Demand side surveys

Coming improvements in New Zealand:
The International Visitors Survey

International Visitors Survey

- Core element of tourism data, for:
  - Balance of Payments
  - Tourism Satellite Account
  - Forecasts
- 5,200 interviews per year
  - Computer-assisted face to face in airports
  - Costs around NZ$700,000 per year
- A “complex survey”
  - Weighted to population: stratified; clustered; post-stratified; imputation, outlier treatment
  - Treatment of exchange rates, package air fares…
  - Capital expenditure excluded
  - Complex treatment of group size
Weighting to population

• Poststratification weighting on:
  • Country group x 14
  • Purpose of visit x 5
  • Sex x 2
  • Age category x 5 (15+ years)
  • Length of stay x ~5 (complex)

• Complex weighting problem
  • $14 \times 5 \times 2 \times 5 \times 5 = 3500$ different combinations
  • Many combinations need to be “collapsed”
  • But this weighting likely to be retained

Weights in the IVS, 2011

Most weights are around 350, but some are as high as 8,000
Redevelopment 2011 - 2013

- First project in a planned five year programme to improve the tourism data set
- Address as many of the current issues as possible
- Dual run for six months planned to allow back-casting
Issues – meeting some needs

- Relatively small sample size means high degree of uncertainty
- OK for national, annual estimates
  - ±3% at 95% confidence level
- But not for:
  - Quarterly changes, and often even annual changes
  - Country of origin differences
  - Purpose of visit differences
  - Regional expenditure and activity
Issues – collection methods

• Sample selection issues
  • Unknown biases from respondent self-selection
  • Lack of business lounge subjects
  • Only three airports covered
  • Very poor on education
  • Nothing on cruise visitors

• Long interview times
  • 25 minute average
  • Can be more than one hour...

Issues – technical

• Significant design effect from flight-based collection
  • Sample errors 1.5 x bigger than simple random sampling

• Strata and weighting out of date

• Limited data reuse
  • Sample errors calculated without making replicate weights available
  • Limited public access to confidentialised unit records
Issues – position in policy debate

• Red herrings in policy debate
  • Focus on changes that aren't statistically significant
  • “why is country X average expenditure declining?”
  • Lack of stakeholder understanding of sampling uncertainty

• Focus on short term (year on year) rather than strategic trends

• Focus on nominal rather than real value

A version of this plot made a significant contribution to the policy debate in 2011
Why “significance” is important

- In 2011 industry figures were concerned Chinese per trip spend declined 10% to $3,200 in year ended September 2011 compared to YE Sep 2010.
- But this phenomenon was not significant
- It vanished with December 2011 data
So what are we doing?

- Precision and confidence
- Collection
- Technical
- Reporting practices

Precision and confidence

- Increase sample size
  - Aiming to bring relative margin of error down to ±10% for key market countries average spend
  - Effective sample will at least double
  - May also be able to introduce seasonally adjusted quarterly series
  - But unlikely to meet needs for regional expenditure estimates
- Re-examine design
  - Might be possible to reduce the design-effect from flight clustering
Collection issues - 1

- Shorten questionnaire to 14 mins
  - Remove cross tabulation of activity and region
- Move to online questionnaire
  - Only need to collect email address at airport; and in future even this may not be necessary
  - Meet airport stakeholder concerns
  - Remove business lounge sample problem (all addresses can be collected at “choke points”)
  - Reduce response burden
  - Change unknown respondent self-selection bias

Collection issues - 2

- Develop alternative methods for measuring education and cruise
- Rationalise with Visitor Experience Monitor
  - Make VEM an extra “module”
  - Could also have other modules…
- Bring in Queenstown airport
  - rapidly growing; has a different visitor profile
Technical

- Revisit design strata and clusters
- Preserve and make available replicate weights from sample error calculations
- Facilitate dissemination of confidentialised unit records

Approach to reporting

- Round the key figures
- Grey out non-significant changes
  - For media, strictly highlight only the significant differences
- Increase use of time series plots
  - focus on long term issues
- Constant prices when possible
  - develop price index for tourism goods and services
Redevelopment 2011 - 2013

• First project in a planned five year programme to improve the tourism data set
• Address as many of the current issues as possible
• Dual run for six months planned to allow back-casting
• Currently in middle of procurement