COUNTRY REPORT – HONG KONG, CHINA

Regional Course on SNA 2008 (Special Topics): Improving Exhaustiveness of GDP Coverage

22-30 August 2016
Daejeon, Republic of Korea

Agenda

• Background
• Data sources and estimation methods for compiling quarterly national accounts
• Methods for rebasing GDP
• Challenges
• Quality practices
Background

• GDP by expenditure component (expenditure approach)
  • PCE, GCE, GDFCF, CIV, Exports, Imports
  • Headline GDP

• GDP by economic activity (production approach)
  • Hong Kong Standard Industrial Classification

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### Background (con’t)

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<th>Expenditure Approach</th>
<th>Production Approach</th>
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Data sources for compiling quarterly national accounts

- External trade statistics
- Surveys on establishments and households
- Government accounts
- Administrative data from government departments and other organisations

Estimation methods for compiling quarterly national accounts

By expenditure component

- Private consumption expenditure (PCE)
  - Consumption expenditure on goods and services in the domestic market (CXDM) + residents' expenditure abroad (REA) for non-business purposes – expenditure of non-residents in the domestic market
  - For CXDM, quarterly estimates are derived by extrapolation of benchmark data using:
    - value indicators (e.g. retail sales, restaurants receipts)
    - volume indicators (e.g. population, employment in selected services industries)
    - administrative records (e.g. rental of public housing)
Estimation methods for compiling quarterly national accounts (con’t)

• Government consumption expenditure (GCE)
  • Sum of compensation of government employees (CE) and purchases of goods and services by the government units (PU), less sales receipts for goods and services provided (Sales)
    • PU include consumption of fixed capital (CFC)
    • Estimated using the perpetual inventory model
  • Quarterly figures of government departments obtained from the Treasury
  • Data in respect of quasi-government non-profit institutions obtained from enquiries on the income and expenditure of these institutions

Estimation methods for compiling quarterly national accounts (con’t)

• Gross domestic capital formation
  Building and construction
    • Quarterly statistics for the private sector using data from Quarterly Survey of Construction Output
    • Public sector covers government departments, quasi-government institutions and public corporations, and relevant data are from their administrative records
  Costs of ownership transfer
    • Expenditure on stamp duties based on the amount of stamp duties collected in connection with property transactions
    • Expenditure on legal fees and real estate agents’ commissions based on the data of the Land Registry
Estimation methods for compiling quarterly national accounts (con’t)

• Gross domestic capital formation
  *Machinery, equipment and intellectual property products*
  • Investment expenditure on machinery and equipment compiled using commodity flow method
  • Expenditure on intellectual property products by the private sector collected through surveys and that by the public sector from government accounts and returns of respective bodies

Change in inventories

• Difference in book value of inventories between beginning and end of the period, with adjustment for appreciation (or depreciation) in their value
• Data from Monthly Survey of Retail Sales, Quarterly Survey of Service Industries and Quarterly Survey of Industrial Production.

Estimation methods for compiling quarterly national accounts (con’t)

• Imports and exports of goods and services
  *Imports and exports of goods*
  • From external trade statistics system
  *Imports and exports of services*
  • Data on expenditure of incoming visitors and travellers based on visitor survey conducted by the Hong Kong Tourism Board
  • REA compiled from data from household surveys (for per capita expenditure abroad of Hong Kong residents) and administrative records (for the number of outbound trips by residents)
  • For services other than travel, quarterly estimates are compiled by extrapolation of the annual benchmark data using quarterly value and volume indicators from quarterly surveys and administrative records
Estimation methods for compiling quarterly national accounts (con’t)

By economic activity

• Volume estimates of GDP
  • Generally compiled using four methods:
    (a) single extrapolation of value added (VA) by deflated gross output (GO) measures (e.g. business receipts deflated by PPI)
    (b) single extrapolation of VA by volume / quantity measures (e.g. volume of trade and physical units of outputs)
    (c) single extrapolation of VA by input indicators (e.g. hours worked)
    (d) double indicators method
  • First two methods are most frequently applied in HK

Methods for rebasing GDP

• Annually re-weighted chain linking approach
• Volume estimates of GDP major components revalued at preceding year prices are derived by “deflating” the current price values of subcomponents at the most disaggregated levels
• Volume estimate of GDP is then obtained by aggregating the volume estimates of GDP major components
• Preceding-year weighted volume measures are chain linked to a selected reference year to obtain a continuous time series of chain volume measures of GDP and its components
Challenges

• Data sources for compiling quarterly GDP are less solidly based than those for compiling annual GDP
  • Quarterly surveys, which are one main source of data, normally incur smaller sample size and collect less detailed information as compared with annual surveys
• GCE
  • accounts data on a cash-flow basis rather than accrual basis are used
  • Considerable short-term fluctuations in quarterly series
  • Adjustments have been made to some important types of expenditures to approximate accrual-based data

Challenges (con’t)

• Practical issues associated with choice of index numbers where deflation method is used for compiling volume measures
  
  Unavailability of current-weighted price indices
  • Current-weighted price indices, strictly speaking, are required for deflating current values
  • Price index series, e.g. the Consumer Price Index (CPI), is usually available in base-weighted form
  • Unlikely introduce serious problems to volume series when the deflation process is carried out at certain detailed level

  Difficult to define relevant deflators
  • For various different categories of imports and exports of services
Quality practices

• Follows international practice to compile and release GDP figures at the earliest possible time by using partial data
• Revise these figures as more information becomes available
• “Preliminary figures”
  • First released GDP statistics in respect of a period
• “Revised figures”
  • All those figures published subsequently, on revision
• Figures are finalised when data from all regular sources are incorporated

Quality practices (con’t)

• Regularly conduct reconciliation between production measure and expenditure measure of GDP
  • Thoroughly investigate the data sources and methods of both approaches when GDP figures compiled using such approaches differ widely
• Look into the direction and magnitude of revisions between the previously published data
  • Underlying reasons for significant revisions are studied
  • Systematic revision pattern found will be considered in refining the preliminary data and the data collection programs as appropriate
• Based on differences between the first estimate of GDP and the revised figure released three years later
  • “Average revision” and “average absolute revision” of yoy real growth rates of quarterly GDP are compiled
  • Revisions between preliminary and revised figures are generally small
Quality practices (con’t)

• Besides routine revisions, non-routine technical revision exercises are undertaken from time to time to enhance the quality of HK’s GDP statistics by incorporating:
  • new data sources
  • improved estimation methods
  • changes in international standards, definitions and classifications
• In a non-routine revision exercise, the entire series of GDP and its components may be subject to revision

Thank you
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