

Measuring the economy in the digital age

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Digital age has brought profound changes in the economy

- Purchase of goods and services on-line is growing
- Free services such as search engines and social media are expanding
- Data are becoming a key factor for production

Digital Age poses some key questions to statisticians

- ✓ Are traditional measures robust when faced with digital transformation?
- ✓ How do we show the broad impacts of digitalisation across society
- ✓ How can we best exploit the exponentially increasing amounts of digital data for statistics?
- ✓ How can we serve our users when they have increasing access to non-official data sources?

Measuring economy in the digital age is becoming a reputational question

Bloomberg

Economics

Poloz Says Digital Revolution Warrants Caution on Rate Increases

By Theophilos Argitis

25 August 2018 18:10



Stephen Poloz. Photographer: James Park/Bloomberg

The vast deployment of digital technologies around the world may be boosting productivity more than current statistics are measuring, giving policy makers another reason to be careful with interest rate increases, the head of Canada's central bank said.

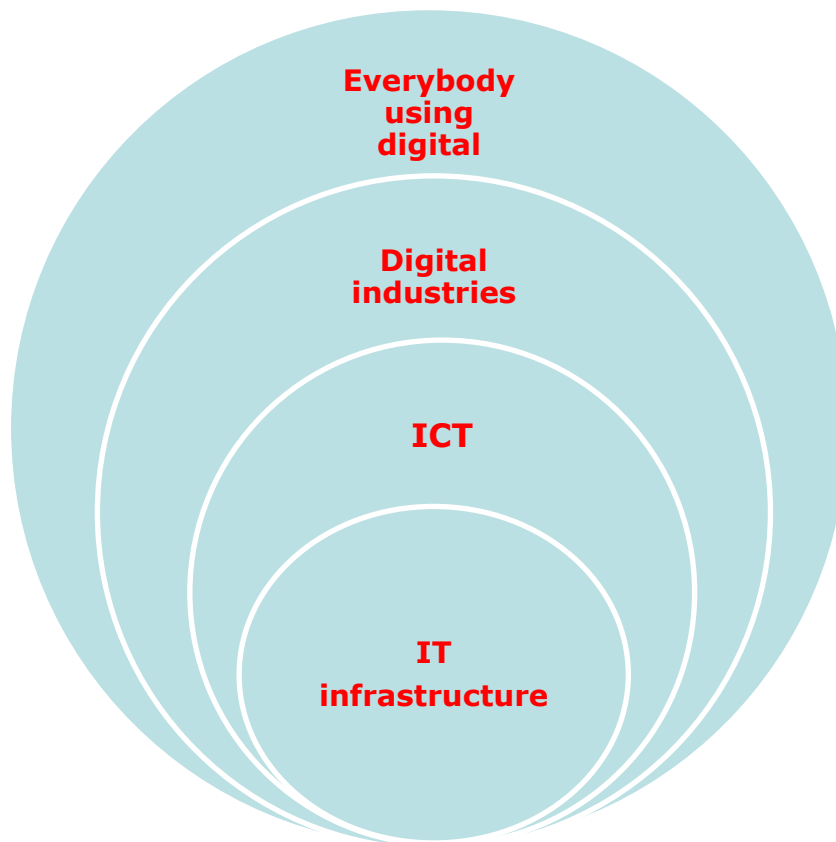
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Lack of precise and universal definition is a fundamental challenge

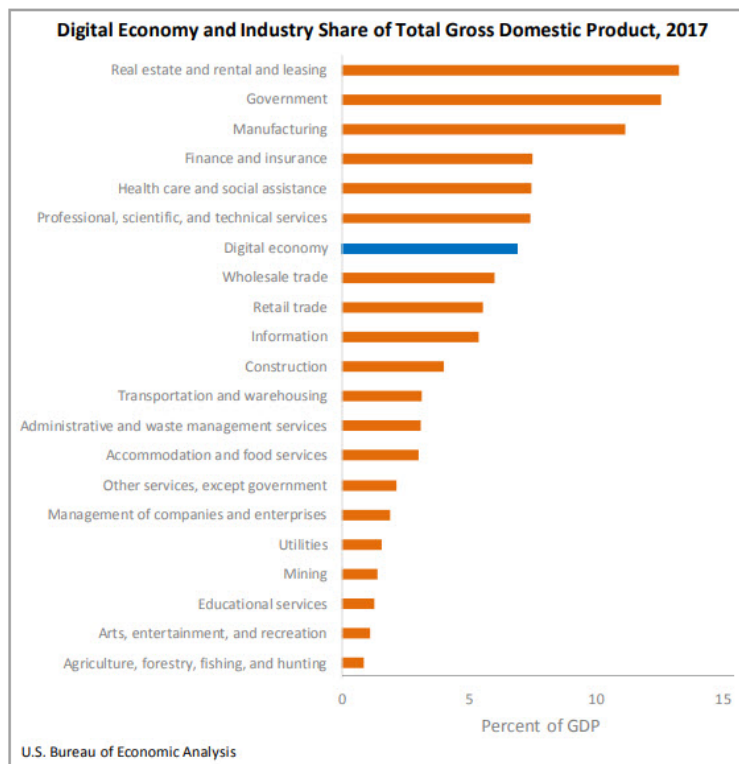


**To estimate digital economy is yet
another challenge**

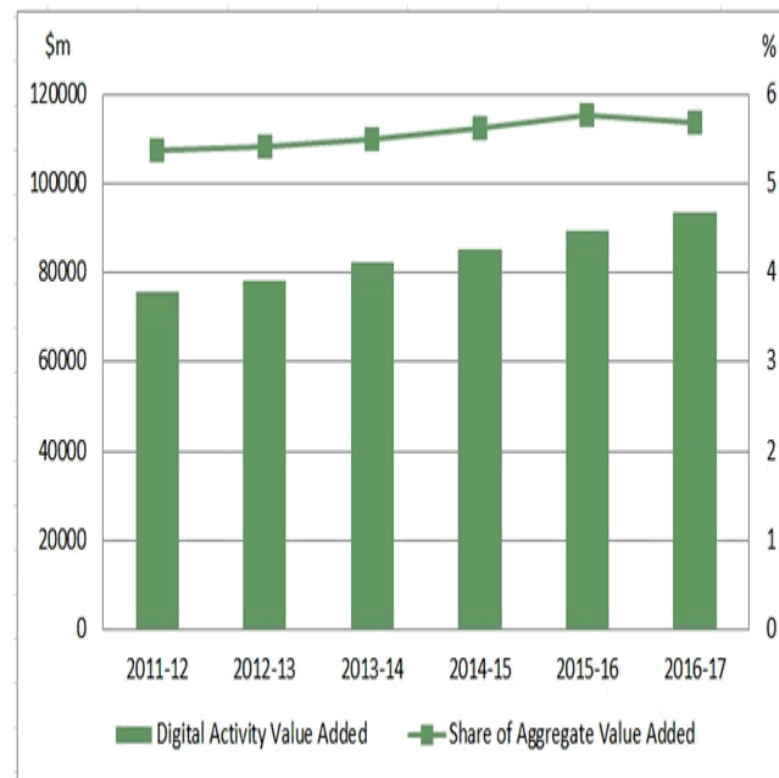
The solution:

Digital Economy Satellite Account

National initiatives towards measuring digital economy



US



Australia

Challenges related to the methodologies and source data

- Outdated statistical classifications
- Price changes for digital economy goods and services
- Dividing output into digital and non-digital segments
- Accurately measuring P2P transactions in shared economy

Digitalisation is high on global statistical agenda

- In March 2019 UNSC agreed on 3 strands to review relevance of SNA 2008: globalisation, digitalisation and well-being and sustainability
- Three task forces were created to deal with issues in each strand under AEG of national accounts
- Guidance notes to be provided by mid 2020 under the steering of ISWGNAs

Priority topics covered by the task force on digitalisation

- Framework for a satellite account on Digital Economy
- Valuation of free assets and free services
- Recording of data in the national accounts
- Crypto assets
- Price and volume measurement of goods and services affected by digitalisation

Challenges in the valuation of free assets and free services

- *Examples: Facebook, Google Search and Mail*
- Is there an exchange to be recorded, and at what value?
- Should they be included in the GDP?
- Are indicators of welfare from free digital products and services needed?
- Does measurement challenges require to intensify statistical cooperation across the globe?

Recording of data in national accounts

- Data as a factor of production
- Is digital data an asset?
- Distinguishing data and information
- How to value digital data-based information?

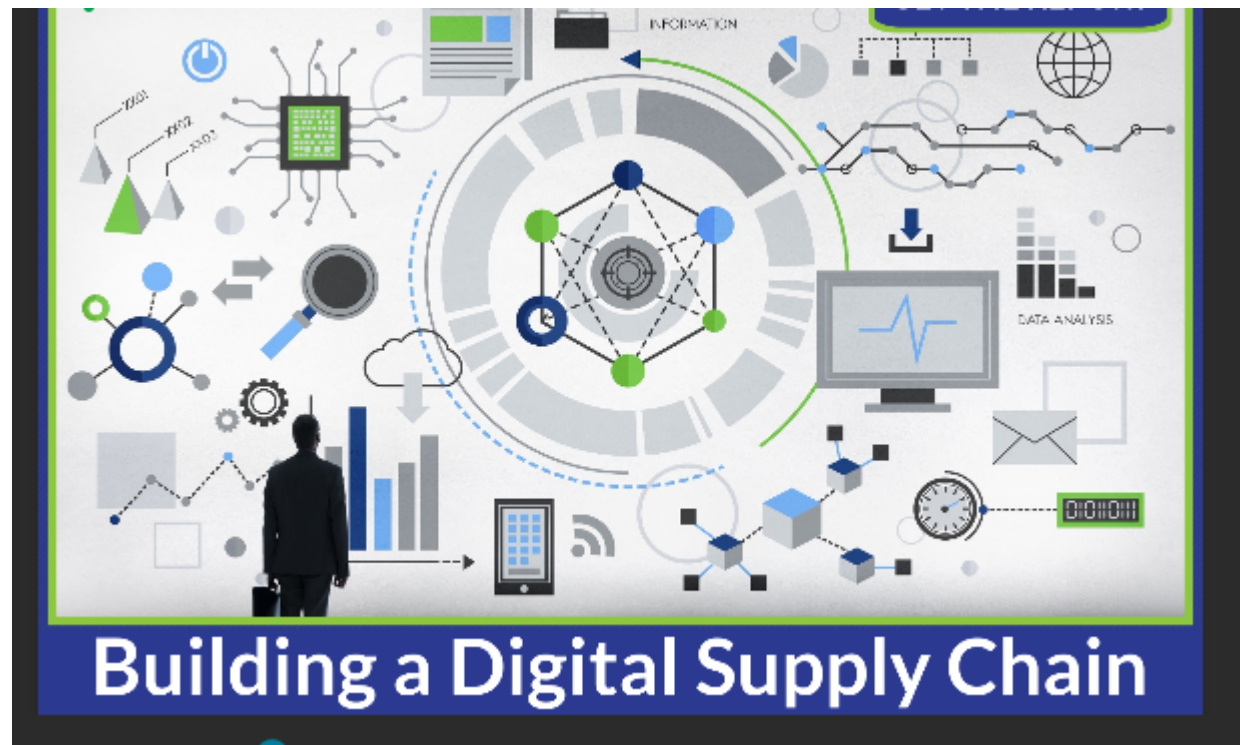
Price and volume measures in a digital world

- Price measures for digital products are challenging to produce.
- Sometimes we are even not sure what the product is.
- Price indices are potentially impacted, but also the real growth of GDP.

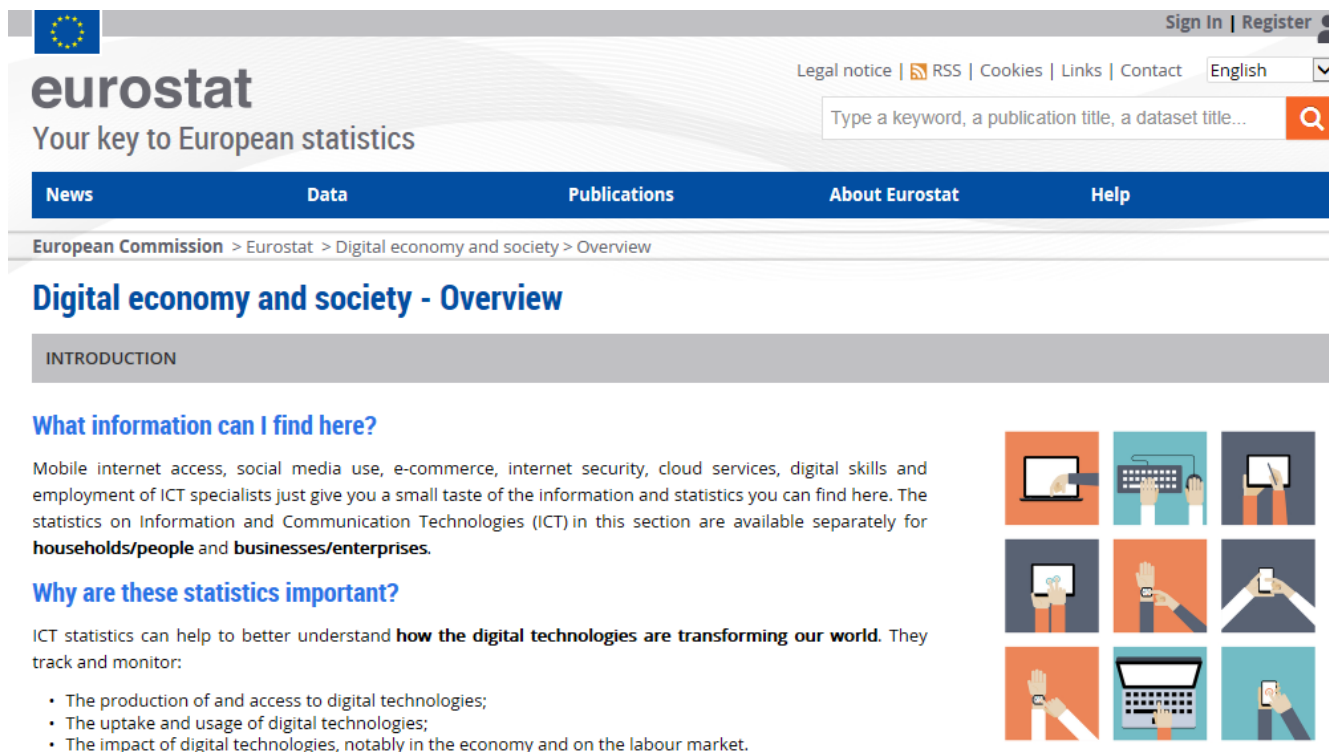
Measuring collaborative economy

- E-platforms linking producers and consumers
- Key issue is the accessing e-platform data for statistical purposes
- Eurostat's work with accommodation platforms:
 - **Voluntary agreements with internal platofrms**
 - **No direct access to microdata**
 - **Potential to collect at EU level and then share with member states**

Yet another challenge: where digitalisation meets globalisation



Measuring digital transformation beyond national accounts



The screenshot shows the Eurostat website interface. At the top, there is a header with the European Union flag, a 'Sign In | Register' link, and a language selector set to 'English'. Below the header, the Eurostat logo is displayed with the tagline 'Your key to European statistics'. A navigation bar contains links for 'News', 'Data', 'Publications', 'About Eurostat', and 'Help'. A search bar is also present. The main content area is titled 'Digital economy and society - Overview' and includes a breadcrumb trail: 'European Commission > Eurostat > Digital economy and society > Overview'. Under the 'INTRODUCTION' section, there are two sub-sections: 'What information can I find here?' and 'Why are these statistics important?'. The first sub-section provides a brief overview of the data available, mentioning mobile internet access, social media use, e-commerce, internet security, cloud services, digital skills, and employment of ICT specialists. The second sub-section explains the importance of ICT statistics in understanding digital transformation. A 3x3 grid of icons illustrates various digital activities: using a laptop, keyboard, tablet, smartphone, and smartwatch.

What information can I find here?

Mobile internet access, social media use, e-commerce, internet security, cloud services, digital skills and employment of ICT specialists just give you a small taste of the information and statistics you can find here. The statistics on Information and Communication Technologies (ICT) in this section are available separately for **households/people** and **businesses/enterprises**.

Why are these statistics important?

ICT statistics can help to better understand **how the digital technologies are transforming our world**. They track and monitor:

- The production of and access to digital technologies;
- The uptake and usage of digital technologies;
- The impact of digital technologies, notably in the economy and on the labour market.

New topics to be followed

Example: Cloud computing



193/2018 - 13 December 2018

ICT usage in enterprises in 2018

**Cloud computing services used by more than
one out of four enterprises in the EU**

12% of enterprises reported analysing big data and 4% used 3D printing

Communicate statistics close to citizens



Statistics to measure the progress of policies related to digital transformation



European Commission > Strategy > Digital Single Market > Policies >

Digital Single Market

POLICY

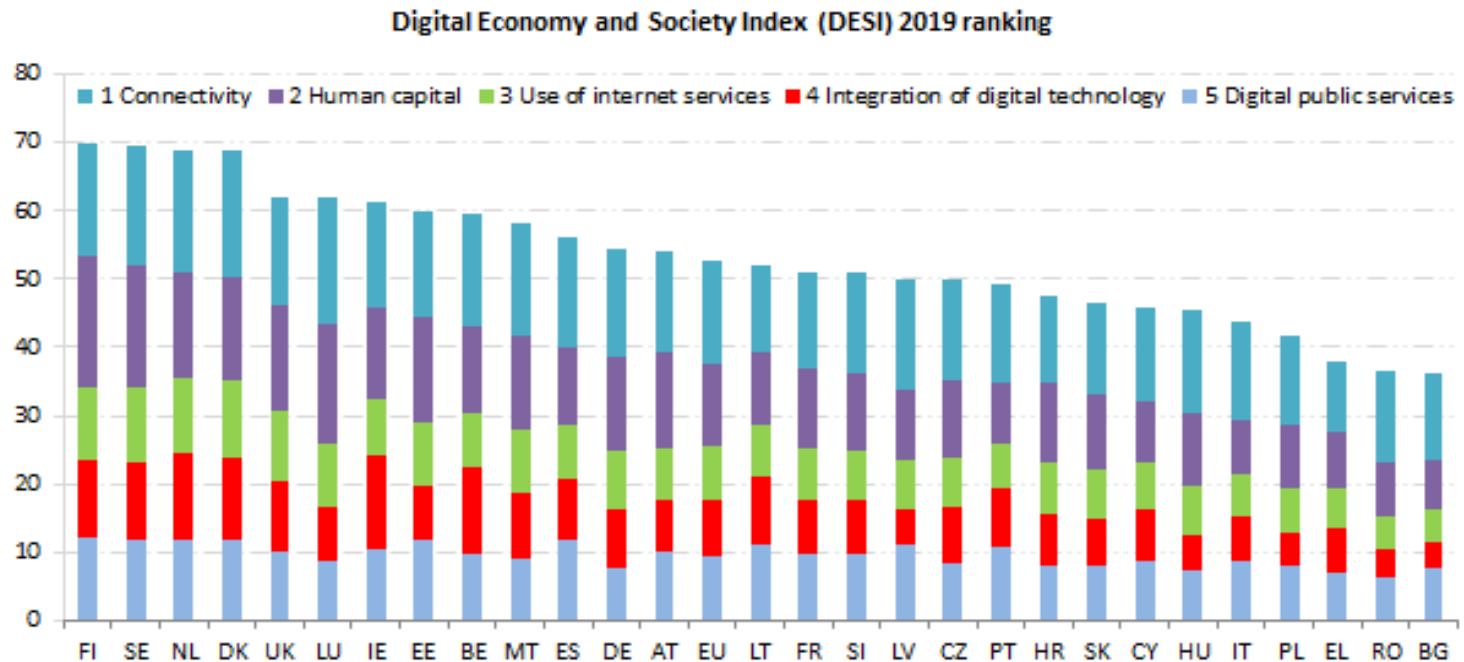
Digital scoreboard

The digital scoreboard measures the performance of Europe and the Member States in a wide range of areas, from connectivity and digital skills to the digitisation of businesses and public services.

The digital scoreboard includes data from the [Digital Economy and Society Index \(DESI\)](#) and the DESI [Telecoms Chapters](#)

The Digital Economy and Society Index (DESI)

DESI 2019



The next great digital revolution will be created by the combination of:

- Internet of Things
- Cloud computing
- Big data
- Artificial intelligence

Are we ready to measure the future?

