



RECENT DEVELOPMENTS IN THE AREA OF DIGITALISATION

GROUP OF EXPERTS ON NATIONAL ACCOUNTS:
MEASURING GLOBAL PRODUCTION
GENEVA, 10-12 APRIL 2019

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Digitalisation in SNA research agenda



SNA research agenda

In November, the AEG **reconfirmed the priority areas** for the SNA research agenda:

- **Globalisation**
economic ownership and recording of IPPs; treatment of MNEs and SPEs; identifying economic presence and residency; ...
- **Digitalisation**
satellite account on the digital economy; valuation of free assets and services; recording of data in the national accounts; cryptocurrencies; ...
- **Economic wellbeing and sustainability**
unpaid household work; distribution of household income, consumption and wealth; environmental economic accounting; ...

Specific **research groups** will be created:

- Led by AEG members, consisting of **experts** from various domains
- To **address** specific issues as listed on the SNA research agenda
- To report back to the ISWGNA and prepare **guidance notes** for wider distribution



Digital supply-and-use tables



Where is the digital economy in macroeconomic statistics?

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



- **Production chains** between producer and consumer **are changing**.
- Digitalisation can remove players (direct online booking) or add additional players (intermediary platforms).
- Statistical recording of the production and use of data, including **the ‘participative’ production of consumers**, digitalisation blurs the production boundary.
- The “free” services provided by private companies, **how and what to measure?**
- Confusion over **production versus consumer surplus**

While research has shown that the productivity slowdown cannot be explained by mismeasurement of digitalisation, the main issue remains:

We just can’t see it!

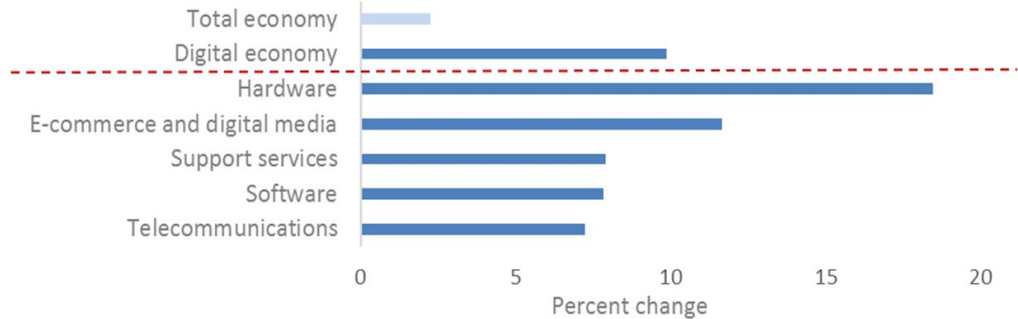


Responses to lack of quantification: National initiatives

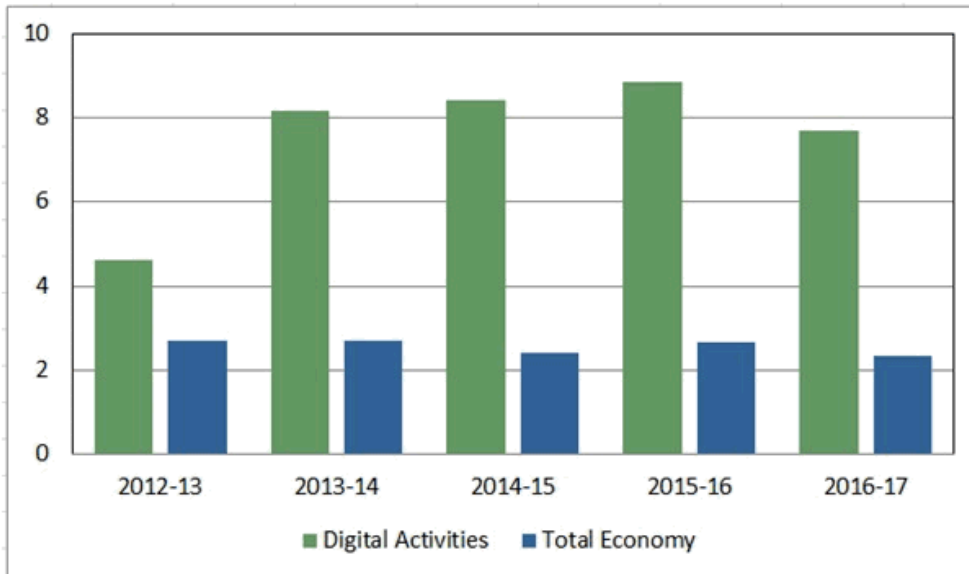
United States, Average annual growth 1998–2017.

- “Digital economy” growth at 9.0%
- Total economy at 2.3%

Components of the Digital Economy:
Real Value-Added Average Annual Growth, 1998–2017



U.S. Bureau of Economic Analysis



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

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



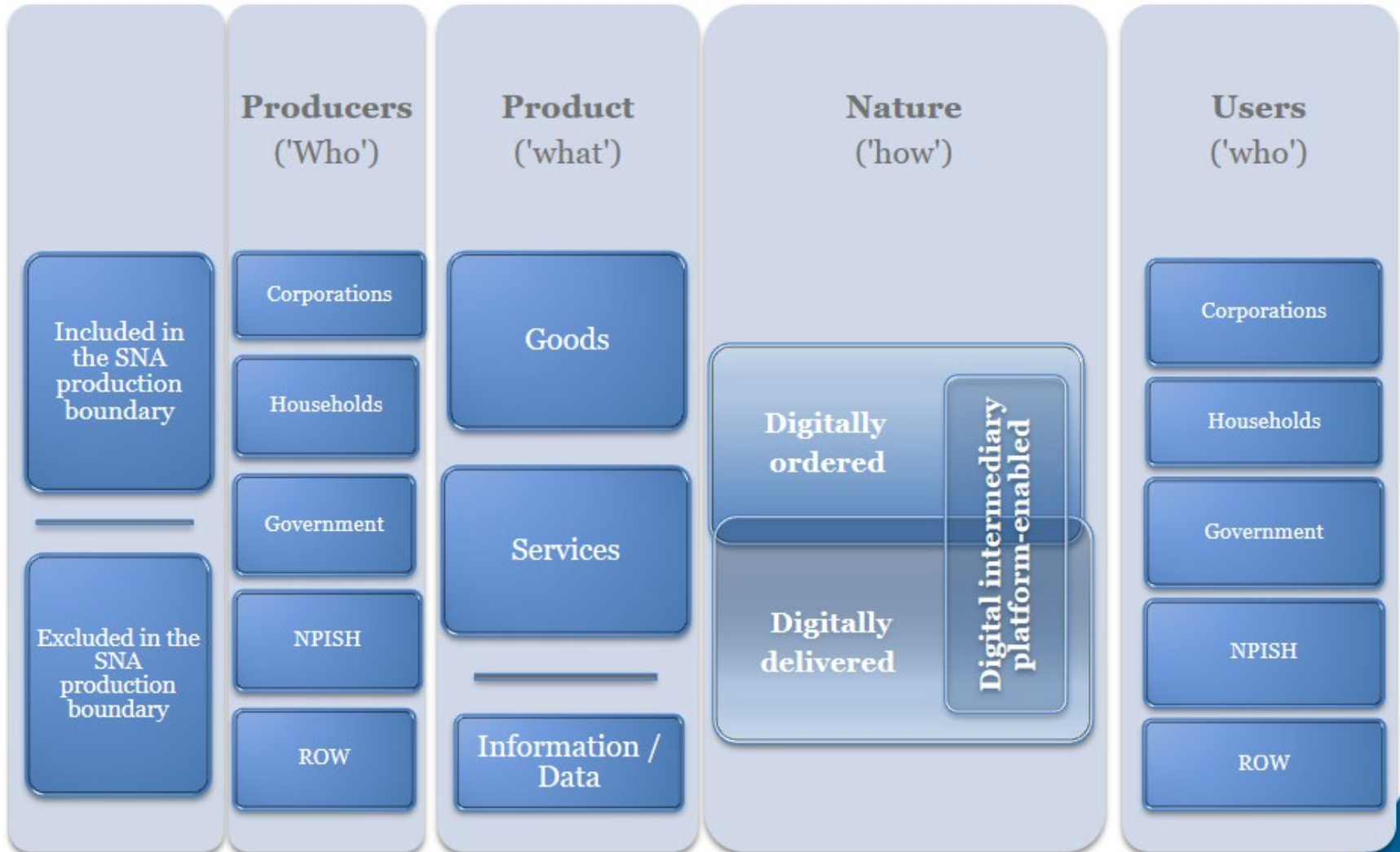
Responses to lack of quantification: International initiatives

- Some considerations regarding national initiatives:
 - “Digitalisation” is often **limited by being split by product or industry**
 - **Lack of agreed definitions and terminology** impacts ability to compare outputs internationally
 - At this stage, estimates often only focus on the **production approach**
 - Current estimates usually do not refer to any of the **‘new’ digital issues**
- Therefore, an **Informal Advisory Group** on Measuring GDP in a Digitalised Economy was created to develop a satellite account on the digital economy:

Digital Supply-and-Use Tables



Underlying typology for digital SUTs





What do the digital SUTs look like?

- The digital SUTs do not define the digital economy but highlight transactions and transactors
- They delineate digital activity **based on nature of the transaction** rather than by product, producer or consumer
- Supply-and-use tables have been extended by:
 - **Additional rows** under each product, separating **transaction types**, i.e. digitally ordered (direct from counterpart or via digital intermediary platform) and non-digitally ordered
 - **Additional product aggregations** focusing on ICT goods and digital services
 - Explicitly distinguishing **‘digital intermediation services’** and **‘cloud computing’**
 - **Additional columns** to represent the **new digital industries**
 - **Additional rows** for **products currently outside the core SNA**
- Countries are **not expected to immediately complete entire table**
- Exchange of compilation practices may help countries in populating parts of the table
- Next meeting of informal advisory group on **1-2 July**



Handbook on digital trade



What is digital trade?

- Digital trade cannot be defined by using traditional toolkit of products, producers and consumers
- But neither can it be defined solely around ‘digital’ concepts such as e-commerce (i.e. **digitally ordered**): This would exclude **digitally delivered** services that are not digitally ordered
- Digital trade: **All trade that is either digitally ordered and/or digitally delivered**
- This is **consistent with** the framework as used for the **digital SUTs**, but now also explicitly targeting information on type of delivery
- Specific **reporting template** to collect relevant information on digital trade
- **Handbook** with guidance to calculate relevant information



Proposed 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)				



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



Recording of data



Data and free services

- Discussion ongoing on **data**:
 - Is it an asset, and if so, is it **produced or non-produced**?
 - If produced, **when** does it become produced?
 - **How should it be valued?**
- Question how to deal with **‘free’ consumer products**, such as free apps, Wikipedia, Social network capabilities, etc.
- Typology of the different types of data and free services is required:
 - Digital SUTs split free assets and services into **those provided for profit by an organisation** and those **“genuinely” free, provided by a community**
 - Distinction between **different types of data** under development
- Several papers on the topic, e.g.:
 - *‘Recording and measuring data in the System of National Accounts’*, Ahmad and Van de Ven, 2018
 - *‘The role and treatment of data in national accounts’*, Statistics Canada and BEA, 2018
- Further discussion at next meeting of informal advisory group



Recording of cryptocurrencies



Cryptocurrencies

- Increasing importance of cryptocurrencies raised the questions how they should be dealt with in the national accounts
- **Two papers** presented at AEG:
 - ***Treatment of Crypto Assets in Macroeconomic Statistics*** (IMF)
Bitcoins are produced non-financial assets except for those issued by central banks which are a financial asset.
 - ***How to deal with Bitcoin and other cryptocurrencies in the System of National Accounts?*** (OECD)
Bitcoins are assets; paper outlined pros and cons of the various treatments that could be applied.
- Survey to AEG participants on the two papers was sent following the meeting.
- Feedback from this will come shortly from the UNSD.
- AEG suggested that “any recording **guidance** currently developed for crypto-assets should be considered as **interim**.”
- Impact on trade estimates are included in discussions.





Thank you for your attention

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