Forestry and Fishing	\$17.08	\$336	5.08%
Mining	\$0.00	\$332	0.00%
Manufacturing	\$0.61	\$124	0.49%
Electricity, Gas and Water	\$0.00	\$67	0.00%
Construction	\$0.00	\$208	0.00%
Wholesale	\$3.85	\$73	5.27%
Retail	\$19.64	\$127	15.46%
Accommodation, Food and Drink	\$21.55	\$60	35.92%
Transport	\$8.11	\$92	8.82%
Communications	\$0.08	\$30	0.27%
Financial services & Ownership of dwellings	\$1.38	\$309	0.45%
Professional services	\$0.00	\$84	0.00%
Administrative support services	\$0.00	\$133	0.00%
Defence and safety	\$0.00	\$36	0.00%
Education and training	\$4.88	\$118	4.14%
Health and Community services	\$0.18	\$114	0.16%
Cultural, Sport and Recreation	\$0.23	\$16	1.44%
Other services	\$0.09	\$41	0.22%
Total GRP	\$77.70	\$2,300	3.38%

Source: Cummings Economics (see Appendix 4).

The following estimates direct tourism employment by industry group.

Table #5: Estimated Direct Tourism Employment by Industry Groups – Tablelands Sub-Region, 2013-14

<u>Industry group</u>	<u>Tablelands Tourism Employment</u>	<u>Tablelands Workforce</u>	<u>Percent Tourism</u>
Agriculture, Forestry and Fishing	87.54	2,332	3.8%
Mining	0.00	708	0.0%
Manufacturing	10.34	1,035	0.1%
Electricity, Gas and Water	0.00	228	0.0%
Construction	0.00	1,611	0.0%
Wholesale	21.31	482	4.4%
Retail	273.52	2,103	13.0%
Accommodation, Food and Drink	358.44	1,123	31.9%
Transport	26.40	740	3.6%
Communications	0.23	128	0.1%
Financial services	2.55	412	0.5%
Professional services	0.00	729	0.0%
Administrative support services	0.00	1,290	0.0%
Defence and safety	0.00	455	0.0%
Education and training	103.05	1,526	6.8%
Health and Community services	2.26	2,014	0.1%
Cultural, Sport and Recreation	2.95	232	1.3%
Other services	1.04	649	0.2%
Total	890	17,800	5.0%

Source: Cummings Economics (see Appendix 4).



4. ESTIMATED 'FLOW-ON' AND TOTAL IMPACT OF TOURISM

4.1 Output and GRP

The Australian Bureau of Statistics produces National Accounts Input/Output Coefficient Tables at national level. These tables calculate the 'flow-through' of an initial increase in output by an industry.

It should be noted that these tables calculate upstream impacts only, ie. they will calculate the impact of a cane farmer's expenditure on inputs, but not take into account the fact that his downstream sales to a mill creates flow-on effects by underpinning employment in a sugar mill. It also does not take into account that expenditure on taxes may eventually flow back to a region in an expanded school or other government services.

The tables assume that the additional upstream activity can be supplied without abnormal additional price rises and imports. When only a small incremental increase in expenditure is involved, this is a reasonable assumption. However, an abnormally large increase in construction would almost certainly result in an increase in prices and increased propensity to import.

In applying input/output multipliers to a sector like tourism, it provides a reasonable estimate of 'flow-through' and total activity generated in the economy by the sector. However if the sector suddenly disappeared, the impacts could be quite different.

This paper uses input/output multipliers calculated by the North Australia Research Group Modified National Model for 2013-14 for the Tablelands sub-region.

For full details of methodology, refer to www.northaustraliaresearchgroup.net.au

Appendix 5 gives details of calculations of Tourism GRP and flow-on for the Tablelands sub-region.

The following table sets out the results.

Table #6: Tourism Input/Output Multipliers – Tablelands Sub-Region, 2013-14

OUTPUT	Initial output	\$1.00 m
GVA	Initial Gross Value Added	\$0.58 m
	Total Gross Value Added including 'flow –on'	\$0.89 m
	Flow-on multiplier	1.53

Estimated Tourism GRP for the Tablelands sub-region and flow-on is as follows.

Table #7: Estimated Tourism GRP and Flow-on for Tablelands Sub-Region

Direct Tourism GRP	\$78 m
Flow-on.....	\$40 m
Total Tourism Impact on GRP including flow-on	\$118 m

4.2 Employment

The following applies ratios of employment to industry output at national level derived from the National Accounts Tables and 'flow-on' impacts derived from the North Australia Research Group Modified Input/Output Multipliers National Model for the TNQ region. Details of calculations are given in Appendix 5.

The following table gives estimate of impact of tourism on Tablelands sub-region's employment – direct and flow-on multipliers.

Table #8: Tourism Impact on Employment in Tablelands Sub-Region

Direct Tourism Employment per \$1m of output	6.69
Total Tourism Employment for \$1m of output including flow-on	8.95
Multiplier direct to Total	1.34

Estimated impact on Tablelands sub-region's employment is as follows.

Table #9: Estimated Tourism Impact on Employment – Tablelands Sub-Region, 2013-14

Direct Tourism Employment.....	890
Flow-on Employment	300
Total Employment including flow-on.....	1,190

4.3 'Flow-on' Effects by Industry Classification

The following table gives 'flow-on' effects by industry. It can be seen that the 'flow-on' effects are very dispersed across all industry categories.

Table #10: Tourism in TNQ, 'Flow-on' Impacts by Industry – Tablelands Sub-Region

	<u>Output</u> \$m	<u>GRP</u> \$m	<u>Workforce</u> 2013-14
Agriculture, Forestry & Fishing	\$11.20	\$5.23	38
Mining	\$0.53	\$0.33	1
Manufacturing	\$11.35	\$3.69	35
Electricity, Gas & Water	\$3.98	\$1.93	6
Construction	\$4.01	\$1.46	12
Wholesale	\$4.13	\$2.27	17
Retail	\$4.86	\$3.04	38
Accommodation, Food & Drink	\$2.27	\$1.22	11
Transport	\$5.11	\$2.48	23
Communications	\$1.56	\$0.88	3
Financial Services	\$11.60	\$8.43	17
Professional Services	\$5.24	\$2.64	30
Administrative support services	\$5.24	\$2.79	39
Defence & Safety	\$0.30	\$1.21	5
Education & Training	\$1.27	\$1.01	6
Health & Community services	\$1.08	\$0.82	1
Cultural, Sport & Recreation	\$0.65	\$0.27	3
Other services	\$2.53	\$0.32	18
Total	\$76.93	\$39.66	303

4.4 Total Direct Plus 'Flow-on' Impacts by Industry

The following table gives total impacts by industry, both direct and 'flow-on'. It brings together figures from Tables #3, #4 and #5 and Table #10. It illustrates the large role of "Accommodation, Food and Drink" in employment and large expenditure and effect in Gross Regional Product in the "Retail" and "Transport" categories.

Table #11: Tourism in Tablelands Sub-Region, Total Direct plus 'Flow-on' Impacts by Industry

	<u>Tourism Output \$m</u>	<u>Tourism GRP \$m</u>	<u>% of Regional GRP</u>	<u>Tourism Workforce 2013-14</u>	<u>% of Total Regional Workforce</u>
Agriculture, Forestry & Fishing	\$38.80	22.31	6.64%	125.94	5.40%
Mining	\$0.53	0.33	0.10%	0.73	0.10%
Manufacturing	\$13.62	4.30	3.47%	45.67	4.41%
Electricity, Gas & Water	\$3.98	1.92	2.89%	6.23	2.74%
Construction	\$4.01	1.45	0.70%	12.14	0.75%
Wholesale	\$11.14	6.12	8.41%	37.82	7.85%
Retail	\$35.70	22.74	17.93%	311.43	14.81%
Accommodation, Food & Drink	\$43.79	22.77	37.91%	369.49	32.89%
Transport	\$19.85	10.60	11.61%	49.47	6.68%
Communications	\$1.71	0.97	3.27%	3.52	2.76%
Financial Servicers	\$13.24	9.41	3.04%	19.62	4.76%
Professional Services	\$5.24	2.64	3.15%	29.53	4.05%
Administrative support services	\$5.24	2.78	2.09%	39.29	3.05%
Defence & Safety	\$0.30	0.21	0.58%	5.21	1.14%
Education & Training	\$7.52	5.90	4.97%	108.91	7.14%
Health & Community services	\$1.33	1.00	0.88%	2.96	0.15%
Cultural, Sport & Recreation	\$1.21	0.50	3.16%	5.65	2.44%
Other services	\$2.71	1.40	3.37%	18.62	2.87%
Total	\$209.93	117.37	5.10%	1,192.23	6.70%

5. SUMMARY OF IMPACTS

The following summarises tourism impacts on the Tablelands sub-region economy.

Summary of Impacts on the Tablelands Sub-Region Economy, 2013-14

Tourism Output..... \$133 m

Estimated Tourism Gross Regional Product – Tablelands Sub-Region

Direct \$78 m

Total including Flow-on \$118 m

Percent of Gross Regional Product – Tablelands Sub-Region of \$2,300m

Direct 3.4%

Total including Flow-on 5.1%

Estimated Tourism Employment – Tablelands Sub-Region

Direct 890

Total including Flow-on 1,190

Percent of Estimated Employed Workforce of 17,800 – Tablelands Sub-Region

Direct 5.0%

Total including Flow-on 6.7%

TOURISM

IN THE

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Appendices

Appendix 1 - Technical Notes

Statistical Note – Difficulties of Measuring Tourism Impacts

Tourism is a difficult industry to measure in terms of output and employment.

It is defined by the 'customer' (ie. visitor), whereas most information on production and employment is measured by the product. Thus, the turnover, value added and employment generated in say a retail establishment becomes part of 'tourism' if a product is sold to a visitor. That same sale to a local resident would not be included. Similarly, a farmer who sells produce to 'visitors' at a roadside stall is technically directly part of the tourist industry to the extent of the sales to visitors.

While an idea of total direct income of tourism businesses can be gained from the expenditure side through surveying visitors about their expenditure patterns, translating that through to value added and employment generated by tourism businesses is not easy.

Thus, all 'value added' and 'employment' figures can be regarded as estimates only.

A further complication arises that is not just confined to tourism. Businesses dealing with 'visitors' will 'value add' but purchase in various goods and services from businesses which in turn, buy in goods and services from others.

There is a question about how far the measurement should go. Some measures will record only the 'value added' and employment of those businesses dealing direct with visitors, others will go through to including 'flow-on' multiplier effects to varying levels.

This analysis estimates direct impacts, flow-on impacts of purchases by tourism businesses from other industries (industrial multipliers), plus purchased by those earning income from tourism businesses (consumption multipliers).

Appendix 2 - Table: Visitor Numbers, Tropical North Queensland, 2011 Census Count

Residents	Cairns/Douglas	Tablelands	Cassowary Coast	Cook	Torres	Weipa	Ethridge	Croydon	Carpentaria	Burke	Mornington	Doomadgee	Hope Vale	Lochardt River	Torres Strait Island	Wujal Wujal	Yarrabah	Pormpuraaw	Pormpuraaw	Kowanyama	Mapoon	Nepranum	NPA	Total
At home	147,795	40,704	25,767	3,764	2,945	3,064	785	270	1,836	465	1,092	1,182	926	439	3,757	255	2,284	1,259	606	982	241	794	2,091	243,303
Same statistical local area	260	141	140	46	28	9	15	9	25	7	18	13	21	0	82	3	40	7	22	17	4	15	19	941
Visitors																								
NSW	4,021	458	589	263	28	90	128	41	292	121	10	6	0	3	6	0	0	0	0	0	3	0	74	6,133
VIC	5,947	337	566	289	32	60	95	14	266	99	6	10	0	3	3	0	0	0	0	8	3	0	126	7,864
QLD	8,168	2,195	2,047	869	428	531	448	67	545	583	75	73	77	62	170	26	65	30	69	51	54	10	231	16,874
SA	1,382	130	203	86	8	14	31	7	82	39	0	0	0	0	0	0	0	0	0	0	0	0	18	2,000
WA	863	145	81	62	10	25	16	0	42	16	0	3	0	0	0	0	0	0	0	0	0	0	21	1,284
TAS	531	47	52	18	22	9	12	0	18	30	0	3	0	0	0	3	0	0	0	0	0	0	13	758
NT	165	35	12	15	3	0	6	0	0	6	0	6	0	0	0	0	0	0	0	0	0	0	3	251
ACT	332	19	19	12	0	5	12	0	8	9	0	3	0	0	0	0	0	0	0	0	3	0	0	422
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Domestic	21,409	3,366	3,569	1,614	531	734	748	129	1,253	903	91	104	77	68	179	29	65	30	69	59	63	10	486	35,586
Overseas	11,105	581	654	245	50	16	64	11	29	13	0	0	0	6	53	0	0	0	3	3	0	0	22	12,855
Total Visitors	32,514	3,947	4,223	1,859	581	750	812	140	1,282	916	91	104	77	74	232	29	65	30	72	62	63	10	508	48,441
Total census count	180,569	44,792	30,130	5,669	3,554	3,823	1,612	419	3,143	1,388	1,201	1,299	1,024	513	4,071	287	2,389	1,296	700	1,061	308	819	2,618	292,685

Appendix 3 – Estimation of Proportion of Industry Outputs Accounted for by Tourism in the Tablelands Sub-Region

In regions with much greater visitor activity compared with national average, they are likely to have a much higher proportion accounted for by tourism.

The 2011 Census data indicates that the proportion of population counted away from their home Statistical Local Area was 5.6 percent whereas for the Tablelands sub-region, it was 8.8 percent.

It is estimated that the average proportion of visitor population in the Tablelands sub-region would be about 1.57 times that of the national average.

On the basis that per visitor expenditure in Tablelands sub-region was similar to national average, this would reflect in the total expenditure in a particular sector being higher in that sector due to the higher tourism population.

This effect can be expressed mathematically in the equation.

$$\text{Tablelands' Proportion} = \frac{a \times 1.57}{(1-a) + (a \times 1.57)}$$

where (a) is the national proportion.

Thus, if the national proportion is high, the Tablelands sub-region proportion will be only marginally higher.

However if the national proportion is very low, the Tablelands sub-region proportion will be about 1.57 higher.

The following table shows adjustment to national proportions.

Table 1: Classification used in National Tourism Satellite Accounts and proportions of activity accounted for by Tourism:

- a) *In National Satellite Accounts;*
- b) *Estimated proportion for Tablelands sub-region*

<u>Classification Tourism characteristic products</u>	<u>Tourism proportion</u>	
	<u>National</u>	<u>Tablelands Sub-Region</u>
Accommodation services	96.7%	97.9%
Actual and imputed rent	2.7%	2.8%
Takeaway restaurant meals	30.9%	41.2%
Taxi fares	35.4%	46.2%
Local area passenger transport	10.3%	15.3%
Long distance passenger transport	89.7%	93.2%
Motor vehicle hire and leasing	64.3%	73.9%
Travel agencies and tour operation services	96.4%	97.7%
Recreation cultural and supporting services	16.1%	38.7%
Gambling and betting services	8.1%	20.3%
<u>Tourism connected industries</u>		
Shopping including gifts and souvenirs	5.5%	5.7%
Food products	4.3%	4.4%

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Economic Impact

Alcohol beverages and other beverages	10.1%	15.0%
Motor vehicles, caravans and boats, etc.	5.6%	5.7%
Fuel (petrol, diesel)	15.0%	21.7%
Repair and maintenance of motor vehicles	1.5%	1.6%
Education services	4.1%	6.3%
Retail margins	10.5%	10.1%
Other margins	3.2%	3.3%
Other tourism goods and services	1.3%	1.4%
Other	0.0%	0.0%

The second consideration is whether, because of the composition of types of visitors, the regional per visitor expenditure on a type of service will be higher than the national per visitor expenditure on that type of service.

The following table shows comparative composition of expenditure by broad categories per visitor night for 2013-14 for the Tropical North Queensland region.

Table 2: Average Expenditure per Visitor Night, Tropical North Queensland compared with National Average

	TNQ	AUST	Difference	Ratio
Total	\$191	\$209		
Transport and fuel	\$40	\$42	-5%	0.95
Packages	\$15	\$10	+50%	1.50
Accommodation, food and drink	\$82	\$86	-5%	0.95
Entertainment	\$10	\$6	+67%	1.67
Shopping	\$15	\$23	-35%	0.65
Other	\$28	\$42	-33%	0.67
Total	\$191	\$209	-8%	

The indications are that the regional per visitor night expenditure is about 8 percent lower than national averages with transport and fuel and accommodation, etc., about 5 percent lower.

Packages and entertainment (including tourist attractions), were much higher at +50 percent and +67 percent.

Most of the additional package spending would be on transport and accommodation indicating that in TNQ, proportion is probably much the same for these categories.

The following allocates the above information to the tourism classification in Table 1.

Table 3: Estimated Ratio of Per Visitor Night Spending, TNQ Region to National Average

Classification Tourism characteristic products	Adjustment ratio
Accommodation services	1.00
Actual and imputed rent	0.67
Takeaway restaurant meals	1.00
Taxi fares	1.00
Local area passenger transport	1.00
Long distance passenger transport	1.00
Motor vehicle hire and leasing	1.00
Travel agencies and tour operation services	1.50

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Recreation cultural and supporting services	1.67
Gambling and betting services	1.67
<u>Tourism connected industries</u>	
Shopping including gifts and souvenirs	0.65
Food products	0.67
Alcohol beverages and other beverages	1.0
Motor vehicles, caravans and boats, etc.	0.67
Fuel (petrol, diesel)	1.0
Repair and maintenance of motor vehicles	0.67
Education services	0.00
Retail margins	0.65
Other margins	0.67
Other tourism goods and services	0.67

Note: Reliable information is not available for the expenditure patterns in the Tablelands sub-region and it is assumed they are similar to the whole TNQ region.

Appendix 4 – Estimated Direct Tourism Gross Value Added by Industry Classifications, Tablelands Sub Region

Australian Bureau of Statistics National Accounts Input/Output Tables give for industry classifications, figures for 'Final Use', Australian Production (output) and Gross Value Added for 2009-10 (latest).

Latest national figures for Employment by industry comes from the 2011 Census

From these estimates of Australian Production (output) per person employed, value added (GRP) to output ratios can be calculated.

It is known that tourism expenditure (equivalent of 'Final Use') in the Tablelands sub-region in 2013-14 was \$133.1 million.

The following table gives resulting estimates for 2013-14 by industry classification and total for the Tablelands sub-region.

Table: Estimate of Direct Tourism 'Final Use' Output, Gross Value Added and Employment by Industry Groups – Tablelands Sub-Region, 2013-14

<u>Industry classification</u>	<u>Tablelands Initial Output \$m</u>	<u>GRP Initial \$m</u>	<u>Employment 2013-14</u>
Agriculture, Forestry and Fishing	27.60	17.08	87.54
Mining	0.00	0.00	0.00
Manufacturing	2.26	0.61	10.34
Electricity, Gas and Water	0.00	0.00	0.00
Construction	0.00	0.00	0.00
Wholesale	7.01	3.85	21.31
Retail	30.84	19.64	273.52
Accommodation, Food and Drink	41.52	21.55	358.44
Transport	14.74	8.11	26.40
Communications	0.15	0.08	0.23
Financial services	1.64	1.38	2.55
Professional services	0.00	0.00	0.00
Administrative support services	0.00	0.00	0.00
Defence and safety	0.00	0.00	0.00
Education and training	6.25	4.88	103.05
Health and Community services	0.25	0.18	2.26
Cultural, Sport and Recreation	0.56	0.23	2.95
Other services	0.17	0.09	1.04
Total	133.00	77.70	889.63

To estimate Gross Regional Product, it is necessary to add a factor for net indirect taxes. In National Tourism Satellite Accounts, this is plus 8.9 percent for 2013-14 and this ratio is used for the Tablelands sub-region, making a total of \$53.5m.

Appendix 5 – Calculation of ‘Flow-on’ Impacts of Tourism in the Tablelands Sub-Regional Economy

North Australia Research Group modified National Data Model sets out input/output multipliers for Tablelands sub-region by industry groups (see following table).

If the Tablelands’ pattern of Direct Tourism Output by industry is applied to these multipliers, it results in estimates of tourism multipliers as follows.

Estimate Tourism Multipliers for Tablelands Sub-Region

Direct Output	\$1.00 m
Direct Initial Gross Value Added	\$0.48 m
Total including Flow-on Gross Value Added.....	\$0.82 m
Direct Employment	6.71 per \$m output
Total Employment including Flow-on	9.44 per \$m output

The following table sets out estimates of the output generated by tourism in the various industry categories and estimates of flow-on additional GVA and employment generated by tourism.

Table: Estimated Additional Flow-on to Tablelands Sub-Regional Industries due to Tourism

	<u>Initial Tourism Output 13-14</u>	<u>Additional Flow-on Output</u>	<u>Additional Flow-on GRP</u>	<u>Additional Flow-on of Employment</u>
Sheep, Grains, Beef and Dairy Cattle	0.00	3.64	1.53	15.96
Poultry and Other Livestock	0.00	1.15	0.60	2.99
Other Agriculture	27.52	2.79	1.73	10.57
Aquaculture	0.00	0.21	0.07	0.55
Forestry and Logging	0.00	0.14	0.06	0.24
Fishing, hunting and trapping	0.09	0.19	0.07	0.49
Agriculture, Forestry and Fishing Support Services	0.00	3.08	1.16	7.62
Coal mining	0.00	0.16	0.09	0.22
Oil and gas extraction	0.00	0.13	0.10	0.07
Iron Ore Mining	0.00	0.03	0.02	0.02
Non Ferrous Metal Ore Mining	0.00	0.12	0.07	0.14
Non Metallic Mineral Mining	0.00	0.06	0.03	0.21
Exploration and Mining Support Services	0.00	0.03	0.01	0.07
Meat and Meat product Manufacturing	1.52	2.13	0.60	14.62
Processed Seafood Manufacturing	0.00	0.25	0.05	0.21
Dairy Product Manufacturing	0.64	1.38	0.35	1.63
Fruit and Vegetable Product Manufacturing	0.00	0.23	0.06	0.29
Oils and Fats Manufacturing	0.00	0.00	0.00	0.00
Grain Mill and Cereal Product Manufacturing	0.00	0.17	0.04	0.25
Bakery Product Manufacturing	0.00	0.79	0.36	5.78
Sugar and Confectionery Manufacturing	0.00	0.80	0.25	1.24
Other Food Product Manufacturing	0.00	0.88	0.23	1.42
Soft Drinks, Cordials and Syrup Manufacturing	0.00	0.00	0.00	0.00
Beer Manufacturing	0.00	1.06	0.46	1.05
Wine, Spirits and Tobacco	0.00	0.12	0.05	0.22
Textile Manufacturing	0.00	0.00	0.00	0.00
Tanned Leather, Dressed Fur and Leather Product Manufacturing	0.00	0.00	0.00	0.00
Textile Product Manufacturing	0.00	0.10	0.05	0.38

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Knitted Product Manufacturing	0.00	0.00	0.00	0.00
Clothing Manufacturing	0.00	0.05	0.03	0.15
Footwear Manufacturing	0.00	0.00	0.00	0.00
Sawmill Product Manufacturing	0.00	0.11	0.04	0.25
Other Wood Product Manufacturing	0.00	0.08	0.03	0.36
Pulp, Paper and Paperboard Manufacturing	0.00	0.00	0.00	0.00
Paper Stationery and Other Converted Paper Product Manufacturing	0.00	0.41	0.14	0.80
Printing (including the reproduction of recorded media)	0.00	0.21	0.11	1.03
Petroleum and Coal Product Manufacturing	0.00	0.50	0.10	0.11
Human Pharmaceutical and Medicinal Product Manufacturing	0.00	0.00	0.00	0.00
Veterinary Pharmaceutical and Medicinal Product Manufacturing	0.00	0.00	0.00	0.00
Basic Chemical Manufacturing	0.00	0.27	0.09	0.28
Cleaning Compounds and Toiletry Preparation Manufacturing	0.00	0.00	0.00	0.00
Polymer Product Manufacturing	0.00	0.13	0.05	0.35
Natural Rubber Product Manufacturing	0.00	0.00	0.00	0.00
Glass and Glass Product Manufacturing	0.00	0.07	0.03	0.33
Ceramic Product Manufacturing	0.00	0.02	0.01	0.06
Cement, Lime and Ready-Mixed Concrete Manufacturing	0.00	0.08	0.02	0.06
Plaster and Concrete Product Manufacturing	0.00	0.06	0.02	0.19
Other Non-Metallic Mineral Product Manufacturing	0.00	0.03	0.01	0.22
Iron and Steel Manufacturing	0.00	0.12	0.03	0.35
Basic Non-Ferrous Metal Manufacturing	0.00	0.16	0.03	0.09
Forged Iron and Steel Product Manufacturing	0.10	0.01	0.00	0.03
Structural Metal Product Manufacturing	0.00	0.14	0.06	0.29
Metal Containers and Other Sheet Metal Product manufacturing	0.00	0.12	0.05	0.25
Other Fabricated Metal Product manufacturing	0.00	0.11	0.05	0.34
Motor Vehicles and Parts; Other Transport Equipment manufacturing	0.00	0.16	0.05	0.23
Ships and Boat Manufacturing	0.00	0.06	0.02	0.14
Railway Rolling Stock Manufacturing	0.00	0.00	0.00	0.00
Aircraft Manufacturing	0.00	0.16	0.09	1.38
Professional, Scientific, Computer and Electronic Equipment Manufacturing	0.00	0.01	0.00	0.03
Electrical Equipment Manufacturing	0.00	0.00	0.00	0.00
Domestic Appliance Manufacturing	0.00	0.00	0.00	0.00
Specialised and other Machinery and Equipment Manufacturing	0.00	0.10	0.04	0.33
Furniture Manufacturing	0.00	0.14	0.05	0.25
Other Manufactured Products	0.00	0.11	0.04	0.33
Electricity Generation	0.00	0.84	0.38	0.95
Electricity Transmission, Distribution, On Selling and Electricity Market Operation	0.00	1.74	0.75	1.98
Gas Supply	0.00	0.03	0.01	0.04
Water Supply, Sewerage and Drainage Services	0.00	1.29	0.72	2.13
Waste Collection, Treatment and Disposal Services	0.00	0.08	0.07	1.13
Residential Building Construction	0.00	0.43	0.10	1.53
Non-Residential Building Construction	0.00	0.17	0.05	0.18
Heavy and Civil Engineering Construction	0.00	0.52	0.20	0.82
Construction Services	0.00	2.89	1.11	9.61
Wholesale Trade	7.01	4.13	2.27	16.51
Retail Trade	30.84	4.86	3.10	37.92



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Accommodation	0.61	0.44	0.27	2.47
Food and Beverage Services	40.91	1.83	0.95	8.58
Road Transport	0.98	2.66	1.25	14.27
Rail Transport	0.97	0.16	0.09	0.35
Water, Pipeline and Other Transport	0.71	0.23	0.10	0.34
Air and Space Transport	0.00	0.46	0.17	0.71
Postal and Courier Pick-up and Delivery Service	0.00	0.72	0.38	5.52
Transport Support services and storage	12.08	0.88	0.49	1.87
Publishing (except Internet and Music Publishing)	0.00	0.49	0.30	1.47
Motion Picture and Sound Recording	0.00	0.01	0.01	0.03
Broadcasting (except Internet)	0.00	0.17	0.09	0.40
Internet Service Providers, Internet Publishing and Broadcasting, Websearch Portals and Data Processing	0.00	0.00	0.00	0.00
Telecommunication Services	0.15	0.87	0.47	1.32
Library and Other Information Services	0.00	0.02	0.02	0.06
Finance	1.64	2.24	1.89	5.81
Insurance and Superannuation Funds	0.00	0.24	0.13	0.33
Auxiliary Finance and Insurance Services	0.00	0.24	0.20	2.07
Rental and Hiring Services (except Real Estate)	0.00	1.34	0.53	3.29
Ownership of Dwellings	0.00	4.91	4.11	0.00
Non-Residential Property Operators and Real Estate Services	0.00	2.64	1.17	5.55
Professional, Scientific and Technical Services	0.00	5.03	2.50	28.22
Computer Systems Design and Related Services	0.00	0.21	0.13	1.32
Employment, Travel Agency and Other Administrative Services	0.00	3.60	1.91	27.50
Building Cleaning, Pest Control and Other Support Services	0.00	1.04	0.51	6.34
Public Administration and Regulatory Services	0.00	0.60	0.36	5.45
Defence	0.00	0.00	0.00	0.00
Public Order and Safety	0.00	0.30	0.21	5.20
Primary and Secondary Education Services (incl Pre-Schools and Special Schools)	2.08	0.54	0.47	0.13
Technical, Vocational and Tertiary Education Services (incl undergraduate and postgraduate)	2.08	0.54	0.41	4.88
Arts, Sports, Adult and Other Education Services (incl community education)	2.08	0.20	0.14	0.85
Health Care Services	0.25	0.58	0.42	0.61
Residential Care and Social Assistance Services	0.00	0.50	0.40	0.09
Heritage, Creative and Performing Arts	0.25	0.27	0.13	1.72
Sports and Recreation	0.31	0.34	0.12	0.97
Gambling	0.00	0.04	0.02	0.01
Automotive Repair and Maintenance	0.13	1.40	0.70	10.20
Other Repair and Maintenance	0.03	0.67	0.31	5.88
Personal Services	0.01	0.24	0.16	1.32
Other Services	0.00	0.22	0.14	0.18
Industry Uses	133.00	76.93	39.66	302.59