Discussion: Papers on Valuation of Natural Resources

Brent Moulton

Group of Experts on National Accounts

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Overview

• Brief review of *SNA 2008* guidance
• Problems addressed by these papers
  – Scope of coverage
  – Economic ownership
  – Leases and licenses; permits
  – Valuation
  – Analysis of estimates
Natural resources in *SNA 2008*

- **Types**
  - Land
  - Mineral and energy resources
  - Non-cultivated biological resources, water resources, and other natural resources

- **Non-produced, but within asset boundary**
  - Some activities (mineral exploration, extraction) within production boundary
  - No "consumption of natural resources" charge
  - Balance sheet, other changes in volume of assets

- **Leases often used for extraction**
Scope

- Papers focus on various natural resources:
  - Canada on mineral and energy and timber resources
  - China on land, timber, and water resources
  - Netherlands on oil and gas
- UN SEEA classification for mineral and energy reserves
  - Classes A (economically viable), B (expected to become viable), and C (non-commercial)
  - Should this classification be used in SNA?
Economic ownership

- Arrangements differ across countries, but in many countries the government is the legal owner of mineral and energy resources, but economic risks and rewards are shared with lessee.
- *SNA 2008* doesn't accept financial lease treatment for natural resource leases
- Canada effectively splits ownership between corporations and government with an intangible asset; tangible asset not allocated to either sector
- Innovative, but is it consistent with SNA?
Leases and licenses

- *SNA* (17.314-315) describes three cases – if lessee can use resource to extinction with little intervention from owner, recorded as sale; otherwise as lease with rent.

- Sharp boundary between effects of sale and lease/license can cause problems
  - Resource owner's balance sheet
  - Net lending

- Installment sale?
Valuation

- *SNA* principle of market valuation must be approximated using net present value
- Canadian paper provides a detailed example of how it can be estimated in practice
- Netherlands paper describes changes moving closer to market valuation
- Market prices may be volatile
Analysis of results

• In Canada, assets in corporation sector account more closely reflects equity valuations
• In Netherlands, interesting analysis of extraction limits for Groningen accumulation
• In China, pilot compilation is designed to meet policy needs
• Bottom line – natural resource statistics help SNA in providing accurate, comprehensive picture of nation's economy.