



SNA 1993 Update: Selected Recommendations

Carol S. Carson
UN ECE NOE Workshop
April 25-27, 2007



Plan of the presentation

- Introduction
- Selected recommendations
 - Research and development (R & D)
 - Military expenditures
 - Capital services
- Considerations



Introduction

- Why discuss these particular recommendations?
 - Most obvious: they are likely to have an impact on GDP
 - Other reasons: They...
 - are among the most widely debated
 - show the SNA as evolving while maintain the fundamental framework
 - demonstrate some features of the update process, especially the attempt to be mindful of business and public accounting

3



Introduction (cont'd)

- Outline for each recommendation
 - Motivation—why was the issue considered during the update?
 - Recommendation adopted at the recent UN Statistical Commission
 - Appearance in draft chapters: see the Update website <http://unstats.un.org/unsd/sna1993/draftingPhase/ChapterIssueMatrix.asp>
 - Impact on GDP
 - Source data

4



R & D

- **Motivation:** the 1993 SNA (¶ 6.163-164) treats expenditures on R & D as intermediate consumption, not investment
 - Issue had been considered leading up to the 1993 SNA and, at the last moment, was put on the research agenda
 - Continuing interest in R & D as a source of economic growth
 - Practical experience with satellite accounts

5



R & D (cont'd)

- **Recommendation adopted:**
 - The principle of treating R & D expenditure as gross fixed capital formation is to be in the updated SNA
 - Difficulties are to be overcome in order to implement:
 - Satellite accounts to provide a test field
 - Manual to help ensure comparability
 - *Rev. 1* will describe and provide links to ongoing work
 - ISWGNA will report to Statistical Commission
- **Related:** patented entities no longer feature as assets

6



R & D (cont'd)

- **Impact:** Raises GDP, by amounts that vary from country to country. On average, for OECD countries it is estimated that...
 - GDP would be about 2 percent larger
 - But with little impact on the growth rate.

7



R & D (cont'd)

- **Draft text:** for now, place holder paragraph
 - ¶ 10.100
 - Definition based on *Frascati Manual*
 - Value determined in terms of economic benefits
 - R & D is expected to provide
 - Includes provision of public services in case of R &D acquired by government
 - In principle, if it does not provide economic benefit to owner, it is not asset (and is intermediate consumption)
 - By convention, valued as sum of costs
 - ¶ 10.100: patent is not asset but legal agreement about terms of access to R&D

8



R & D (cont'd)

- **Source data:** Bulk of data will be from R & D surveys
 - Work underway to align survey instruments with SNA needs
 - OECD manual on methods of estimating intellectual assets is expected

9



R & D (cont'd)

- **Keep an eye on:**
 - Eurostat is said to be preparing for satellite accounts
 - US BEA is preparing a satellite account with a view to incorporating R & D in its core accounts in 2012

10

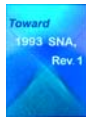


Military expenditures

Motivation

- The 1993 SNA (¶ 10.65-68) divides military expenditures into ...
 - Weapons and support systems—intermediate consumption regardless of their length of life
 - All other durables: gross fixed capital formation
- Problems with the current treatment
 - Division is hard to apply in practice
 - Weapons taken from stock and sold call for some counter-intuitive accounting

11



Military expenditures (cont'd)

- **Recommendation:**
 - Main: treat as assets all military goods that meet usual criteria—used in production for more than one year
 - Bullets and like (single-use weapons) to be treated as inventories
 - Separate categories within fixed capital formation and inventories
- **See draft chapter:** ¶ 10.84 and ¶ 10.137

12



Military expenditures (cont'd)

- **Impact:**
 - Purchase of weapons moved from intermediate consumption of government (and thus consumption expenditure) to gross capital formation
 - CFC on existing stock of weapons systems, which will vary across countries, will be addition to GDP

13



Military expenditures (cont'd)

- **Source data**
 - Admittedly problematic, although USA already implements the recommendation
 - Prospect: latest international public sector accounting standard treats military durables as property, plant, and equipment and requires depreciation over useful lives
 - Possible rule of thumb: perhaps GFCF on weapons systems as a percentage of total defense budget (based on shares of similar countries)

14



Capital services

- **Motivation:**
 - 1993 SNA does not explicitly recognize the services provided by non-financial assets
 - Assets used in market production: capital services are within operating surplus
 - Assets used in non-market production: when output is measured as sum costs, only consumption of fixed capital is counted
 - Estimates useful for productivity and other analysis
 - OECD *Measuring Capital* pushed frontier

15



Capital services (cont'd)

- **Basics about capital services**
 - Focus: non-financial assets used in production (that is, excluding, e.g., valuables)
 - Principle: Such assets contribute more to the value of output over the time they are used than their initial cost. This must be true or else producer would do better to leave his money in the bank to earn interest.

16



Capital services (cont'd)

- **Basics about capital services** (cont'd)
 - Long-standing view that operating surplus is the return to capital used in production, but SNA does not articulate how this surplus is generated.
 - Perpetual inventory method uses a model, either explicitly or implicitly, that can be used to derive estimates of all three capital-related measures: the asset value, a return on capital, and CFC

17



Capital services (cont'd)

- **Recommendation for assets used in market production (issue 15)**
 - Estimates to be included in supplementary tables rather than core accounts
 - Confirmed that capital services and capital stock measures should be compiled in an integrated manner
 - Basic concepts to be presented in SNA

18



Capital services (cont'd)

- Recommendation for assets used in non-market production (issue 16)
 - Maintain the present treatment
 - Undertake more research ...
 - in a manner that deals squarely with the unresolved points,
 - tests as conclusively as possible the impact on GDP,
 - and takes into account the differing degrees of data availability around the world.
 - ISWGNA is prepared to coordinate this research and to report to the Statistical Commission on progress.

19



Capital services (cont'd)

- Impact on GDP
 - Assets used in market production: no impact
 - Assets used in non-market production--**if** the recommendation had been adopted: non-market output estimated by the sum of costs, and thus GDP, would be higher by the amount of the estimated capital services
- Source data: no new data collections required but systems for estimating stock and CFC will need to be redeveloped to generate capital services in integrated way

20



Capital services (cont'd)

- Keep an eye on:
 - OECD plans to update *Measuring Capital*, which will include methods useful to countries needing less complex systems for estimation
 - Editor's paper for the ISI session on implementing the updated SNA, Lisbon, August 2007

21

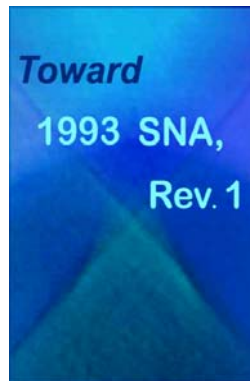


Considerations

- **SNA basics:** Recommendations do not change the fundamental framework, so countries are encouraged to continue development in line with *1993 SNA*
- **Harmonization with BOP:** IMF *BOP Manual* is being updated on a parallel track and this should be factored in to plans for implementation

22

Thank you



Contact: ccarson@imf.org

23