Measurement challenges in a globalized world

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Michael Connolly
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Mr. Themba Munalula (COMESA)
Ms. Lourdes Erro (Uruguay)
Mr. Dirk van den Bergen (Statistics Netherlands)
Are we making any progress?
Outline for today

• Introduction - what are the challenges?
• How we approach updating of guidance in the new SNA
• MNE Company structures
• Global Value Chains and Trade in Value Added
• Multi-National Trading Arrangements
• Economic ownership and trade in IPP and Marketing assets
• Valuation of Exports and Imports
What are the challenges with Globalization?
MNEs, roughly account for one-third of global output and between 50-60% of global exports.
But UNCTAD say MNEs account for 80% of trade?

- 80% of trade takes place in 'value chains' linked to transnational corporations
- *UNCTAD – World Investment Report*
What about Ireland - one of the most globalised countries in the World?

- MNEs account for
  - 65% of Goods exports and 67% of services exports
  - For imports: 22% of goods and 68% of services

![Chart showing export and import percentages for goods and services in Ireland.](chart.png)
it is important that the SNA provides the granularity users will need to analyse, understand, and develop effective policy to address Globalization in the economy

Cannot identify MNE activity separately in the National Accounts data
How we approach incorporating Globalisation in the new SNA
Globalization Task Team (GZTT)

- Intersecretariat Working Group on National Accounts (ISWGNA) Globalization Task Team set up to develop guidance notes on MNEs and SPEs leading to the update of 2008 SNA and BPM6 in 2025,
  - In consultation with the Advisory Expert Group (AEG) on National Accounts and related task teams created under the aegis of IMF Balance of Payments Committee (BOPCOM).

Building on much work and discussion that has occurred post 2008 SNA and BPM6, these options were put forward:

(I) Emphasize existing macroeconomic indicators
(II) Develop granular or supplemental data
(III) Come up with alternative presentations or extensions
(IV) Change standards
Corporate Structures
- MNEs
- SPEs

Trading Arrangements
- GVCs, TiVa, eSUTs
- FGPs and Contract Manufacturers

Specific Transactions
- Intellectual Property Products
- Marketing Assets

Exports and Imports
- Valuation
MNE Company structures - MNEs and SPEs GN.2 & GN.4
### Institutional Sectoral Accounts Template

<table>
<thead>
<tr>
<th>Financial Corporations</th>
<th>Domestically controlled financial corporations</th>
<th>Foreign-controlled financial corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public financial corporations</td>
<td>National private financial corporations</td>
</tr>
<tr>
<td></td>
<td>Of which: Public financial corporations, which</td>
<td>Of which: National private financial</td>
</tr>
<tr>
<td></td>
<td>are part of domestic multinationals</td>
<td>corporations, which are part of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>domestic multinationals</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nonfinancial Corporations</th>
<th>Domestically controlled nonfinancial corporations</th>
<th>Foreign-controlled nonfinancial corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Public nonfinancial corporations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Of which: Public nonfinancial corporations, which</td>
<td></td>
</tr>
<tr>
<td></td>
<td>are part of domestic multinationals</td>
<td></td>
</tr>
</tbody>
</table>

- It is supported by the existing SNA framework to identify foreign-controlled nonfinancial/financial corporations.
- But requires additional subsectors, national private nonfinancial/financial corporations which are part of domestic MNEs.
- Corporate inversions can be separately identified as an “of which” category of domestic nonfinancial corporations sector.
Sequence of Accounts

- Gross Domestic Product
  - equals
  - Product taxes less subsidies
  - plus
  - Gross Value Added
    - equals
    - Intermediate Consumption
      - minus
      - Pay to employees
        - equals
        - Gross Operating Surplus
          - Production
          - Generation of income
          - Distribution of primary income
          - Distribution of secondary income
          - Use of disposable income
          - Change in net worth from saving and capital transfers
          - Acquisition of non-financial assets
    - Net lending/borrowing
      - minus
      - Final Consumption
        - equals
        - Gross Disposable Income
          - plus/minus
          - Income and corporation tax
          - plus/minus
          - Pension and social protection
          - equals
          - Gross Saving
            - plus/minus
            - Depreciation
            - plus/minus
            - Capital transfers
            - equals
            - Change in net worth from saving and capital transfers
            - plus/minus
            - Financial Account
              - equals
              - www.cso.ie
Globalization in the Indonesian ISA

- The impact of globalization in Indonesia is captured by splitting Nonfinancial Corporations (NFC) Sector in the Indonesian ISA 2019 to describe how MNEs affect the economy.

- Subsector of NFC:
  1. Domestically controlled NFC
  2. Foreign-controlled NFC
     - Non-MNE
     - MNE

- The number of MNE is not full coverage because SBR is under development.

- MNE activities are depicted in the current and capital accounts.
# Impact of foreign MNEs Activities on Gross National Income

<table>
<thead>
<tr>
<th></th>
<th>Domestic non-financial corporations</th>
<th>Foreign-controlled non-financial corporations</th>
<th>Of which: Foreign controlled nonfinancial corporations which are part of MNE Group</th>
<th>Rest of the World</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total (NFC)</strong></td>
<td>$11</td>
<td>$11DO</td>
<td>$11DO3</td>
<td>$216</td>
</tr>
<tr>
<td>Gross operating surplus</td>
<td>4629</td>
<td>2474</td>
<td>2155</td>
<td>647</td>
</tr>
<tr>
<td>Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>139</td>
<td>74</td>
<td>65</td>
<td>13</td>
</tr>
<tr>
<td>Property income other than interest</td>
<td>175</td>
<td>93</td>
<td>81</td>
<td>0</td>
</tr>
<tr>
<td>Uses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>313</td>
<td>168</td>
<td>146</td>
<td>62</td>
</tr>
<tr>
<td>Property income other than interest</td>
<td>820</td>
<td>438</td>
<td>382</td>
<td>105</td>
</tr>
<tr>
<td>Balance of primary incomes</td>
<td>3809</td>
<td>1942</td>
<td>1646</td>
<td>446</td>
</tr>
<tr>
<td>Net lending (+)/net borrowing (-)</td>
<td>-628</td>
<td>-435</td>
<td>-426</td>
<td>203</td>
</tr>
</tbody>
</table>
Extended SUTs with firm heterogeneity

<table>
<thead>
<tr>
<th></th>
<th>Foreign-owned MNE</th>
<th>Domestic-owned MNE</th>
<th>Non-MNE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Exporter</td>
<td>Non-Exporter</td>
<td>Exporter</td>
</tr>
<tr>
<td>Imp</td>
<td>S</td>
<td>M</td>
<td>L</td>
</tr>
<tr>
<td>Non-Imp</td>
<td>M</td>
<td>L</td>
<td>S</td>
</tr>
</tbody>
</table>

- Dimensions: Ownership, Export orientation, Import orientation, Firm size class
- OECD “possible” breakdown of columns and rows for each industry in extended supply use table (SUT)
- Experimental approach
  - Focus on MNE breakout
- Microdata linking
  - Expanded to export orientation and firm size class in current work
  - Will consider import orientation and other possible criteria in long-run research

RECOMMENDATION: A refined definition for MNE, emphasizing “control”

*MNE is a legal entity that:*

- has at least one nonresident affiliate or branch, and;
- exercises control over its affiliate(s) or branch(es) either directly—by owning over **50 percent** of the voting power in the entity—or by *indirect transmission* of control.
- The MNE is the ultimate controlling parent (UCP)—the direct investor at the top of the control chain. **The MNE group** consists of the MNE and the set of legal entities—regardless of their economies of residence—that are under the control of the same UCP.
Including Depreciation / Degradation in Economic Growth - Need to focus on Net measures
Why ‘net’?

- GDP contains depreciated investment and its replacement investment - double counting


- Net income closer approximates sustainable income: the income that can be consumed in period without being worse off.

- The next SNA will include depletion adjusted income

- Net product is less prone to globalisation shocks
Net Value Added (factor cost) v’s Gross Value Added (basic prices)
Ireland: GDP, GNP, Modified GNI and NNI at constant prices
Summary: G.2 Treatment of MNE and Intra-MNE Flows

- GN proposes highlighting **MNEs**—recommend a breakdown (e.g., foreign-controlled corporations and national private/public corporations which are part of domestic MNEs) in the national accounts through the institutional sector accounts (ISAs), eSUTs (extended supply-use tables), and/or gross value-added (GVA) should be determined by:
  - *national agencies dependent on their statistical production process,*
  - *users’ analytical and policy needs.*

- **GN incorporates:** A **refined definition** for MNE, emphasizing “control” as defined by *BD4* and

- **Include** emphasis on Net indicators and supplemental granular information.
SPEs simply corporate letterboxes?

- Accounting statements
- Balance Sheets
- Transactions
- Employees?
Growing Importance and Complexity of SPEs

Traditional typology (BPM6 and 2008 SNA)

- Mostly set up by financial institutions for financial activities
- Arrange worldwide borrowing and lending activities for MNEs
- Narrow, specific financial activities, such as securitization
- Mostly engaged in pass-through and round-tripping direct investment

Currently

- Also nonfinancial entities involved in R&D, trade, and other activities for group-wide profit maximization
- Reallocate the collection and distribution of royalties, license and other fees, profits, intellectual property products, etc.
- Broad range of financial and non-financial activities, even some not “SPE-like”
- Direct, portfolio and other investment, as well as current and capital account transactions
An SPE, resident in an economy, is a formally registered and/or incorporated legal entity recognized as an institutional unit, with no or little employment up to a maximum of five employees, no or little physical presence and no or little physical production in the host economy.

SPEs are directly or indirectly controlled by nonresidents.

SPEs are established to obtain specific advantages provided by the host jurisdiction with an objective to (i) grant its owner(s) access to capital markets or sophisticated financial services; and/or (ii) isolate owner(s) from financial risks; and/or (iii) reduce regulatory and tax burden; and/or (iv) safeguard confidentiality of their transactions and owner(s).

SPEs transact almost entirely with nonresidents and a large part of their financial balance sheet typically consists of cross-border claims and liabilities.
Figure 1. Decision Tree to Identify Resident SPEs for External Sector Statistics

1. Is the entity formally registered and/or incorporated resident institutional unit?
   - Yes
   - No
     - Nonresident unit

2. Is the entity directly or indirectly controlled by nonresident(s)?
   - Yes
   - No
     - Nonresident unit

3. Is the entity established with one or more of the four objectives in the definition?
   - Yes
   - No
     - Nonresident unit

4. Does the entity have no or up to five employees?
   - Yes
   - No
     - Nonresident unit

5. Does the entity have little or no physical presence and physical production in the host economy?
   - Yes
   - No
     - Nonresident unit

6. Does the entity transact almost entirely with nonresidents?
   - Yes
   - No
     - Nonresident unit

The entity is an SPE

Not an SPE
**Treatment of SPEs: Options considered**

**Option 3**: Proposal to extend the existing framework, adopting the nationality-based presentation as alternative concept, without departing from the current statistical *SNA/BPM* framework.

- Changes suggested by Borga and Caliandro (2018) and Rassier (2017), if implemented as supplemental presentations, could yield meaningful enough departures from current practice.

- **Views** that this be considered on a *supplemental basis* to complement residence-based statistics. A viable option only for countries for which SPEs were deemed important:
  - Would give rise to country specific practicality issue of implementation – too ambitious and resource intensive.
  - To undertake this approach, data sharing agreements will become a priority.
  - Nonetheless, both approaches as complements will meet the practicalities and policy needs of countries for which these presentations would bring value addition to analysts or policymakers.
  - Nationality-based framework would complement the existing residence-based framework, which identifies where financial claims and liabilities are held.
G20 (DGI-2) Institutional Sector Accounts (Financial and Nonfinancial Corporations)

- ESS are already moving towards collecting data on resident SPEs that have foreign parents.
- Consideration could be given to take those units identified for ESS and identify same within the ISAs.
- This presentation provides the sequence of accounts from production through to saving and net lending and borrowing.
- They include both financial and non-financial flows and balance sheet data.
- Informative in terms of pass through investment, capital investment activities - particularly intellectual property and other aspects of SPE activities.

### Non-Financial Corporations

<table>
<thead>
<tr>
<th>Total</th>
<th>Total</th>
<th>Domestic non-financial corporations</th>
<th>Foreign-controlled non-financial corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>S11</td>
<td>S11DO</td>
<td>S11001</td>
<td>Of which: S110011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Domestic non-financial corporations, which are part of domestic multinationals</td>
<td>National private non-financial corporations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Of which: S11002</td>
<td>Of which: S110021</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Of which: S11003</td>
<td>Of which: SPEs</td>
</tr>
</tbody>
</table>

### Financial Corporations

<table>
<thead>
<tr>
<th>Total</th>
<th>Total</th>
<th>Domestic financial corporations</th>
<th>Foreign-controlled financial corporations</th>
</tr>
</thead>
<tbody>
<tr>
<td>S12</td>
<td>S12D0</td>
<td>S12001</td>
<td>Of which: S120011</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Domestic non-financial corporations, which are part of domestic multinationals</td>
<td>National private financial corporations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Of which: S12002</td>
<td>Of which: National private financial corporation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Of which: S12003</td>
<td>Of which: SPEs</td>
</tr>
</tbody>
</table>

= Target
= Encouraged
Summary: G.4 Treatment of Special Purpose Entities and Residency

GN recommends no change made to the residency principle in the SNA and BOP frameworks, SPEs with non-resident parents should continue to be classified as institutional units in the economic territory in which they are located.

A definition of SPEs that is consistent between national accounts and external sector statistics.

Distinguishing separate “of which” category (within the non-financial and financial corporations’ sectors) for foreign-controlled SPEs.

✓ Unanimously supported the proposals on (i) adopting the SPEs definition, in both BPM7 and 2025 SNA; and (ii) integrating the proposed breakdown of foreign controlled SPEs within the ISAs for countries for which SPEs are significant, leaving the core BPM and SNA framework unchanged.

✓ Agreed to drop the term “foreign controlled” before SPEs given that the definition already contains foreign control as one of its elements.
MNE Trading Arrangements

- Why have Global Production arrangements (GVCs) developed
- Consider a few examples of the concepts - Goods for Processing (GFP), Factoryless Goods Production (FGP) and Merchanting
- Real impacts on National Accounts of getting Global Production right and wrong
- TiVA indicators, addressing the double counting implicit in gross flows of trade,
- GVC satellite account
- More granularity using the extended supply and use tables (eSUTs)
Before - all the activity at one site

Now:

• Fragmentation
• Specialisation
• Cost optimization
• Tax optimization
A320 Family workshare + transport

Who makes what?

- **AIRBUS**
  - in **FRANCE**: Forward centre fuselage, Saint-Nazaire
  - in **GERMANY**: Centre wing box, Nantes
  - in **UK**: Engine pylons, Toulouse - Saint Eloi
  - in **SPAIN**: Vertical Stabiliser, Stade
  - in **GREAT BRITAIN**: Flaps, Bremen
  - Operations in seven countries, three continents, 24 hours a day

Operations in seven countries:
- **Belugas**
- **Container ships**
- **Roll-on / roll-off vessels**
- **Trucks**

Map of production and transportation routes:
- **US**
- **UK**
- **FRANCE**
- **GERMANY**
- **ITALY**
- **CHINA**
- **TIANJIN**

Production sites:
- **MOBILE**
- **Saint-Nazaire**
- **Nantes**
- **Toulouse**
- **Stade**
- **Hamburg**
- **Broughton**
- **Meaulte**
- **Naples**

Aircraft models:
- A318
- A319
- A320
- A321

Timeline:
- From 2016
Why does fragmentation occur?

Value Added

Basic and applied R&D, design, Commercialization

Manufacturing, Standardized services

Marketing, Advertising and Brand management, Specialized logistic, After-sales services

R&D Knowledge

Inputs

Location 1  Location 2  Location 3  Location 4  Location 5

Markets

Value Chain Disaggregation
How business functions are generally located about generation of value added in a GVC
Classifications used

- **Business Functions**
  - A business line represents a sequence of business functions controlled by the lead firm
  - Can be mapped to the reference classification of products and economic activities

- **GVC participating firms**
  - Firms are classified according to their role in the GVC (whether lead firm, affiliated or non-affiliated supplier)

- **GVC products by GVC industry**
  - A standardized list of product codes and descriptions for industry specific GVCs
  - Can be mapped to HS for traded products and CPC for the SUT framework

- **GVC institutional sectors**
  - An extension to the institutional sector framework is largely made to accommodate concepts from FDI

- **GVC functional breakdown**
  - Enhances the standard BOP/IIP functional classification to include a separate category distinct from foreign direct investment – namely other inter-company financing
General MDL Model used at Statistics Netherlands

1:1 M: Ent Group → Ent → Job → Person
1:1 N: Business Register (BR) → Job Insurance
P:1: Population Register (BRP)

Ownership (UCI)/FATS → Internation Trade TEC/STEC
Finances of Enterprises (SFO) → Tax data → SBS & STS Surveys
Large Case Unit → Investments, FDI → R&D/CIS etc.
Linked Employer-Employee Data (LEED)

External Sources (commercial & non-commercial) BiG DATA
Why? OECD / WTO Trade in Value Added

Figure 1 – Import content of exports (% of gross exports), 1995 and 2011

Figure 2 – Mapping the drivers

- Technological progress
  - Better coordination of complex production processes over great distances
- Multilateral & bilateral trade & investment agreements
  - Reduction of trade and investment barriers
- Reduction of transport & communication costs
- Lowering of trade costs
  - Increase in trade flows
  - Multinational enterprises
    - Fragmenting production & distributing fragments of the value chain across various locations
  - Increase in FDI
- International value chains
CATEGORIES
BY EXTENSION

Export Focus

ToR OCDE:
- Exporter
- Non Exporter

ESUT Mexico:
- Exporter
- Non Exporter
  - Formal
  - Informal

Ownership Focus

ToR OCDE:
- Foreign Owned
- Domestically owned MNE
- Domestic Owned

ESUT Mexico:
- Domestic Owned
  - Affiliate Domestic Owned
  - Foreign Owned
  - Affiliate Foreign Owned

Hybrid/Integrated Focus

ToR OCDE:
- Foreign Owned
- Domestically owned MNE
- Domestic Owned (Small)
- Domestic Owned (Medium)
- Domestic Owned (Large)

ESUT Mexico:
- Export Focus
  - Domestic Owned
    - Small
    - Medium
    - Large
  - Affiliate Domestic Owned
    - Small
    - Medium
    - Large
  - Foreign Owned
    - Small
    - Medium
    - Large
  - Affiliate Foreign Owned
    - Small
    - Medium
    - Large
- Non Export Focus
  - Formal
  - Informal
Extended SUTs with firm heterogeneity

<table>
<thead>
<tr>
<th>Foreign-owned MNE</th>
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<th>Non-MNE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exporter</td>
<td>Non-Exporter</td>
<td>Exporter</td>
</tr>
<tr>
<td>Imp</td>
<td>Non-Imp</td>
<td>Imp</td>
</tr>
<tr>
<td>SML</td>
<td>SML</td>
<td>SML</td>
</tr>
</tbody>
</table>

- Dimensions: Ownership, Export orientation, Import orientation, Firm size class
- OECD “possible” breakdown of columns and rows for each industry in extended supply use table (SUT)
- Experimental approach
  - Focus on MNE breakout
- Microdata linking
  - Expanded to export orientation and firm size class in current work
  - Will consider import orientation and other possible criteria in long-run research

**Exporter Focus**

- **Supply**
  - Exporter: 9.0%
  - Non Exporter Formal: 32.1%
  - Non Exporter Informal: 58.9%

- **Use**
  - Exporter: 6.0%
  - Non Exporter Formal: 43.5%
  - Non Exporter Informal: 50.5%

**Ownership Focus**

- **Supply**
  - Domestic Owned: 29.9%
  - Affiliate Domestic Owned: 10.3%
  - Foreign Owned: 29.5%
  - Affiliate Foreign Owned: 30.3%

- **Use**
  - Domestic Owned: 32.2%
  - Affiliate Domestic Owned: 11.2%
  - Foreign Owned: 31.0%
  - Affiliate Foreign Owned: 25.6%

**Size class**

- **Supply**
  - Small: 33.2%
  - Medium: 12.4%
  - Large: 54.4%

- **Use**
  - Small: 42.4%
  - Medium: 45.2%
  - Large: 12.4%

*Economic Units are classified as exporters.*
Experimental Statistics

International trade in value added indicators

What do the indicators measure?

1. **EX_DVA**
   - It measures the total domestic value added generated in the local economy contained in exports to the partner country.

2. **EX_FVA**
   - Measures the content of foreign value added in gross exports of intermediate goods and services incorporated in the total gross exports of the local country.

3. **DFE_VAD**
   - It measures the domestic value added contained in the final goods and services that local industries export to partner countries.

4. **IM_DVA**
   - It is the domestic value added generated in the local country that returns to the local country contained in the gross imports of the industry of the partner country.
Factoryless Goods
Production and
Contract
Manufacturing
MNE Trading Arrangements

- Consider a few examples of the concepts - Goods for Processing (GFP), Factoryless Goods Production (FGP) and Merchanting
- Recording data on a change in economic ownership basis v’s cross border movements
- Real impacts on National Accounts of getting Global Production right and wrong
The flows of goods and transactions in a processing arrangement

Country B
Third party supplier

Country C
Contractor

Country D
Final customer

Transactions
Goods flow

Material input
Final Product
## In a processing setup

<table>
<thead>
<tr>
<th>BoP transactions</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale of final good</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Purchase of material inputs</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Purchase of manufacturing services</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Adjustment for goods crossing the border (ITGS)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Contractor</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale of manufacturing services</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Adjustment for goods crossing the border (ITGS)</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Third party supplier of material inputs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale of material inputs</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td><strong>Final customer</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of final good</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
In a processing setup - Principal owns all material inputs during transformation

<table>
<thead>
<tr>
<th>BoP transactions</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>40</td>
<td>110</td>
</tr>
<tr>
<td>Sale of final good</td>
<td></td>
<td>110</td>
</tr>
<tr>
<td>Purchase of material goods abroad</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Purchase of manufacturing services</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Adjustment for goods crossing the border (ITGS)</td>
<td></td>
<td>-10</td>
</tr>
<tr>
<td>Contractor</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Sale of manufacturing services</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Adjustment for goods crossing the border (ITGS)</td>
<td></td>
<td>-30</td>
</tr>
<tr>
<td>Third party supplier of material goods</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Export of material goods</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

The flows of goods and transactions in a processing arrangement
The flows of goods and transactions in a FGP type arrangement

Country B
Third party supplier

Country C
Contractor

Country D
Final customer

Transactions

Goods flow
For FGP - Option 1 net the sale of material inputs, reduce the inflation of trade, retain material inputs bought abroad.

<table>
<thead>
<tr>
<th>BoP transactions</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>50</td>
<td>120</td>
</tr>
<tr>
<td>Sale of final good</td>
<td>110</td>
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<tr>
<td><strong>Net export of material inputs</strong></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Purchase of material input</td>
<td>-20</td>
<td></td>
</tr>
<tr>
<td>Sale of material input</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Purchase of goods after transformation</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td><strong>Contractor</strong></td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Sale of transformed goods</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td><strong>Purchase of material goods</strong></td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Third party supplier of material goods</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Export of material goods</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>

The flows of goods and transactions in a FGP type arrangement
In a FGP setup

- Principal owns all materials input before transformation, sells them during transformation and rebuy the final goods.

<table>
<thead>
<tr>
<th>BoP transactions</th>
<th>Import</th>
<th>Export</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>70</td>
<td>140</td>
</tr>
<tr>
<td>Sale of final goods</td>
<td></td>
<td>110</td>
</tr>
<tr>
<td>Purchase of material goods</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Purchase of goods after transformation</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Sale of material goods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contractor</td>
<td>30</td>
<td>50</td>
</tr>
<tr>
<td>Sale of transformed goods</td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>Purchase of material goods</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Third party supplier of material goods</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Export of material goods</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>
An Example of Merchanting of Goods

Merchant in country A
<table>
<thead>
<tr>
<th>Item</th>
<th>2019</th>
<th>2020</th>
<th>2020</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year</td>
<td>Year</td>
<td>Quarter 1</td>
<td>Quarter 2</td>
<td>Quarter 3</td>
</tr>
<tr>
<td>Current Account</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Merchandise(^1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td>225,944</td>
<td>244,809</td>
<td>62,528</td>
<td>57,033</td>
<td>61,349</td>
</tr>
<tr>
<td>Imports</td>
<td>107,828</td>
<td>99,856</td>
<td>24,872</td>
<td>22,756</td>
<td>23,454</td>
</tr>
<tr>
<td>International trade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td>152,535</td>
<td>161,894</td>
<td>44,206</td>
<td>37,848</td>
<td>40,540</td>
</tr>
<tr>
<td>Imports</td>
<td>87,486</td>
<td>83,022</td>
<td>20,894</td>
<td>17,714</td>
<td>19,659</td>
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<tr>
<td>Goods for processing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td>66,264</td>
<td>73,945</td>
<td>14,737</td>
<td>16,728</td>
<td>18,535</td>
</tr>
<tr>
<td>Imports</td>
<td>16,394</td>
<td>14,851</td>
<td>3,230</td>
<td>4,722</td>
<td>3,322</td>
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<tr>
<td>Other conceptual adjustments</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Exports</td>
<td>-6,813</td>
<td>-5,901</td>
<td>-83</td>
<td>-884</td>
<td>-1,316</td>
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<tr>
<td>Imports</td>
<td>3,948</td>
<td>1,983</td>
<td>747</td>
<td>320</td>
<td>474</td>
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<tr>
<td>Merchanting (net export)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td>13,960</td>
<td>14,873</td>
<td>3,668</td>
<td>3,342</td>
<td>3,591</td>
</tr>
</tbody>
</table>
How important is it?
Analysis of Goods - Change of Economic Ownership

€Billions


-5  -10

Trade Import  Import Adjustment  Trade Export  Export Adjustment
Summary

• Identifying the change in economic ownership for Goods exports and imports is crucial.
• Cross border based exports and imports of goods is no substitute - conceptual models for GFP and FGP demonstrate this.
• Discussed methods of identifying inconsistencies using company data.
G.7 Global Value Chains and Trade in Value-Added

- GN recommends no conceptual changes are required.
- Discusses TiVA estimates, eSUTs, and GVC satellite account.

Decision:

- Unanimously supported the proposals, namely including descriptions of GVCs and TiVA in the next set of manuals and supporting the development of supplementary information for GVC analysis.
- Some members underscored that the supplementary information should remain voluntary and not be embedded into official statistics, considering countries’ varying degrees of statistical capacity and scarce resources.
- A few members REQUESTED International Organizations to commit to maintaining the statistical infrastructure to produce Inter-Country Input-Output tables (ICIOs) to create indicators on GVCs or other indicators relevant for users and policy analyses.
G.6/C.4 “Merchanting and Factoryless Goods Producers and Recording of their Transactions”

- GN recommends treating **factoryless goods producers (FGP) as manufacturers**, regardless of any affiliation with the contractor responsible for transforming the goods.
- Consistent with the task team on ISIC (2021) recommendation

- **The output of the contractor recorded as a good** when the contractor takes ownership of the material inputs (*where IPP and the management of the production process are provided by the principal—FGP type arrangement*), and as a **service** when the material inputs are owned by the principal (*—typical processing arrangement*).

- Balance of payments standard component of goods adjusted to cover the transactions related to goods traded as part of a global manufacturing arrangement as a distinct item.

**Decision:**
- ✓ Agreed with proposed treatment of FGPs.
Economic Ownership of IPP Assets and Recognition of Marketing Assets
Globalisation and Fragmentation of Production changed everything

- Recording changes in economic ownership of goods and capital assets in particular
- Both intangible and tangible highly mobile capital assets
- Fundamental question - Who owns what?
- Basis for economic statistical compilation
Background

• Statistical challenge—identifying economic ownership of previously produced intellectual property products (IPPs) amongst units of a Multinational Enterprise (MNE).

• MNE can register the previously produced IPP in an economy that maximizes the overall post-tax MNE profits.

• Determining economic ownership of IPPs, and the recording of related transactions affects the recording of assets and related income flows.
  • IPP asset can be leveraged as an input into the production of other (non-IPP) goods and services.
  • IPP asset can earn revenue through royalties and license fees.
  • Creation of IPP assets at one location of MNE group is often funded by affiliates elsewhere in the group.
Questions to be answered

1. Did a transaction occur between affiliates in the MNE Group to acquire a previously produced IPP asset?

2. Is the receiving entity an Institutional Unit in the economy?

3. Is the IPP directly engaged with production or is it located with the producer of the IPP?

4. Does the entity receive income related to the IPP or pay royalties for its use?
   - Either directly of through contract manufacturing arrangements
Consequences of Increases in Stock of IPP Assets

- Increased Capital Assets
- Increased Production of Goods and Services
- Increased Exports
- Increased Depreciation
- Increased Profits
Issues for Discussion

• Change in ownership from an economic point of view means that all risks, rewards, rights and responsibilities of ownership are transferred.
  ➢ Not straightforward in the case of MNEs.
  ➢ May assign legal ownership of the IPP asset to a special purpose entity (SPE).

• International tax rules are being modified to more align tax with economic ownership.

• All affiliates of an enterprise group are to some degree controlled by their parent.

• However, affiliates are economic owners of the (tangible) assets they hold but the issue is more complicated for intangible products.

• How can a change in economic ownership of previously produced IPP be determined?
Options Considered

• **Option 1:** The ultimate parent is deemed the economic owner of all IPP assets across the MNE group. The argument is that in an MNE Group control is exerted centrally and consequently the risks are managed centrally and at the same time the returns are routed ultimately to the MNE headquarters (HQ).

• **Option 2:** The producer of the IPP is deemed the economic owner of the IPP asset. In many MNEs, dedicated R&D units (affiliates) produce the IPP.

• **Option 3:** The unit that uses the IPP in productive activities is the economic owner. This option assumes that the economic owner of the IPP is any unit that produces goods and services for which it, directly or indirectly, makes use of the IPP.
Options Considered (cont’d)

- **Option 4:** A more nuanced option based on the *Guide to Measuring Global Production (GMGP)* decision tree.

 Assigns economic ownership to a unit on the basis of whether the unit is
  
  - (i) a producer of the IPP
  
  - (ii) whether it receives explicit payment to produce the IPP or a payment to acquire the whole of the previously produced IPP (corresponding with a change in ownership) or
  
  - (iii) making use of the IPP (no change in ownership).

  Changes in ownership mainly follow the type of monetary transaction observed

- **Option 5:** Intra-MNE transactions in cross-border previously produced IPP assets are viewed as a type of securitized asset and recorded in the financial account of the national accounts and balance of payments.

  Bundles an existing asset(s) into a tradable security, thus the capital assets are transformed into financial assets, or the assets and payment profiles of the assets are used to create additional financial assets.
G.5 Economic Ownership and Recording of Intellectual Property Products (IPPs)

- GN considers 5 options on how to determine economic ownership of IPPs; recommends assigning economic ownership depending on the scenarios under consideration.

- GN proposes to adopt the GMGP Decision Tree (option 4) for the determination of the economic owner of IPP across an MNE Group.
  - Does not propose a change in the conceptual standards of assigning economic ownership based on risks and rewards.
  - Decision Tree should be seen as a tool to assist compilers in how to interpret risks and rewards in the case of IPPs.
  - Attributes economic ownership of IPPs to an SPE, aligned with the GZTT GN G.4 “Treatment of SPEs and Residency” and as per the IMF’s “Operational Guidelines on SPEs”.

*’s comments then to be sent for final endorsement.
Transfer Pricing and BEPS

Implementation of BEPS in the intervening period since the publication of the GMGP in 2015

- additional validation to the approach taken in constructing the decision tree.
- BEPS has resulted in a greater coincidence between generation of value added and the economic ownership of the IPP assets.
Conclusions

- GZTT consultation revealed assigning economic ownership to a unit depends on the scenarios under consideration and that a one-size-fits-all approach should not be taken.
- GZTT consultation supported the adoption of the GMGP Decision Tree for the determination of the economic owner of IPP across an MNE Group.
- Proposal to adopt the GMGP Decision Tree does not propose a change in the conceptual standards of assigning economic ownership based on risks and rewards.
- Decision Tree should be seen as a tool to assist compilers in how to interpret risks and rewards in the case of IPPs.
- Some GZTT members expressed reservations about attributing economic ownership of IPPs to an SPE.
- Worth emphasizing that a stricter implementation of economic ownership in the accounts is not necessarily a panacea to perceptions of distortions to the accounts!
Background – Marketing Assets

• Both the 2008 SNA and the BPM6 classify marketing assets as nonproduced non-financial assets.
  ✓ Assets that come into existence in ways other than through processes of production.

• Classified into three categories:
  (i) Natural resources, (ii) Contracts, leases, and licenses, and (iii) Goodwill and marketing assets.

• While the basis for classifying natural resources and contracts leases, and licenses as nonproduced assets is clear, the basis for classifying marketing assets is not.

2008 SNA acknowledges that the major reason for not treating marketing assets as fixed assets is due to the difficulty of measuring their value.

Conceptual issues:
✓ whether marketing assets should be maintained as being nonproduced non-financial assets
✓ whether marketing assets could be re-examined as produced non-financial assets
Outcomes: Options Considered

- **OPTION I: Marketing Assets are treated as Produced Non-Financial Assets**
- The existing definition of intellectual property products would then be expanded with a new sub-category for marketing assets.
- *Payments for the use of a marketing asset (franchise fee):* would be recorded as output in the form of the sale of a service.
- Outright acquisition/sale of a marketing asset: recorded in the goods and services account
Outcomes: Options Considered

• **OPTION II: Maintain treatment of Marketing Assets as Nonproduced Non-Financial Assets**

  *Consistent guidance between BPM6 and 2008 SNA would be required*

• Payments for the use of a marketing asset (franchise fee): Existing *BPM6* guidance could be taken as a starting point

• “…it would be desirable to separate the income and service elements. However, it may not generally be feasible to do so in practice; in which case, a convention is adopted that the entire values are to be classified as charges for the use of intellectual property.”

• How should the property income be recorded?

• BPM6 and 2008 SNA offer no options for recording the property income from non-produced assets, other than rent

  *However: rent is the return on natural resources*
Recommended Approach

• If marketing assets are nonproduced

✓ No consensus on how to best record transactions if marketing assets continue to be recorded as nonproduced.

• Possible options (i) by splitting them between services and income (the flexible option in BPM6, if information is available) (ii) in services (the default solution in BPM6, if a split is not possible) (iii) in income

✓ A specific subcategory to goodwill and marketing assets be introduced on the NA balance sheet

• GZTT unanimously supported global consultation to test the practical aspects of the proposed options
Recommended Approach

• If marketing assets are produced:
• May entail new IPP sub-category on marketing assets
✓ Present specific methodological guidance for the recording of fees for the use of marketing assets as service payments and BPM6 updated to reflect that marketing assets are produced assets.
✓ Acquisitions or sales of marketing assets included in the capital account in the national accounts and the goods and services account in the balance of payments
G.9 “Payments for ‘Knowledge-based Capital’”

- GN discusses two major conceptual options

- Option I: Marketing assets are treated as produced non-financial assets

- Option II: Marketing assets are maintained as being non-produced non-financial assets but with consistent and enhanced reporting in both manuals
  - How to record payments for the use of a marketing asset (franchise fee)? Under Services, Income, or both?
  - How should property income be recorded?

- Decision:
  ✓ Supportive to the GZTT’s proposal of undertaking a targeted testing before deciding on the final recommendation.
  ✓ Members remained favorable to the preferred treatment of marketing assets as produced on conceptual grounds.
  ✓ If status quo (continue treating these assets as nonproduced) be maintained, clearer guidance on the treatment of payments for the rights to use marketing assets.
  ✓ Slight preference to treat those payments as services (the default solution in BPM6, if a split is not possible).
  ✓ Large support for creating a new subcategory on the payment for nonproduced nonfinancial assets other than natural resources in the primary income account.
  ✓ Concept of rent, and the need to distinguish between rent and services, has been discussed by other task teams during the update process.
  ✓ Eurostat is preparing a more general guidance note on rent.

- GN will be finalized once testing ends. To be completed by December 2022.
Workshop and Follow-up Testing etc

1. Workshop was to determine a practical method to measure marketing assets as produced assets in the international statistical standards, and included discussions on

   (i) available data sources;

   (ii) the adequate methodology to calculate the current production and gross fixed capital formation and appropriate valuation

   (iii) the development of depreciation rates, retirement patterns, and service lives to calculate capital stock and consumption of fixed capital; and

   (iv) the appropriate deflator.

2. A two-stage testing strategy for guidance on measurement of the assets:

   - Stage 1: a dedicated group of economies and international organizations to review existing literature on the topic and assess if the methodology can be replicated, using the current workshop to facilitate the discussion.

   - Stage 2: launch of a global consultation in September 2022, using responses from economies to make recommendations to AEG/BOPCOM on feasibility by end-December 2022.
Valuation of Exports and Imports - CIF/FOB
Valuation of imports and exports: introduction


- recommends recording of imports and exports of goods at FOB value;
- the FOB valuation seems to not be fully reconciled with the general conceptual principle of recording output at basic prices:
  - **FOB valuation principle**: goods are valued excluding freight and insurance services between the exporting and importing countries (i.e., at a point of uniform valuation).
  - **basic price valuation principle**: goods are valued at the observed transaction price receivable by the producer (freight and insurance services are included or excluded depending on if these services are separately invoiced by the producer).

- imports of goods are to be recorded in the supply and use tables at basic prices:
  - **CIF to FOB adjustment** is needed, if FOB-type data detailed by product group are not available for imports.
Valuation of imports and exports: recommended approach – conceptual aspects

*Impact of adopting transaction values*

- **National Accounts:**
  - in general consistent with the principles concerning the time of recording and valuation of production recommended in the 2008 SNA.
  - need of additional guidance for SUT compilation.

- **Balance of Payments:**
  - demarcation between goods and services
  - introduction of a changeable valuation point
  - change in treatment of international freight and insurance services
Historical background

- International Trade (ITGS) data as a source already existed – INCO Terms 1920s
- Change in economic ownership coincided largely with movement across National Frontiers
- Used available data to compile Exports and Imports of Goods that predated System of National Accounts although Balance of Payments already existed
<table>
<thead>
<tr>
<th>Groups</th>
<th>Any Mode or Modes of Transport</th>
<th>Sea and Inland Waterway Transport</th>
<th>Freight Prepaid Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incoterm®</td>
<td>EXW (Place)</td>
<td>FAS (Free Alongside Ship (Port))</td>
<td>CPT (Carriage Paid To (Place))</td>
</tr>
<tr>
<td>Incoterm®</td>
<td>FCA (Free Carrier (Place))</td>
<td>FOB (Free On Board (Port))</td>
<td>CIF (Cost and Freight (Port))</td>
</tr>
<tr>
<td>Incoterm®</td>
<td></td>
<td>CFR (Cost and Freight (Port))</td>
<td>CIP (Carriage &amp; Insurance Paid to Place)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transfer of Risk</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>At Buyer’s Disposal</td>
<td>On Buyer’s Transport</td>
<td>Alongside Ship</td>
<td>On Board Vessel</td>
</tr>
<tr>
<td>On Board Vessel</td>
<td>On Board Vessel</td>
<td>On Board Vessel</td>
<td>At Carrier</td>
</tr>
</tbody>
</table>
Complete answers: number of economies, by region

- Results by May 26, 2021
- 119 economies submitted complete answers
- 12 economies to be contacted to clarify details on answers received

*(some results may change with the outcome of these contacts)*
Size of the FOB valuation adjustment

- Economies reported very diverse estimates of the CIF to FOB adjustment of Imports, ranging from 0 to 16% (excluding outliers)
  - Blue columns in the graph represent the estimates reported
- The average of the estimated adjustment reported 6%
  - Orange line in the graph represent the average of the estimates
Feedback from BOPCOM and AEG

- Support the use of invoice values on a conceptual level for inclusion in BPM7 and SNA 2025
- Further experimentation and testing is required by countries
- As wide a range as possible of countries need to participate in the testing
- Need to identify the challenges for all countries in adopting the Invoice value for Exports and Imports of goods
More exhaustive testing....

• Disappointing response from 43 candidate countries

• Half of responses addressed valuation of exports only

• Compilation of the results gave no basis for firm conclusions
Way forward

• Data on invoice value needs to be assessed

• Include invoice value in the data collected from ITGS compilers

• Enable a Quality Assurance framework to assess the Invoice value over a number of periods

• Conceptual arguments have been accepted - now it is about the practical issues
Summary: G.1 Valuation of Imports and Exports (CIF-FOB Adjustment)

- Guidance note (GN) on the adoption of transaction (invoice value) for the valuation of imports and exports
  - Further consultation and testing to understand the practical feasibility of the preference for recording of exports and imports of goods at their observed transaction value.
- Launched on March 12, 2021, simultaneously on UNSD and the IMF’s BPM6 Update webpage.
  - Responses for stage 1 due April 12, 2021.
- Stage 1 closed April 2021
- Stage 2 closed beginning of September 2021
- Discussed at the joint AEG-BOPCOM session October 26 – November 1, 2021.

Decisions:

✓ Option 3—valuing exports and imports of goods at invoice values—is conceptually sound, but in light of the practical difficulties the status quo (Option 2) is being recommended as part of the current BPM and SNA update.

✓ Option 3 will be the standard in the next round of BPM and SNA updates, with an understanding that economies should start preparing for a transition to the use of invoice values as of the next update of the manuals

✓ Collection of invoice data will be explored through the International Merchandise Trade Statistics (IMTS) and experimentation by economies should ensure the quality of the data.

Final version of the GN is ready to be circulated to the AEG and Committee for endorsement.
Corporate Structures
- MNEs
- SPEs

Trading Arrangements
- GVCs, TiVa, eSUTs
- FGPs and Contract Manufacturers

Specific Transactions
- Intellectual Property Products
- Marketing Assets

Exports and Imports
- Valuation
Globalization Task Team (GZTT)

- Intersecretariat Working Group on National Accounts (ISWGNA) Globalization Task Team set up to develop guidance notes on MNEs and SPEs leading to the update of 2008 SNA and BPM6 in 2025,
  - In consultation with the Advisory Expert Group (AEG) on National Accounts and related task teams created under the aegis of IMF Balance of Payments Committee (BOPCOM).

Building on much work and discussion that has occurred post 2008 SNA and BPM6, these options were put forward:

(I) Emphasize existing macroeconomic indicators
(II) Develop granular or supplemental data
(III) Come up with alternative presentations or extensions
(IV) Change standards
Questions?

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Questions

- MNE control
- Spe
- Greater detail on MNEs
- Types of IPP transactions
- Difference between FGP and Goods for Processing