



# MEASURING GDP IN A DIGITALISED ECONOMY PROPOSAL FOR A SATELLITE ACCOUNT

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Jennifer Ribarsky  
U.S. BEA (Formerly OECD)



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# Background

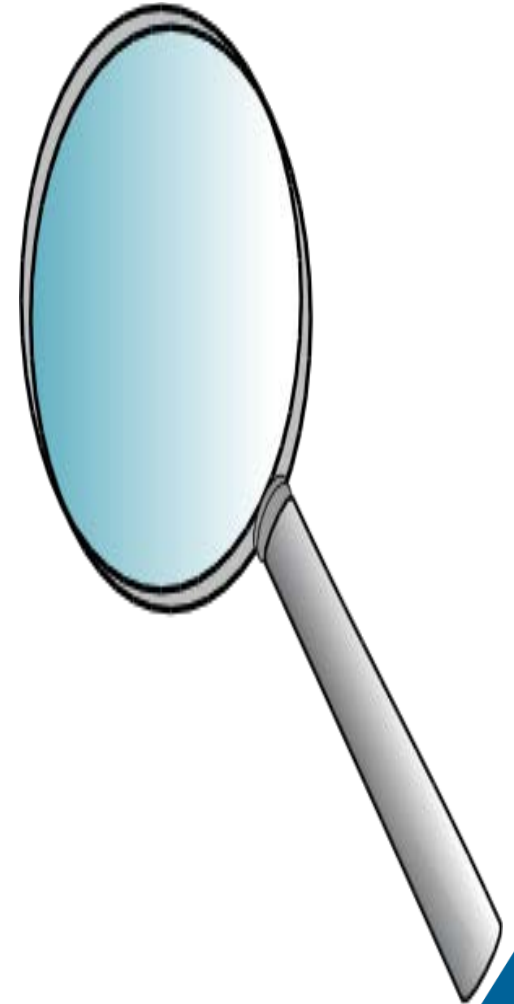


# Where is the digital economy in macroeconomic statistics?

Digital transformation is critical to success of national economies, as a source of growth, enabler of trade, and key to competitiveness...

Yet, economic evidence in official statistics is limited.

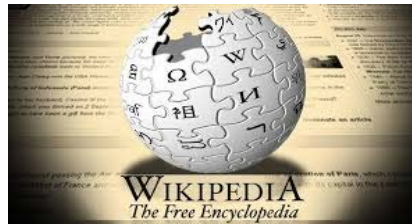
*U.S. International Trade Commission estimated that in 2011, **digital trade increased U.S. GDP** by between \$517 billion and \$711 billion (**3.4 percent to 4.8 percent**); **increased average wages by 4.5 to 5.0 percent**; and was **the catalyst for the creation of up to 2.4 million jobs**. (USITC, 2014)*





# Potential mismeasurement issues

- **GDP** is an adequate concept to measure **market production**, but **concerns have arisen** over a number of areas...
  - Prices and volumes
  - New forms of intermediation service
  - Free and subsidised consumer products
  - Consumers as producers
  - Certain assets not being measured
  - Cross border flows





# The response

- International Statistical community
  - OECD Measuring GDP in a Digitalised Economy
  - OECD-IMF Can potential mismeasurement of the digital economy explain the post-crisis slowdown in GDP and productivity growth?
  - OECD-IMF Measuring Consumer Inflation in a Digital Economy
- **Advisory Group on measuring GDP in a digitalised economy**
  - Consists of NSOs (members of OECD WPNA), Eurostat, IMF, UN, and members of OECD WPMMADE
  - On-line discussions and in-person meeting 10 November 2017
  - Conducted various surveys of country practices
- TF on International Trade in Services Statistics (TFITS) exploring similar issues





# Advisory Group on Measuring GDP in a Digitalised Economy

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- **Main objectives**
  - Defining a measurement framework within the system of national accounts (a satellite account), to monitor the “digital economy”
  - Implementation of the framework, including identifying potential data gaps
- **But what is the digital economy? What should we look at?**



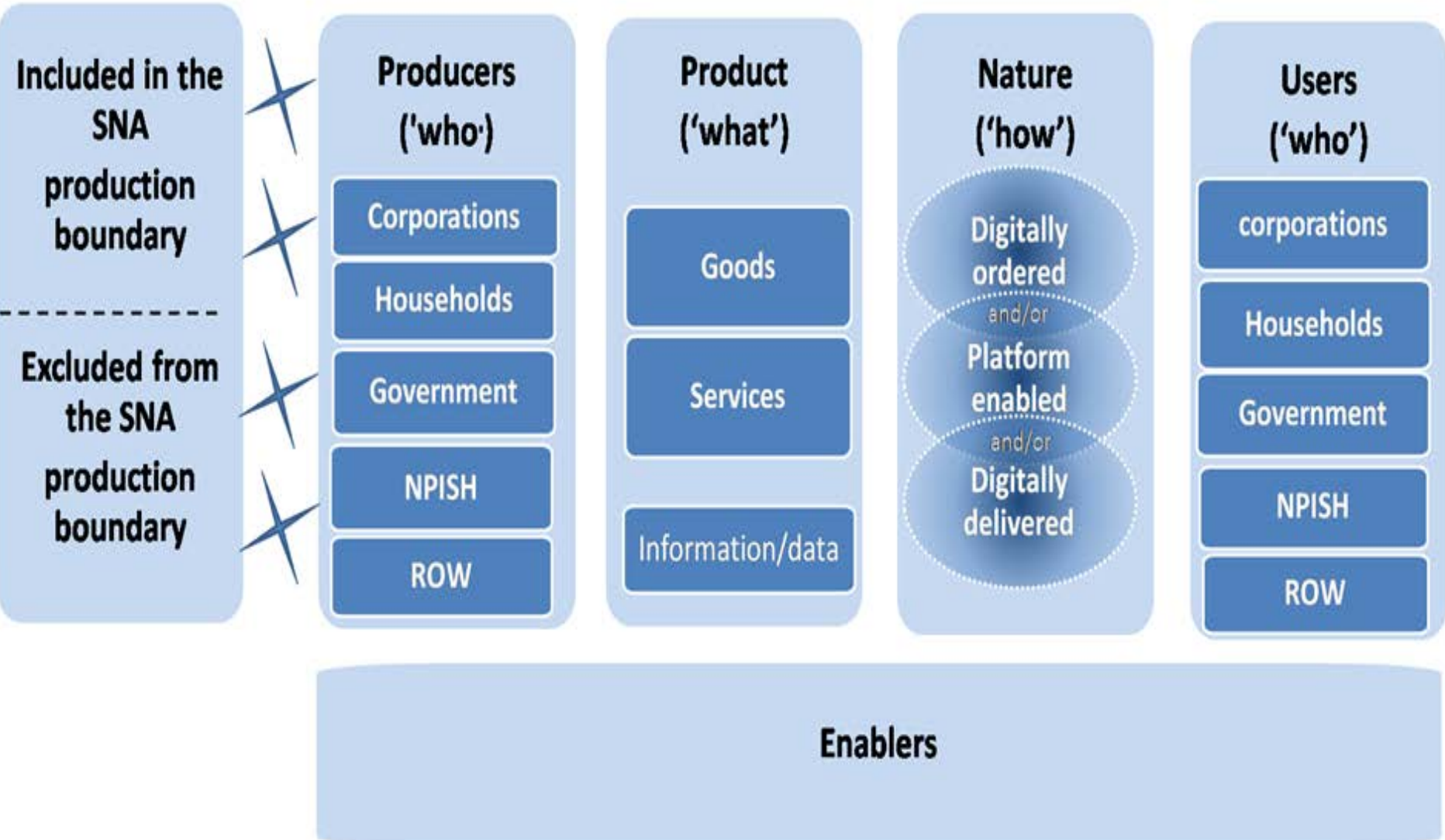


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# The Proposed Measurement Framework (Satellite Account)



# Proposed Framework: Dimensions of the digital economy







# Nature of transaction ('how')

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- Nature of the transaction is organising principle, **but** ... doesn't dictate what should be digital goods and services or digital industries
- **Digitally ordered:** The sale or purchase of a good or service, conducted over computer networks by methods specifically designed for the purpose of receiving or placing orders (*follows OECD e-commerce definition*)
- **Platform enabled:** Transactions that are facilitated via online intermediary platforms that match buyer and supplier (e.g. eBay, Amazon, Uber); platform may be based domestically or abroad, foreign or domestically owned
- **Digitally delivered:** 'downloadable' services and data flows (software, data, database services, etc.)



## Product ('what')

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- Traditional: goods and services
- **Importance of data/information flows that may not result in monetary transaction, but may support one:**
  - e.g. Facebook: advertising revenue is captured, the data flows are currently not > measurement of consumer surpluses?
  - E.g. use of public goods (open-source/free software) > currently no imputations are made



# Actors involved ('who')

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- **Producers**

- Can be broken down in a number of ways:

- by institutional sector, which would highlight the importance of Rest of the World
- Categories of industries (e.g. digital/non-digital industries and/or producers of digital products)

- **Users**

- Can be broken down in a number of ways:

- By institutional sector (again including ROW)
- Categories of industries, and also consumers of final demand (notably households)



## Other parts of framework

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- **Enablers**
  - Important pillar of the digital economy
  - Namely investment and infrastructure channels that help drive digital transformation
- **SNA production boundary**
  - Not all transactions are currently within the SNA production boundary



# Proposed Framework: General Information

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- Basically supply and use tables with **further breakdowns of products and producers, which are considered relevant for describing the “digital economy”**
- **Supply table:** for each product, total supply broken down by domestic producers (industries) and imports
- **Use table:** for each product, total use broken down by domestic producers (intermediate consumption), final consumption, investments, and exports
- Framework also includes “free” digital services, including data that are not in the current SNA framework



# Issues to be resolved

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- **Digital goods:**
  - narrow view (no or hardly any digital goods), but what about 3D printing?
  - ICT goods are included in the satellite account as enablers
- **Digital services:**
  - Should all digitally delivered products be part of a ‘digital products’ category? But what about electronic delivery of documents or insurance policy?
  - Broad agreement about including digitally downloaded products and streaming services (e-books, software, video and music streaming services)
  - All ICT services in scope for ‘digital services’, but if telecommunication services are included then what about other electronic communication forms such as multimedia (including TV transmission)?
  - Services of digital platform intermediaries to be included, but what about recording?



# **Making the Proposed Measurement Framework Operational**



# Digital economy typology

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- The majority of the AG **agreed with the multi-dimensional scope** proposed
- **Satellite account designed to be flexible:**
  - Doesn't define the digital economy but highlights important transactions (and transactors)
  - Despite ambition and wide coverage by no means exhaustive
- Some further refinements needed to **make it operational** for a satellite account on the digital economy
- Considered to be **ambitious**, but also need to further expand the framework:
  - Gross and net capital stock estimates and capital services
  - Price and volume measures





# Way forward

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- **Further research** into potential sources of mismeasurement: active involvement in G-20 work, jointly with IMF
- **Work plan of OECD Advisory group:**
  - Agreement on the typology of digital economy and the framework for measurement
    - Consistent with typology for digital trade; joint work with TFITS and input into the 2018 G20 Trade and Investment Working Group
  - Research into potential data sources, and gaining practical experience
  - Meeting of the Advisory Group on 9 November 2018
  - Indicators to better highlight the digital economy
- **Work feeds into the *Measurement Roadmap for the OECD's Going Digital* project**



**Thank you for your attention!**