Introduction

This paper discusses the characteristics of the New Zealand International Visitor Survey (IVS) and Domestic Travel Survey (DTS) datasets, with a focus on the looping structure of the surveys that enable detailed data on the itineraries of travellers to be collected.

The paper further explores how this looping is applied in each surveys, how the data is stored, the benefits, challenges and new uses that this data is able to support.

International Visitor Survey

The IVS captures 5,000 completed interviews of departing international visitors each year, using a Computer Assisted Personal Interview (CAPI) system.

The survey questionnaire has three main sections.

- The first section collects demographic type information – age, gender, purpose of visit to New Zealand, travel style etc. The types of things you can have ‘one’ of. This section is quick to complete.
- The second section is the looping section of the questionnaire, the section where the majority of the interview length is spent.
- The third section captures expenditure data and is also quick to complete.

Within the IVS, the respondent is initially asked for all the places they stayed overnight during their visit to New Zealand. In the ‘looping’ section of the questionnaire, a set of questions is asked for every place that the interviewee has stayed overnight, including:

- type of transport they used on the way to the location
- what activities they did while they were in each location
- what accommodation types they used in each location
- what day trips they made from each location

For each of the day trips mentioned, information on transport types used and activities undertaken is also collected.

Domestic Travel Survey

The DTS has a slightly different structure. The DTS is a survey of 15,000 domestic residents, conducted by Computer Assisted Telephone Interviewing (CATI).
The DTS asks for all trips conducted by domestic travellers, although only one of these trips is selected for further analysis. The questioning regarding this randomly selected trip has the same looping structure as used within the IVS. For every overnight location visited on that selected trip, questions are asked about:

- what type of transport they used on the way to the location
- what activities they did while they were in each location
- what accommodation types they used in each location
- what day trips they made from each location

**Benefits of the looping structure**

The inclusion of a looping section within both the IVS and DTS provides an itinerary for every each respondent, and it is this trip itinerary from which the value comes for data analysis. This means that when analysing the dataset you are able to look at a variety of sub-national results. Because the data is linked to the location, it is possible to look at the activities conducted within an area (say Northland) and compare this to the activities conducted in another area (say Southland).

**Challenges of a looping structure**

The main challenge of the looping structure is the impact on interview length. Dependent on the number of places that a respondent stays while visiting New Zealand, the interview length can be particularly long. Respondents are either happy to spend a lengthy period completed the survey in detail (most do) or they recognise that it will be a lengthy process and withdraw from the survey or move through this section quickly which can affect the quality of the response. The average interview length of the IVS is currently around 25 minutes, with around 60% of this time is due to the looping section of the questionnaire.

**Uses of the looping dataset**

While the design of both the IVS and the DTS is for the production of reliable national level statistics, the demand is increasingly for sub-national estimates of behaviour. For both of these purposes, the IVS and DTS are the best tools available.

As noted above, one of the best uses of this dataset is for the comparison of regions within New Zealand – answering the question of ‘how do visitors behave differently in different parts of New Zealand’. By recognising differences in behaviour across New Zealand, operators and infrastructure investors have robust data upon which to base planning. Investment occurs at a local level and investors are able to take the IVS and DTS datasets and identify the characteristics of visitors to their location of interest. When combined with other data sources, such as accommodation data or various sorts of non-tourism data, decision-makers can be well informed of the matter they are considering.

**Tourism Flows Model**

The Ministry of Tourism is currently developing a tool that uses the itinerary data available from the IVS and the DTS surveys.

This new tool, the *Tourism Flows Model*, presents how international and domestic travellers flow through the country based on the travel itineraries collected from the tourism surveys. It uses mapping software to present this flow visually based on a Geographic Information System (GIS) approach. Also included in the model are a range of other data sources including Transit New Zealand traffic count data and data provided by major transport
providers (such as ferry operators and airlines). New Zealand’s forecasts are included in the model so providing a future focus to the data presented.

The model produces estimates of the characteristics of people on different travel routes through New Zealand which is valuable for infrastructure planners within New Zealand. For instance, agencies like the Department of Conservation and local governments can estimate the needs for their resources along these routes, including such facilities as toilet facilities, signage and other infrastructure used by travellers.

At present the Model is under development and a process is being undertaken to address data quality issues (which in turn is informing the dataset development process). We will be releasing initially to central and local government agencies (who already run the GIS software) and more widely to the industry at a later time. We will be examining options for web application of this tool also.

**Conclusion**

The itinerary data that the looping structure of the IVS and DTS provides is critical to generating sub-national data from these surveys. Given that tourism is a regional activity, this data is of considerable importance to regions and to the tourism industry. The data is also able to support the reporting of information in new ways, such as the Tourism Flows Model, that assists in communicating data to users in ways that extracts a high level of value from the core input data.