Towards the 2025 SNA

Developing guidelines for estimating the net return to capital for non-market production

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Introduction

- At its 10-12 July 2023 meeting, the AEG supported a range of recommendations to improve the **consistency in measurement using the sum of cost approach**, including to incorporate a **net return to capital** in the sum of costs approach for non-market producers
  - This followed on from a discussion of this issue at the March 2023 AEG meeting and subsequent global consultation which supported including a net rate of return for non-market production
- The meeting stressed the **need to develop practical guidance on the appropriate rate of return** to use in the calculation of non-market output to facilitate the implementation of the recommendations and ensure internationally comparable results
- The recommendations regarding improving the consistency in measurement using the sum of costs approach were included in the list of recommendations for changes to the SNA that were **endorsed by the UNSC** at its meeting during 27 February to 1 March 2024
- After AEG consideration, the paper will be updated as necessary and then **undergo global consultation**

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Introduction
(continued)

- By definition, the net return to capital for non-market production is equal to:

rate of return to capital

X

value of non-financial assets used in non-market production

- Therefore, there is a need to determine an **appropriate rate of return** to capital for non-market production
- The value of non-financial assets used in non-market production comes from **balance sheets**
- However, balance sheets are not produced by all countries, so for these countries an **alternative method** for estimating the net return to capital for non-market production is needed
- The rate of return to capital is not the same as a discount rate, as they serve different purposes
  - However, they both essentially relate to the **cost of capital** and therefore **similar issues** arise when considering appropriate rates for each of them

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Literature review

- OECD ***Measuring Capital***
  - Specifically discusses measuring the rate of return to the government sector
  - Three possibilities are suggested
    - A combination of the rate of return used for the market sector and the rate of return for owner-occupied housing
    - A measure based on the financing costs of government
    - The social rate of time preference (SRTP), which is a measure of society's willingness to postpone private consumption in order to consume later
      - Empirical work suggests an average (real(SRTP for OECD countries of 2.6%
  - No recommendation is made
- **International Public Sector Accounting Standards**
  - Discusses appropriate discount rates for the public sector, particularly in the context of pension obligations
  - Recommends the use of an appropriate government bond rate

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Literature review
(continued)

- Eurostat ***Pension Guide***
  - Also focuses on discount rates for estimating pension entitlements
  - Establishes criteria around the use of government bond rates
  - Proposes a **real discount rate of two percent** and a **nominal discount rate of four percent** for most countries based on a target inflation rate of 2 percent
- IMF Working Paper ***Public versus Private Cost of Capital with State-Contingent Terminal Value***
  - Notes that there has been a long-standing dispute about the relative costs of public versus private finance and observes that different approaches are used in different countries to value public projects
    - Many use government bond rates
    - Some use market-based costs of capital
  - However, the Paper concludes that a **lower public than private discount rate** should be applied in the feasibility analysis of public projects

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Considerations for the 2025 SNA

- While there is **no definitive answer** from literature, it seems **a rate of return based on or consistent with government bond rates is most appropriate** for government non-market output at least
  - Should each country calculate its own rate of return based on its own government bonds?
  - Or should a proxy rate of return for general government be established that could be applied consistently across countries?
  - The latter approach is recommended to reduce the possibility of arbitrary and volatile results, and to promote international comparability
- The paper proposes five criteria for determining an appropriate proxy rate

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Considerations for the 2025 SNA

- Using these criteria and based on EU analysis
  - it is recommended that a **two percent be used as the default real rate of return** for estimating the net return for government non-market output. Where a country's real bond rate is persistently and significantly in excess of two percent, it is recommended that a real bond rate specific for that country be estimated
  - the **nominal rate would be equal to the real rate of return plus the country's target inflation rate**
    - For countries without a target inflation rate , the inflation component of the nominal rate of return be set at three percent as a default unless there are compelling circumstances to estimate an alternative rate

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Considerations for the 2025 SNA

(continued)

- For the **central bank**, it is proposed to use the **same rate of return as for general government**

- For NPISH's, it is proposed to use a **real rate of return of 2.6% (based on the SRTP)** plus the **target inflation rate** to estimate the nominal frate of return

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Practical issues

- For countries with balance sheets, once an appropriate rate of return is determined calculating the return to capital for non-market production is reasonably straightforward
- For countries that do not have balance sheets, **a proxy measure** needs to be developed
  - It is noted that these countries used proxy measures for depreciation (COFC), which is also a cost in the sum of costs method, as well as necessary for calculating net measures such as NDP
  - It is proposed that a proxy measure of the net return to capital be developed based on the proxy measure for depreciation, noting that in capital theory the net return to capital and depreciation are not independent of each other
  - However, such countries should be encouraged to **adopt at least a simplified PIM** to establish more robust estimates of depreciation and the net return to capital, as well as balance sheet values

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Summary of recommendations

1. The preferred method of determining the net return to capital for non-market production is to multiply a rate of return to capital by the value of non-financial assets used in non-market production
2. To promote stability and international comparability, it is proposed that for estimating general government non-market output a real rate of return of two percent be used, unless there are compelling reasons to choose a different rate
3. The nominal rate of return for a country should equal the real rate of return plus the country's target inflation rate. If a country does not have a target inflation rate, a default rate of three percent can be used, unless there are compelling reasons to use a different rate
4. For central bank non-market output, it is proposed to use the same nominal rate of return as for general government
5. For NPISH non-market output, it is proposed to use a real rate of return of 2.6 percent, with the nominal rate of return calculated using the same inflation measure that is applied in calculating the nominal rate of return for government
6. Where countries do not have balance sheets to enable the preferred method of calculating the net return to capital for non-market production, it is proposed that a surrogate measure be developed based on a pre-determined relationship between the net return to capital and depreciation (with the specifics of this to be developed)
   - Such countries are strongly encouraged to adopt at least a simplified PIM, not only to provide balance sheet information that could be used to calculate the next return to capital for non-market production, but also to provide higher quality estimates of depreciation for both estimating the value of non-market output and for deriving important net measures such as net domestic product and net national income

Questions or Comments?