



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

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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**

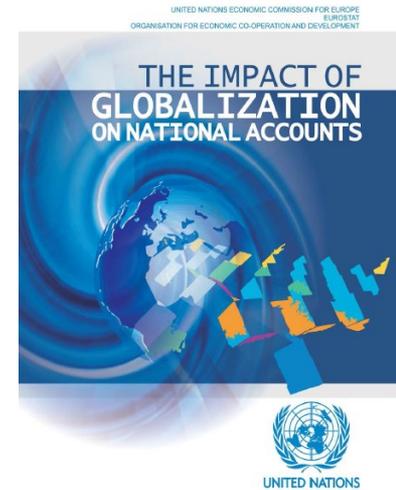


What Are the Main Issues related to Statistical Measurement?



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)

Gross domestic blarney

Ireland’s GDP, % change on a year earlier



Source: Central Statistics Office of Ireland



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

All countries	0.840
Canada	0.848
Europe	0.579
Ireland	6.639
Netherlands	0.878
Switzerland	1.614
Latin America and Other Western Hemisphere	1.555
Central & South America	0.978
Other Western Hemisphere	11.709
Barbados	34.967
Bermuda	36.062
United Kingdom Islands, Caribbean ¹	8.833
Western Hemisphere, n.e.c. ²	6.347
Middle East	1.837
Other Middle East ³	9.403
Asia Pacific	1.178
Hong Kong	0.953
Singapore	2.978

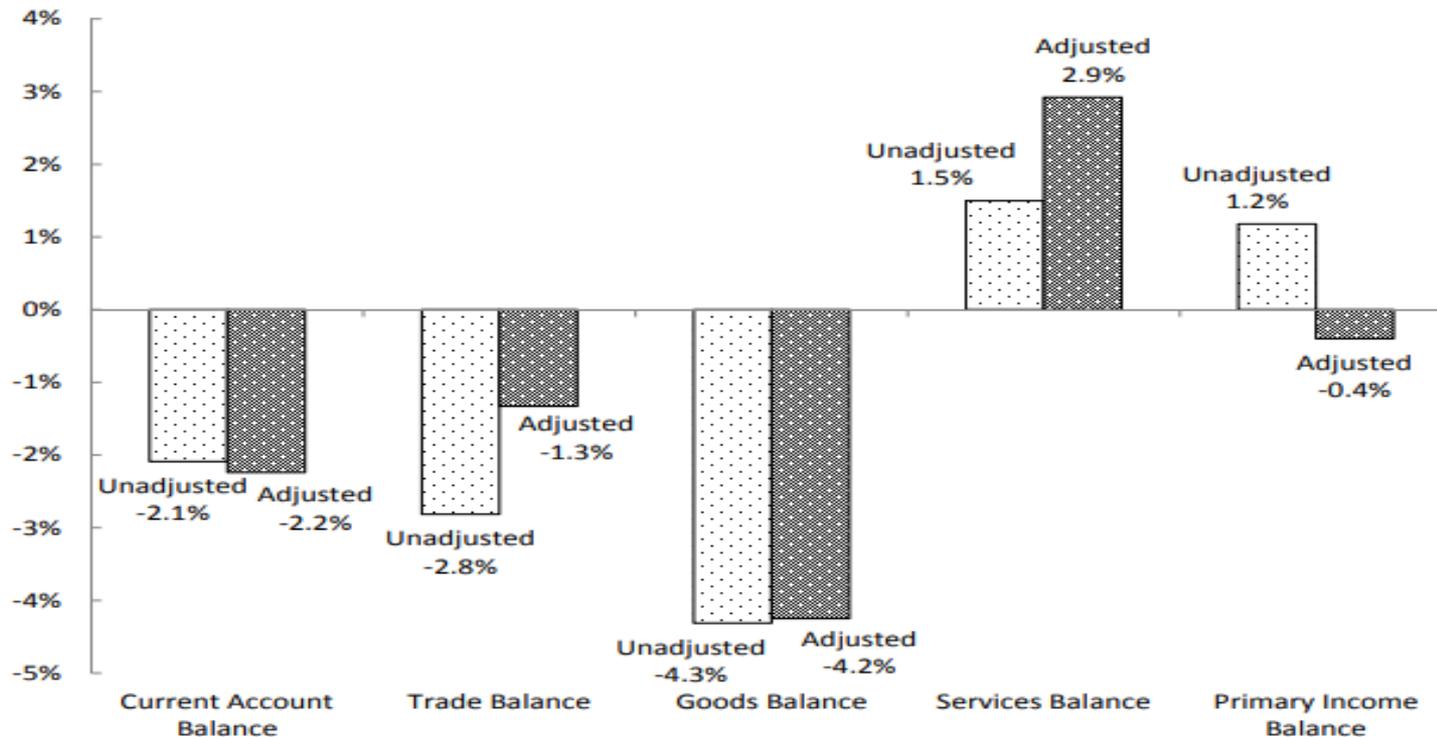
Source: Robert E. Lipsey: Measuring the Location of Production in a World of intangible Productive Assets, FDI, and Intra-Firm Trade (NBER Working Paper 14121)



Ratio of Profit-type Return to Compensation of Employees

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

Figure 6: U.S. External Balances for 2014

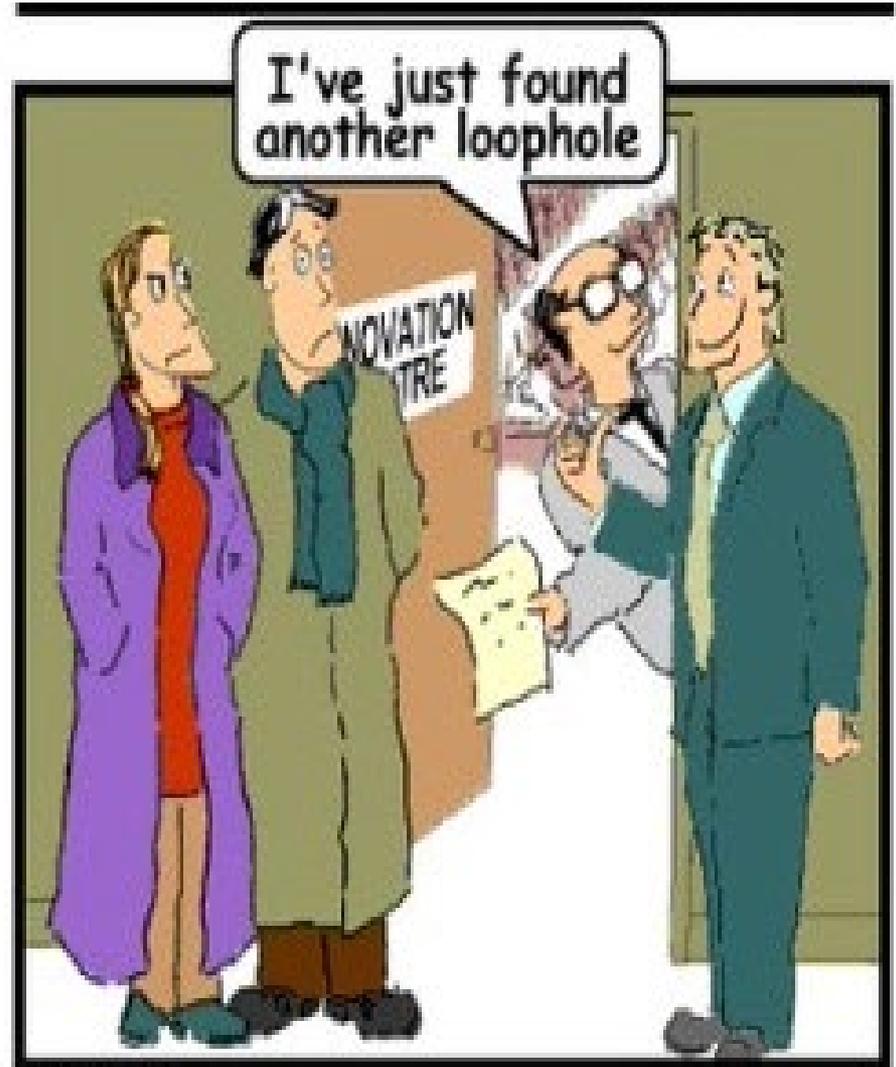


Note: Trade balances are shown as a percentage of expenditure-based GDP. Current account and primary income balances are shown as a percentage of GNI. See appendix A for a description of calculations.

Source: Bruner et al, Multinational Profit Shifting and Measures throughout Economic Accounts (NBER Working Paper 24915)



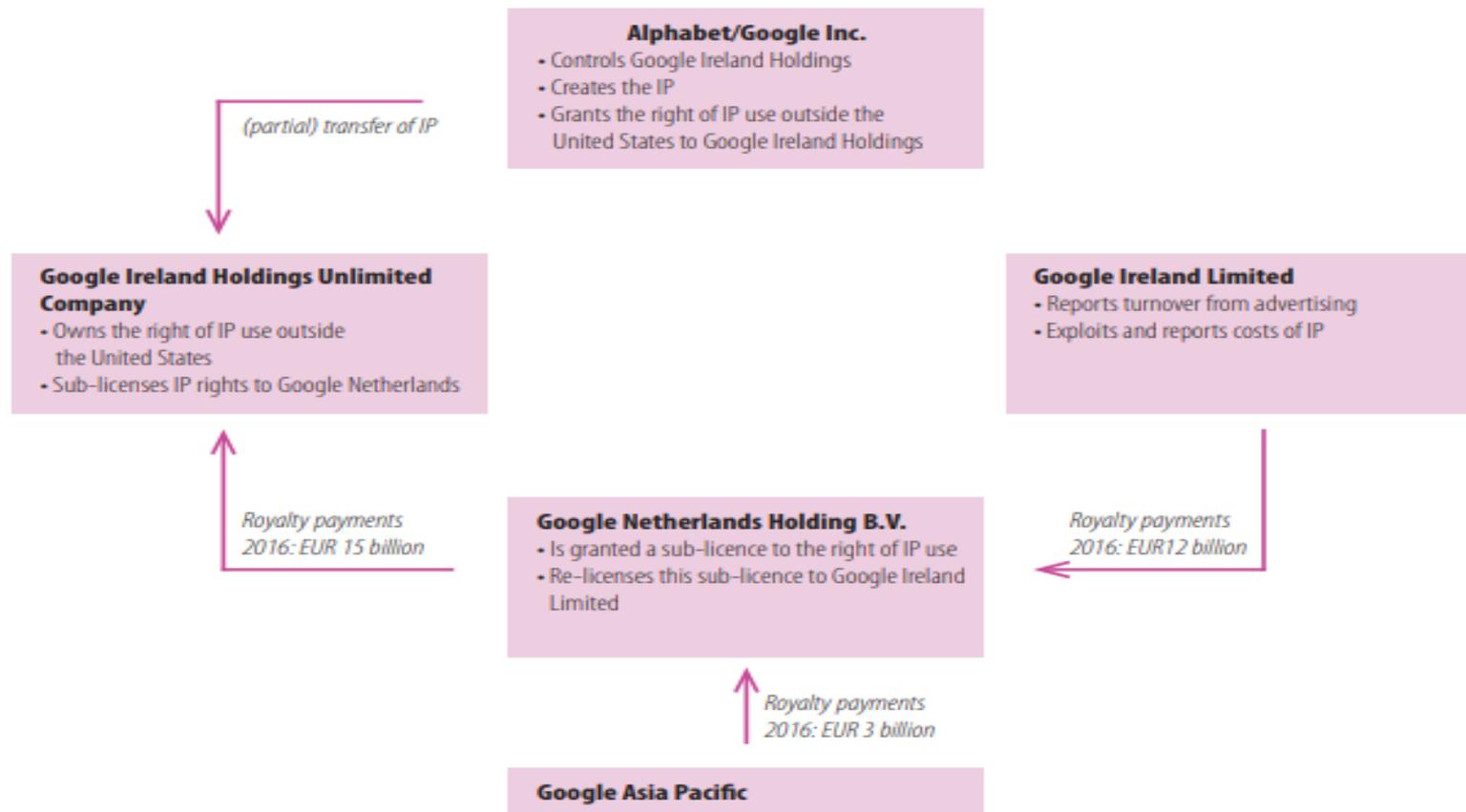
Special Purpose Entities in the Netherlands





Special Purpose Entities in the Netherlands: Another kind of sandwich

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



Source: De Haan and Haynes: R&D Capitalisation: Where Did We Go Wrong? (EURONA 1/2018)

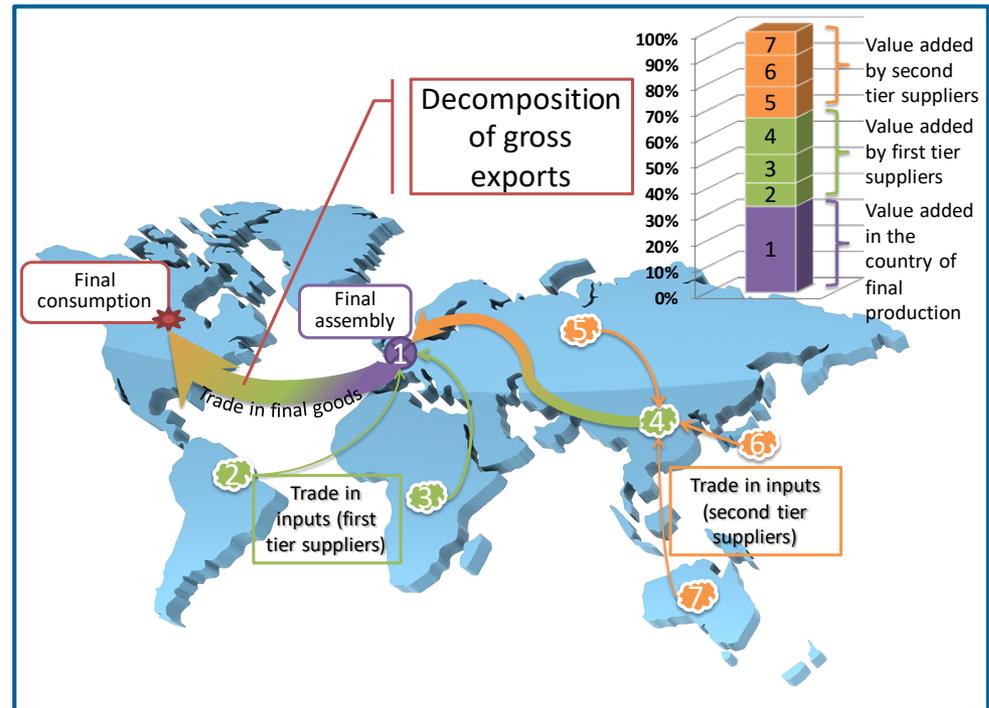
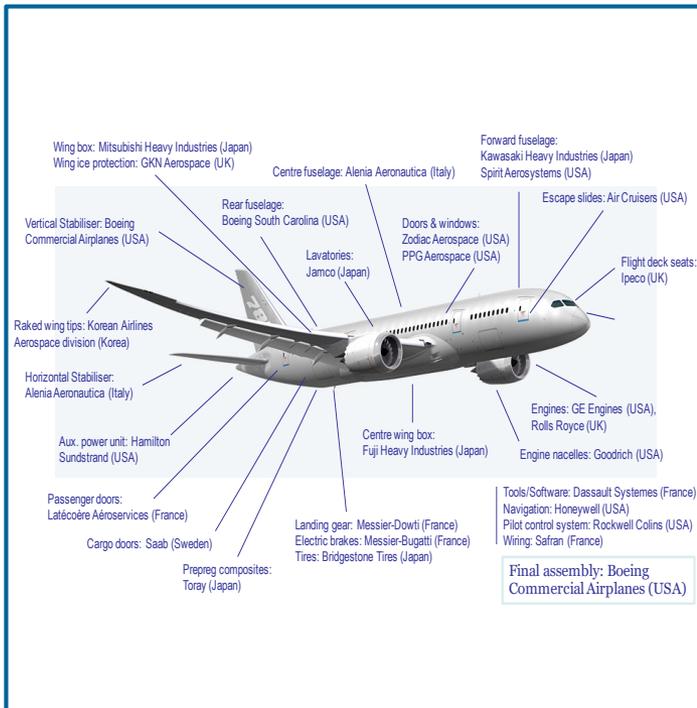


What Are the Main Issues related to Research and Policy Analysis?



Increasing international fragmentation of production

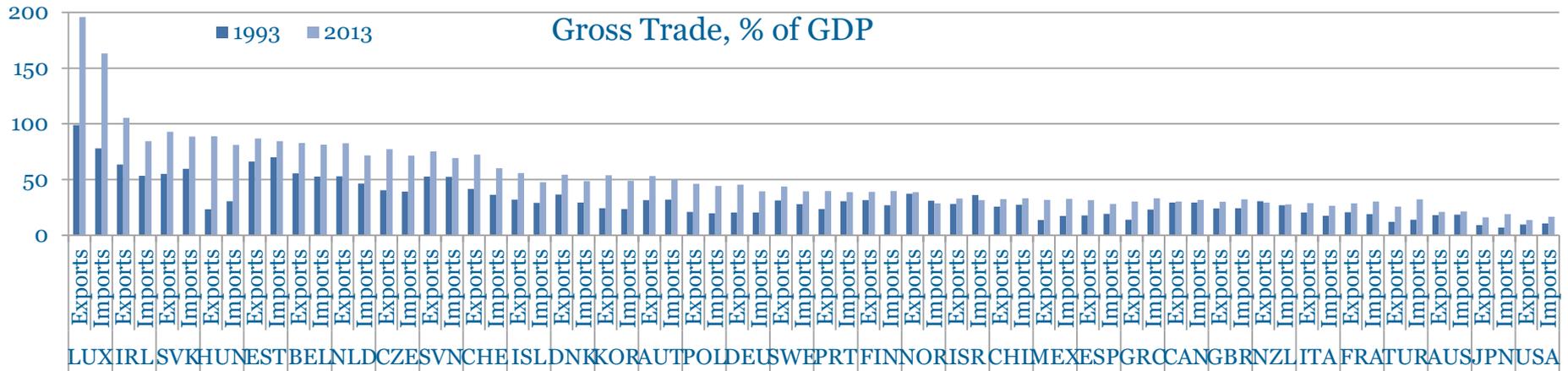
Explosion of trade in intermediates as firms specialise in stages (tasks) of production



Gross trade flows increasingly embody components (and so value) created elsewhere



But conventional trade statistics don't reflect this...

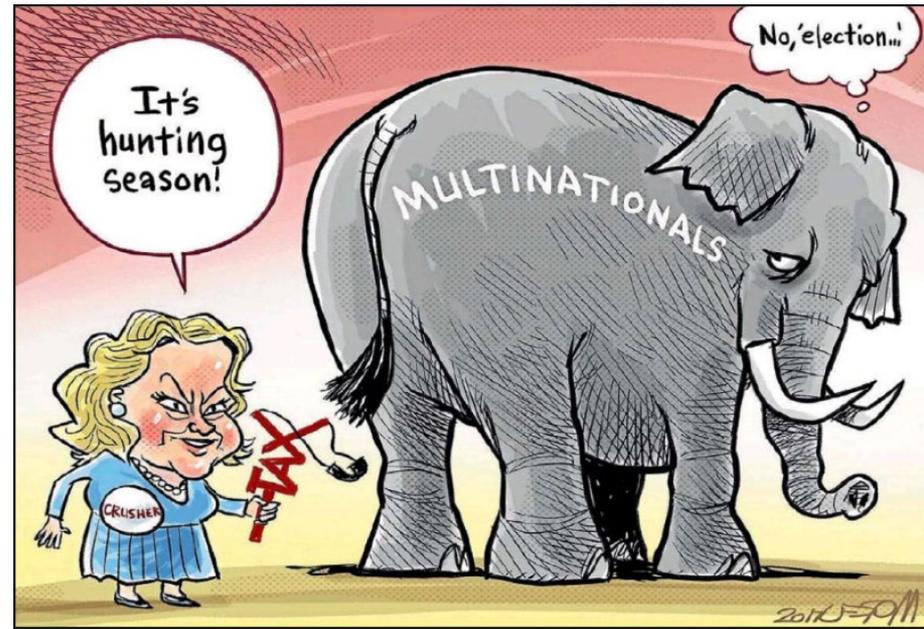


- Creating 'misleading perceptions' and imperfect policies: **exports require imports** => **protectionism can have a negative impact on domestic industries**
- **Export driven growth strategies may target the wrong sectors:** high export value but low GDP contribution
- They **mask underlying nature of bilateral trade relationships**, production inter-dependencies 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



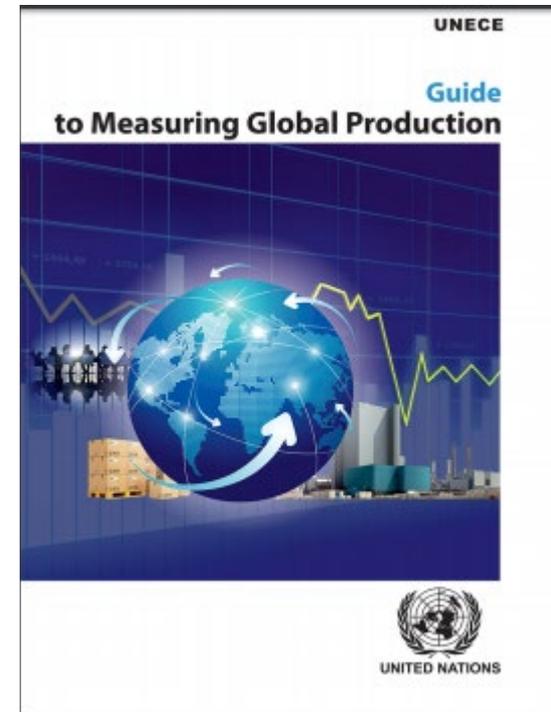


Measurement Issues: Way Forward within the Current International Standards



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.)





Emphasising existing complementary indicators, ...

- **National Accounts \neq 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, merchanters, contract manufacturers, processors
 - By business function?

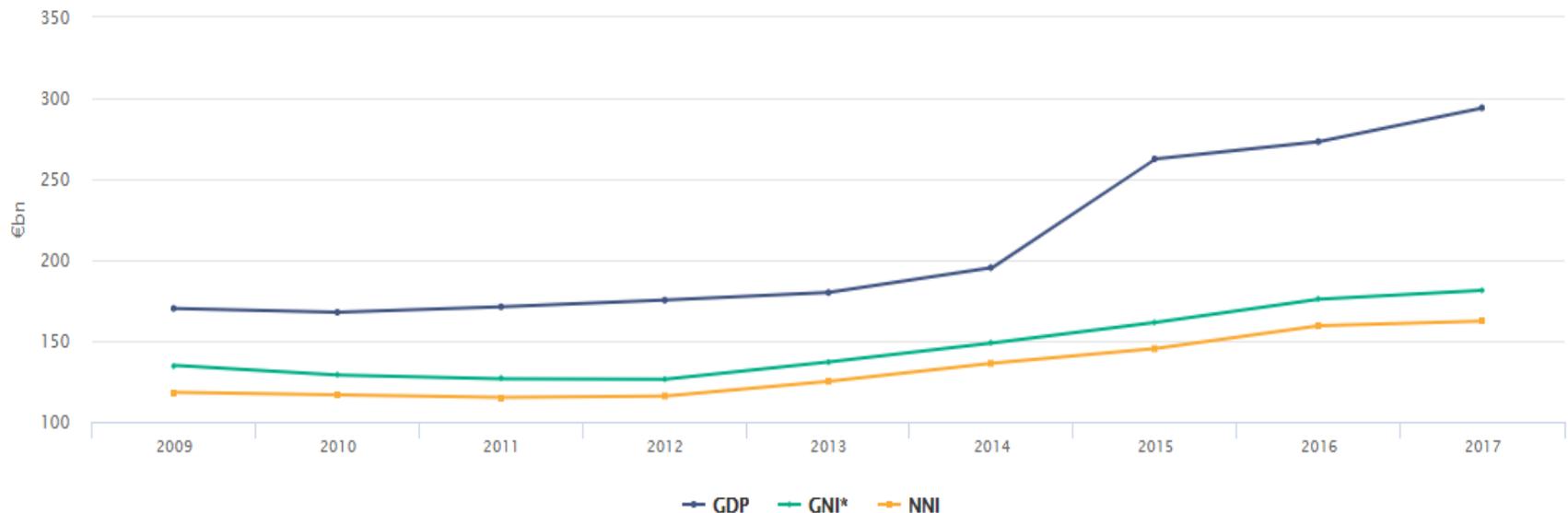


..., and possibly defining additional indicators and datasets

- **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)

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





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?

Figure 4.1
Decision tree for determining economic ownership of an IPP observed in global production (1)

Control/ownership of unit	Production of the IPP	Type of producer	Income and expenditure related to the IPP	Decision about economic ownership of the IPP	Related decisions	
1. The unit is part of a multinational enterprise (MNE)	1.1. The unit is a main producer of other than IPP goods and services and is expected to use the IPP in its production process	1.1.1. The unit is a main producer of other than IPP goods and services and is expected to use the IPP in its production process	1.1.1. The unit may, or may not, receive funding from the parent as compensation for IPP development costs but this aspect is not decisive.	1.1.1. The unit may, or may not, receive funding from the parent as compensation for IPP development costs but this aspect is not decisive.	1.1.1. The unit may, or may not, receive funding from the parent as compensation for IPP development costs but this aspect is not decisive.	1.1.1. The unit may, or may not, receive funding from the parent as compensation for IPP development costs but this aspect is not decisive.
		1.1.2. The unit is a main IPP producer.	1.1.2. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.	1.1.2. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.	1.1.2. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.	1.1.2. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.
1. The unit is part of a multinational enterprise (MNE)	1.1. The unit is a main producer of other than IPP goods and services and may use the IPP in production	1.1.1. The unit pays royalties or licences to use.	1.1.1. The unit pays royalties or licences to use.	1.1.1. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.	1.1.1. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.	1.1.1. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.
		1.1.2. The unit purchased the IPP original for use in production	1.1.2. The unit purchased the IPP original for use in production	1.1.2. The unit receives income from royalties or licences to use, or does not receive any compensation for IPP development from the parent, so it can be assumed that it is expected to obtain income from royalties and licences to use in the near future.	1.1.2. The unit receives income from royalties or licences to use, or does not receive any compensation for IPP development from the parent, so it can be assumed that it is expected to obtain income from royalties and licences to use in the near future.	1.1.2. The unit receives income from royalties or licences to use, or does not receive any compensation for IPP development from the parent, so it can be assumed that it is expected to obtain income from royalties and licences to use in the near future.
1.2. The unit did not produce the IPP	1.2. The unit is not a producer of other than IPP goods and services, its main output is IPP related.	1.2.1. No IPP related payments are being observed; IPP use may be indirectly observed based on the nature of the production process (with usually high IPP requirements) and above average returns to capital.	1.2.1. No IPP related payments are being observed; IPP use may be indirectly observed based on the nature of the production process (with usually high IPP requirements) and above average returns to capital.	1.2.1. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.	1.2.1. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.	1.2.1. The unit does not receive income from royalties or licences to use, but either receives compensation for IPP development from the parent or sells the IPP originals to the parent.
		1.2.2. Purchase of the IPP from the parent and income from royalties and licences to use may, or may not, be observed.	1.2.2. Purchase of the IPP from the parent and income from royalties and licences to use may, or may not, be observed.	1.2.2. 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.	1.2.2. 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.	1.2.2. 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.

- 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.



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

Register	Indicators	Monitor
All enterprises (parents + affiliates): Enterprise Identifiers (ISIN, LEI, CIK) Address/country of operation Industry (ISIC rev 4) Immediate and ultimate parent IDs Demographic events + dates	Consolidated balance sheet Assets (current; PPE; intangibles; ...) Liabilities (current; long-term)	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
Ultimate Parents only:	Equity Consolidated income statement	
Consolidated industry	Revenues/turnover Expenses (COGS, SG&A, subcomponents) Profitability (EBIT, EBITDA, net income)	
Year of incorporation Country of global decision centre	Employment Share of int'l sales, assets, employment, ... Country-level sales, assets, employment, ... Register-derived indicators (# affiliates, # countries, spread) Entropy measures of internationalisation	



Better monitoring financial risks and vulnerabilities

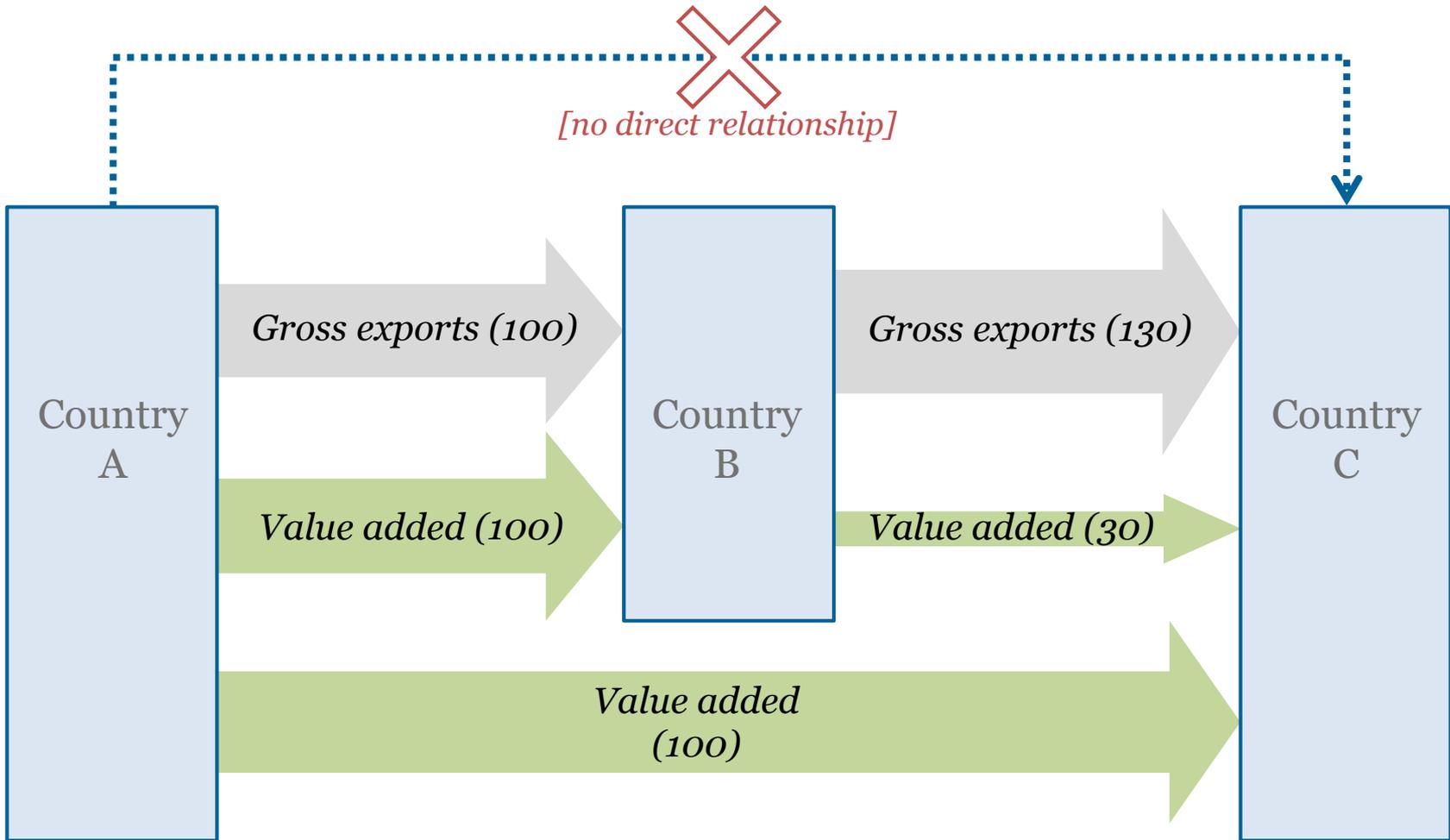
- G-20 Data Gaps Initiative, among which
 - Rec. II.4: Data for Globally Systemically Important Financial Institutions => **“nationality” perspective**
 - **Global flow of funds (interconnectedness)**
- More generally, data on International Investment Position (IIP):
 - More emphasis on **intra-MNE connections**
 - 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



[in value added terms, there is a direct relationship between A and C]



A global input-output table ...

		Country A			Country B			Country C			Final Demand		
		Sector 1	Sector 2	Sector 3	Sector 1	Sector 2	Sector 3	Sector 1	Sector 2	Sector 3	Country A	Country B	Country C
Country A	Sector 1												
	Sector 2												
	Sector 3												
Country B	Sector 1												
	Sector 2												
	Sector 3												
Country C	Sector 1												
	Sector 2												
	Sector 3												
Taxes less subsidies on products													
Value added	Labour compensation												
	Operating surplus												
	Taxes less subsidies on production												
Output													



Industry AND country dimension:

Final demand by category and country:

Value added and output (NA consistent):



Coverage of countries

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



List of industries

IO Ind.	ISIC Rev.3	Industry	IO Ind.	ISIC Rev.3	Industry
1	01t05	Agriculture, hunting, forestry and fishing	19	40t41	Electricity, gas and water supply
2	10t14	Mining and quarrying	20	45	Construction
3	15t16	Food products, beverages and tobacco	21	50t52	Wholesale and retail trade; repairs
4	17t19	Textiles, textile products, leather and footwear	22	55	Hotels and restaurants
5	20	Wood and products of wood and cork	23	60t63	Transport and storage
6	21t22	Pulp, paper, paper products, printing and publishing	24	64	Post and telecommunications
7	23	Coke, refined petroleum products and nuclear fuel	25	65t67	Finance and insurance
8	24	Chemicals and chemical products	26	70	Real estate activities
9	25	Rubber and plastics products	27	71	Renting of machinery and equipment
10	26	Other non-metallic mineral products	28	72	Computer and related activities
11	27	Basic metals	29	73, 74	Other Business Activities (incl. R&D)
12	28	Fabricated metal products except machinery and equipment	30	75	Public admin. and defence; compulsory social security
13	29	Machinery and equipment n.e.c	31	80	Education
14	30,32,33	Computer, electronic and optical products	32	85	Health and social work
15	31	Electrical machinery and apparatus n.e.c	33	90t93	Other community, social and personal services
16	34	Motor vehicles, trailers and semi-trailers	34	95	Private households with employed persons
17	35	Other transport equipment	19	40t41	Electricity, gas and water supply
18	36t37	Manufacturing n.e.c; recycling	20	45	Construction



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!**

LIVING TOGETHER
AFTER **RETIREMENT**
OR: There's a spouse in the house



35 cartoons from Graham Harrop



Thank you for your attention!

