

Comparing the Australian and New Zealand Censuses – a Trans-Tasman experience

.id the population experts



About .id

.id is a company of demographers, housing analysts, forecasters and Census data experts who provide tools and consulting services for Local Government.

.id stands for 'informed decisions'. We provide government and community decision makers with readily accessible, easy to use information about their changing places.

.id believes by making demographic information accessible and promoting evidence-based decision making, we are contributing to a fairer and more sustainable society.

.id online community profiles are the industry standard for Census dissemination in Australia. We have over 270 local government clients covering more than 75% of the Australian population. We now have these resources for NZ local government, and have 18 local government areas and regions as clients.

In 2010, .id moved into the New Zealand market.

We thought due to the similarities between our countries, we could easily move our socio-demographic suite of planning tools across the Tasman.

However we encountered some difficulties....



1. The approach to geographies is different between Australia and New Zealand.

- ▶ In Australia, we offer the ability to do custom geography (not available with ABS).
- ▶ Data is ordered at the smallest geographic level, and aggregated up, splitting separately for each Census period, the CDs or SA1s, to match the client's defined boundaries.
- ▶ In Australia we have multiple census years (initially 3 Census periods, this built to 4, 5 and now 6 periods. We now present 25 years of demographic change (2016 back to 1991).

1. The approach to geographies is different between Australia and New Zealand (continued).

StatsNZ provide different services to ABS:

- ▶ StatsNZ release data for Census Area Units, allowing users a suburb level experience.
- ▶ StatsNZ each Census released data on current boundaries, back-adjusting two census periods.
- ▶ We focused on our simple yet effective way of presenting and analyzing data, called “Dominant-Emerging Analysis”.
- ▶ Understanding changing populations helps councils to improve their analysis.
- ▶ Also personalized service and demographic assistance to all our LG clients.

2. Differences in questions

Data in the NZ Census which would be useful in the Australian Census?

- ▶ Smoking rates.
- ▶ Sources of Income
- ▶ Pre-calculated time series



2. Differences in questions

Data in the Australian Census which would be useful in the New Zealand Census?

- ▶ mortgage repayments
- ▶ more detailed ancestry information



3. Confidentiality: Difference in approach

Both ABS and Stats NZ take confidentiality very seriously, and protect individual data very well. But they do it quite differently.

ABS treatment of confidentiality

Pre 2006 - Small cells with a 1 or 2 in them were randomly adjusted to 0 or 3

2006-2011 - “Perturbation” applied, making small adjustments to all cells, but additivity retained, just as many cells adjusted down as up

2016 - “Perturbation” continued to be applied, but without “additivity” adjustments.

3. Differences in confidentiality – the StatsNZ approach

StatsNZ treatment of confidentiality

2013 - Eight confidentiality rules applied.

<http://archive.stats.govt.nz/Census/2013-census/methodology/confidentiality-how-applied.aspx>

- ▶ All numbers are rounded to multiples of 3.
- ▶ Depending on the complexity of the table (number of crosstab variables) and the average cell size, cells with less than 6 respondents may be suppressed. Suppressed cells are marked with a “C”.
- ▶ This can cause problems in databases not set up to work with strings
- ▶ While it’s clear which cells are suppressed, calculating percentages becomes a problem.

4. Changes to the Australian 2016 Census

Removal of Additivity

- ▶ The removal of additivity caused issues with our 2016 Census data because small numbers were now randomly set to zero, (similar to the Stats NZ confidentiality model but without the convenient “C” designation so you could identify adjusted cells).
- ▶ Notification of the additivity change was too late to allow adjustment of custom orders. When we got our data order for 2016 Census, we were “missing” almost 2 million people, or 10% of population, due to the new rules.
- ▶ Had to reorder a number of our datasets
- ▶ Flexibility was impacted.

5. Changes to the 2016 Australian Census

... and changes to Journey to Work coding

- ▶ In 2016, the ABS decided to impute work destinations for those who didn't state one, or it couldn't be coded. Done by comparing to other similar records.
- ▶ This change meant 2016 data and 2011 data can't be directly compared on a place of work basis.
- ▶ Change not well publicised, so many people make the mistake of comparing – leading to incorrect conclusions about the magnitude of increase in working population.
- ▶ We sourced experimental imputed data from 2011 from ABS unpublished data. A huge job as it wasn't available at Local Government level and needed to be concorded.

6. To the future: The Australian 2021 Census submissions process

- ▶ ABS has just been through a comprehensive topic consultation process.
- ▶ As representatives for close to half the Local Government Areas in Australia, .id was in a unique position to advocate for topics on behalf of our clients.
- ▶ We canvassed our clients' views as well as gathering information gleaned during training and presentations across Australia
- ▶ We collated this into 7 submissions, of which 5 suggested new topics, one for retention of a planned topic removal, and one for removal of a topic.

6. The Australian 2021 Census submissions process (continued)

- ▶ Overall the ABS received 450 submissions. They make interesting reading (315 published)

https://consult.abs.gov.au/census/census-topics/consultation/published_select_respondent

- ▶ There is clearly a strong level of public interest in the Census despite the detail required when submitting. Submissions required the following detail plus more.
 - The need for data at a national level
 - The impact on respondent burden
 - The importance of cross-tab and small area information,
 - The lack of alternative sources

7. The Australian 2021 submissions process - results

How did we do? – as a private sector organisation we don't get automatic access to stakeholder meetings etc..

- ▶ **Three of our seven proposals were supported**, and will be investigated as new topics Including some of the new Census topics.
- ▶ A further two topics were not supported in terms of the proposed change or expansion, but will be retained in current form.

7. The Australian 2021 submissions process - Changes to questions

More detail on disability and need for assistance

- ▶ the ABS are going to review this question

Volunteering

- ▶ ABS are retaining this topic without improvement.

Journey to Education

- ▶ Where people go to education and how they get there - to be tested for 2021.

Long-term or chronic health conditions

- ▶ ABS is looking at how to ask these questions in the future.

7. The Australian 2021 submissions process - Changes to questions

▶ Method of travel to work

- ▶ Our suggestion of including “ride sharing service” as a category was not supported.

▶ Number of motor vehicles per household

- ▶ The ABS have confirmed the removal of this question in the 2021 Census. This will impact Local Government clients, who use this data in their planning processes, particularly for new developments, and working out developer contributions.

▶ Domestic work

- ▶ An underutilized topic – we suggested “drop it” to make way for more useful topics. The ABS didn’t agree, and are keeping the question on domestic work which has been in the Census since 2006.

7. The Australian 2021 submissions process - Changes to questions

Other new or changed questions include:

- ▶ Sexual orientation and gender identity
- ▶ Shared care of children within families
- ▶ Aboriginal/Torres Strait Islander cultural identity
- ▶ Defence force service.

8. Where to now in New Zealand?

- ▶ The delay in 2018 Census data in New Zealand has caused some issues for our clients.
- ▶ Increased demand for our forecasts, which provide more detail, nuanced information independent of Census results.
- ▶ We are ready to work with the new geographic areas from 2018 Census.
- ▶ And we can have the data on the sites soon after release
- ▶ Including some of the new Census topics.
- ▶ We will work with our clients to get the best result in future.

.idconsulting

Bringing together in depth analysis:



demographic



economic



housing



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