



USABILITY ENGINEERING

Assignment 3 – Sem 1 – May 2020

Abstract

Summary report on TRA state of industry report and IVS data which answers predefined questions as part of task.

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Q 1. What quantitative data is provided?

The IVS – Data and TRA Report provides numerous quantitative data which includes,

1. Total number of visitors from major countries, number of nights they spent in Australia and Total trip expenditure by respective region
2. Median and average of the number of nights stayed by visitors in Australia
3. Average trip expenditure by foreign tourists in Australia.
4. Average per night expenditure by foreign tourist in Australia
5. Number of visitors, visitor nights, and total trip expenditure by main reason for visiting Australia including holiday, education, etc.
6. Percentage change between year endings in a number of visitors, visitor nights, and total trip expenditure by main reasons for visiting Australia
7. Annual estimated number of International visitors, visitor nights and regional trip expenditure by state visited in Australia for all accommodation
8. Percentage change between year ends (2018-2019) for quantitative data mentioned in pt. 7
9. Capital share of visitors, visitor nights, and respective expenditures.
10. Capital share of **backpacker** visitors, visitor nights, and respective expenditures.
11. International visitors, visitor nights, and regional expenditure for the top 50 tourism hotspots in Australia
12. International backpacker visitors, visitor nights for top 30 regions in Australia

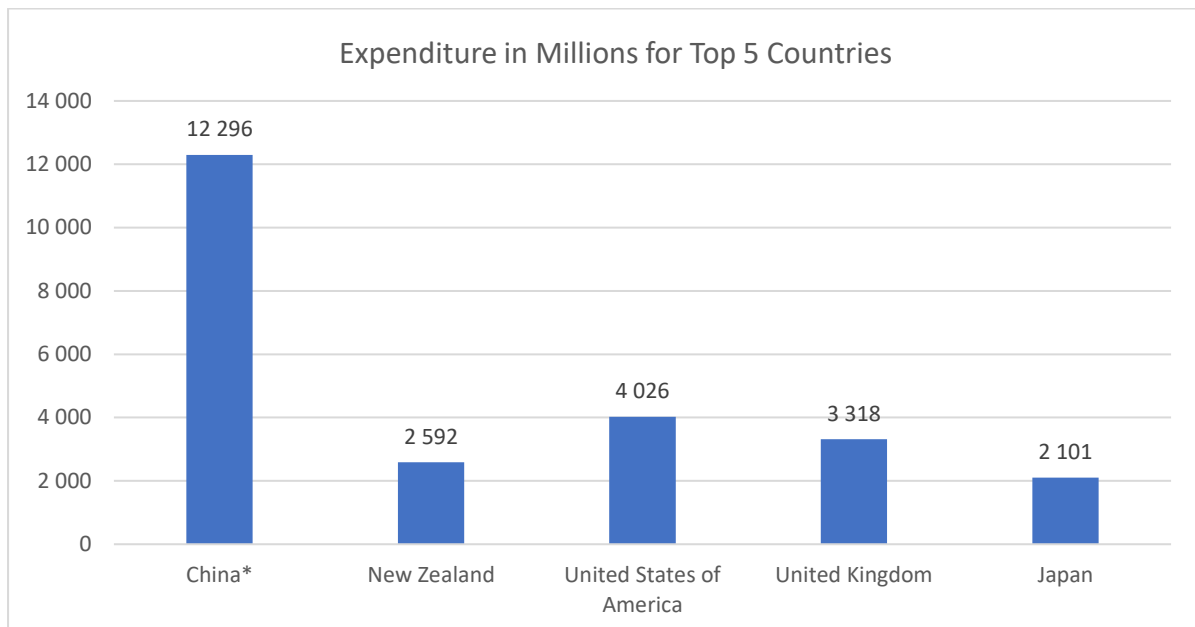
Notable Analysis:

China, New Zealand, United States of America, United Kingdom, Japan remains the top 5 countries by expenditure and number of visitors in both years.

Holiday is the top reason for having the highest expenditure accounting for \$16,252m and \$17,121 for the year 2018 and 2019 respectively.

Though there are comparatively a smaller number of visitors for the education sector it still provided much more turn-over at \$12,321 for 2018 & \$13,179 for 2019 which is just 23 percent less than Holiday.

Country	Total Trip Expenditure in Millions
China*	12 296
New Zealand	2 592
United States of America	4 026
United Kingdom	3 318
Japan	2 101
Mean	4866.6592
Median	3318.208
Standard Deviation	4216.534143
Confidence Level(95.0%)	5235.518643
Upper Value	10102.17784
Lower Value	-368.8594432



Q 2. What qualitative data is provided?

Qualitative data that has been provided include,

Categorization of visitors based on attributes like

- Country of origin (China, India, Japan)
- Type of individual (Backpacker / non- Backpacker)
- Reason of visit to Australia such as business, education, etc
- Expenditure based on the type of Item purchased during the trip such as airfare, food, etc.
- Type of accommodation chosen for the trip (Hostel, Hotel, Resort)

Q 3 How comprehensive and complete is the data? Do you think there may be any missing data?

When it comes to the IVS survey, data is comprehensive and complete only concerning information gathered for foreign visitors. It does not provide any significant data regarding domestic travelers and their effect on industry profitability.

The TRA report does not provide any data regarding the actual profit made by the industry due to mentioned sectors like education, holiday, etc. Report only talks about the expenditure which is subjective to several factors like change in the tax system, inflation, change of government, etc.

TRA Report does state the adoption of disruptive services like Airbnb and Uber by the Australian tourism industry. However, the number of people using these services during their stay is unknown. Moreover, these being non-Australian firms, their holding on local businesses may have a significant impact on produced statistical results.

In addition to this, Other data gaps include,

• bookings and ticketing	• telecommunications and location data
• transactions and financial data	• social media and reviews

Limitations:

- Estimates in the IVS datasheet only includes international visitors aged 15 and over. (sheet 1a). An error introduced due to this may change the calculated average values.

- Backpackers are defined (sheet 3c) as an individual who spent at least one night in Backpackers/Hostel accommodation. This may necessarily not true and makes data incomplete for producing close to the actual statistical result.
- Going challenges in accessing data including high costs, privacy and security issues, and the lack of national coverage.

Mitigation:

- Introduce a standard metric to identify backpackers or any other type of visitor. e.g. Visa type
- Every individual should be counted as a sole visitor.
- Organizations have already begun work in this case.

Q 4. The authors of the report have produced an analysis which primarily compares profit from 2018 with the profit made in 2019. On the whole was the profit increasing? What does the report say about this?

The TRA report indicates that overall profit was increasing, and the sector even witnessed the double-digit growth in 2018-19. Australia also stands in the top 10 worldwide for international expenditure which demonstrates the growth of the industry in Australia.

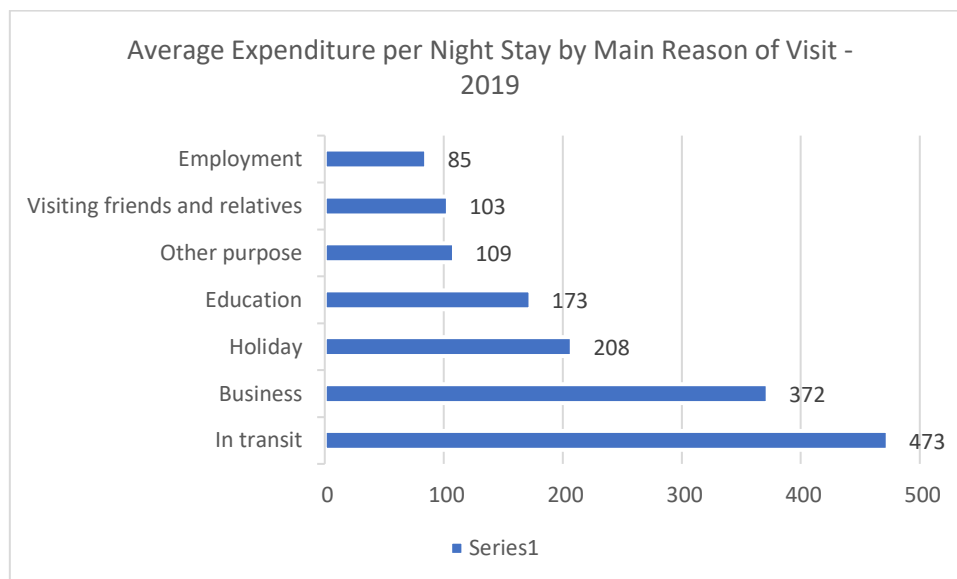
Analysis 1 - Yield due to Local Travellers:

As travel is being considered as an essential part of life by locals, the Australian tourism industry managed to see spending upwards of \$100 billion for the **first time**.

When traveling domestically, Australian travelers opt for shorter but more frequent trips which increased the average number of nights spent domestically to 20 from 15. This in turn increased the average spend on domestic travel per Australian from \$1,150 to \$4,975 ultimately contributing to the profitability of tourism.

Analysis 2 - Yield Due to Foreign Visitors:

A marginal increase of 3% in the number of foreign visitors was experienced. The international spend increased to 5% accounting for \$44.6 billion at the end of the year 2019 this was due to lower exchange rates and an increase in high yield education visitors.



There are market segments that stand out for expenditures such as High-yield travelers, international students, and Business travelers. Average nightly spend was more than \$1000 for high-yield visitors despite the short average trip length of 5.9 nights. The impact of international students on tourism

infrastructure is modest but non-ignorable due to the number of visitors each year (586,000). A student spends an average of 2.56 nights in hotels and resorts. The average expenditure of business visitors is the highest at \$372 per night with an average length of stay of 10.8 nights. All these contributed to the fast-paced profitability of tourism in Australia.

Other relevant pieces of evidence:

Transport and connectivity are key requisites for tourism. The seats were operating at 80.9 percent peak load factor and near to maximum capacity during peak periods. That implies international aviation appears to be competitive & gainful yet has the potential to expand beyond periods of peak demand.

Occupancy rates tumbled to 74.0% in 2018–19, yet this is still profitable compared with other contender markets. Solid growth in convenience flexibly added to this fall. The fall in inhabitancy rates is a transient impact, and these metrics are expected to lift as demand eventually catches up with the supply.

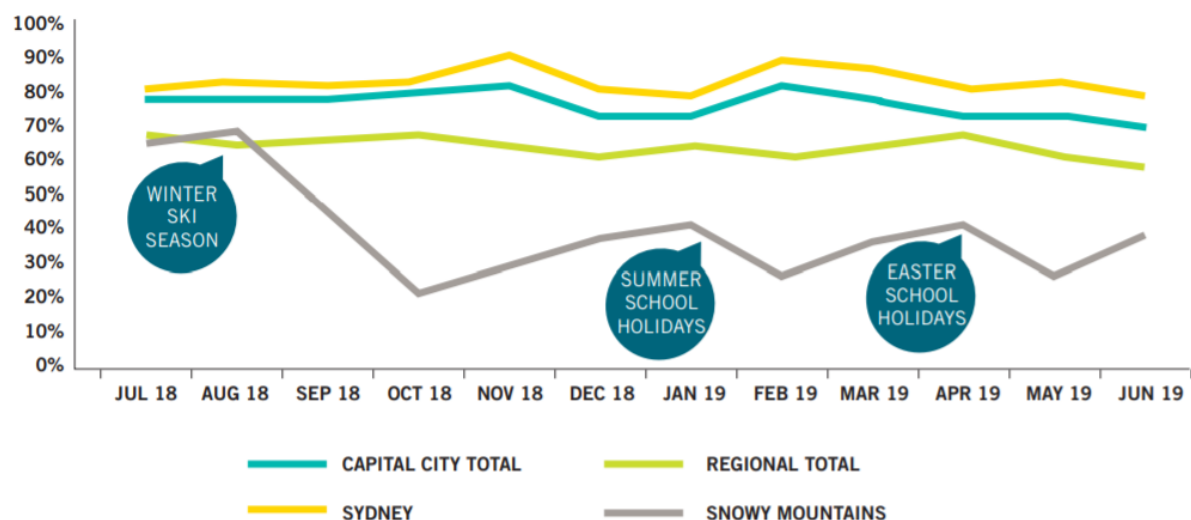


Fig. [1] Month wise change in occupancy rate in Australia between 2018 - 2019

Q 5. In the introduction to the report, the authors of the report state: “There is more understanding of diverse cultures and practices, and increased awareness of the impact people have on the environment and the community. This has seen more interest in sustainability, with new trends emerging, including ‘flight shaming’ and a focus on minimizing travel miles.” Is there any data from the survey and report which supports this assertion? Give the actual questions, descriptions or definitions and data which could support it or reject it.

Yes. TRA report includes some indirect explanation for this assertion.

It enlists 3 areas in which sustainability needs to be attained in order to achieve sustainable growth of an industry which is economic development while addressing environmental concerns and impact of tourism on the community in a broader sense. The report emphasizes achieving.

Economic sustainability	Ensuring that Australia meets heights of expectations its visitors expect
Environmental sustainability	Maintaining natural habitats so that they can be enjoyed by upcoming generations
Community sustainability	Supporting tourism by addressing impacts while spreading its benefits.

Younger visitors are becoming more aware of the effect of tourism on the climate, with tastes shifting towards more environmentally friendly options. Hence it is important to achieve economic growth while controlling or perhaps eliminating environmental impacts.

All these suggest that people are showing an increasing awareness of sustainable development.

Limitation: If more tourism is introduced without having a sufficiently equipped infrastructure in place then it would have a negative impact on every aspect. It could damage the environment. Due to unawareness culturally inappropriate actions may happen this in turn may disappoint visitors.

Mitigation: Future growth of industry should be targeted to the regions which are ready with necessary infrastructure.

Q 6. If we consider this from a user perspective, where the user is an international tour to Australia, is there any information in this report which could be of interest to a user?

The report provides the top 10 tourism hotspots within Australia. Along with this it also provides us information regarding the average expenditure per night and preferred period of stay in those regions.

It also highlights some popular natural attractions and the respective growth experienced in terms of the number of visitors by that attraction.

According to the TRA report, Australia keeps on positioning exceptionally in worldwide terms for safety and security, with Sydney (5) and Melbourne (10) both positioning in the top ten in the Safe Cities Index 2019. This information could be a driving factor while choosing a tourist destination for the majority of international visitors.

TRA report also puts a spotlight on the disruption due to online services like Airbnb and Uber on the Australian tourist industry. It also suggests that many traditional hoteliers and accommodation are adapting to this to become competitive. This is valuable information for tech-savvy travelers who prefer the existence of such globally recognized middlemen for hustle free tour due to transparency & convenience they offer.

Q 7- What information does the report provide about technology and disruption?

As per the report, technology has the potential to both enhance and shake up the tourism industry and significant disruptions have already been experienced through tech giants like Airbnb and Uber who operate primarily in accommodation and travel sectors respectively.

The industry is expected to witness next wave of disruption in areas such as shopping, tours and food and beverage sectors with continued advancements in the sharing economy, payment gateways and futuristic technologies like augmented reality (AR) and virtual reality (VR)

So far, these disruptions are in favor of industry growth. Hoteliers are adopting to this to remain competitive in the sector. Statistics indicate that the Airbnb platform experienced the rise of a whopping 152% in the listing of conventional hotels and accommodation worldwide. This has also been observed in parts of the Australian market, with hotels from Sydney and Melbourne already offering rooms via Airbnb to attract tech-savvy tourists.

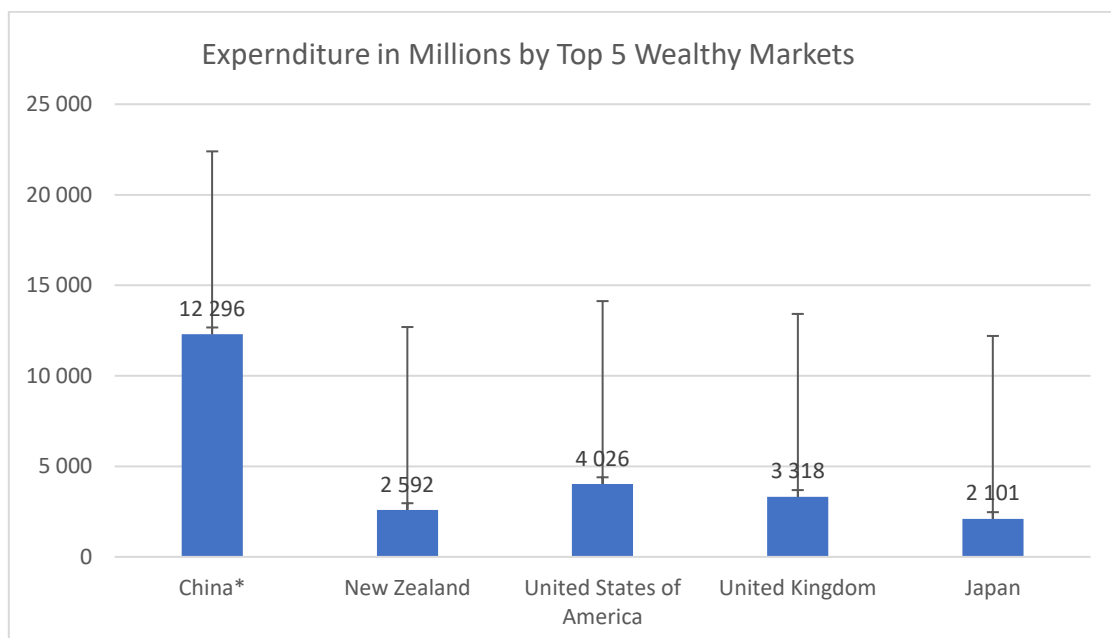
Limitations: The actual number of businesses in Australia who adopted this has not been provided hence impact can't be analyzed.

Mitigation: The impact of technology on the tourism industry in Australia can be analyzed by capturing the number of bookings made through such online services during a certain period.

Q 8. Does the report provide any information regarding the factors that affect the global competitiveness of Australia when projecting it as a tourism destination?

The report enlists 4 such convincing factors that affect Australian tourism industry which includes,

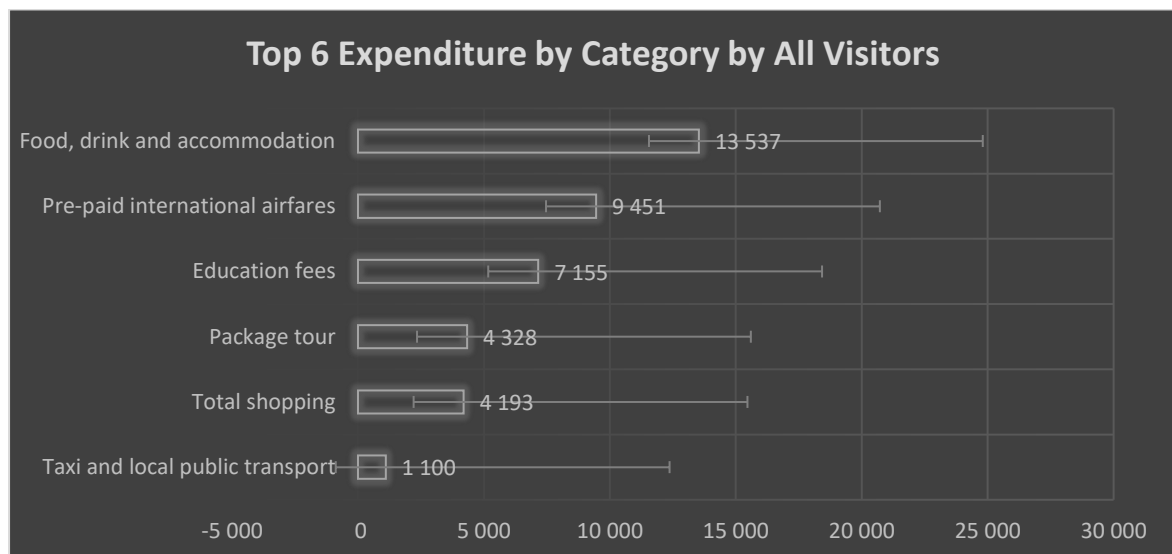
- Australia is a destination on the long haul. This constrains Australia's ability to offer non-stop flights and can considerably increase travel time to an international trip, resulting in higher flight fares.
- The high cost of living makes Australia a relatively costly destination for foreign visitors. Australia is now positioned 130 Of the 137 on the economic attractiveness of rates.
- Exceptional high quality of living, superior quality product, and infrastructure including accommodation and transport
- Fluctuations in exchange rates. Lower exchange rates attract more tourists.
- Marketing strategies and their reach and impact it creates. As of now Australia only targets a handful of wealthy markets that appear to be working. However, an absence of diversity expands the dangers of current worldwide monetary and geopolitical vulnerabilities on the business



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****Total expenditure of china is significantly larger than other countries making it is as an influential variable. Therefore, mean is affected and so is the confidence level which will result in positively skewed data.**

The impact of Coronavirus on Chinese visitors is unknown. High dependency on a handful of markets could prove to fatal to the entire industry.



Category	Expenditure in Millions - 2019
Taxi and local public transport	1 100
Total shopping	4 193
Package tour	4 328
Education fees	7 155
Pre-paid international airfares	9 451
Food, drink, and accommodation	13 537
Mean	6627.388
Median	5741.537
Standard Deviation	4421.718
Confidence Level(95.0%)	4640.309
Higher Value	11267.7
Lower Value	1987.08

Food, drink, and accommodation is the most expensive expenditure in Australia. This explains points 2 and 3. Due to the variation in the sample values, the mean is quite large and has affected the confidence interval. This would result in positively skewed data.

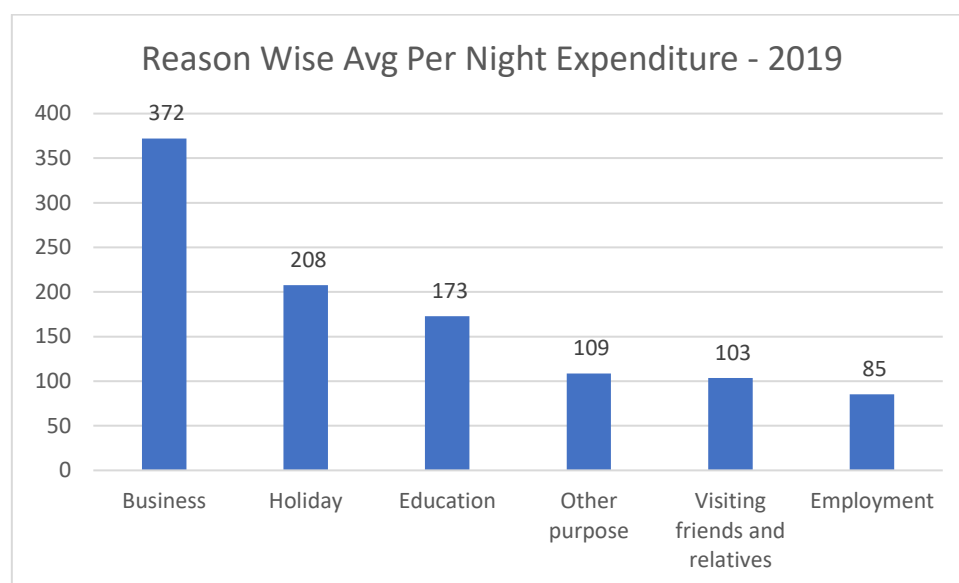
Limitations: High cost of living may only be a concern for visitors coming from non-European countries or countries with weak currencies or countries with comparatively low living costs like India, Thailand, etc.

Mitigation: Survey should capture data to validate those assertions

Q 9. Does the report provide information on how does the business visitors contribute to the tourism industry?

Business travelers are one of the niche market segments which stand out in terms of expenditure. The average expenditure of business visitors is the highest at \$372 per night with an average length of stay of 10.8 nights. This is due to expenditure on accommodation with 58% of business nights spent in motels, hotels, or resorts. Even though there are a low number of business travelers, their trip expenditure is considerably high. All these contributed to the fast-paced profitability of tourism in Australia.

Reason	Average Expenditure Per Night
Business	372
Holiday	208
Education	173
Other purposes	109
Visiting friends and relatives	103
Employment	85



Expenditure by business travelers is far more than any other travelers.

Conclusions:

Australia is a diverse country packed with natural beauty. However, it seems that only a handful of markets are aware of this fact due to marketing strategy Australia has been following so far. Technology has penetrated its way to local markets. Businesses are adapting to these changes to remain competitive which is helping them offer an even better experience to their customers. As the industry is growing, Australia needs to make sure that the gap of quality laborers should be filled. Solid work policies need to be imposed to attract quality professionals who see tourism & hospitality as a potential career option. The market is huge and targeting the right kind of visitors could be tricky. It appears that Business travelers, premium visitors, and international education visitors are prominent user groups for the Australian tourism industry. Careful planning and marketing can result in more visits and monetary exchange by these groups. WHMs are one such example of that. Even being an educational capital, which attracts so many international students worldwide every year, the effect of such a group is marginal on the tourism industry which if addressed could pump profit even further. Thought process regards to sustainable development in the economic, environmental, and community

is truly remarkable. However special care should be taken so that increased flow of tourism in regions where sufficient infrastructure is not in place have no negative impact on it. Given that Australia truly has the potential to become no. 1 tourist destination worldwide.

Recommendations:

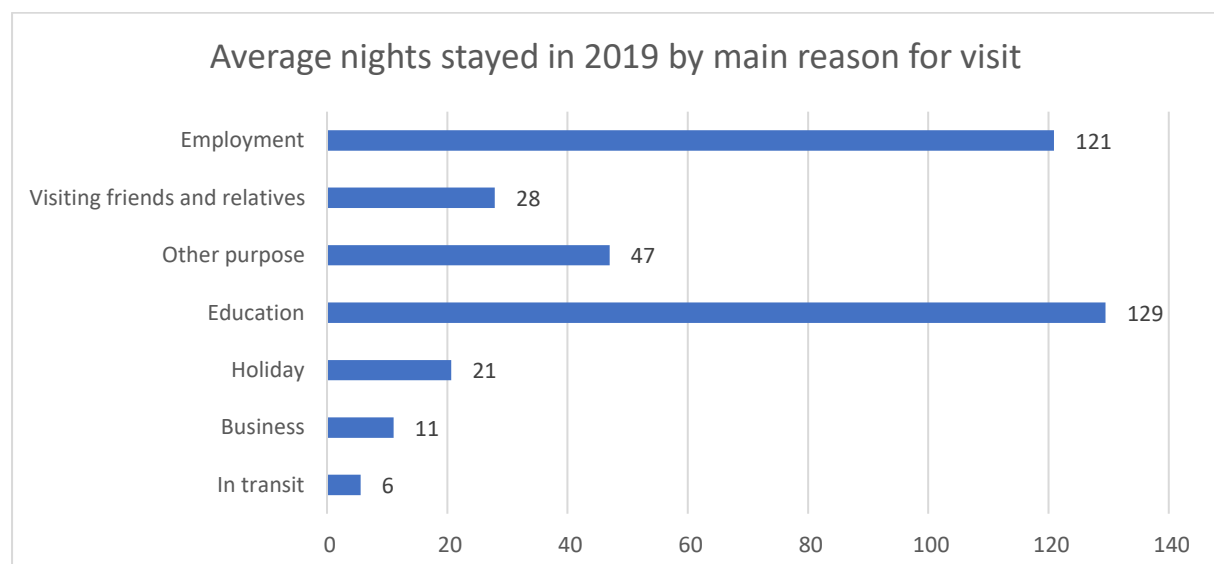
For more accurate data collection, each person should be considered as a sole visitor and should be counted separately. This may alter values like average expenditure per person, visitor nights, etc

Instead of only looking at total expenditure, actual in hand profit received by businesses should be considered. As mentioned already, expenditure is a dependant variable and can change due to several factors. This may result in either a positive, negative, or neutral effect on profitability.

Other expenditure items like travel insurance cost, visa fees should also be considered and ranked. High administrative & processing fees might also be a reason for the majority of international visitors to stay away from Australia.

Appendix :

Q 4 -



The graph represents the average night stayed by a visitor having different reasons of stay like a holiday, education, etc. Though students spend significantly higher nights in Australia those do not contribute to the tourism industry. Business travelers are the most profitable followed by high-yield travelers.

References :

Fig [1]. Tourism Research Australia (TRA), STATE OF THE INDUSTRY 2018–19, March 2020