THE EMERGENCE OF LEGAL AND ORGANISATIONAL ARRANGEMENTS TO MINIMISE GLOBAL TAX BURDEN, AND ITS IMPACT ON MONITORING DOMESTIC ECONOMIC ACTIVITIES

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Peter van de Ven
Heads of National Accounts, OECD
Introduction

• **Main issues related to globalisation**
  – Measurement
  – Research and analysis

• **Way forward regarding measurement**
  – Within the context of current international standards
  – Challenges with and implications for international standards

• **Way forward regarding research and policy analysis**
  – Statistics based on “nationality” concept
  – Trade in Value Added (TiVA)

• **Some final considerations**
What Are the Main Issues related to Statistical Measurement?
Global production versus national statistics

- **Global production arrangements** between firms and within MNEs
- **Quickly evolving, even minor organisational rearrangements** can have significant impact
- **Statistical complications** have long been recognised and discussed:
  - Goods for processing, merchanting
  - Transfer pricing
  - Special Purpose Entities
  - Relocations/reorganisations
  - International consistency (asymmetries)
- **Clear friction between national statistics** based on residency and global behavior of MNEs
Have They Gone Mad?

Irish GDP up by 26.3% in 2015!

“Ireland’s Economists Left Speechless by 26% Growth Figure” (Bloomberg)

“Why GDP growth of 26% a year is mad” (Economist)

“It’s complete bullshit, it’s Alice in Wonderland economics” Colm McCarthy, University College Dublin)
Adding IPPs and digitalisation

• In the area of production of goods and services, challenges exacerbated when **globalisation meets IPPs and digitalisation**

• IPPs have no physical and local constraints => relatively easy to relocate from one country to another

• Impact can be large, especially in small economies

• **Is GDP still valid** as a measure of domestic production? For **designing** monetary, fiscal and structural **policies**?
Ratio of Profit-type Return to Compensation of Employees

<table>
<thead>
<tr>
<th>Region</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>All countries</td>
<td>0.840</td>
</tr>
<tr>
<td>Canada</td>
<td>0.848</td>
</tr>
<tr>
<td>Europe</td>
<td>0.579</td>
</tr>
<tr>
<td>Ireland</td>
<td>6.639</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.878</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1.614</td>
</tr>
<tr>
<td>Latin America and Other Western Hemisphere</td>
<td>1.555</td>
</tr>
<tr>
<td>Central &amp; South America</td>
<td>0.978</td>
</tr>
<tr>
<td>Other Western Hemisphere</td>
<td>11.709</td>
</tr>
<tr>
<td>Barbados</td>
<td>34.967</td>
</tr>
<tr>
<td>Bermuda</td>
<td>36.062</td>
</tr>
<tr>
<td>United Kingdom Islands, Caribbean</td>
<td>8.833</td>
</tr>
<tr>
<td>Western Hemisphere, n.e.c.</td>
<td>6.347</td>
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<tr>
<td>Middle East</td>
<td>1.837</td>
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<tr>
<td>Other Middle East</td>
<td>9.403</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>1.178</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>0.953</td>
</tr>
<tr>
<td>Singapore</td>
<td>2.978</td>
</tr>
</tbody>
</table>

Proportional allocation of US MNEs’ profits would lead an 1.5% increase of US GDP.

Source: Bruner et al, Multinational Profit Shifting and Measures throughout Economic Accounts (NBER Working Paper 24915)
Special Purpose Entities in the Netherlands

...It's... full of accountants

I've just found another loophole

INNOVATION CENTRE
Special Purpose Entities in the Netherlands: Another kind of sandwich

Figure 1.1: A double Irish Dutch sandwich: the Google case

- **Alphabet/Google Inc.**
  - Controls Google Ireland Holdings
  - Creates the IP
  - Grants the right of IP use outside the United States to Google Ireland Holdings

- **Google Ireland Holdings Unlimited Company**
  - Owns the right of IP use outside the United States
  - Sub-licenses IP rights to Google Netherlands

- **Google Ireland Limited**
  - Reports turnover from advertising
  - Exploits and reports costs of IP

- **Google Netherlands Holding B.V.**
  - Is granted a sub-licence to the right of IP use
  - Re-licenses this sub-licence to Google Ireland Limited

- **Google Asia Pacific**
  - Royalty payments 2016: EUR 3 billion

Source: De Haan and Haynes: R&D Capitalisation: Where Did We Go Wrong? (EURONA 1/2018)
What Are the Main Issues related to Research and Policy Analysis?
Increasing international fragmentation of production

Explosion of trade in intermediates as firms specialise in stages (tasks) of production

Gross trade flows increasingly embody components (and so value) created elsewhere
But conventional trade statistics don’t reflect this...

- Creating ‘misleading perceptions’ and imperfect policies: exports require imports => protectionism can have a negative impact on domestic industries
- Export driven growth strategies may target the wrong sectors: high export value but low GDP contribution
- They mask underlying nature of bilateral trade relationships, production interdependencies and systemic risks (e.g. impact of macro-economic shocks on supply-chains)
- They also mask true nature of competitiveness: upstream matters as much as downstream (especially services => services trade restrictions may hurt exporting manufacturers
Understanding the elephant

- Multinational enterprises more and more internationally fragmented, while national statistics are residency based
  - They look at national parts of multinational enterprises (MNEs) => fully understanding MNE-behaviour requires a more complete, worldwide view
  - They may not appropriately capture financial risks and vulnerabilities, which are also affected by intra-MNE interdependencies
Measurement Issues: Way Forward within the Current International Standards
Improved accounting

- Better accounting for global production arrangements
- Improving consistency at national level (e.g. by establishing Large Case Units)
- Improving international consistency of recording MNE-activities (EuroGroups Register, Early Warning System, etc.)
National Accounts ≠ GDP

The System of National Accounts is a framework from which a variety of indicators can be derived.

Some indicators such as NNI and Household Disposable Income hardly/not affected by e.g. relocations.

Better use and communication needed.
... including greater granularity, ...

- **Additional breakdowns** in both supply and use tables and institutional sector accounts:
  - **By type of ownership:**
    - Public corporations
    - National private corporations, not part of domestic MNE
    - National private corporations, part of domestic MNEs
    - Foreign-controlled corporations
      - Of which: Special Purpose Entities (SPEs) (may only be relevant for some countries)
  - **By type of firm:**
    - Factoryless producers, merchancers, contract manufacturers, processors
    - By business function?
..., and possibly defining additional indicators and datasets

- **Additional indicators:**
  - **GNI**\(^*\) (= GNI minus retained earnings of re-domiciled firms minus depreciation of categories of foreign-owned domestic capital assets (such as IP capital assets))
  - **Contributions of inputs to (growth of) GDP** (e.g. separating value added from IPPs and other movable assets, from labour and other assets)

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**Figure 3.1 Comparison of GDP, Modified GNI and NNI at current prices 2009–2017**

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Source: CSO Ireland
Measurement Issues: Challenges with and Implications for the Current International Standards
Allocating IPPs and related income

• Main characteristics of IPPs:
  – No physical or local constraints
  – Often no direct link to the production process (e.g. basic research)
  – Often no direct link between today’s stock of assets and today’s production of goods and services
  – Often concern the whole value chain, not a particular part of the process (e.g. product and process innovations)
  – Once produced, they are usually easily scalable
  – …
## Who owns the IPPs?

- **2008 SNA** makes distinction between economic (*risks and rewards*) and legal ownership.
- But, despite best efforts, guidance on identifying economic ownership arguably falls short.

| 1.2.2. The unit is not a producer of other (non-IPP) goods and services. Its main output is IPP related. | 1.2.2. Purchase of the IPP from the parent and income from royalties and licences to use may, or may not, be observed. | The unit is assumed to have purchased the IPP (original) from the parent and to receive (on behalf of the parent) income from royalties or licences to use the IPP. Attribute economic ownership of the IPP to the unit. The unit is considered an IPP holding SPE providing its services to the MNE parent. | It is recommended to classify the fixed capital formation, income and expenditure related to these IPP holding SPEs separately to allow analysis excluding "brass plate" units, also because the transactions carried by these units are not necessarily at arm’s length. |

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*Figure 4.3* Decision tree for determining economic ownership of an IPP observed in global production (1)
Way Forward?

- More prescriptive guidance on economic ownership
- As a default option, to always consider, conceptually, the parent as the economic owner, …
- … meaning that current measures of (distributed and reinvested) earnings would shift from GNI to GDP in the parent economy
- Note: In current national accounts, payments for services and property income often blurred
A panacea or a sticking plaster? Who is the ultimate parent?

- **Centre of economic decisions** = location from where decisions are made on:
  - global arrangements of production
  - R&D and other corporate investments
  - corporate finance
  - appointment at senior management level
  - etc.

- **Location of board of directors**

- ...

- Corporate inversion by setting up a holding type of SPE to minimise tax burden would thus not affect centre of economic decisions
Consolidating SPEs

- SPEs are typically **pass-through types of units**, often set up to minimize global tax burden.
- **No economic substance; often brass plates**.
- Currently treated as separate institutional units, because associated corporation is located in another country.
- If not located in another country, they would **not be considered as separate institutional units** and would be consolidated.
- Assigning e.g. ownership of IPPs to these units is matter of legality or practicality.
- **Consolidate SPEs with the ultimate owner?**
“In between dream and act there are hindering laws and practical issues” *

- Solutions require extensive exchange of individual enterprise information at the international level
  - **Top-down approach** (e.g. BEPS-data, or alternative/additional collection of data on MNEs at the international level)
  - **Bottom-up approach** (monitoring and analysis of MNEs primarily based on collection of data on the national level)
- But … we already have **major problems in arriving at consistency at the national and international level**
- **Need for enhancing (the possibilities for) international co-operation and co-ordination**

* Quote from the poem “The Marriage” by Willem Elsschot
Way Forward for Research and Policy Analysis: More Statistics Based on “Nationality” Concept
Analytical Database on Individual Multinationals: ADIMA

To cover **Top 500** by 2020

**Criteria:**
- Revenues
- Stock listing
- Multinational

<table>
<thead>
<tr>
<th><strong>Register</strong></th>
<th><strong>Indicators</strong></th>
<th><strong>Monitor</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>All enterprises (parents + affiliates):</td>
<td>Consolidated balance sheet</td>
<td>Changes in register variables, based on text analytics of unstructured big data sources (e.g. Open Street Map, GDELT, MNE IR and Jobs websites), classified by MNE, country and industry</td>
</tr>
<tr>
<td>Enterprise Identifiers (ISIN, LEI, CIK)</td>
<td>Assets (current; PPE; intangibles; …)</td>
<td></td>
</tr>
<tr>
<td>Address/country of operation</td>
<td>Liabilities (current; long-term)</td>
<td></td>
</tr>
<tr>
<td>Industry (ISIC rev 4)</td>
<td>Equity</td>
<td></td>
</tr>
<tr>
<td>Immediate and ultimate parent IDs</td>
<td>Consolidated income statement</td>
<td></td>
</tr>
<tr>
<td>Demographic events + dates</td>
<td>Revenues/turnover</td>
<td></td>
</tr>
<tr>
<td>Ultimate Parents only:</td>
<td>Expenses (COGS, SG&amp;A, subcomponents)</td>
<td></td>
</tr>
<tr>
<td>Consolidated industry</td>
<td>Profitability (EBIT, EBITDA, net income)</td>
<td></td>
</tr>
<tr>
<td>Year of incorporation</td>
<td>Employment</td>
<td></td>
</tr>
<tr>
<td>Country of global decision centre</td>
<td>Share of int'l sales, assets, employment, …</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Country-level sales, assets, employment, …</td>
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</tr>
<tr>
<td></td>
<td>Register-derived indicators (# affiliates, # countries, spread)</td>
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<tr>
<td></td>
<td>Entropy measures of internationalisation</td>
<td></td>
</tr>
</tbody>
</table>
Better monitoring financial risks and vulnerabilities

• G-20 Data Gaps Initiative, among which
  – Rec. II.4: Data for Globally Systemically Important Financial Institutions => “nationality” perspective
  – Global flow of funds (interconnectedness)

• More generally, data on International Investment Position (IIP):
  – More emphasis on intra-MNE connections
  – More emphasis on ultimate investing/host country
Way Forward for Research and Policy
Analysis: Tools for Analysing Trade in
Value Added
Requiring a new statistical response: TiVA

[no direct relationship]

[in value added terms, there is a direct relationship between A and C]
A global input-output table …

<table>
<thead>
<tr>
<th>Country A</th>
<th>Sector 1</th>
<th>Sector 2</th>
<th>Sector 3</th>
<th>Country B</th>
<th>Sector 1</th>
<th>Sector 2</th>
<th>Sector 3</th>
<th>Country C</th>
<th>Sector 1</th>
<th>Sector 2</th>
<th>Sector 3</th>
<th>Final Demand</th>
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<tr>
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<td></td>
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<td>Sector 1</td>
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<tr>
<td>Sector 2</td>
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<table>
<thead>
<tr>
<th>Taxes less subsidies on products</th>
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</thead>
<tbody>
<tr>
<td>Value added</td>
</tr>
<tr>
<td>Labour compensation</td>
</tr>
<tr>
<td>Operating surplus</td>
</tr>
<tr>
<td>Taxes less subsidies on production</td>
</tr>
</tbody>
</table>

Industry AND country dimension:

Final demand by category and country:

Value added and output (NA consistent):
# Coverage of countries

<table>
<thead>
<tr>
<th>OECD</th>
<th>All OECD 36 countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRIICS</td>
<td>Brazil, China, India, Indonesia, Russian Federation, South Africa</td>
</tr>
<tr>
<td>Other EU28</td>
<td>Bulgaria, Croatia, Cyprus, Malta, Romania</td>
</tr>
<tr>
<td>Other G20</td>
<td>Argentina, Saudi Arabia</td>
</tr>
<tr>
<td>Other South Eastern Asia</td>
<td>Brunei Darussalam, Cambodia, Malaysia, Philippines, Singapore, Thailand, Viet Nam</td>
</tr>
<tr>
<td>Other Eastern Asia</td>
<td>Chinese Taipei, Hong Kong China</td>
</tr>
<tr>
<td>Other Africa/MENA</td>
<td>Tunisia, Morocco</td>
</tr>
<tr>
<td>Other Central and Southern America</td>
<td>Colombia, Costa Rica, Peru</td>
</tr>
<tr>
<td>Other</td>
<td>Rest of the World</td>
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</table>
## List of industries

<table>
<thead>
<tr>
<th>IO Ind.</th>
<th>ISIC Rev.3</th>
<th>Industry</th>
<th>IO Ind.</th>
<th>ISIC Rev.3</th>
<th>Industry</th>
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<tbody>
<tr>
<td>1</td>
<td>0105</td>
<td>Agriculture, hunting, forestry and fishing</td>
<td>19</td>
<td>4041</td>
<td>Electricity, gas and water supply</td>
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<tr>
<td>2</td>
<td>1014</td>
<td>Mining and quarrying</td>
<td>20</td>
<td>45</td>
<td>Construction</td>
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<td>3</td>
<td>1516</td>
<td>Food products, beverages and tobacco</td>
<td>21</td>
<td>5052</td>
<td>Wholesale and retail trade; repairs</td>
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<td>1719</td>
<td>Textiles, textile products, leather and footwear</td>
<td>22</td>
<td>55</td>
<td>Hotels and restaurants</td>
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<td>5</td>
<td>20</td>
<td>Wood and products of wood and cork</td>
<td>23</td>
<td>6063</td>
<td>Transport and storage</td>
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<td>6</td>
<td>2122</td>
<td>Pulp, paper, paper products, printing and publishing</td>
<td>24</td>
<td>64</td>
<td>Post and telecommunications</td>
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<tr>
<td>7</td>
<td>23</td>
<td>Coke, refined petroleum products and nuclear fuel</td>
<td>25</td>
<td>6567</td>
<td>Finance and insurance</td>
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<tr>
<td>8</td>
<td>24</td>
<td>Chemicals and chemical products</td>
<td>26</td>
<td>70</td>
<td>Real estate activities</td>
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<tr>
<td>9</td>
<td>25</td>
<td>Rubber and plastics products</td>
<td>27</td>
<td>71</td>
<td>Renting of machinery and equipment</td>
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<tr>
<td>10</td>
<td>26</td>
<td>Other non-metallic mineral products</td>
<td>28</td>
<td>72</td>
<td>Computer and related activities</td>
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<tr>
<td>11</td>
<td>27</td>
<td>Basic metals</td>
<td>29</td>
<td>73, 74</td>
<td>Other Business Activities (incl. R&amp;D)</td>
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<tr>
<td>12</td>
<td>28</td>
<td>Fabricated metal products except machinery and equipment</td>
<td>30</td>
<td>75</td>
<td>Public admin. and defence; compulsory social security</td>
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<tr>
<td>13</td>
<td>29</td>
<td>Machinery and equipment n.e.c</td>
<td>31</td>
<td>80</td>
<td>Education</td>
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<td>14</td>
<td>30, 32, 33</td>
<td>Computer, electronic and optical products</td>
<td>32</td>
<td>85</td>
<td>Health and social work</td>
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<td>15</td>
<td>31</td>
<td>Electrical machinery and apparatus n.e.c</td>
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<td>9093</td>
<td>Other community, social and personal services</td>
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<tr>
<td>16</td>
<td>34</td>
<td>Motor vehicles, trailers and semi-trailers</td>
<td>34</td>
<td>95</td>
<td>Private households with employed persons</td>
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<td>17</td>
<td>35</td>
<td>Other transport equipment</td>
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<td>9041</td>
<td>Electricity, gas and water supply</td>
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<tr>
<td>18</td>
<td>3637</td>
<td>Manufacturing n.e.c; recycling</td>
<td>36</td>
<td>45</td>
<td>Construction</td>
</tr>
</tbody>
</table>
Final considerations
Final considerations

• Challenging issues related to globalisation
• But also other challenges, such as measurement of well-being, sustainability, digitalisation, (financial) risks and vulnerabilities
• Lots of work being done, but still much more to do => lots of fun!
• No time to retire soon!

35 cartoons from Graham Harrop
Thank you for your attention!