



Specific Changes in the SNA 2008

Research and Development Expenditure-Estimation Methods

Alick Mjuma Nyasulu

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affecting GDP Compilation.

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Outline

- Background
- Research and Development In National Accounts
- Data and Measurement Issues
- Impact on GDP



Background

- ❑ Research and Development as creative activities
 - ❑ Experimental or theoretical work to acquire new knowledge
 - ❑ Applied research with a practical aim
 - ❑ Developmental research aimed at improving existing systems

- ❑ R&D projects have a long gestation period

- ❑ Focus is to generate new knowledge

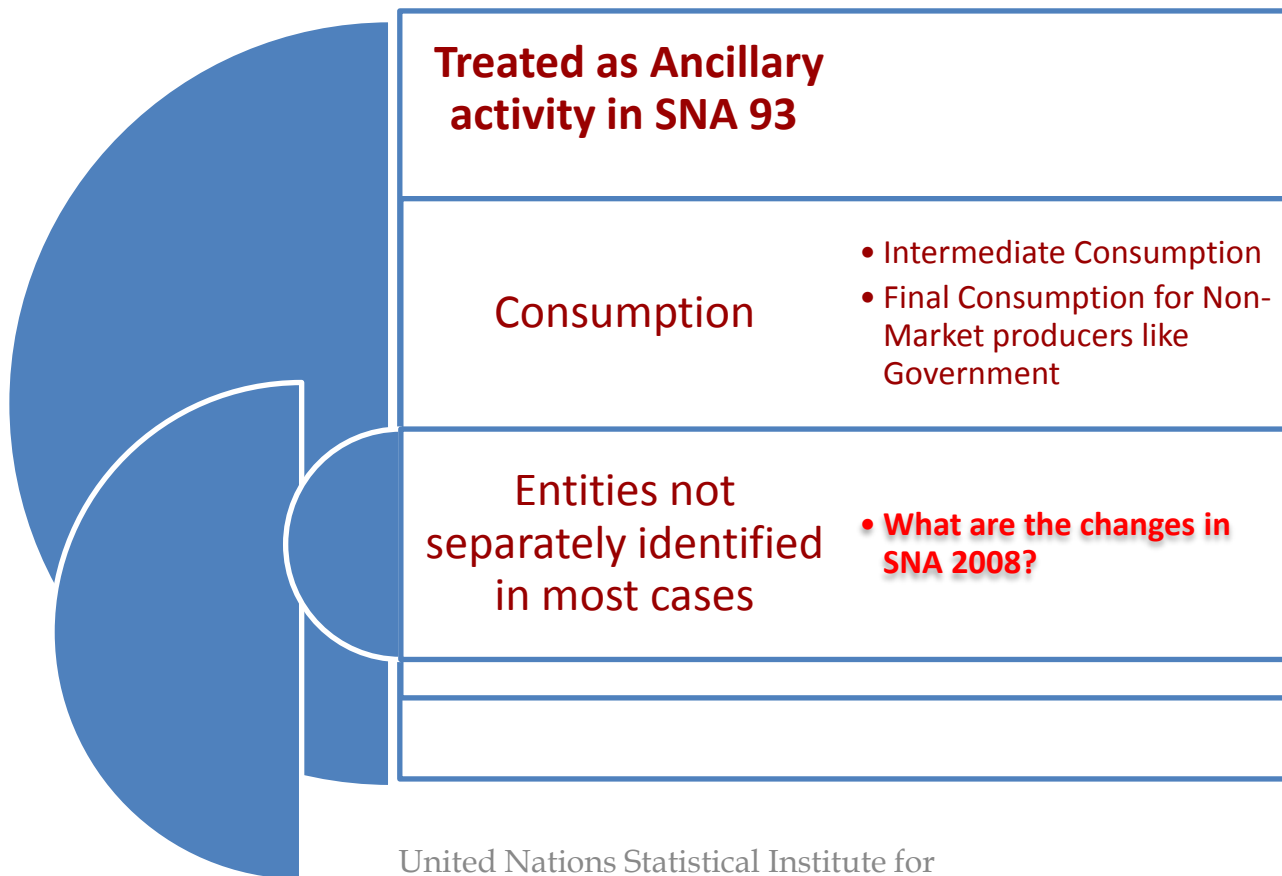


Background

- R& D is classified under Division 72 of ISIC Rev 4
 - Does not include education i.e Research Degrees
- Similarity with fixed assets, capital formation goods, even if not directly visible



R&D In National Accounts





R&D In National Accounts

Changes in SNA 2008

Output of Research and development is not treated as intermediate consumption

R&D activities should not be classified as ancillary

Output Valuation

- ✓ Market price
- ✓ Sum of total production costs + mark up

Specific Change

Capital formation

[Except if there is no economic benefit to owner, has to be treated as -Intermediate Consumption-SNA 2008-6.230]

Separate establishments must be identified where possible

If outsourced/purchased
If undertaken on own account



Data and Measurement Issues

- Discussions of method and data
- Test compilations of R&D capital and consequences for national accounts aggregates
 - Test accounts? What is the acceptable margin?
 - Norway had GDP+1.2% change, negligible impact on Volume measure
- Full scale integration in the national accounts
 - Issues of consistency
 - Some aspects need attention



Data and Measurement Issues

- Standard classifications should be used
 - Norway experience-Survey of R&D not consistent with NACE/ISIC
- Specific surveys on R&D consistency with ISIC/NACE
- Volatility of GDP and expenditure on R& D
- Price Indices fore R&D
 - Input methods



Impact on GDP

Capitalization of R&D

Impacts

- Move R&D from intermediate consumption to gross capital formation. This changes GDP by the same amount.
- Require adding consumption of R&D fixed capital stock to non-market output: increase GDP



Impact on GDP

GDP (P)

- Output for own final use (↑)
- non-market output (↑↓)

GDP (E)

- Non-market final consumption expenditure (↑↓)
- Gross fixed capital formation (↑)

GDP (I)

- Operating surplus (↑)



Thank You