KŌTĀTĀ INSIGHT

BEHAVIOURAL ECONOMIC & SOCIAL ANALYSIS

NZGSS User Needs:

the wellbeing agenda and the IDI

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NZGSS USER NEEDS: THE WELLBEING AGENDA AND THE IDI

Purpose

This note discusses the user need for information on wellbeing outcomes in New Zealand and examines the implications of this for the New Zealand General Social Survey (NZGSS). In particular, the note focuses on the impact of changes in the policy environment (a more explicit focus on wellbeing) and in the data environment (particularly the creation of the IDI) on the suitability of the current NZGSS sample frame, frequency, and content.

Background

Although not the only thing that governments care about, wellbeing is a core focus for government policy. This is reflected in the explicit policy direction of the current government, but is also inherent in any meaningful analysis of the outcomes of social and economic policy. This latter concern with wellbeing outcomes is enduring, and is reflected strongly in international statistical frameworks (Sen, Stiglitz, Fitoussi, 2009; OECD, 2011; UNECE, 2014) as well as international agreements around policy goals such as the SDGs (UN, 2015). In a New Zealand context the Social Report was developed in 2001 to help better monitor social policy outcomes, while Treasury's Living Standards Framework has explicitly situated economic policy in a wellbeing context since its introduction in 2011. More recently, Treasury has refreshed the Living Standards Framework to bring it more into line with international standards (Smith, 2018), while major government agencies such as Oranga Tamariki have invested significant resources in modelling wellbeing outcomes to support policy and delivery.

The primary source of data on wellbeing outcomes in New Zealand is the NZGSS. The survey was commissioned as part of the 2005 Social Statistics Programme, and was explicitly built around the Social Report wellbeing framework. The primary aim of the survey is to provide measures of different wellbeing outcomes for the same individual, allowing the analysis not only of wellbeing outcomes not measured elsewhere, but also of the joint distribution of wellbeing outcomes. A cross-sectional survey with a sample size of approximately 8500 people aged 15+ living in private dwellings, the NZGSS is carried out every second year. The first wave of the NZGSS was in 2008, and the 6th wave is currently in the field. From 2008 to 2012 the content of the NZGSS remained largely fixed, but there was a significant update to the content in 2014, with changes to both the substantive content and question wording. Since 2014 the NZGSS has been structured around a core survey and rotating modular content.

Issues with the NZGSS

The NZGSS positions New Zealand comparatively well in terms of the ability to monitor wellbeing outcomes at the national level compared to many other countries (Fleischer, Smith, and Viac, 2016). However, there are a number of limitations associated with the current shape of the NZGSS that should be addressed. These are of sufficient importance to warrant additional investment in the NZGSS as well as changes to the broad content and structure of the survey. These issues are discussed below under the following headings:

- timeliness;
- sample size; and
- content.

Timeliness

The frequency of the NZGSS was originally set on the basis that most of the outcomes captured by

the survey do not move by a large amount from year to year. As a result, Statistics New Zealand opted for a two yearly frequency. In fact, the original decision was in some respects poorly conceived as it aligned badly with the main purpose for which the survey was commissioned (to inform the, then annual, Social Report). Beyond this, the assumption that the most important statistics in the NZGSS were of the sort that do not move much from year to year has proved to be empirically false (OECD, 2013, p37) and, even were this true, the assumption that small annual movements implies that infrequent measurement is adequate is false (OECD, 2013, p154).

The two yearly timeframe of the current NZGSS raises particular problems in the current environment. Implementing the Treasury's Living Standards Framework will require annual (or more frequent) comment on wellbeing indicators to support the budget process (Smith, 2018). However, the proposed indicators for the Living Standards Dashboard draw heavily on the NZGSS which are not available on an annual basis. ***Meeting Treasury's reporting requirements are therefore likely to require annual NZGSS data***.

Beyond the specific needs of the Treasury, the two yearly frequency of the NZGSS creates significant policy risks. The current NZGSS timing is such that information on the impact of a major policy shock such as the 2008 financial crisis will not be available to New Zealand governments in sufficient time to guide policy. For example, should such a shock occur in September 2018, results on the impact of the shock would not be collected until 2020, and data would not be available until early in 2021. Despite the shock occurring in the first year of the current government, ***no meaningful information on the impact of the shock would be available until after the next election***. There is a time lag of potentially nearly three years between the impact of a major shock on New Zealand society and the first availability of meaningful information from the NZGSS should such a shock occur towards the end of an NZGSS collection year or early in the following year. This three year lag is particularly problematic given New Zealand's three year parliamentary term.

Annual data collection for the NZGSS would substantially address these issues. Based on end-of-year publication the maximum time between a shock and information becoming available would drop to approximately 18 months. However, in practice it is likely to be able to reduce this even further. Annual data collection would mean that the NZGSS is continually in the field, and it would be possible to publish results on the past 12 months every quarter as is done with labour market statistics. This would mean that information on the impact of a shock would become progressively clearer over the period following the shock, with a full picture emerging within about 15 months. Hence, ***doubling the NZGSS frequency to annual would more than halve the time lag associated with NZGSS data***.

Sample size

The current sample size of the NZGSS is approximately 8500 individuals per wave. This is sufficient to produce robust national estimates for outcomes measured in the NZGSS and to allow analysis of these outcomes by the main demographic sub-groups (ie age, sex, ethnicity, family type etc). While the current sample size is adequate for the purposes of producing a meaningful information release by Statistics New Zealand, there is a strong case that a large sample size is warranted. There are three reasons for this. First, ***there is a strong policy interest in the ability to output descriptive statistics for small population groups***. Information on the population with poor outcomes and on regional outcomes is of particular interest here. Second, ***there is a strong analytical interest in the joint distribution of outcomes and multiple disadvantage***. Sample size is currently a major limitation in looking at multiple disadvantage despite this being an area of major policy interest. Finally, ***the current NZGSS sample size is inadequate to effectively leverage the IDI*** to support the analysis of the impact of social services on the wellbeing of service recipients. Given that the NZGSS is exceptionally well-aligned to complement the measures in the core of the IDI when looking at the impact of social services, this is a major drawback.

Small population groups

Wellbeing is currently a major focus for government policy. This is likely to be enduring given that

much of the current work on wellbeing was started under a previous government and because international statistical agencies (OECD, UNECE, Eurostat) are investing significantly in building wellbeing measures into the broad structure of official statistics. The policy need for wellbeing data, however, is not limited to broad population outcomes or simple descriptive analyses of the main demographic groups. In fact, ***the primary policy uses of wellbeing data focus on smaller sub-populations that are difficult to measure within the existing NZGSS sample***.

There are two areas of analysis where smaller sub-populations are of particular importance. The first simply reflects the fact that most social policy is targeted at those with poor outcomes (roughly the bottom quartile or quintile of the population). Meaningful policy analysis requires not only estimating the size of this group or average wellbeing outcomes for people at the bottom of the wellbeing distribution, but also the ability to produce meaningful estimates of poor outcomes by different demographic groups. Of particular significance here is the ability to make robust inferences about changes over time in the proportion of the population with poor outcomes accounted for by different demographic groups (or the proportion of demographic groups with poor outcomes). For example, there might be a policy interest in whether the proportion of pacific people reporting low trust in the police has increased over time and whether this change is statistically significant.

In addition to demographic analysis, there is also a strong policy interest in the analysis of wellbeing outcomes at a regional level. The Local Government Act will shortly have concern for wellbeing reintroduced, and there is a strong policy focus on the state of New Zealand's regions and regional development. Currently the NZGSS can provide meaningful estimates at the level of roughly Auckland, other urban, and non-urban. This is inadequate to inform any regional analysis, although the policy interest is strong. Even if much of local government reporting ultimately derives from specific local government datasets (eg the Big Cities Quality of Life Survey), there will be a strong demand for comparable regional data to serve as a baseline. Beyond this, some regions – such as Northland and East Cape – are likely to remain a focus for policy for some time given existing evidence of disadvantage in both regions compared to the New Zealand average. There is therefore a strong need for the ability to monitor wellbeing outcomes at this level.

Multiple disadvantage

Multiple disadvantage occurs when a person suffers poor outcomes in more than one dimension of wellbeing. This is of high policy interest since a society where disadvantages are scattered widely across the population is very different from one where the same few people suffer disadvantage across multiple wellbeing dimensions. MSD has a current research programme focusing on families with multiple disadvantage (eg Krassoi Peach and Cording, 2018) which has been instrumental in highlighting the proportion of total disadvantage accounted for by families with multiple disadvantage. This analysis has, in turn, been influential with the Treasury, which is using analysis of multiple disadvantage to inform priorities for the 2019 wellbeing budget. Additional similar work is currently being undertaken jointly between MSD and the SIA looking at the relationship between income and material disadvantage.

The analysis of multiple disadvantage necessarily involves looking at small population groups. If a poor outcome is defined as being in the bottom quintile of the distribution then we would expect only 4% of the population to have two disadvantages, 0.8% to have three disadvantages, 0.16% four disadvantages and so on. In fact, disadvantage is more concentrated than one would expect from a random distribution, but overall numbers remains small. Krassoi Peach and Cording, for example, calculate that 17.6% of families have three or more disadvantages, but, these families account for roughly half of total disadvantage. These estimates are, however, sensitive to estimates of the size of the population with many disadvantages. ***With current NZGSS sample sizes, estimates of the proportion of families with more than three disadvantages are subject to large margins of error***.

The ability to measure multiple disadvantage accurately and to identify the characteristics of those people affected by multiple disadvantage has immediate policy relevance. It is this group that accounts for most of the disadvantage in New Zealand society, and which has the highest

costs in terms of social service provision. Information on multiple disadvantage is important both at a strategic level – such as setting budget priorities – and also at a service delivery level in terms of understanding the high need population.

Using the NZGSS in the IDI

Providing high quality public services involves understanding what works to improve outcomes for service users. This means understanding how social services affect the wellbeing of New Zealanders. While full scale programme evaluations can often collect data specifically for the purposes of establishing what works, this is not always possible or affordable. Only a small proportion of programmes are able to be independently evaluated at any point in time, and many government services are simply not suitable for traditional programme evaluations because access to the services in question is a legal right and it is not possible to run an experimental evaluation.

The creation of the IDI raises the possibility of looking to existing data to better understand the impact of government services. However, although the IDI provides a good picture of a person's interactions with government agencies, the administrative data in the IDI contains relatively little information on peoples' wellbeing. The exception to this is the information provided by the household surveys included in the IDI: especially the NZGSS. The NZGSS complements the IDI administrative data by providing information on the wellbeing outcomes achieved by people, as well as a range of information on potential causal or contextual factors not reflected in the administrative data.

The information from the NZGSS has the potential to be used in the IDI in a number of different ways to leverage the administrative data to create a better picture of the impact of social services and policy interventions on peoples' wellbeing. For services where there is a clear transition point defining access to the service, such as social housing or medical interventions, it is possible to link IDI records on the receipt of a service to NZGSS data on outcomes. Using the fact that the timing of NZGSS interviews is essentially random with respect to receipt of the social service, it is conceptually possible to obtain a picture of average wellbeing outcomes before and after receiving the service (Social Investment Agency, 2018a). With an adequate sample size it is possible to apply regression discontinuity or similar techniques to obtain estimates of the causal impact of social services on wellbeing outcomes (Social investment Agency, 2018b). ***The ability to estimate the causal impact of social services on wellbeing outcomes using existing data is of very high value to social policy, but sample size currently represents a major constraint on the type of services this can be applied to***.

With the current NZGSS sample size, and pooling across four waves, only policies for which there are more than 30,000 transitions per year produce a moderately viable sample of NZGSS responses. In other words, if 30,000 New Zealanders receive a government intervention each year, it is possible to obtain a useful sample by pooling across four waves of the NZGSS (c100 observations for before and after the intervention in the pooled data). More robust analysis is possible with interventions involving more than 50,000 transitions per year. This limits the use of the NZGSS to only the largest social sector programmes. However, a sample size and frequency on the same order of magnitude as the HLFS would substantially transform this and would enable relatively robust estimates of the impact of interventions affecting fewer than 10,000 people per year.

In addition to looking at the transitions, the NZGSS is also likely to be important in calibrating measures of wellbeing outcomes derived entirely from administrative data. Measures of wellbeing outcomes derived entirely from administrative data are valuable for making policy decisions because they potentially capture the entire New Zealand population. The Child Wellbeing Model developed by Oranga Tamariki is an example of this sort of use of administrative data. However, without an unbiased measure of wellbeing outcomes against which a synthetic measure constructed from administrative data can be calibrated, it is not possible to have confidence in the validity of such measures. An adequate sample size for the NZGSS is valuable for this sort of function both to enable calibration of outcomes against the population of interest

where the total sample size is small (e.g. children with poor outcomes) and because the validity of synthetic measures of this sort has a relatively limited half-life (Lazer et al, 2014). ***Timely high quality measures of wellbeing outcomes with an adequate sample size are essential to effectively leveraging the IDI to use administrative data to monitor wellbeing outcomes***.

Way forward

In any attempt to build a coherent statistical infrastructure around wellbeing, a general social survey represents a critical asset (Fleischer, Smith, and Viac, 2016). In the New Zealand context, this is represented by the NZGSS. While the broad content and structure of the NZGSS aligns well both with international recommendations and New Zealand data needs, sample size and timeliness are currently significant limitations. It is the responsibility of Statistics New Zealand, in consultation with the wider community of data users, to determine the scope of any steps taken to address these issues. Nonetheless, it is useful to set out some idea as to the perceived need from the perspective of a data user.

Required sample size

The concept of a required sample size is something of a misnomer: holding all other things equal a larger sample size is always preferable. However, other things are not equal. Larger surveys cost more and inflict a larger respondent burden. It is therefore a matter of balancing statistical and policy needs against an acceptable cost. As outlined in the earlier part of this note, the current NZGSS sample size is too small to support the types of analysis needed to underpin government policy. While it is not possible to provide a definitive answer to the ideal sample size for the NZGSS, several of the data needs discussed earlier point in the same general direction. In particular:

- There is a clear need for annual data
- The NZGSS should be able to provide robust analysis for the tail of poor outcomes/multiple disadvantage (c5% to 10% of the population)
- Using the NZGSS effectively in the IDI requires samples that generate 200 to 400 NZGSS respondents for a transition affecting 10,000 New Zealanders annually based of pooling across four survey waves

All of these factors suggest that ***a sample size and frequency roughly of the same order as the HLFS would be desirable.*** This implies covering about 30,000 households and obtaining about 30,000 personal responses on an annual basis. At this sample size and frequency the survey could be continually in the field, and it would be possible to release statistics annually, or even update them on a quarterly basis. While the idea of including a one year panel component in the sample design (as is the case with the HLFS) would be welcome from a pure research point of view, the policy need for panel design is less compelling (particularly since many transitions of interest can be picked up in the IDI administrative data). The total burden and complexity of the survey might still, therefore, be lower than is the case for the HLFS even with the larger sample size.

Content

If the NZGSS sample size is being reconsidered, it would be timely to reconsider the NZGSS content. When considered alongside the IDI, for example, there are aspects of the NZGSS that are essentially unnecessary as they can be captured from administrative data in the IDI. Information on income, labour market participation, and service usage/access, for example, can all potentially be addressed in this way. Alternatively, some information that is currently not the main focus of the NZGSS increases significantly in value in the IDI. In particular, the ability to identify all members of the household and link them in the IDI is essential for much analysis.

One key area where it might be possible to make significant savings in terms of both fiscal costs and respondent burden that would offset some of the impact of a larger sample size is in the rotating modular component of the NZGSS. With the exception of the New Zealand Time Use

Survey – which collects unique information not available from other sources – the rotating modules attached to the NZGSS are of little value. There is little meaningful analysis that can be undertaken with a one-off descriptive survey, and the time frame between repeats of different waves means that data is likely to be years out of date when needed and time series analysis is difficult. In addition, many of the questions in the rotating modules to date (e.g. the 2014 social connectedness module) are difficult to use, poorly aligned with policy needs, and lack robust evidence of external validity. For these reasons, there would be a strong case to be made for dropping most of the rotating core modules and streamlining some of the NZGSS core content to focus specifically on those wellbeing outcome measures not captured in the IDI as part of the process of reconsidering the NZGSS sample size.

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