Australian Bureau of Statistics

METHODOLOGICAL NEWS

A QUARTERLY INFORMATION BULLETIN FROM THE METHODOLOGY AND DATA MANAGEMENT DIVISION

June 2008

Sample Reductions in MPS, Boom-Time for HSM

The Australian Statistician Brian Pink recently announced budget savings for the 2008/09 financial year that affected most areas of the Australian Bureau of Statistics (ABS). One of the significant components of these savings lies in a 22 per cent reduction to the sample size in the Monthly Population Survey (MPS). The Labour Force Survey (LFS) is the most significant survey to be run off the MPS but there are also monthly supplementary surveys that will be affected by these sample cuts.

The 2006 MPS redesign, phased in from November 2007, was the first instance of significant sample reduction in the MPS for some time. The introduction of Composite Estimation (CE) for LFS in April 2007 resulted in sampling error reductions on key LFS estimates. These sampling error reductions were translated into cost savings by reducing the sample for the 2006 design and maintaining sampling error levels prior to the introduction of CE. The distribution of sample across states was also affected by the 2006 MPS redesign, with Northern Territory (NT) coming out with more sample and Western Australia (WA) with less. Unfortunately MPS supplementary surveys do not utilise CE as they are run in a single month only. The savings realised in the LFS by reducing sample and using CE simply meant increased overall sampling error in the MPS supplementary surveys.

The 22 per cent sample cuts are much less discriminating - they are effectively blanket reductions across all states and territories. However, there are no innovations in estimation to counter-balance the reduction in sample, so all estimates, including those from LFS and MPS supplementary surveys, will be subject to larger sampling errors. Recent work by Household Survey Methodology (HSM) has looked at best anticipating the impact on LFS estimates under different phase-in strategies as well as assessing operational issues associated with such a large reduction in sample size to an ongoing and historical survey.

The 2006 MPS redesign team had already engineered which Private Dwelling (PD) deselections would need to take place to implement the proposed 22 per cent sample cut. The first component of HSM's work into this sample cut was to generate Special Dwelling (SD) and Indigenous Community Framework (ICF) deselections. SD deselections were straightforward in that the set of SD selections were skipped through, with roughly 1 in 5 SD groups being deselected. For ICF, the task was not as straightforward because in states where Indigenous communities are selected, only NT had more than 2 communities initially selected. In NT, 3 from 14 communities were randomly deselected. For South Australia (SA), Queensland (Qld) and WA, where only 1 or 2 communities were selected in the first place, a strategy has been put in place for interviewers to systematically deselect 1 in 5 dwellings from the selected communities.

Some work went into assessing the immediate impact on LFS estimates resulting from different phase-in strategies. Using algebraic and empirical information, a longer phase-in period allows for greater savings and less impact on month-to-month movements under CE, but yielded a greater cumulative increase in sampling error. It was decided to use a single month "flip-in" approach as it is operationally simpler, especially with regards to interviewer management, yet is likely to yield a larger impact on movement estimates in the month of the flip-in. This strategy does, however, allow for supplementary surveys being run up to June 2008 to be unaffected by the 22 per cent sample reduction.

Up until now, the LFS has not been susceptible to small cells (those cells with small sample counts) during weighting due to its large overall sample size. With the 2006 sample redesign and subsequent 22 per cent sample reduction, an assessment was undertaken on how likely the LFS was to encounter benchmark cells with small or zero sample count. Binomial probabilities were used to simulate how often this may happen under the reduced sample and as a result some benchmark cells have been recommended for collapsing in LFS, as the LFS processing team does not have sufficient time every month to remedy small and zero cells on a case-by-case basis.

For more information about reduced sample in the MPS, please contact Justin Lokhorst on (08) 8237 7476.

Hedonic Price Index Construction for Laptop Computers

Hedonic regressions for personal computers (PCs), in conjunction with a traditional matched model approach, are currently used in the Producer Price Indexes (PPI). Hedonic regression is a method for predicting the price of a good through the characteristics that make up that good. In the area of PCs, for example, sales information on a range of computers is available, together with information on each PC's characteristics such as RAM size, speed, hard drive size, etc. Through standard

regression techniques, one can model the relationship between the price of the good and these characteristics.

The use of hedonic regression in a price index is motivated primarily by a good having a high rate of quality change. This means that the number of one-to-one matches in successive months is reduced, and so traditional matched model approaches become less effective. The bias that is inherent through this reduction in matches can be somewhat reduced by estimating the prices of those goods that are not matched; this is why the hedonic regression is used.

A review was recently conducted by the Prices Branch recommending that the timing was appropriate to investigate the possibility of extending the hedonics regression to laptop computers, as laptop sales have been very strong in the last couple of years. On top of this possibility for a laptop hedonic price index, the desktop hedonic regression also requires a review to test its robustness and applicability in the current environment. The Analytical Services Branch (ASB) has started to assist in this review and in investigating the feasibility of introducing a hedonic price index for laptops. For laptops, it is expected that the form of the regression equation will be similar to that for desktop computers, with slight changes in the explanatory variables included.

For more information, please contact Steve Lane on (02) 6252 7833 or Charity Liaw on (02) 6252 5578.

Luxembourg on a Shoestring - 2008 METIS Work Session on Statistical Metadata

METIS is a joint UNECE/Eurostat/OECD initiative on statistical metadata, which promotes the implementation of metadata systems in national statistical offices. METIS maintains a Common Metadata Framework intended to provide guidance to NSOs in choosing the right standards, models and approaches in developing their metadata systems. It also facilitates collection, discussion and dissemination of best practices in the field of statistical metadata focusing on the role of metadata in the corporate management of statistical activities, and practical implementations.

Together with the OECD and Eurostat, the UNECE organises a work session on statistical metadata every two years. In April this year, the three organisations held the METIS 2008 conference in Luxembourg. The conference was attended by about 72 participants, from the national statistical agencies of over 30 different countries.

Several ABS Data Management staff also attended the conference via a video conferencing link. While the time difference with Luxembourg (currently eight hours behind Australia) meant late nights for the participants at this end, it did allow more ABS staff to participate than would have been possible if a representative had been sent.

About a month prior to the conference, UNECE collected case studies from statistical agencies, who described their experiences with developing and implementing statistical metadata systems. These case studies were presented by each country at the conference, along with presentations around topics such as the Common Metadata Framework, Metadata Common Vocabularies, and the implementation of SDMX and ISO 11179-based registries.

The ABS case study outlined the history of metadata use in the ABS over the past 15 years. It included the beginning of metadata, and creation of the early data dictionaries, through to current and future planned projects in Data Management, which will enhance the use of common metadata frameworks throughout ABS.

The development of common metadata frameworks is important to the effectiveness and efficiency of statistical operations, in particular the quality and comparability of the statistical outputs. Most applications previously developed in the ABS were isolated applications, resulting in multiple instances of underlying metadata needing to be captured, registered, stored and validated throughout statistical lifecycles and across different ABS areas. The introduction of a more standard use of common metadata means better support for end-to-end facilities in the statistical infrastructure.

The ABS presented its case study via the Video Conference link and received very positive feedback. There was a lot of interest in the current and planned work, particularly the "2020 Vision", a paper currently being developed to encapsulate the longer term ABS aspirations for metadata.

Overall, those who participated in the video conference sessions found the conference to be very stimulating, with staff able to compare ABS with other international statistical agencies, as well as to gain new ideas and perspectives on metadata implementation initiatives.

For more information, contact Simon Wall on (02) 6252 6300, or access the following websites:

- METIS Common Metadata Framework: http://www.unece.org/stats/cmf/
- METIS 2008 Conference papers: http://www.unece.org/stats/documents/2008.04.metis.htm
- ABS Case Study: http://www.unece.org/stats/documents/ece/ces/ge.40/2008/wp.22.e.pdf

NATSISS 2008 Sample Design Uses Meshblocks

The Indigenous population of Australia is roughly 2.3 per cent the total population. In survey terms, the Indigenous population is a rare population. There is no list of Indigenous persons within Australia, so conducting a survey of the Indigenous population can be a challenging and costly exercise.

ABS Indigenous surveys have two components. The non-Indigenous Community component uses a screening mechanism to assist in selecting the sample. Census Collection Districts (CDs; a geographic unit) are

selected and dwellings within the CD are approached (or 'screened') to determine if an Indigenous person resides in the dwelling. For example, under this design, screening approximately 230,000 dwellings would result in an expected sample size of 5,100 responding Indigenous dwellings, equating to roughly one responding Indigenous dwelling per forty-five dwellings screened.

Recently, a new geographic unit called a meshblock has become available. Meshblocks are generally much smaller than CDs, being roughly one-seventh the size of a CD. In designing the sample for the 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS 08), the Household Survey Methodology Section investigated the possibility of using meshblocks to improve the efficiency of the NATSISS 08 sample design. It was hoped that using meshblocks would result in a large reduction of screened dwellings for the same level of survey accuracy.

The proposed sample design was to use meshblocks as the secondary stage of selection. That is, CDs are selected; then within CDs, meshblocks are selected and screened for Indigenous dwellings. Meshblocks expected to contain no Indigenous dwellings (from Census data) were removed from the coverage of the survey. Under this design, 5,100 responding Indigenous dwellings could be expected to be obtained by screening approximately 137,000 dwellings - equating to roughly one responding Indigenous dwelling per twenty-seven dwellings screened. However, due to the high mobility rate of Indigenous persons, it is expected that some of the meshblocks removed from the coverage of NATSISS 08 will contain Indigenous persons by the time NATSISS 08 is in the field. The level of undercoverage (i.e. proportion of Indigenous persons excluded from the coverage of NATSISS 08) was estimated to be approximately 8.7 per cent across Australia, but was particularly high in certain parts of Australia, such as Victoria, where the undercoverage was estimated to be 17.1 per cent. This level of undercoverage was not acceptable.

Meshblocks expected to contain no Indigenous dwellings (from Census data) can be included in NATSISS 08 to reduce the undercoverage, however their inclusion increases the level of screening. Subsampling these meshblocks results in a lower increase in the level of screening and reduces the undercoverage, but increases the sample error, decreasing the survey accuracy. An acceptable balance of screening level, undercoverage and sample error is required and was achieved by careful adjustment of these factors.

The resulting NATSISS 08 sample design is expected to have undercoverage of 4.4 per cent and to obtain 5,100 responding Indigenous dwellings from a screened sample of approximately 154,000 dwellings, being roughly one responding Indigenous dwelling per thirty dwellings screened. This equates to a saving of 76,000 dwellings screened for the same expected sample size.

For further information about the sample design of NATSISS 08, please contact Jennifer Webb on (02) 6252 5944.

Automated Industry Coding Application for New Business Registrations in Australia

The Australian Bureau of Statistics (ABS) uses the Australian Business Register (ABR) as its primary source of information to identify new businesses. The information from new businesses flows through to the ABS Business Register which is used as a register or frame for business surveys run by the ABS.

During the process of registering with the Australian Tax Office (ATO), businesses are required to identify their main industry from a pick list and also to provide their main business activity as a free text written response. The pick list of industries is based on the industry divisions as defined by the Australian and New Zealand Industry Classification (ANZSIC).

The automated coding process developed by the ABS in consultation with the ATO was developed to help improve the quality of the ANZSIC coding, reduce manual coding and the time required for processing information received from clients. The Autocoder was implemented for ANZSIC coding of employing businesses in 2004 and for non-employing businesses in 2006.

The Autocoder uses an ‘exact word’ matching algorithm through an index file with codes which are regularly updated. This process ensures better control of the links between codes and descriptions. However, continued investigation is occurring in the ABS into using information retrieval technology for searching to improve match rates, as significant savings can be made at an organisational level.

The Autocoder uses both the main activity and main industry information from the Australian Business Number (ABN) registration form. The Autocoder matches the activity description (or part of it) against an index file of activity descriptions and assigns a four digit ANZSIC code.

The index file contains word string entries of activity descriptions and is based on the primary activity descriptions in the ANZSIC publication. To increase coverage rates, entries are added based on knowledge gained about how businesses describe their activities.

The first stage of the auto coding process involves running the activity description across parsing rules. Parsing rules enable the activity description to be changed into a more useable description to be used by the Autocoder, thus improving the probability of the entry being matched to an ANZSIC code.

During the matching process, multiple matches can occur when the Autocoder matches two or more basic words in an activity description with entries in the index file with different ANZSIC codes. Metadata are used to avoid common multi-matches by identifying certain basic words (or combinations of basic words) and prioritising them to enable common combinations of activity descriptions to be coded.

Checks on the quality and accuracy of the index and associated coding files are regularly performed. In 2007, the Autocoder coded approximately 50 per cent of new business registrations to a quality level of approximately 97 per cent.

The ABS seeks to maintain a high quality ANZSIC coding by the Autocoder by undertaking 12 monthly data updates. Regular updates to the Autocoder files are necessary to reflect current ANZSIC coding methodology, increase coverage rates, allow for efficient coding and ensure that the quality of the coding does not deteriorate.

For more information, please contact Grant M Arnold on (02) 6252 6262.

Cohort Analysis of Children's Sports Participation

Many experts recognise that children's participation in sports is beneficial to health and physical fitness and also facilitates the development of social/interpersonal skills and psychological well-being. This is why information on the range, frequency and duration of sporting activities, the characteristics of children who participate in them and changes in these characteristics over time, are of particular interest to researchers and policymakers. Also of interest is any information on changes in participation during the childhood lifecycle. For example, do children continue to play the same sports or increase/decrease or rearrange their sporting activities as they grow older? Detecting patterns in children's sports participation over their lifecycle and reasons behind these patterns could inform policymaking.

While changes in children's sports participation over their lifecycle can be best examined using longitudinal data, which follows the same child over time, such data are not always available and are often costly to collect. One alternative is to pool successive cross-sectional data and construct a 'longitudinal' or 'pseudo-panel' data to study this phenomenon. A research project currently underway in Analytical Services Branch, in collaboration with the National Centre for Culture and Recreation Statistics, aims to do exactly this. The study pools together data from the three (2000, 2003, 2006) cross-sectional surveys on Children's Participation in Cultural and Leisure Activities to construct a 'longitudinal' or 'pseudo-panel' data to study children's participation in sports over time. From this pooled dataset, cohorts of children were identified, and each cohort's sports participation over time was traced. Cohorts have been defined on the basis of the year of birth of the child, and both three-year birth cohorts and single-year birth cohorts are being studied in this project. A modelling technique called age-period-cohort analysis is also being tested, which is a regression-based decomposition technique that disentangles the confluence of age, birth cohort, and period effects on children's sports participation.

The sorts of questions the study will attempt to provide answers to include:

- How do the rates of participation in sport by 6-8 year olds identified in the 2000 survey compare with those of 9-11 years olds in the 2003 survey and 12-14 year olds in the 2006 survey?
- Is there a cohort effect in sports participation?
- Are there any changes in participation in sport during the childhood lifecycle i.e., do young children who play sport, continue to play sport or participate in similar or different activities as they grow?
- Do these participants (in sports) have similar socio-demographic characteristics?
- Are there any changes in the mix of activities e.g. do 6-8 year old children who have music lessons, play sport and watch television for below average hour continue this trend as 9-11 and 12-14 year olds?

For more information about the analysis, please contact Anil Kumar on (02) 6252 5344.

Refining the Stratification for the Established House Price Index

The House Price Index (HPI) team in the Consumer Price Index (CPI) section constructs an established HPI of quarterly estimates of the changes in price of the established housing stock in each Australian capital city and for Australia as a whole. The established HPI is based on grouping together "similar" suburbs within statistical sub-divisions (SSDs) in each capital city. The "similarity" of suburbs is determined by applying a stratification method based on attributes that can be broadly defined as the structural, locational and neighbourhood characteristics of the suburbs. Suburbs within an SSD are grouped together into strata, so that similarity within groups and dissimilarity between groups are maximised. In each period, a summary price measure based on house sales is calculated for each stratum and used to construct a stratum level price index. The aggregate indexes are then calculated by weighting together individual strata indexes using weights that represent the value of the housing stock in each stratum.

This stratification approach has been the subject of an ongoing study conducted by staff from the Analytical Services Branch and the HPI team in the Prices Branch. The study investigates ways to refine the stratification used for the construction of the established HPI to better control for compositional change. The study explores several avenues for improvement. The first avenue is to apply stratification within capital cities (rather than within SSDs), which may lead to more acceptable numbers of stratum in each capital city and each stratum containing a relatively broader grouping of similar suburbs with sufficient numbers of house sales every period to allow for the construction of reliable stratum summary price measures. Second, we can explore the inclusion of the long-term median house price of a suburb as a stratification variable and examine its potential for improving compositional adjustment - on the premise of controlling for economic strata - when combined with socioeconomic stratification variables. Third, we can investigate the variables used in the

stratification to determine if more efficient results can possibly be achieved by using a simpler stratification method (for example, using fewer stratification variables). Finally, we can utilise improved data sets that have become available since the last stratification review was completed.

For more information, please direct enquiries to Alexa Olczyk on (02) 6252 5854 or Steve Lane on (02) 6252 7833.

Producing Agriculture Financial Statistics Using Linked Data

The Agriculture Statistics NSC, with support from Analytical Services Branch and Economic Conditions section, is currently undertaking a feasibility study to investigate the possibility of linking data collected as part of the Agricultural Census (commodity production data) with Business Income Tax (BIT) and Business Activity Statement (BAS) data from the Australian Taxation Office (ATO). This project has been made possible through user funding provided by the Department of Agriculture, Fisheries and Forestry (DAFF), who saw potential and were keen to assist the ABS add value by linking these two rich data sources. If successful, the linked dataset will provide a rich source of information useful to discussions on the economic performance of businesses operating within the agriculture industry.

The first phase of the feasibility study was to link, at the unit record level, the responding in-scope units from the 2005-06 Agricultural Census (approx 138,000) with the BIT and BAS data held in the ABS. Analytical Services Branch provided some advice on the linking methodology. A form of deterministic linking was implemented using Australian Business Number (ABN) along with other business structure information. Some specific issues encountered when linking with ABN included:

- Tax records from multiple ABNs being consolidated under one head ABN;
- A business (with one ABN) operating over multiple locations (multiple Agricultural Census records); and
- The statistical reporting ABN may not be the same as the tax reporting ABN.

Business structure information was used to deal with these issues and ensure the maximum number of meaningful links were made.

Initial linking results are very encouraging and indicate that approximately 90 per cent of 2005-06 Agricultural Census records can be linked to 2005-06 BIT and BAS records. The other important point is that unlinked Agricultural Census records have roughly the same proportional distribution by state and commodity as the linked records providing confidence that bias in our results will be minimised. Imputation is currently being considered as the best option for dealing with the unlinked records.

The next phase of the feasibility study, which is currently underway, is to focus on a conceptual comparison of Tax Data and ABS Financial Data, to ensure that the linked data set can be used to measure the appropriate financial concepts. Generally speaking, the concepts align fairly well, however there are some slight differences in the definition of some individual data items. At present, the funders and other potential users of the estimates (e.g. ABARE, National Accounts Branch) are being consulted regarding the financial concepts that are being measured.

ABS staff have provided a presentation to DAFF outlining the project achievements to date which has generated considerable interest from staff within the funding body. The project also provides ongoing opportunities for the ABS. The current and ongoing consultation will ensure that any estimates derived from the linked data set will inform and support the information needs relating to agricultural statistics.

For more information on this project, please contact Bella Liao on (02) 6252 7311 or Jeffrey Wright on (02) 6252 5294.

ABS Using Operations Research to Improve Household Survey Operational Processes

The Operations Research Unit (ORU) was established within the Statistical Services Branch in July 2005 and evaluates operational processes to answer questions such as: Which strategies result in the highest rate of response for the lowest amount of cost? Where are we expending a lot of effort without receiving a lot in return? Where should we be targeting our effort for the greatest gain?

Household survey related investigations to date, have centred around the Monthly Population Survey (the main component of which is the Labour Force Survey) and selected Special Social Surveys. Household surveys use trained interviewers to collect the information needed via both face to face and telephone interviewing. Interviewers are paid for conducting interviews, the time they spend driving around to conduct face to face interviews, and an allowance for the use of their own car.

The enumeration strategies for these collections vary considerably:

- The Monthly Population survey is conducted every month for a period of eight months for each selected dwelling. A face to face visit is conducted during the first month and in subsequent months interviews are generally conducted over the telephone. The interview length is approximately 12 minutes; and
- Special Social Surveys (SSS) are conducted on a particular topic (for example health, time use, household income and expenditure) and vary from survey to survey in the enumeration period (many are conducted over 3-4 months but some over a whole year to pick up seasonal variations), and interview length (which generally range between 30 - 120 minutes). They are conducted via a face-to-face

interview as the length of the interview generally makes telephone interviewing impractical.

Using Operations Research, investigations into selected SSS's have identified a number of patterns that can be used by the Population Survey Operations (PSO) area to improve the effectiveness of the enumeration processes. For a recent SSS for example, it was found that:

- Some households were visited up to 44 times without contact being made. In particular, visiting a household more than 10 times takes 6 per cent of the overall effort in terms of calls, and results in an increase of the response rate by approximately 3 percentage points. Being able to identify a point in the follow up process, after which further gains are expected to be small, will enable PSO to develop more effective strategies for following up outstanding households that do not respond to simple intensification of effort;
- Contact rates increased after 4 p.m., but the majority of first call attempts (77%) were prior to this time. Analysis of second call attempts revealed that the majority of interviewers did vary the time segment in which they attempted to make contact with a household. The first and second call attempt time of day sequence with the lowest contact rate (29%) was pre-noon followed by noon-4 p.m.. This information can be used to schedule household follow-up in a way that accommodates operational requirements (for example, it is mandatory that the first visit is made during daylight hours), but maximises the chances of making contact with the household, particularly on subsequent visits; and
- There was a high proportion of trips involving only one attempted household visit (30%), which increased to 55 per cent in the follow-up stages of enumeration due to workloads having few households assigned to them. This information can be used to develop more effective strategies for follow-up, for example possibly assigning interviewers to concurrent workloads.

Future work will extend the above analysis to the MPS survey, with the aim being to assist PSO in reviewing their overall strategy for follow- up procedures.

For further information, please contact Julie Cole on (03) 9615 7562.

But wait, there's more... OR Techniques also Applied to ABS VIC Office Car Fleet Size.

The Operations Research unit (ORU) recently undertook an investigation of the Australian Bureau of Statistics (ABS) Victoria Office car fleet and car booking system in an effort to cut unnecessary costs. The aim of the analysis was to determine the feasibility of reducing the number of cars in the fleet and whether the current car booking system could be improved to make more effective use of the vehicles.

The investigation looked at data from the past 13 months to identify how many cars were used each day. It was found that on 52 of the 309 days (17%) all seven cars in the fleet were used. A sample of 20 per cent of the days when all cars were used was then taken for further analysis. Making use of operations research techniques, an optimal schedule was developed which minimized the number of cars used for the days in the sample. The optimal schedule resulted in 90 per cent of the sample using 6 or less cars, with the remaining days reduced to six or less cars when flexible boundaries of 15 minutes were applied to the bookings.

As a result of this study, the ABS Victoria Office has reduced the size of the fleet by one car, providing significant cost savings. Future studies will measure the cost/benefit implications of reducing the fleet further by analysing the cost-effectiveness of alternative transport for particular trips (such as car hire, taxis or public transport) compared to leases.

For more information on the application of OR techniques, contact Kristy Warren on (03) 9615 7042 .

NatStats Conference08- updates

The NatStats Conference08 will be held at the Crown Promenade, Melbourne from 19 - 21 November 2008.

Preprogram registration for the conference is NOW OPEN! Register and pay before 20th June to receive a special price on your conference registration - even cheaper than early bird!

The NatStats08 website, http://www.nss.gov.au/natstats, is your one-stop shop for all your NatStats08 needs. From the website you will be able to register for the conference, download sponsorship and exhibition documents, and be informed of all the latest program and social events developments.

The conference program has been designed with policy and decision makers in mind. Senior staff from policy departments, academia and the private sector, as well as overseas speakers are being invited to help elevate thinking to a national perspective. The conference will be divided into three main themes: Informing the Nation; Measuring the Progress of Society and Informing the Environment Debate. There will also be a showcase session that will demonstrate Information Platforms and State planning initiatives.

Participating in NatStats08 will provide you with the opportunity to:

- Learn from experts and experience first hand the latest developments and the future directions of key national statistics;
- Connect with the statistical community on the issues and challenges in creating a culture of evidence-based decision making;
- Share your experiences and raise awareness of the significant issues within your field; and
- Network with policy makers from across government, industry, academia and the community.

If you would like to know more about the conference program, please contact Mark Lound on (02) 6252 6325 or email inquiries@nss.gov.au.

To register your interest in the conference, please contact Conference Solutions on natstats@con-sol.com.

How to Contact Us and Subscriber Emailing List

The Methodological Newsletter features articles and developments in relation to work done within the ABS Methodology and Data Management Division. By its nature, the work of the Division brings it into contact with virtually every other area of the ABS. Because of this, the newsletter is a way of letting all areas of the ABS know of some of the issues we are working on and help information flow. We hope the Methodological Newsletter is useful and we welcome comments.

If you would like to be placed on our electronic mailing list, please contact:

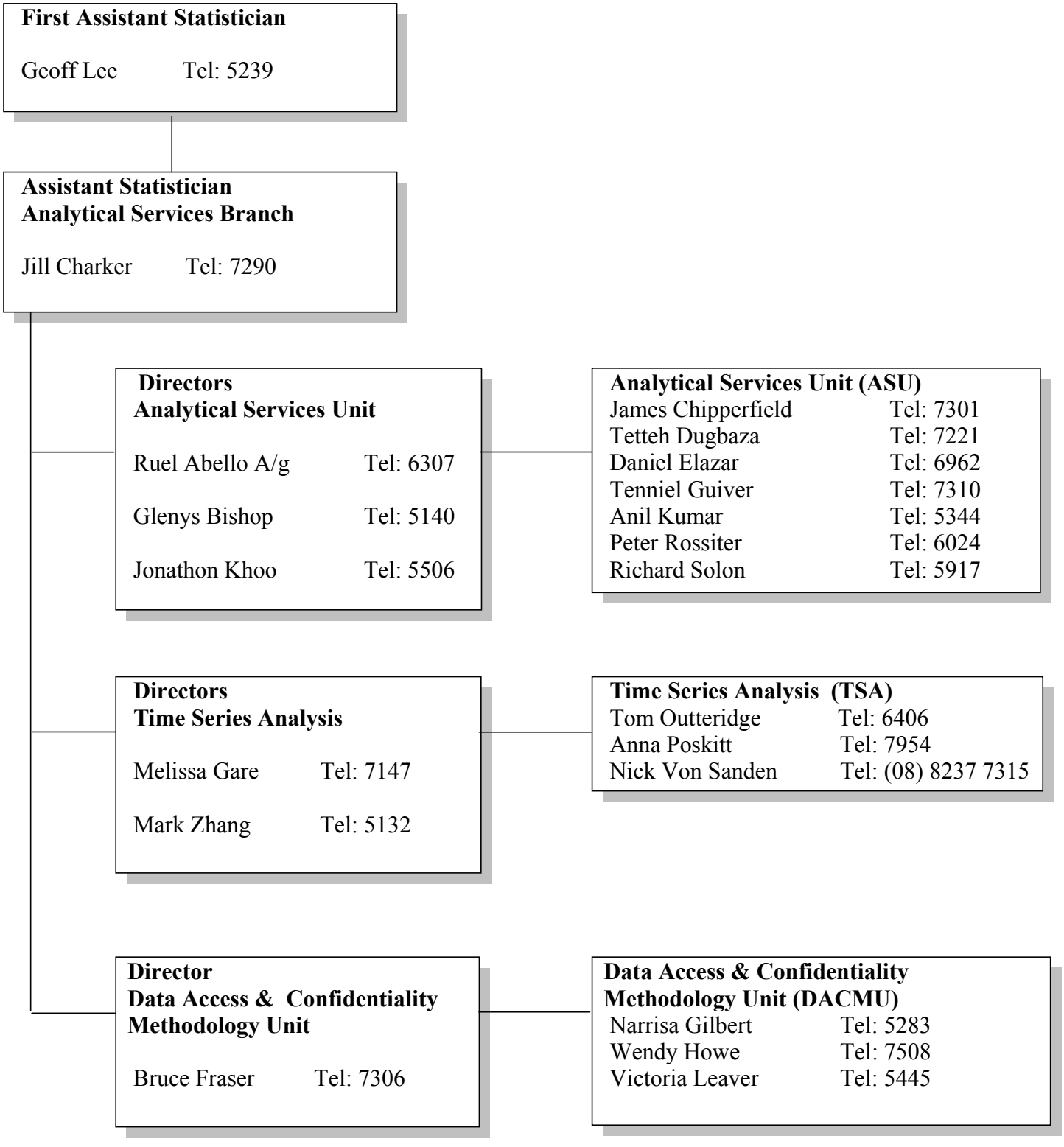
Valentin M. Valdez
Methodology & Data Management Division
Australian Bureau of Statistics
Locked Bag No. 10
BELCONNEN ACT 2617

Tel: (02) 6252 7037
Email: methodology@abs.gov.au

Click on the following links to view the ABS Privacy Statement and Disclaimer
Privacy Statement | Disclaimer

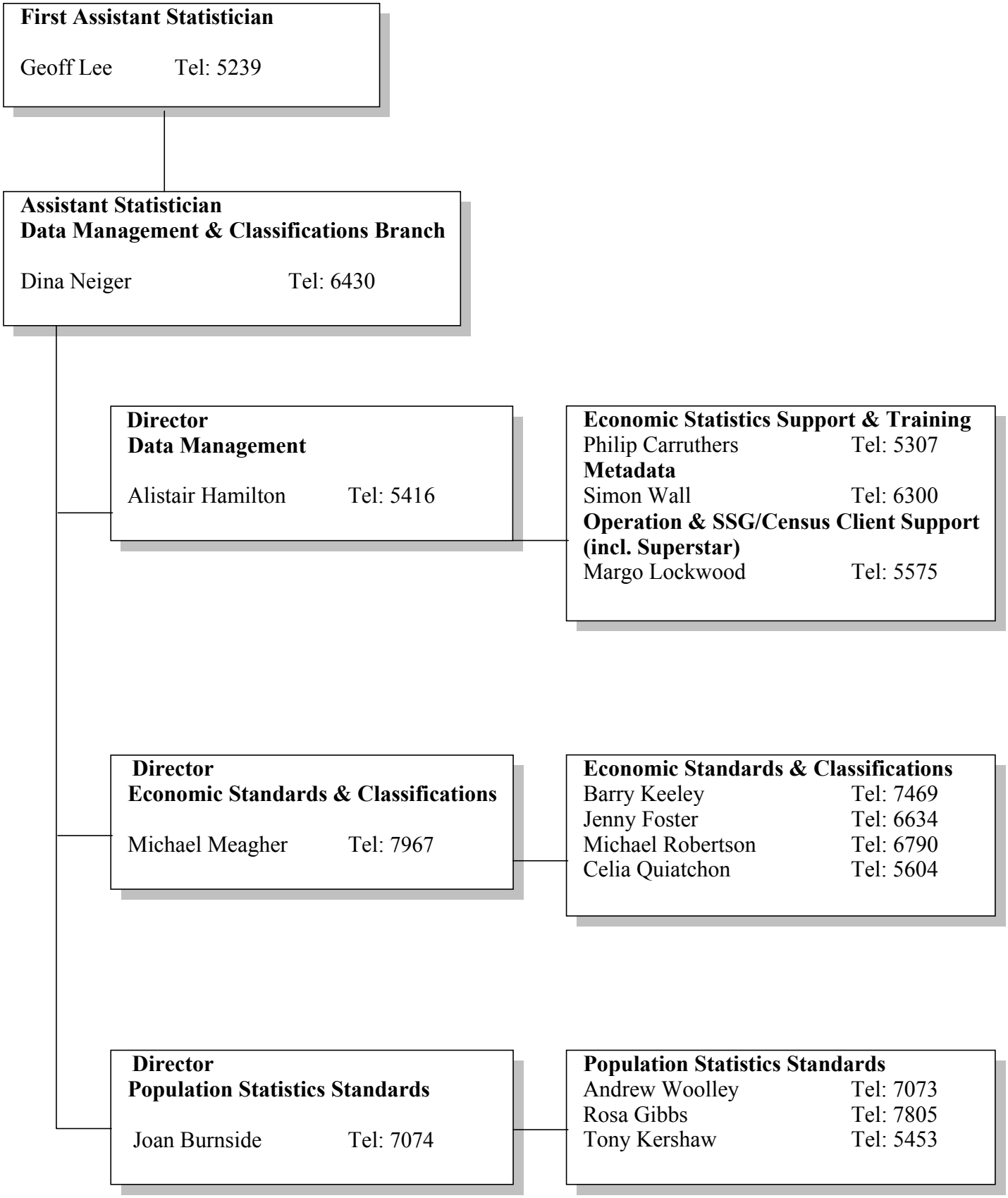
Methodology & Data Management Division
Management Structure

Current at June 2008



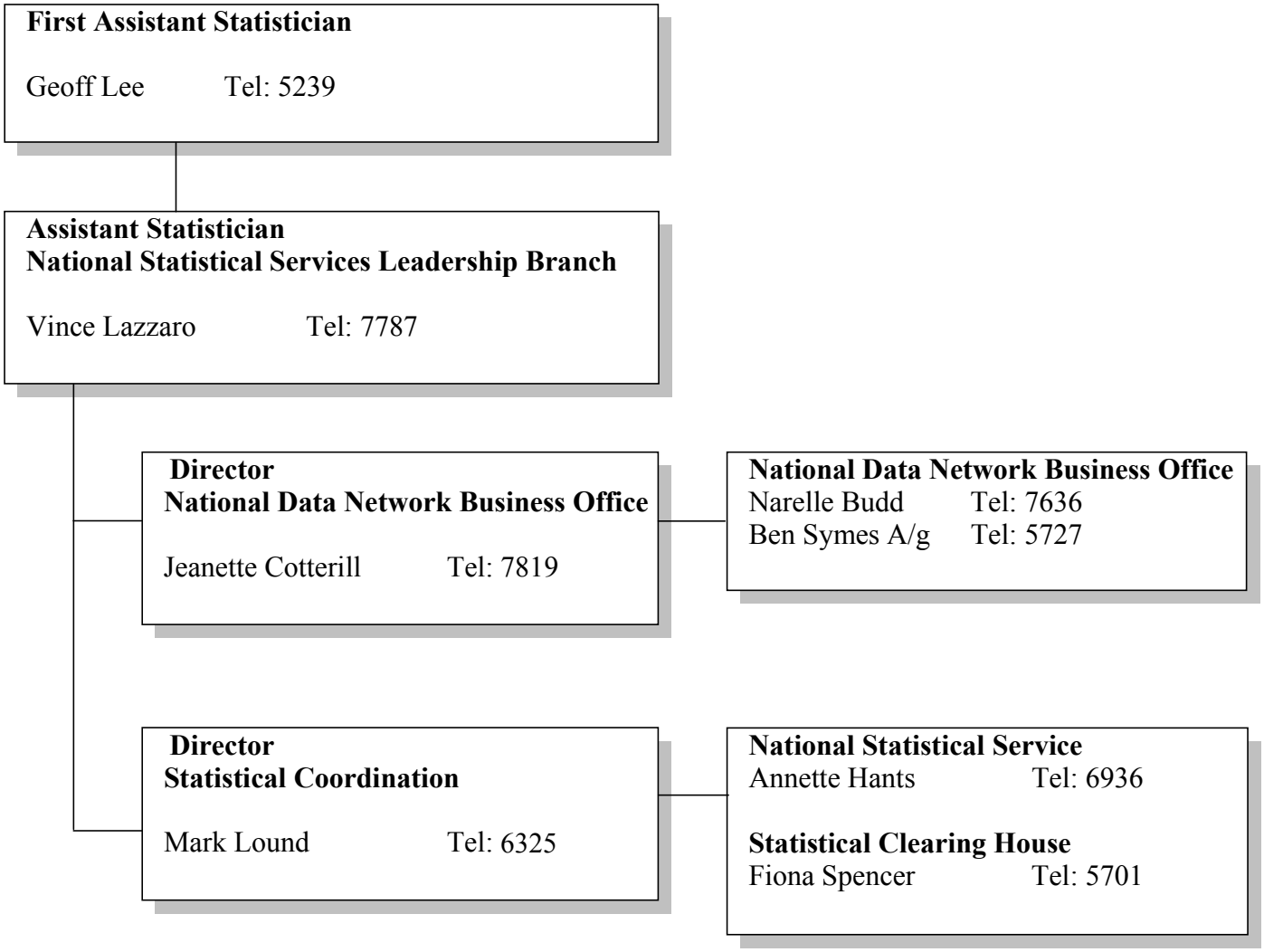
Methodology & Data Management Division
Management Structure

Current at March 2008



Methodology & Data Management Division
Management Structure

Current at June 2008



Methodology & Data Management Division
Management Structure

Current at June 2008

First Assistant Statistician
Geoff Lee Tel: 5239

Assistant Statistician
Statistical Services Branch
Frank Yu Tel: 7163

Directors
Household Survey Methodology

Bill Gross Tel: 6302

Alistair Rogers Tel: 7334

Household Survey Methodology (HSM)

John Martin	Tel: 7006
Jenny Webb	Tel: 5944
Philip Bell (SA)	Tel: (08) 8237 7304
Justin Lokhorst (SA)	Tel: (08) 8237 7476

Directors
Business Survey Methodology

Greg Griffiths Tel: 6970

Justin Farrow Tel: 5795

Business Survey Methodology (BSM)

Alan Herning		Tel: 5350
Edward Szoldra	(NSW)	Tel: (02) 9498 4214
Brett Frazer	(QLD)	Tel: (07) 3222 6028
John Preston	(QLD)	Tel: (07) 3222 6229
Elsa Lapiz	(VIC)	Tel: (03) 9615 7364
Carl Mackin	(WA)	Tel: (08) 9360 5250
Keith Farwell	(TAS)	Tel: (03) 6222 5889

Directors
Data Collection Methodology

Greg Griffiths Tel: 6970

Bill Gross Tel: 6302

Data Collection Methodology (DCM)

Emma Farrell	Tel: 7316
Kettie Hewett	Tel: 7295

Director
Operations Research Unit

Louise Gates A/g Tel: 6540

Operations Research Unit (OR)

Rebecca Cassidy		Tel: 6022
Julie Cole	(VIC)	Tel: (03) 9615 7562
Rosslyn Starick	(VIC)	Tel: (03) 9615 7055