Guidelines for measuring tax and commercial IFFs: Methods used in the pilot studies

Final event on Statistics and Data for Measuring Illicit Financial Flows in the Asia-Pacific region
Session 5  
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Outline

PART I: Methodological Guidelines to measure tax and commercial IFFs

PART II: Feedback from African pioneering countries
PART I

METHODOLOGICAL GUIDELINES TO MEASURE TAX AND COMMERCIAL IFFS
Selecting methods

• Econometric vs statistical approach
• Comprehensive, comparable, applicable

• Criteria for selection:
  • Soundness of methods
  • Source data
  • Results
Suggested methods

A Illegal commercial and tax practices

B Aggressive tax avoidance

- Profit shifting
- Offshore wealth
- Misinvoicing

A Illegal commercial and tax practices
Suggested methods

A Illegal commercial and tax practices
B Aggressive tax avoidance

1. Partner Country Method (PCM) + Price Filter Method (PFM) +
2. Global distribution of profits within an MNE
3. MNEs vs comparable non-MNEs
4. Flows of undeclared offshore assets
5. Flows of offshore financial wealth
6. A illegal commercial and tax practices
Suggested methods

A Illegal commercial and tax practices
B Aggressive tax avoidance

Global distribution of profits within an MNE
MNEs vs comparable non-MNEs

Partner Country Method (PCM) +
Price Filter Method (PFM) +

A Illegal commercial and tax practices

Flows of undeclared offshore assets
Flows of offshore financial wealth

Offshore wealth
Mis invoicing
Profit shifting
Trade misinvoicing

Partner Country Method (PCM) +

• Overview of Method #1
Concept

• Mirroring trade values by trading partners
• (EX of A to B) vs (IM of B from A)
• Using granular nationally-available data
• Assuming a correct value of one partner -> critical!
• Many factors for discrepancies -> [inspect!]

Trade System
CIF/FOB
Partner country attribution
Other
## Calculation

<table>
<thead>
<tr>
<th>ORIGINAL DATA</th>
<th>R IMPORTS</th>
<th>P EXPORTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Official data</td>
<td>IM_\text{CIF, c,r,p,t}</td>
<td>EX_\text{FOB, c,r,p,t}</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADJUSTMENT</th>
<th>R IMPORTS</th>
<th>P EXPORTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIF-FOB</td>
<td>A_\text{CIF-FOB, c,r,p,t}</td>
<td>IM_\text{FOB, c,r,p,t}</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>ADJUSTMENT</th>
<th>R IMPORTS</th>
<th>P EXPORTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade system</td>
<td>A_\text{TS, c,r,p,t}</td>
<td></td>
</tr>
<tr>
<td>Indirect trade</td>
<td>A_\text{IT, c,r,p,t}</td>
<td></td>
</tr>
<tr>
<td>Re-exports</td>
<td></td>
<td>B_\text{Re-Ex, c,r,p,t}</td>
</tr>
<tr>
<td>Merchanting</td>
<td>A_\text{M, c,r,p,t}</td>
<td>B_\text{M, c,r,p,t}</td>
</tr>
<tr>
<td>Timing (time lags)</td>
<td>A_\text{T, c,r,p,t}</td>
<td></td>
</tr>
</tbody>
</table>

### ADJUSTED DATA

\[
\text{IM}_{\text{FOB, c,r,p,t}}^{\text{Adj}} = \text{IM}_{\text{FOB, c,r,p,t}} - A_{\text{TS, c,r,p,t}} - A_{\text{IT, c,r,p,t}} - A_{\text{M, c,r,p,t}} - A_{\text{T, c,r,p,t}}
\]

\[
\text{EX}_{\text{FOB, c,r,p,t}}^{\text{Adj}} = \text{EX}_{\text{FOB, c,r,p,t}} - B_{\text{Re-Ex, c,r,p,t}} - B_{\text{M, c,r,p,t}}
\]

### REMAINING ASYMMETRY

\[
\text{InboundRA} = \text{IM}_{\text{FOB, c,r,p,t}}^{\text{Adj}} - \text{EX}_{\text{FOB, c,r,p,t}}^{\text{Adj}}
\]

*Source: UNSD (2019)*
Calculation

$\text{InwardIFFs}_{c,r,p,t} = \text{Over invoiced } EX_{c,r,p,t} + \text{Under invoiced } IM_{c,r,p,t}$

$\text{Under invoiced } IM_{c,r,p,t} = -1 \times \min(0, \text{Inbound}_{c,r,p,t})$

$\text{Over invoiced } EX_{c,r,p,t} = \max(0, \text{Outbound}_{c,r,p,t})$

$\text{OutwardIFFs}_{c,r,p,t} = \text{Under invoiced } EX_{c,r,p,t} + \text{Over invoiced } IM_{c,r,p,t}$

$\text{Over invoiced } IM_{c,r,p,t} = \max(0, \text{Inbound}_{c,r,p,t})$

$\text{Under invoiced } EX_{c,r,p,t} = -1 \times \min(0, \text{Outbound}_{c,r,p,t})$
Price Filter Method (PFM) +

• Overview of Method #2
Concept

• Detect abnormal prices, deviating from arm’s length
• Transaction-level trade data
• Price filter is a range

\[ p_{\text{filter}} = \text{central price} \pm \alpha \]

[Price filter]
[heterogeneity of products]
[endogeneity of filter]
[contractual terms]
[…]

Abnormal price: over-pricing
Abnormal price: under-pricing
Calculation

• Over- and under-pricing
  • Undervalued amount = $Q \times \max(0, LP - P)$
  • Overvalued amount = $Q \times \max(0, P - UP)$

• Inward and outward IFFs
  • Inward IFFs = Overvalued amount^{EX} + Undervalued amount^{IM}
  • Outward IFFs = Undervalued amount^{EX} + Overvalued amount^{IM}
Flows of offshore financial wealth by country

• Overview of Method #6
Concept

• Top-down method
• Unreported wealth held by individuals outside their countries

• Validation and calibration of assumptions
  [Non-compliance rate]
  [Divide offshore wealth into deposits and portfolio investments]
  [Capital gains, wealth consumption?]
  […]

• International data sources
• Data exchange -> agreements, confidentiality
Calculation

**Estimation of the global offshore wealth**

\[
\text{offFinW}_{G,t} = \text{offPFW}_{G,t} + \text{Deposits}_{G,t}
\]

\[
\text{offPFW}_{G,t} = \sum_i \text{IPFliabilities}_{i,t} - \sum_i \text{IPFassets}_{i,t}
\]

\[
\text{Deposits}_{G,t} = \text{offPFW}_{G,t} \times \frac{25}{75}
\]

**Breakdown of wealth by country**

Estimate using ownership shares of cross-border deposits held by individuals in IFC

**Estimate IFFs**

\[
\text{flow}_{i,t} = \text{offFinW}_{i,t} - \text{offFinW}_{i,t-1} \times (1 + r_F)
\]

\[
\text{OutwardIFFs}_{i,t} = \max(0, \text{flow}_{i,t}) \times r_n
\]
PART II

FEEDBACK FROM AFRICAN PIONEERING COUNTRIES
Pilot testing

Pioneering and pilot countries measuring IFFs, by type of IFFs
Project activities

**Step 1**  
Self-assessment questionnaire

**Step 2**  
Mapping of national agencies

**Step 3**  
Data availability and quality review by method

**Step 4**  
Method selection

**Step 5**  
Pilot testing plan

**Step 6**  
Compile and disseminate IFF statistics
Technical Working Groups Key Members

- Revenue Authority
- Customs Authority
- Line ministries (e.g., Finance, Energy,...)
- National Statistical Office
- Central Bank
- Financial Intelligence Centre
- Anti-corruption Authority
- Police Services
- Specialised agencies (e.g., Drug Enforcement,...)
- Civil society, research institutes, academia
Choice of Methods

- Method #1
- Method #2
- Method #3
- Method #4
- Method #5
- Method #6
Feedback from countries

• **Methods & measurement**
  - Methods are easy enough to apply, mostly Methods 1 and 2
  - Methods 4, 5 and 6 are more challenging due to data availability

• **Data**
  - Access to customs and other data is problematic for many countries
  - Data confidentiality is a concern and affects access to data
  - Sub-committees should be established to work on the specific measurement methods, based on where the data resides, addressing the confidentiality issue.

• **Funding**
  - Resources need to be allocated to ensure that these TWGs, on the measurement, are made permanent.
Lessons learned

• Sharing of information between authorities within countries (inter-country); equally, sharing information among countries (extra-country) is critical to understand the risks & trade data disparities.

• Establishment of a Community of Practice to share lessons learned on data cleaning, data analysing, IFFs regarding particular sectors and countries, or on the various methods, etc.

• The measurement work needs to be formalised and endorsed at the political level, with officials making this part of their day to day activities.

• Measurement of IFFs is the first step in identifying threats and risks from IFFs.

• Since transparency is a key to addressing IFFs, it is important that the results are shared, at least within this forum or this Community of Practice so that countries can learn from each other and identify IFF threats and risks between the pilot countries.
UNCTAD/ECA Videos

• Lessons learned
  https://www.youtube.com/watch?v=J8yVBaLJTi0&list=PLji49uuj
  oC9o1CJneBwlpN52Je-_zP4L_&index=2

• Why other countries should join
  https://www.youtube.com/watch?v=j4OyF_yw10o&list=PLji49uuj
  oC9o1CJneBwlpN52Je-_zP4L_&index=1