



DIGITAL SUPPLY-USE TABLES AND HANDBOOK ON MEASURING DIGITAL TRADE

OECD Statistics and Data Directorate



DIGITAL SUPPLY-USE TABLES



Where is the digital economy in macroeconomic statistics?

Digital transformation is **largely hidden in the core economic accounts** and challenges existing conceptual frameworks and measurement approaches.

- **Production chains** between producer and consumer **are changing**, while the overall value added may remain the same, the current frameworks struggle to show the “winners” and “losers”.
- Digitalisation can remove players (e.g travel agencies) and add additional players (intermediary platforms, such as on-line booking).
- Statistical recording of the production and use of data, including **the ‘participative’ production of consumers**, digitalisation blurs the boundaries between produced and non produced.
- The “free / zero cost” services provided by private companies, **how and what to measure?**
- Confusion over what is **Production vs. Consumer Surplus**

While research has shown that digital mismeasurement is not the cause of the productivity slowdown, the main issue remains...



OECD response to the lack of quantification of digital activity

- Various OECD Working Papers:
 - Measuring GDP in a Digitalised Economy (2016)
 - Can potential mismeasurement of the digital economy explain the post-crisis slowdown in GDP and productivity growth? (2017)
- Creation of the Informal Advisory Group on measuring GDP in a digitalised economy (members of OECD WPNA), Eurostat, IMF, UN, plus members of OECD WPMMADE.
 - Development of a supply-use framework for Measuring the Digital Economy.
 - Discussions on the measurement and valuation of data.
- Work on the measurement of **digital trade**, including a Handbook on measuring digital trade produced by the inter-agency task force on international trade statistics

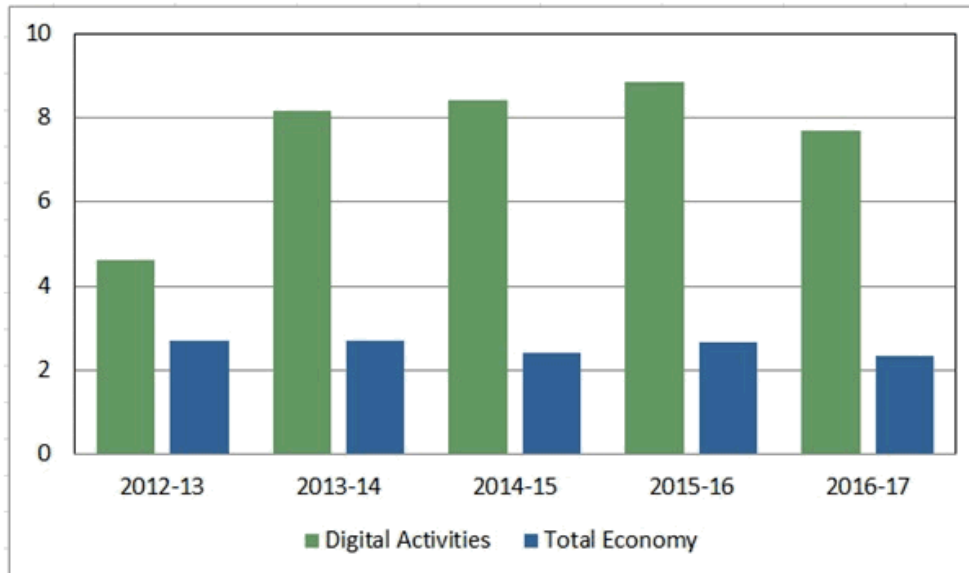
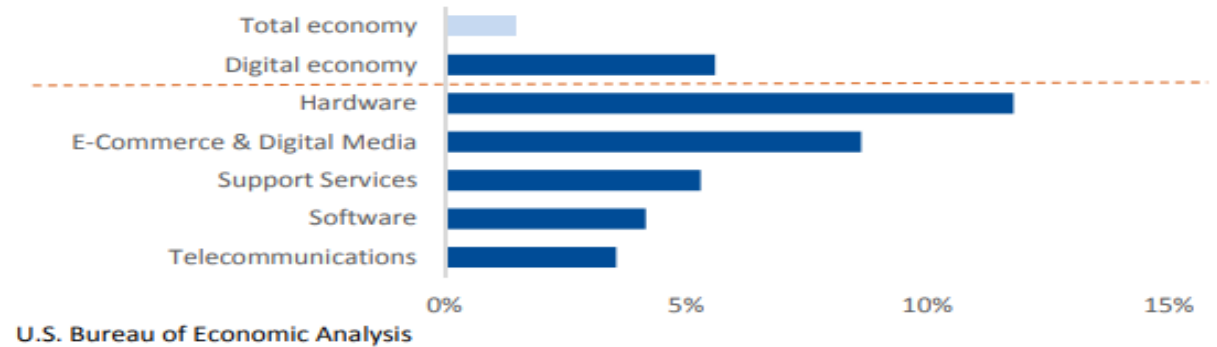


Work by Statistical Offices on the digital economy - 1

United States, average annual growth 2006–2016.

- “Digital economy” growth at 5.6%
- Total economy at 1.5%

**Chart 4. Components of the Digital Economy:
Real Value Added Average Annual Growth, 2006–2016**



Australia, average annual growth 2012-13 to 2016-17.

- “Digital economy” growth at 7.5%
- Total economy at 2.5%



Work by Statistical Offices on the digital economy - 2

- This work is an excellent start and will feed into the proposed digital supply-use tables, however considerations on the work include:
- “Digitalisation” is **limited by being split by product or by industry**
 - no goods and services delivered by platform, other products partly affected by digitalisation are not included
- The **lack of agreed definitions and terminology** impacts the ability to compare outputs internationally
 - only high level aggregates have been produced. (i.e. total digital economy)
- The estimate has been compiled using **the production approach only**
 - limited information on consumption, import/export, etc.
- They do not refer to any of the “new” digital issues
 - Zero cost consumer products, the use of data in production etc.



Considerations in development

The Digital SUTs need to:

- Be something that countries **could fit within their current statistical framework** and measurement processes
- Find a balance between **practically possible and statistically informative**
- Allow for the **inclusion of additional products** not currently included in aggregates
- Be **flexible** to meet the changing landscape of the digital economy



How does the Digital Supply-Use Tables extend on this work

- The Digital SUTs delineate digital activity **based on the nature of the transaction** rather than by the product, the producer or the consumer.
- This allows for the production of a variety of indicators relating to:
 - Digital consumption
 - Final demand by type of transaction
 - Output of certain digital industries
- Therefore the Supply-Use Tables have been extended by:
 - **Additional product aggregations** and lower level products to assist in answering specific user questions.
 - Additional columns to represent the **new digital industries**, units move from existing ISIC industry classifications based on their shared characteristics.
 - Product rows to incorporate **products currently outside of the core SNA** production boundary
 - Additional rows, under each product, separating the different transactions types



Transactions

- The split in transactions is a significant change to the template and allows for **all products** to be considered as digital.

Accommodation services		
A	Digitally ordered	
a_i	Direct from a counterparty	
a_ii	Via a resident digital intermediary platform	
a_iii	Via a non-resident digital intermediary platform	
B	Not Digitally ordered	

- Currently this kind of split would be requested only for **aggregates, digital products, and products that have been heavily impacted by digitalisation** (e.g. accommodation, food service, education)



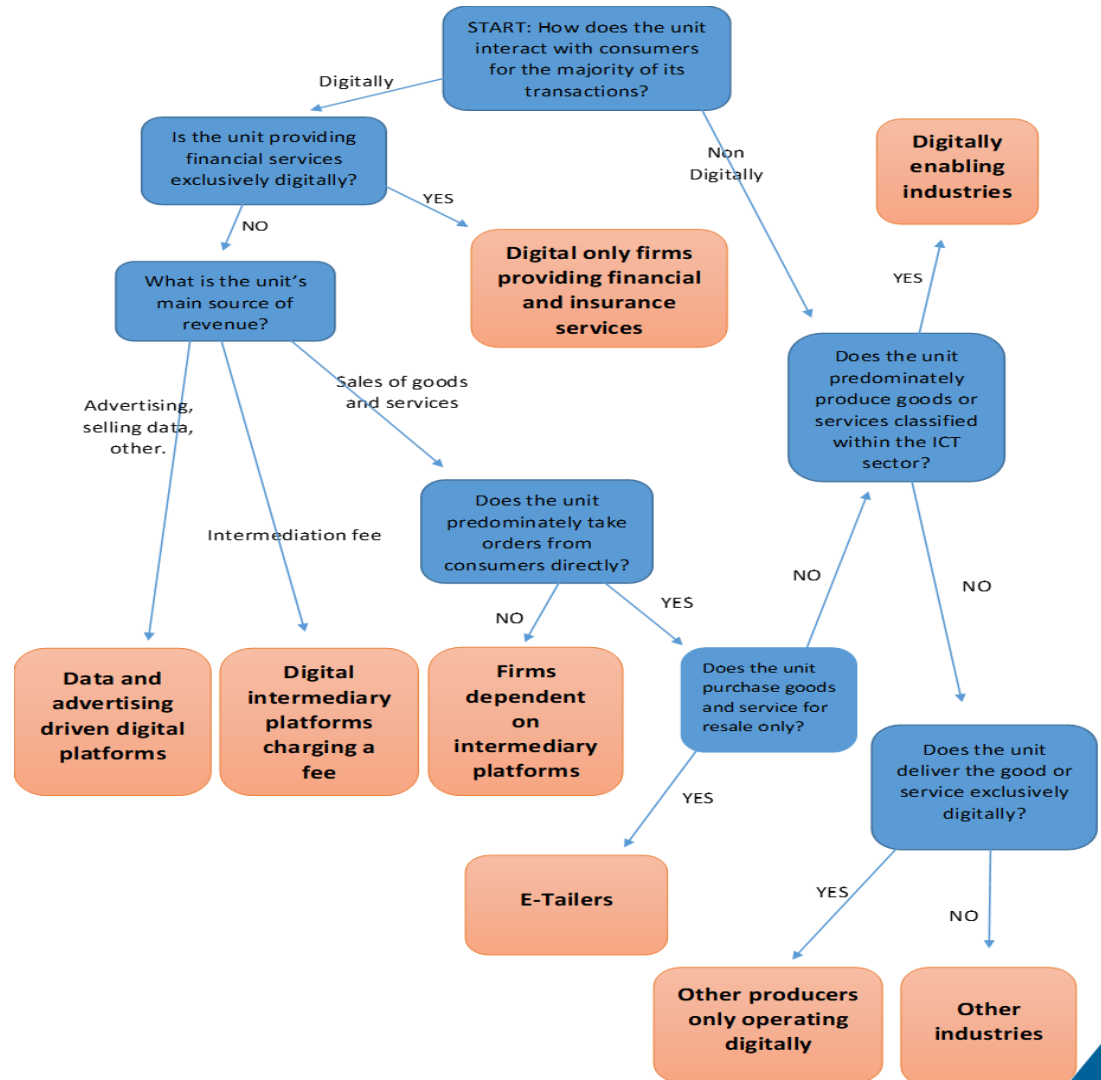
Products

- Digital SUTs have additional product aggregations and lower level products to assist in answering specific user questions
 - ICT goods
 - Digital services
 - Cloud computing services
 - Digital intermediary services
- They also include product rows to incorporate products currently outside of the core SNA production boundary
 - Data (beyond 2008 SNA)
 - Digital services (beyond 2008 SNA), provided by enterprises
 - Digital services (beyond 2008 SNA), provided by communities



Industries

- Additional columns to represent the new digital industries
 - Digitally enabling industries
 - Digital only firms providing finance & Insurance services
 - Digital intermediary platforms
 - Firms dependent on platforms
 - Data and advertising driven digital businesses
 - E-Tailers
 - Other producers operating digitally
- Units reclassified from existing ISIC industry classifications based on shared characteristics.





Outputs from the Digital SUTs

While the framework does not advocate the production of a single estimate of the “digital economy”, the Digital SUTs produce a range of indicators,

- Total E-commerce (digital ordered).
- Total expenditure on products via third party (platform enabled).
- Total value add of digital intermediary platforms, digital enabling industries, firms relying on platforms.
- Total expenditure on digital goods and services.



What's next

- Proposal has been presented at various forums with a **finalised version sent to countries** for feedback. (Feb 2019)
- Some countries have already published experimental estimates for components of the table, may require only slight altering to fit within the frameworks definitions.
- Countries are **not expected to be able to populate all cells** immediately.
- **Workshop on July 1-3** will discuss compilation of the tables rather than statistical concepts.
- Additional workshops in 2019 to **develop ideas around measurement of data, zero priced assets and services.**



HANDBOOK ON MEASURING DIGITAL TRADE PROGRESS REPORT



Defining Digital Trade

Can't be defined using the traditional tool-kit of: products, producers and consumers, or solely around 'digital' concepts such as e-commerce (*digitally-ordered*)

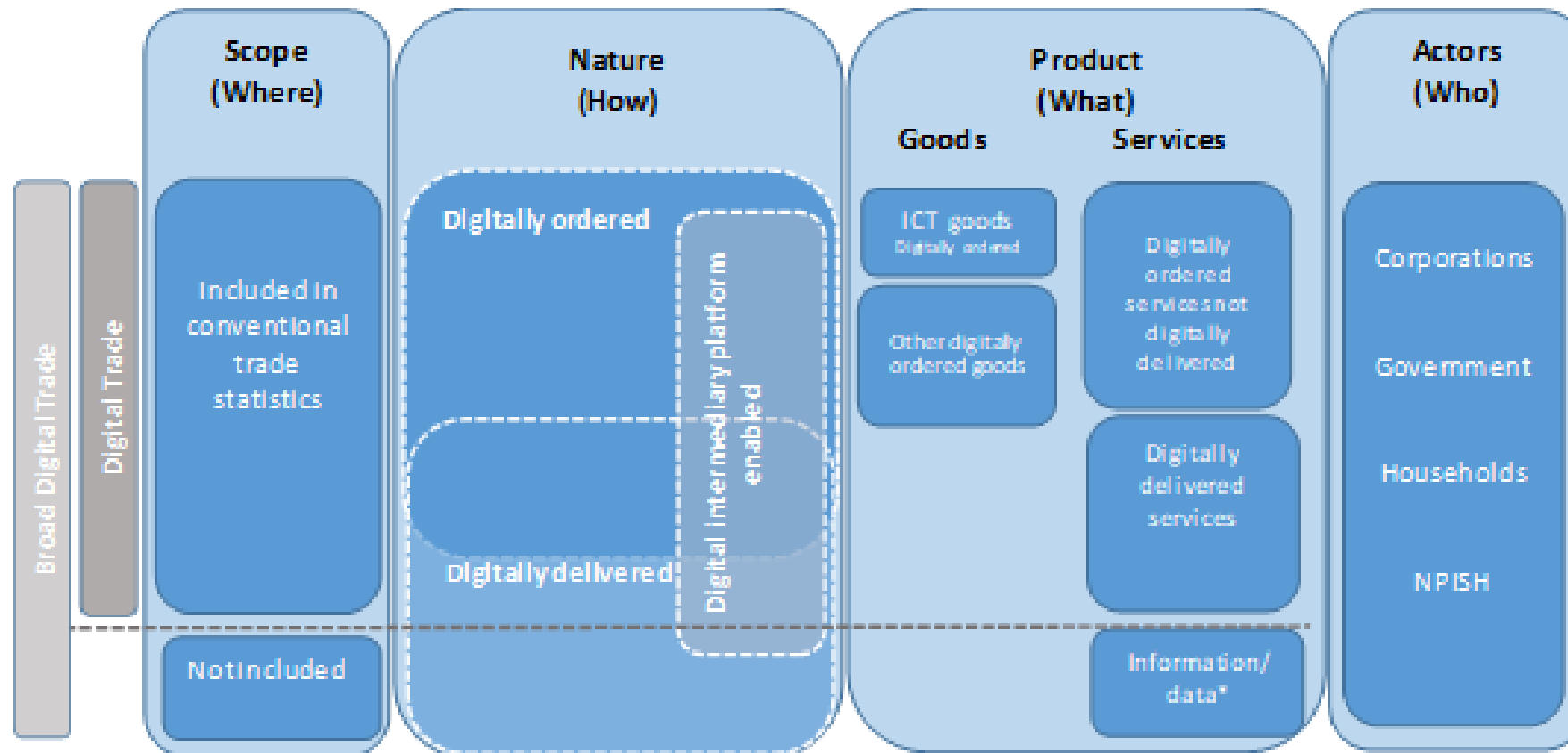
>> excludes digitally delivered services not digitally ordered

No perfect approach, but a view has emerged around the idea of the nature of the transaction, and the following definition:

- *All trade that is either digitally ordered and/or digitally delivered*



...guided by the following framework



- * Refers to data/information where no explicit monetary exchange occurs
- NPISH : Non-profit institutions serving households



...and an emerging reporting template

		Total	By Exporter/Importer		
			Corporations (by industry)	Government	Households/ NPISH
(i)	Digital Trade (ii+iv+vi+ix)				
(ii)	Digitally ordered ICT goods				
(iii)	<i>of which via DIPs</i>				
(iv)	Digitally ordered goods (other)				
(v)	<i>of which via DIPs</i>				
(vi)	Digitally delivered Services				
(vii)	<i>of which via DIPs</i>				
(viii)	<i>of which digitally ordered (including via DIPs)</i>				
(ix)	Digitally ordered services (not delivered digitally)				
(x)	<i>of which via DIPs</i>				
<i>Addendum items</i>					
(xi)	Digitally ordered total (ii+iv+viii+ix)				
(xii)	ICT goods total (digitally and non-digitally ordered)				
(xiii)	Potentially ICT enabled services				
(xiv)	Non-monetary transactions in information/data (imputed)				
(xv)	Broad Digital Trade (i+xv)				

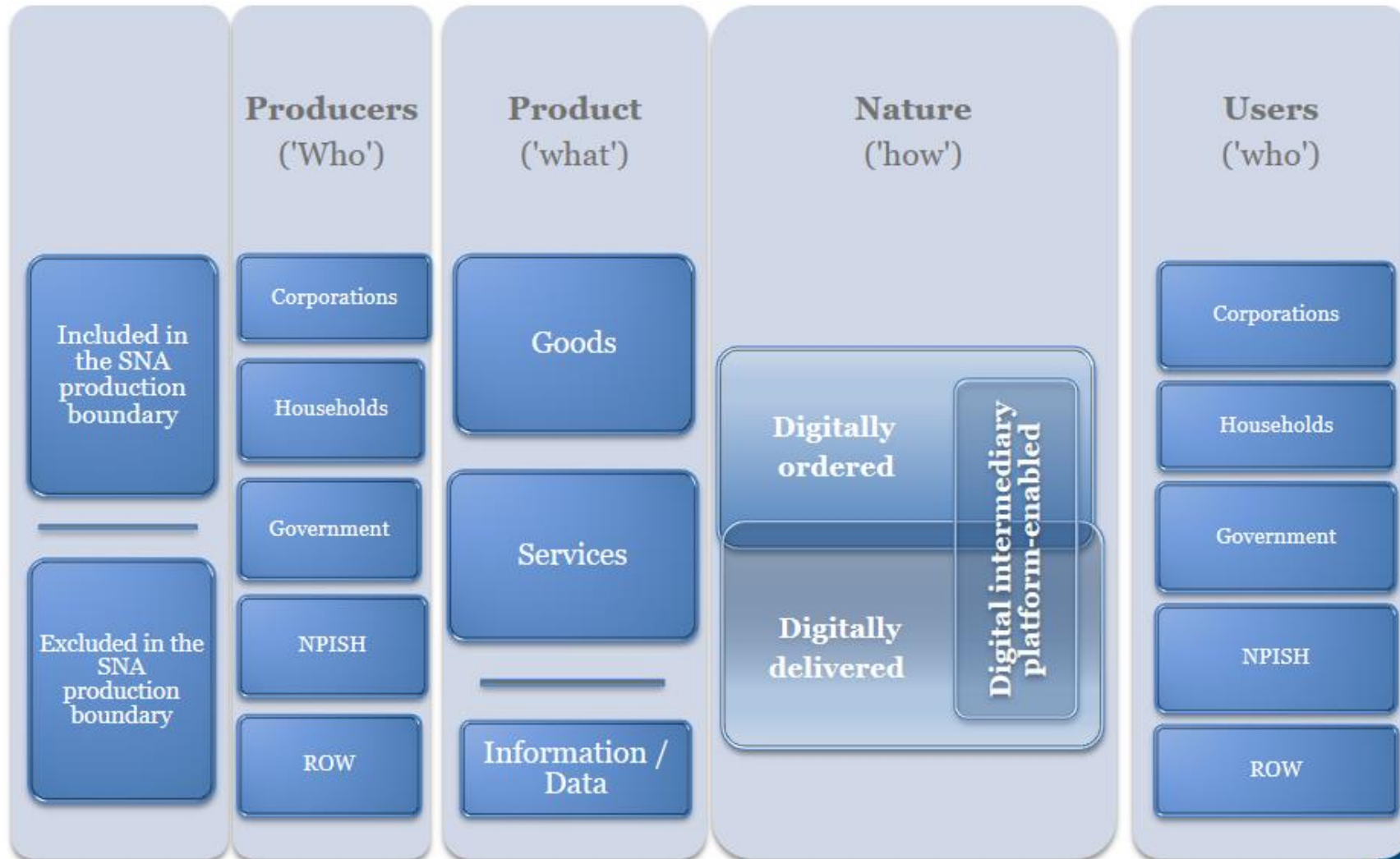
Provides a guide on ordering to deal with overlaps and structured around important aggregations.....

But also shaped around practicalities

What can be done now



Consistent with framework for broader macro-economy





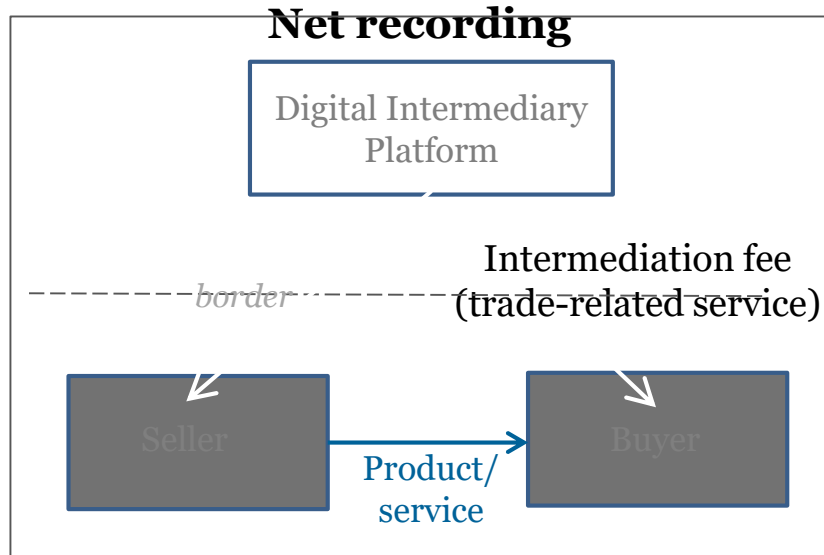
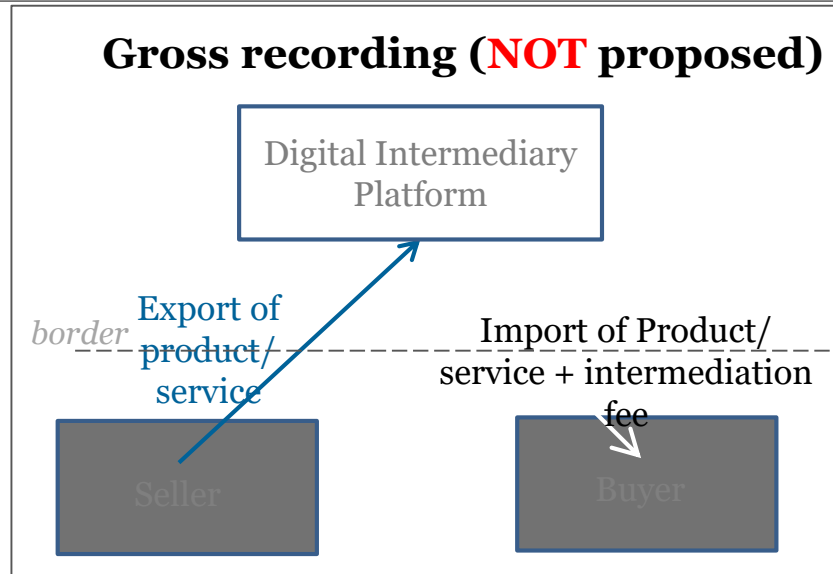
Why do we care about Digital Intermediary Platform

> Accounting/conceptual complications

- Important ‘actors’ but also important aspect of ‘nature’:
 - They may be ‘invisible’ in conventional firm based surveys that focus on resident importers and exporters
 - Digitally ordered/delivered trade by households through foreign platforms require different survey approaches
- The way the flows are recorded matters, DIPs:
 - intermediate for a fee (to sellers and/or buyers) without owning the product
- Which differ from those of e-tailers, who:
 - purchase (take ownership of) and then sell the products



... meaning that the flows are recorded 'net' not 'gross'



Important to note that this treatment differs from the recommendations given in BPM6 and the Manual on Statistics of International Trade in Services (2010) for subcontracting, which recommends that the flows are recorded on a gross basis, on the grounds that the arranger (of the subcontracted service) buys and sells the services.

The argument made in the Handbook is that subcontracted services involve a higher degree of engagement on the part of the intermediary than (typically completely automated) digital intermediation platforms.



Identifying the platforms is not easy

- It is not clear where the service (product/industry) should be recorded
 - Current guidance is that the intermediation service is the service being intermediated
 - Or retail if goods.
- and who imports the service when implicit
 - In the national accounts area > current guidance is that it is the producer of the good/service being intermediated, with the consumer paying a market price that equals the producer's basic price



Current status of the Handbook - 'living document'

Chapter 1. Introduction

Chapter 2. Conceptual framework for digital trade

Chapter 3. Compiling digitally ordered goods and services

Chapter 4. Compiling digitally delivered transactions

Chapter 5. Compiling transactions facilitated by digital intermediary platforms

Chapter 6. Complementary measures

Chapter 7. Conclusions and next steps

Appendices:

1: Extract from OECD “Measuring the Digital Transformation”: The digital transformation and economic statistics

2: Recommendations from the OECD Informal Reflection Group on the Impact of Globalisation on the Measurement of GDP

3: Extract from OECD “Measuring the Digital Transformation”: Measuring Cloud Computing Services

4: A Toolkit for Measuring the Digital Economy: Extract from the 2018 G20 Ministerial Declaration

5: Recommendations from the US Department of Commerce report: Measuring the Value of Cross-Border Data Flows (2016)

6: OECD-IMF Stocktaking Survey on Measuring Digital Trade

7: Product and Industry Classifications



Chapter 6: Complementary measures

Guidelines on:

- Potentially Digitally Delivered Services
- ICT goods

To be included

- Data (concepts being developed)
- Crypto currencies/assets
- IPP transactions



Chapter 7: Conclusions

- *What can we measure on digital trade so far?*
 - Digitally delivered services trade... (but with challenges and next to nothing ‘directly’ on data)
 - Imports and Exports by e-tailers
 - Trade in ICT enablers
 - Some efforts on DIPs – but ‘finding’ them is not easy
- *What does current data tell policy makers?*
 - It’s growing.....but **we need more data**
- *What remains to be done?*
 - Conceptually, we think we’re there but practical guidance on measuring the value of data remains a challenge
 - IP related transactions remain challenging but BEPS may help
 - Increased international data exchange on DIPs could be a game changer



Questions for the CEBTS

Provide feedback on:

- **Feasibility/challenges in identifying actors** (aggregation of firms) including DIPS (by category of product being intermediated) and e-tailers.
- **Challenges in differentiating between firms** (e.g. DIPs) that have only a pure digital presence in the economy (e.g. domain name) and so are non-resident, from those that are resident.
- **Possibility of mainstreaming digital transactions in standard business surveys**, e.g. % of sales through digital ordering, % of purchases through digital ordering. (because these transactions need to have a cross-border dimension for digital trade, what guidance needs to be provided to firms to allow them to identify whether ordering/delivery was indeed cross-border).
- **Measuring transactions in data** - can business surveys help?



Thank you for your attention !

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