DMES Seminar on Benchmark Revisions

Revisions are good for you?

Ampere, BECH Building, Eurostat, Luxembourg.
11th December 2015

Sanjiv Mahajan
Head of International Strategy and Coordination
Office for National Statistics (UK)
Sanjiv.mahajan@ons.gov.uk
DMES Seminar on Benchmark Revisions
Revisions are good for you?

An overview

• Why do we revise?
• Statistical value chain - UK
• National Accounts Vision - Integrating the way forward
• Measuring UK GDP
  • Life cycle of National Accounts data - estimation timeframe
  • Revision time frame – GDP estimate for 2013 Q1
  • Evolution of data availability
• NA / BoP – where do we get our source data from?
• Sources of revision
• EU demands for economic statistics
• UK Assessment of Harmonised EU Revision Policy
• Any questions?
DMES Seminar on Benchmark Revisions
Revisions are good for you?

Why do we revise?

Because our users want us to ... !

- What do our users want?
  - Early, reliable and accurate short-term indicators.
  - Consistent, coherent and comparable statistics.
  - Regular benchmarking
    - Reconciliation of short-term surveys and annual surveys.
  - Long run time series without discontinuities.
  - Balanced picture of the economy (micro and macro).
    - Consistency and coherency.
    - Across all institutional sectors, all accounts, quarterly and annual.
  - High quality - do not want quality reduction.
  - Always want MORE – timeliness, detail and accuracy.

Different users have different needs all required to high-quality standards
DMES Seminar on Benchmark Revisions
Revisions are good for you?

Why do we revise?

Because our users want us to … !

- We have to balance these conflicting demands
  - Timeliness versus quality (earlier - more prone to revision)
  - Reliable implies not too many changes.
  - Consistent also implies a coherent picture of the economy.
  - Correct growth rates and levels as well as flows and stocks.
    - Implies stored revisions cannot, or should not, be held back for long.
    - Maintenance of long time series – impact on resources, systems, etc.

- UK approach
  - A single revision policy applied to all institutional sectors, and across all accounts, produced in any particular quarterly or annual exercise.
  - Depth of quarters or years open for revision can change depending upon a range of factors.
    - Number of revisions, size of revision, regulatory requirements, etc.
DMES Seminar on Benchmark Revisions
Revisions are good for you?

Statistical value chain - UK

Business Register (and the statistical unit) + Administrative data
→ Data collection, editing and validation processes
→ Production and publication of survey results and analysis
→ Census and population
  → National Accounts including non-financial and financial accounts
  → Supply and Use Tables and Input-Output Tables
  → Labour, prices and social statistics
  → Regional Accounts and Environmental Accounts
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
→ Balance of Payments including IIP
→ Public Sector Finance including EDP
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
  → Productivity analyses (labour and capital)
  → Well-being and Tourism Satellite Accounts
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
  → Labour Accounts and Social Accounting Matrices
→ Other satellite accounts
  ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
  → Regional, impact and policy analyses
  → CGE and economic modelling

These boundaries covering the compilation of economic statistics in each National Statistical Office differ across countries
DMES Seminar on Benchmark Revisions
Revisions are good for you?

National Accounts Vision - **Integrating** the way forward

Beyond GDP and Well-Being

- National Accounts including SUTs / IOTs and PSUTs / PIOTs
- Sectors
- Industries
- Products
- Links to administrative sources
- Stocks
- Business sample surveys
- Public Sector Finance
- Flows
- Business Register
- Prices
- Regions
- Accounts
- Environmental Accounts
- Regional Accounts
- Focus on Quality

Key cross-cutting issues

Classifications
Definitions
Confidentiality
Compliance
Revision Policies
Resources
Timeliness
Costs
Users

Compiled by Sanjiv Mahajan
February 2013
Measuring UK Gross Domestic Product
Life cycle of National Accounts data - estimation timeframe

Use of short term indicators and smaller sample size business surveys

<table>
<thead>
<tr>
<th>Quarter</th>
<th>1st Estimate of GDP (25 days)</th>
<th>2nd Estimate of GDP (55 days)</th>
<th>3rd Estimate of GDP and Quarterly National Accounts (85 days)</th>
</tr>
</thead>
</table>

Output (production)
Expenditure
Income

Annual balancing
Blue Book 1
Latest year annual data based on sum of quarterly data and partial benchmarking

Blue Book 2
Full SUTs framework plus benchmarking short-term indicators

Compiled by Sanjiv Mahajan
November 2004
## Measuring UK Gross Domestic Product

### Revision time frame – GDP estimate for 2013 Q1

<table>
<thead>
<tr>
<th>Month</th>
<th>Release</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr 2013</td>
<td>1st estimate</td>
<td>Preliminary estimate of GDP (after 25 days)</td>
</tr>
<tr>
<td>May 2013</td>
<td>2nd estimate</td>
<td>2nd Estimate of GDP (after 55 days)</td>
</tr>
<tr>
<td>Jun 2013</td>
<td>3rd estimate</td>
<td>Quarterly National Accounts (after 85 days)</td>
</tr>
<tr>
<td>Sep 2013</td>
<td>Quarterly Exercise</td>
<td></td>
</tr>
<tr>
<td>Dec 2013</td>
<td>Quarterly Exercise</td>
<td></td>
</tr>
<tr>
<td>Mar 2014</td>
<td>Quarterly Exercise</td>
<td></td>
</tr>
<tr>
<td>Jun 2014</td>
<td>Quarterly Exercise</td>
<td></td>
</tr>
<tr>
<td>Sep 2014</td>
<td><strong>Blue Book One</strong></td>
<td>1st annual exercise - Partial benchmarking</td>
</tr>
<tr>
<td>Dec 2014</td>
<td>Quarterly Exercise</td>
<td></td>
</tr>
<tr>
<td>Mar 2015</td>
<td>Quarterly Exercise</td>
<td></td>
</tr>
<tr>
<td>Jun 2015</td>
<td>Quarterly Exercise</td>
<td></td>
</tr>
<tr>
<td>Sep 2015</td>
<td><strong>Blue Book Two</strong></td>
<td>2nd annual exercise - Benchmarking short-term indicators and balancing through SUTs</td>
</tr>
</tbody>
</table>
DMES Seminar on Benchmark Revisions
Revisions are good for you?

Evolution of data availability

GDP (Output / production) Data Content

- Preliminary Estimate T+25
- Second Estimate T+55
- Quarterly National Accounts T+85

Percentage
## Quarterly GDP Expenditure components

### Data availability and estimation

<table>
<thead>
<tr>
<th>Expenditure GDP</th>
<th>Blue Book 1</th>
<th>Blue Book 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(%) for the year 2013 in the 2015 Blue Book</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households + NPISHs 49.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Government 15.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GFCF 12.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventories + Valuables 0.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports of Goods 13.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports of Services 9.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (final expenditure)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Limited data

<table>
<thead>
<tr>
<th></th>
<th><strong>T+25</strong></th>
<th><strong>T+55</strong></th>
<th><strong>T+85</strong></th>
<th><strong>Blue Book 1</strong></th>
<th><strong>Blue Book 2</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Households + NPISHs 49.3%</td>
<td></td>
<td>45%</td>
<td>85%</td>
<td>100% R</td>
<td>100% B</td>
</tr>
<tr>
<td>General Government 15.2%</td>
<td></td>
<td>60%</td>
<td>60%</td>
<td>100% R</td>
<td>100% B</td>
</tr>
<tr>
<td>GFCF 12.2%</td>
<td></td>
<td>55%</td>
<td>80%</td>
<td>100% R</td>
<td>100% B</td>
</tr>
<tr>
<td>Inventories + Valuables 0.5%</td>
<td></td>
<td>65%</td>
<td>85%</td>
<td>100% R</td>
<td>100% B</td>
</tr>
<tr>
<td>Exports of Goods 13.4%</td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100% R</td>
<td>100% B</td>
</tr>
<tr>
<td>Exports of Services 9.4%</td>
<td></td>
<td>60%</td>
<td>80%</td>
<td>100% R</td>
<td>100% B</td>
</tr>
<tr>
<td>Total (final expenditure)</td>
<td>Limited data</td>
<td>60%</td>
<td>80%</td>
<td>100% R</td>
<td>100% B</td>
</tr>
</tbody>
</table>

R = Revised
B = Benchmarked
Revisions are good for you?

NA / BoP – where do we get our source data from?

Source data

- ONS Business surveys based on the Business Register sampling frame
  - Monthly, quarterly, annual and adhoc frequency.

- ONS Household based surveys
  - Census, International Passenger Survey (IPS), Labour Force Survey (LFS), Living Costs and Food Survey (LCF), etc.

- Administrative data
  - INTRASTAT data.
  - Pay and profits relating to tax and employment records.

- Other government departments
  - Banking data from the Bank of England (Central Bank).
  - Government incomes and expenditures from the HM Treasury (finance ministry).

- Other sources
  - Company annual report and accounts, regulatory bodies’ accounts, etc.
DMES Seminar on Benchmark Revisions
Revisions are good for you?

Sources of revisions

- New data
  - Actual data replacing forecasts.
  - Higher survey response rates, late returns, etc.
  - New data sources.
  - Error correction – rarely a source of significant revision.

- Updating processes
  - Benchmarking (annual, 5-yearly, etc.).
  - Census (10-yearly).
  - Annual chain-linking.
  - Seasonal adjustment and improved deflation.
  - Revised balancing – estimates evolve, inevitable and unavoidable.
  - New or improved IT systems.

- International drivers
  - International guidance manuals, e.g. SNA, BPM, ESA, MGDD, etc.
  - Classifications, e.g. ISIC, NACE, CPC, CPA, etc.
  - Improved or new methods, e.g. FISIM, SPEs, illegal activities, R&D, etc.
  - EU requirements, e.g. GNI, FRIBS, MIPS, EDP, IESS, European Semester, etc.
DMES Seminar on Benchmark Revisions
Revisions are good for you?

EU demand for economic statistics

Examples of EU Statistical Regulations

- Structural Business Statistics
- Short-Term Statistics
- Business Registers
- PRODCOM
- INTRASTAT
- National Accounts ESA 2010
- Balance of Payments BPM 6
- Prices
- ITIS
- FATS
- GDP / GNI
- FDI
- Labour Market
- Maastricht Debt and Deficit MGDD
- Excessive Deficit Procedure
- EU Policy
  - European Commission
  - Eurostat
  - European Central Bank

Different requirements with different delivery timetables and revision policies
Need to synchronise primary inputs

Compiled by Sanjiv Mahajan
September 2012
UK Assessment of Harmonised EU Revision Policy

- Welcome, and support, the need to have such a policy.
- National Accounts and BoP should be integrated, consistent and coherent.
- Challenges with making the existing HERP operational:
  - Need to reflect other EU needs, e.g. GNI, EDP, European Semester, etc.
  - Need to reflect future changes, e.g. Vision 2020, FRIBS, MIPS, EPSAS, financial industries regulation, etc.
  - Need to reflect primary source data, e.g. Differing EU requirements, etc.
  - Need to include seasonally adjusted data.
  - Policy should seek to either maintain or improve existing quality.
  - Depth of quarters / annuals available for revision is too limited.
    - Creates stored revisions leading to wrong levels / growth rates.
    - Mar: 12 quarters; Jun: 13 quarters; Sep: 14 quarters; Dec: 11 quarters.
    - Annual accounts release either Jun or Sep affects all quarters and years.

- UK do not delineate “routine” revision versus “benchmark” revision as the annual benchmark revision is routine.

Continuous Improvement leads to better Quality, and inevitably, Revisions!
DMES Seminar on Benchmark Revisions
Revisions are good for you?

Any questions?

Sanjiv Mahajan
Head of International Strategy and Coordination
Office for National Statistics (UK)

sanjiv.mahajan@ons.gov.uk
Framework for a coherent picture of the economy

Supply

Industries

Imports
Margins
Taxes
Subs

Total output

Use

Industries

Households
Government
GCF
Exports

Total intermediate use

Balancing:
Data confrontation, benchmarking and balancing to achieve all key identities.

TOTAL OUTPUT

Equals

GVA (Production)

TOTAL INPUT

Equals

Compensation of employees
Other net taxes on production
Gross operating surplus

GVA (Income)

Balancing:
Data confrontation, benchmarking and balancing to achieve all key identities.

Compiled by Sanjiv Mahajan
November 2004