

3MOONS

METHODOLOGY DIRECTORATE
LEADING THE DEVELOPMENT OF STATISTICAL METHODS

Autumn 2007

This is the ninth issue of Methodology Directorate's (MD's) quarterly overview of methodological issues in ONS. The eighth issue covered aspects such as: MD re-structuring, GSS methodology conference, ICES-III conference, updates to the Statistical Value Chain, recent conference presentations, and an introduction to Statistical Quality. Read on for the latest news from MD.

NEWS

Advisory committee meetings

MD will host the thirteenth meeting of the National Statistics Methodology Advisory Committee on 27 November in London. Topics to be discussed include: Quantifying and Measuring Revisions in Time Series Estimates, Census Overcount, the Port Survey Review, and Winsorisation of Change. Contact denise.e.williams@ons.gov.uk or see www.statistics.gov.uk/methods_quality/nsmac.asp for further details.

The latest UK Census Design & Methodology Advisory Committee (UKCDMAC) meeting on 11 October discussed: 2007 test evaluation findings, field methodology, address register development, disclosure control methodology, and output geography. Contact: peter.benton@ons.gov.uk for further details.

MD – Government Statistical Service (GSS) forum meeting

The latest meeting of the National Statistics Quality and Methodology Programme Board (hosted by MD) was held in London on 4 October. Topics included: UK Statistics Independence, Statistics Board assessment, ONS peer review, process quality, quality in public service output, and data sharing. The next meeting will be in March. Please email comments and suggestions for potential agenda items to david.matthewson@ons.gov.uk.

Secondments

MD welcomes applicants from UK government departments and other National Statistics Institutes for short and long-term secondments. Both organisations benefit from the

in this issue:

Employment opportunities

Methodology Directorate welcomes applications for secondments

Introduction to index numbers

Postcard from Canada

Top award for MD secondees

Night and day

Sarah Green on acting and working

Interview

Gary Brown talks to NZ expat Rachael Viles

30 years of SMB

A celebration of success

knowledge-sharing and training elements these arrangements offer. Please contact: peter.gittins@ons.gov.uk for more information. To see all current jobs in ONS, please visit www.statistics.gov.uk/recruitment

News continued on page 4

Introduction to Index Numbers

'Index Numbers, Prices and Inflation Measurement', better known as 'Index Numbers', is small but has a large remit. Staff in the branch are kept busy supporting all ONS index number outputs, including the most prominent – the Retail Prices Index, the Consumer Prices Index, and Gross Domestic Product – and are world-leaders in estimating the variance of index growths. But the branch has only three staff and at times since its formation in 2000 has numbered only one: John Wood. He has always been branch head, and is currently joined by two other MD stalwarts – Markus Šova and Neil Parkin.

A recurring question asked is: "What are index numbers?" The simple answer is that they are measurements of inflation and economic activity. The more complex answer is that they measure changes in prices or volumes (quantities), usually over time but sometimes spatially (such as for regional comparisons). For a complete answer, you need to attend the one day training course!

To ensure index numbers are used appropriately in ONS, the branch

- supports current indices
- quality assures current and new indices
- researches new theory and methods

They are also currently involved in a number of specific ONS projects, including:

- reconciliation of Average Earnings Index and Average Weekly Earnings
- sample re-allocation of Producer Prices Index
- development of Services Producer Price Indices

Much of the branch's work is in a consultancy role, principally to National Accounts Group (because volume measures are a type of index number) and Prices Division, but also to other internal and external clients. Staff collaborate with other MD branches on aspects such as sample design or imputation methods when they affect index number construction. So there is no lack of variety in the work – and the busy threesome report no lack of work either!

Postcard from Canada

Begoña Martín was seconded to Statistics Canada in May 2007. In ONS she worked in Business Survey Edit and Imputation, Survey Methods Division, Methodology. In Statistics Canada she works in Imputation, Business Survey Methods Division, Methodology. A direct transfer? Gary Brown found out more.

Begoña Martín in Ottawa.



What are the differences?

'Many – not just in work, but in lifestyle, climate and even public transport! Work is very different – from a Methodology department of around 100, I have moved to one of around 350. I have moved from an open-plan office to my own cubicle, and now have to learn French in addition to the English I picked up at ONS. Luckily, my studies are well supported – both English and French courses are available at the office. I'd also like to say how friendly Canadians are – and how

sporty. Everybody seems to be part of a team, more often 'Ultimate Frisbee' than rugby; a big change from Wales! Another change is the climate. When I arrived I was surprised to find it hot and humid – no more waiting in the rain for the number 30 bus. When I decided to go to Canada I was looking forward to my first white Christmas – but this has changed (to a sense of foreboding). Everyone I talk to says "Your first Canadian winter? Good Luck!"

What's this I hear about a prize?

'I submitted a paper, 'Estimating the Pay Distribution in the New Earnings Survey using Missing Data Methods', to an International Association of Official Statisticians (IAOS) competition some time ago. I had forgotten all about it. Then I heard I had won. This was on 17 August. I had to collect my prize (some cash, two years' IAOS membership, and my paper published in the second issue of the *Statistical Journal of the IAOS*) at the ISI conference in Lisbon, Portugal – all expenses paid. I cleared the trip with ONS, with Statistics Canada, booked my flights and

accommodation, all in a matter of hours. A world record maybe? The conference itself was fantastic – and provided me with excellent opportunity for networking with all the big names in statistics. The shame was that I was one of the few young statisticians attending – it would be good for more people starting their career, in government or academic statistics, to get the chance to meet such experienced and world-renowned professionals.'



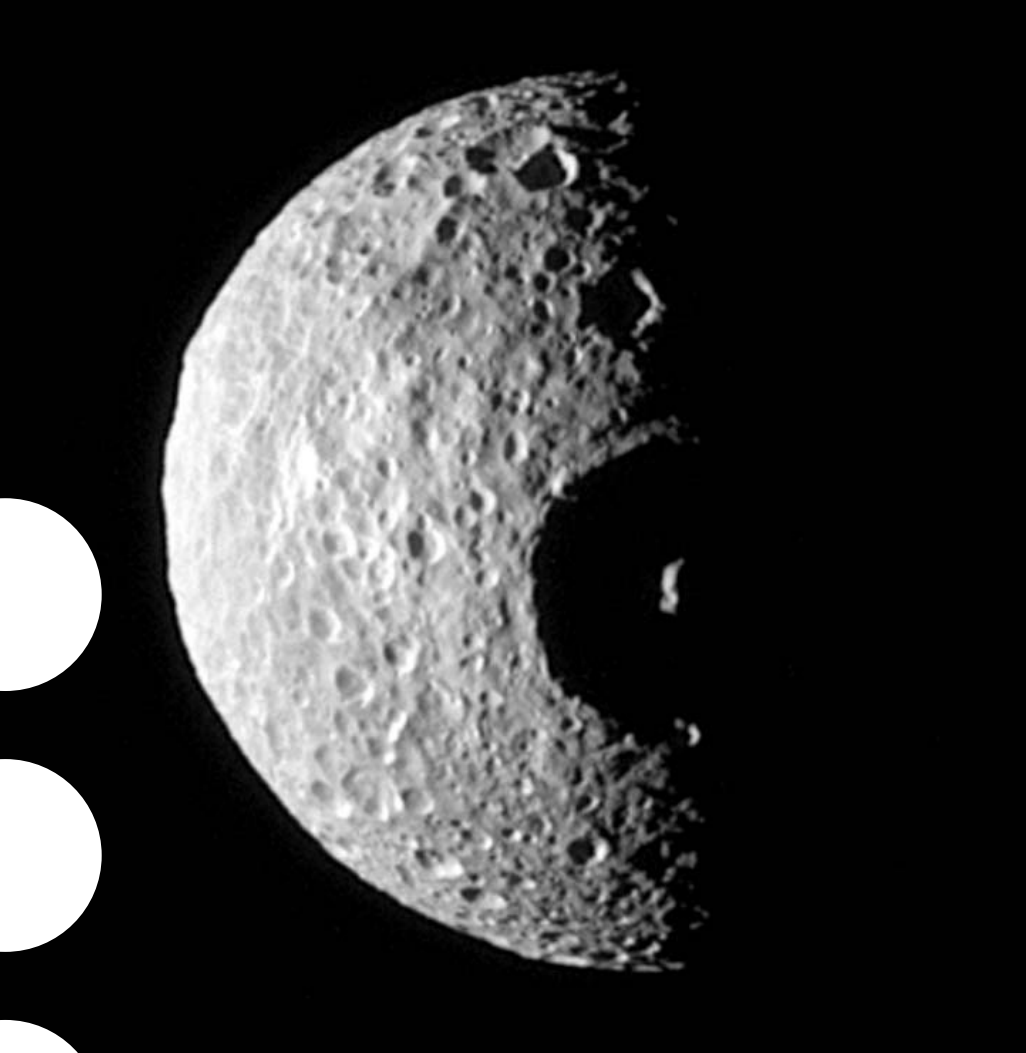
Begoña lost no time getting to Lisbon to collect her award.

Your questions answered

In this issue, we have been asked to print MD's organisation chart post June's restructure (see 3MOONS Summer 2007). Thanks again for all your queries, from home and abroad.

Please send your questions to 3moons@ons.gov.uk





Carry on Seconding

Rachael Viles joined MD for a year from Statistics New Zealand in December 2005, which she extended by another year in December 2006 – and again in December 2007. Gary Brown finds out why.

What appeals about Wales?

It reminds me of home – a small, green country of rugby lovers! The social life is also very good, and I play netball in Cardiff and table-tennis at work. It is also an ideal base for trips to Europe.

Speaking of rugby...

I enjoy watching the All Blacks, and I play touch rugby myself. Since coming to Wales I have played in London and Paris in league tournaments, and I have even played a couple of times for the Welsh National team – we beat England!



Rachael watching New Zealand (the 'All Blacks') play Wales at rugby, at the Millennium Stadium, Cardiff.

Burning the Candle at Both Ends

Sarah Green: professional methodologist and amateur actor

By day Sarah Green works in the Statistical Quality team in MD, developing an e-learning module for process quality measures amongst other tasks. By night she treads the boards, acting in classic plays by Anton Chekhov, Arthur Miller, Tennessee Williams and of course William Shakespeare.

A strange combination?

'I think it works. Both in the theatre and in the ONS I have a story to tell. Both require thorough preparation and research, and at the end of the day it is me who decides which words or statistics will best get the message across.'

Appropriately, Sarah follows 'method' acting (derived from Stanislavski), which can prove very demanding when a production is in full swing.

'It is hard to work in Newport during the day, and then go to Cardiff (or Neath) to act in the evening. My last play, *The Glass Menagerie*, was so physically demanding that I took the week's run off. However, it can be very rewarding – this year we won the Best Production award in the Glamies (Glamorgan Drama League Awards), and Ian 'H' Watkins (from Steps) came to watch the 'Menagerie'!



Sarah Green, by night she treads the boards.

Does life sometimes seem to imitate art?

'I presented a paper at the Royal Statistical Society in July, and it felt like being on stage. My training certainly helped – I managed to project my voice to the back of the lecture theatre (*the editor can vouch for that*) and I really enjoyed the experience of explaining my work to an audience.'

So, is it an actor's life for you?

'No, I love the theatre, but I have professional actor friends who, despite their talent and numerous good parts, still face hard times between jobs. Besides, I really enjoy my day job, and how many people can say that without acting?'

And ONS?

I came to ONS for career development, after three years working at Statistics New Zealand (SNZ also sponsored my university degree: Mathematics and Economics). I wanted first-hand experience of what methodology other NSIs use to solve the same problems. The similarities are reassuring – even down to software (SAS, BANFF and X12ARIMA). However, ONS is far bigger (SNZ has around 700 staff), and there are so many experienced people. It's one reason why I stayed – there is so much to learn!

What are you working on now?

When I came to ONS I joined the Quality Centre. It was a big change after working in time series and sample design at SNZ – but it's been a great development opportunity. I'm working on process quality measures – for example scanning error rates – to complement our statistical quality measures (www.statistics.gov/qualitymeasures) and I'm also leading on continuous quality improvement techniques.

The future?

I'm really enjoying my time at ONS and my holidays in Europe, but I miss my friends and family and the relaxed character of New Zealand. So I will definitely go home in December. But then I've been saying that for three years!

Thirty Years of the SMB

Celebrating thirty years of the *Survey Methodology Bulletin*

The year 1977 saw the launch of a new publication from the then Office of Population Censuses and Surveys (OPCS) – the *Survey Methodology Bulletin* (SMB). The SMB was created with the purpose of keeping people 'informed of the nature and progress of all methodological work ... and to stimulate thought about methodological problems'. Its first editor was Roger Thomas.

Primarily designed as an in-house journal for staff in the Social Survey Division, the SMB soon attracted wider interest and increased its circulation. In 1981, Karen Dunnell noted in her SMB editorial that external recipients found the publication 'useful and/or stimulating to their own research and/or teaching work'.

By 1986 there were almost 200 external recipients of the publication, mostly from overseas. The SMB was also being referred to by academic/statistical bodies, for example the Department of Sociology at University of Surrey, the Institute

for Social and Economic Research, and the Economic and Social Data Service.

Evolution

The biggest change to the SMB came in 1996, when The Office for National Statistics (ONS) took over responsibility for producing it and introduced the now familiar blue and yellow cover. (ONS was formed from the merger of OPCS with the Central Statistical Office.)

Over 370 articles have been published in SMB, including contributions from Jean Martin, Jil Matheson, Tricia Dodd and Karen Dunnell (former editor). Initially concerned with issues relating to Social Surveys, the scope of the bulletin has been expanded to encompass a larger range of methodological topics. In the first issue, papers included 'A Proxy Interviewing Survey', and 'An Investigation of the Coverage of the Electoral Register'. In the sixtieth issue, papers included 'SNOWDON: Tool for Assessing Impact of Changing Editing Rules on Cost & Quality' and 'Business Register and Employment Survey: Progress on Design'.

SMB Today

Today the publication is still produced for the purpose of keeping ONS and the Government Statistical Service staff up-to-date with methodological developments in ONS. It continues to enjoy international interest, with requests from as far afield as America, Australia and Singapore. Such is the demand that, in August 2006, a special edition publication was produced dedicated to spreading the results of research into social capital.

Unlike its paper-based launch back in December 1977, copies of issue 48 onwards are now also available on the National Statistics website at www.statistics.gov.uk/statbase/Product.asp?vlnk=8127

It is hoped that more back issues will be made available on-line in the future.

If you would like to be added to the circulation list to receive a paper copy of the bulletin, or electronic reminders when new issues are put on the website, please email dcm.business.surveys@ons.gov.uk

NEWS continued

Recent MD conference presentations (presenters only)

RSS conference (16–20 July)	
Robust method for trimming extreme values in ratio imputation	Andy Fallows
Non-response in ONS business surveys	Sarah Green
Scoring: an alternative approach to response-rate targets	Gareth James
The assessment process in the UK Statistics Bill	Frank Nolan
2007 ASA Joint Statistical Meetings (29 July–2 August)	
Small-Area Estimation in Multivariate Surveys	Hukum Chandra
Quantifying and Measuring Revisions in Time-Series Estimates	Duncan Elliott
56th Session of the International Statistical Institute (22–29 August)	
Evaluating UK official statistics – standards for a quality label	Frank Nolan
Design and Analysis of Repeated Surveys (two-day course)	Craig McLaren
The Use of Statistical Models to Define Proxy Means Tests for Targeting Brazilian Social Programs	Denise Silva

IASS Satellite Conference on Innovative Methodologies for Censuses in the New Millennium (31 August–2 September)	
The Design of the 2011 Census Coverage Survey	Owen Abbott
Modelling Census Household Non-response	Shayla Goldring
Statistical Disclosure Control strategy for the 2011 UK Census	Jane Longhurst
Exploring the acceptability of using colour labels to categorise ethnicity	Michelle Monkman
Targeting resources to achieve robust coverage adjustments to the population Census	Paul Smith
The application of Dual System Estimation in the 2011 UK Census	Nicola Tromans
Geographically Intelligent Disclosure Control for Flexible Aggregation of Census Data	Caroline Young
IASS Satellite Conference on Small Area Estimation (3–5 September)	
Small Area Estimation for Skewed Data	Hukum Chandra
Developments in Small Area Estimation in UK with focus on current research activities	Philip Clarke
Fifth ASC International Conference on Survey and Statistical Computing (12–14 September)	
Use of Seasonal Adjustment Software within the Office for National Statistics	Fida Hussain
What's the time? Relations between interview periods and output periods in surveys	Paul Smith

And, farewell...

Gary Brown, MD's editor for 3MOONS, would like to thank Aidan Steer of Communication Division for his help with this and all previous issues. This will be Aidan's last 3MOONS before he moves on.