



Recording of data in the National Accounts

Group of experts on National Accounts, May 19, 2022

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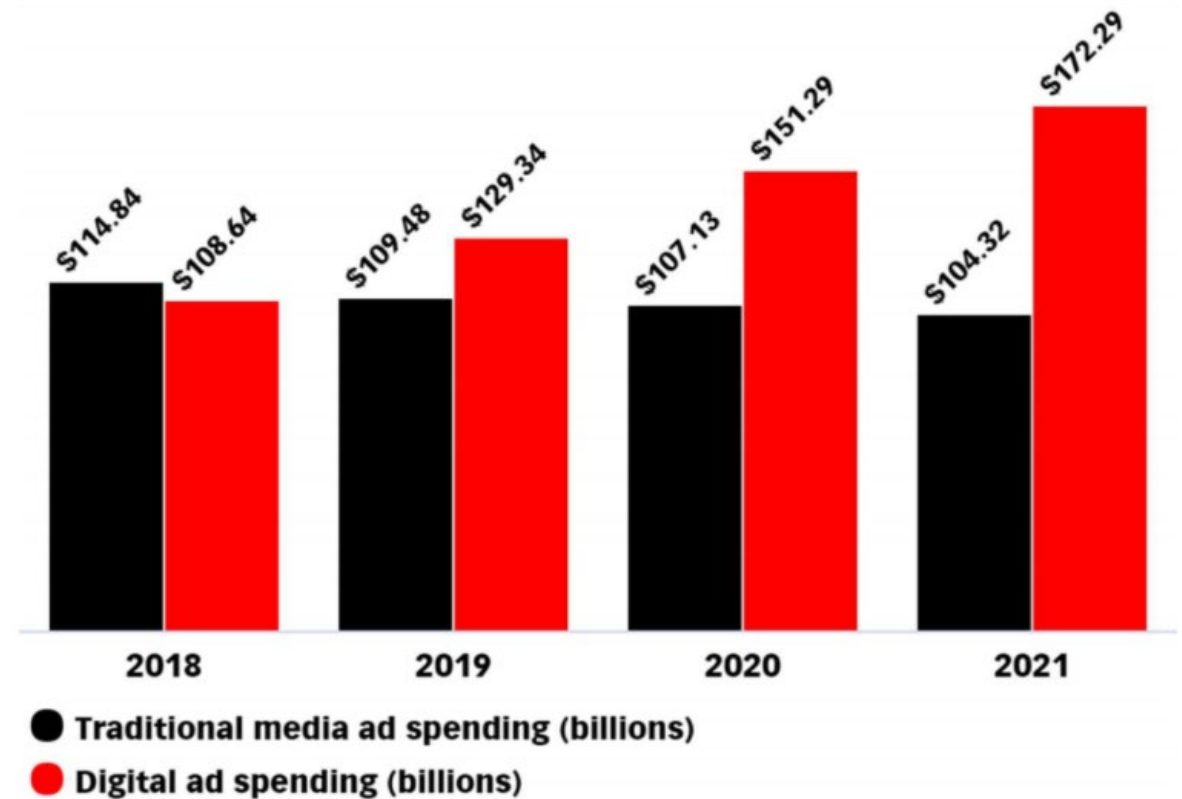
Data as an asset within the SNA

What assets are recorded in the SNA during the production of Digital advertising?

- ✓ Computer hardware
- ✓ Computer Software
- ✓ R & D
- ✓ ...
- X Data

Digital vs. Traditional Ad Spending

United States, 2018-2021



Source: eMarketer, Feb 2019



Data as an asset within the SNA

Data contributes to **improved productivity & efficiency** in a range of outputs across different industries.

- **Just-in-time supply chain control**
- **Customer loyalty programs**
- **Improved demand forecasts**

Not just the private sector; **public sector data** has transformed many aspects of non-market output!





Incorporating data into the SNA – the process

Preliminary discussion around data.

NSO's pilot various methods and produce experimental results

More **technical discussion** on incorporating data into SNA – ISWGNA task team

Recommendations proposed (i.e. Intermediate consumption Vs Investment, how to record transactions involving data and OPs etc.)

Global consultation on proposed recommendations

Testing of feasibility with countries

Incorporate feedback from consultation and results from testing

Final set of recommendation on recording of data

Continual development and sharing of best practice from expert groups etc.

Implementation





Incorporating data into the SNA – Proposed recommendations

Data is defined as

*“information content that is **produced** by accessing and observing phenomena; and recording, organizing and storing information elements from these phenomena in **a digital format**, which provide an economic benefit when used in productive activities”*

For pragmatic reasons data in the national accounts focusses only on digitised data



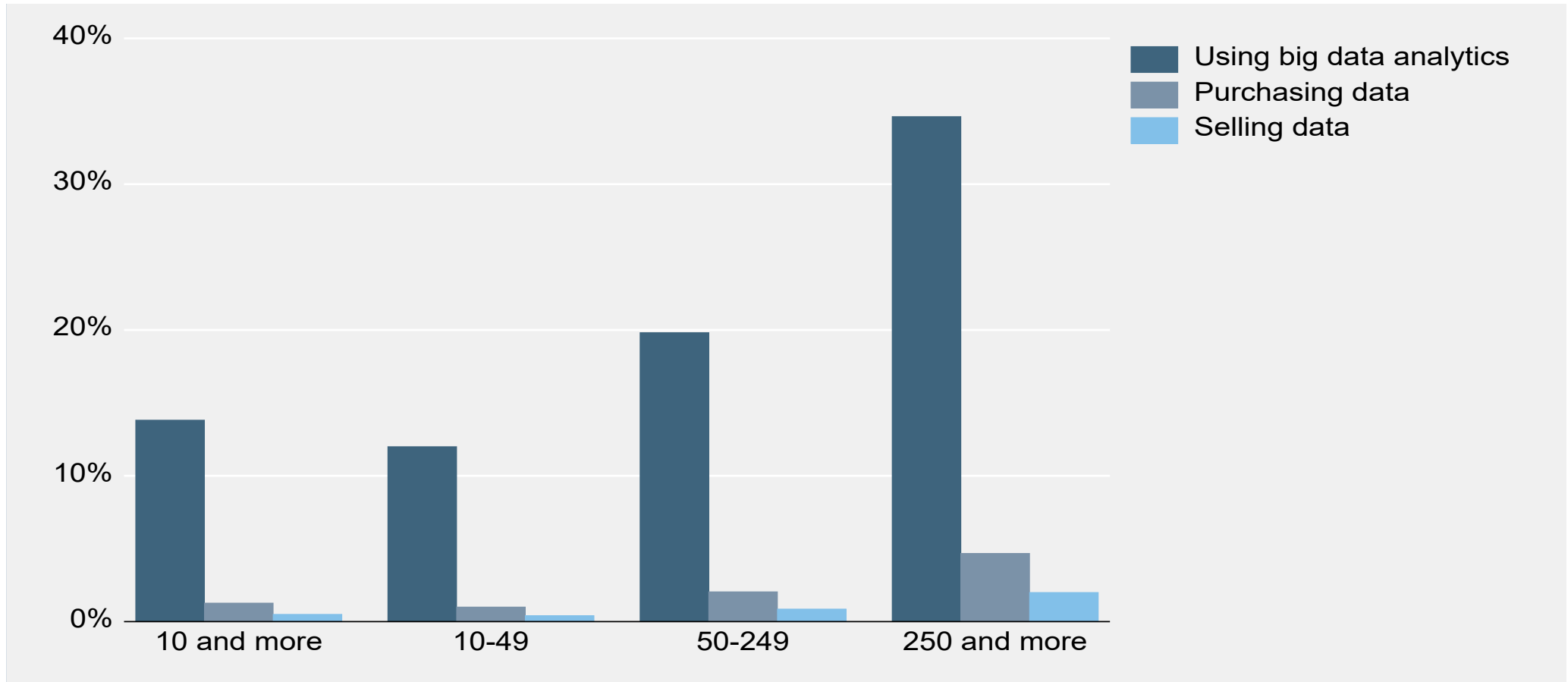
Data vs other assets within the SNA.

- Most data is produced on **an own account basis**.
- Data **doesn't depreciate** in a conventional sense.
- Data is extraordinarily **heterogeneous**.
- **Quantity** often **unrelated to the value**.



Purchasing or selling big data is rare, even among firms that conduct big data analytics

Average across 23 European countries by firm size
(total number of employees), 2020



Source: Eurostat (2022), *ICT Usage in Enterprises*,



Data assets – How to value?

- ~~**Market Price,**~~ data not sold at market in large enough quantities.
- ~~**Net Present Value,**~~ not enough of the required information available.
- **Sum of costs,** successfully tried already, (see Canada, Netherlands, Australia, USA, academia); similarities with other intangible assets in the SNA.



Incorporating data into the SNA – Proposed recommendations

- Own account production of data should be valued at the sum of costs, which would include;
 - costs of **planning, preparing and developing** a data production strategy,
 - costs associated with **accessing, recording and storing** information embedded in OPs,
 - costs associated with **designing, organising, testing and analysing** the data in order to draw information and conclusions from it.
- Costs **include staff time** and costs of items used as **intermediate consumption**.
- Costs include an estimate **for consumption of the fixed capital used** in the own account production of data.
- Costs **include a mark-up** for net operating surplus for market producers.



Incorporating data into the SNA – Proposed recommendations

- Data is the **result of production**.
- Data is **distinct from the information** elements of ‘observable phenomena’ (OP), which are inputs for data.
- Replenishing data with **new information** is considered **new investment**.
- **All own account** production of data is **considered capital formation**.
- Data is **subject to economic ownership**, valuation (re-valuation) and depreciation.
- Only data that provides an **economic benefit** when used in the productive activities of its owner is included in the SNA asset boundary.
- Data is classified to a new asset category called “data” (**excludes software**)



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The beginning of the end or just the end of the beginning?

- R & D inclusion in the SNA 15 years ago.

“R&D should be recognized as part of capital formation. In order to achieve this, several issues have to be addressed. These include deriving measures of research and development, price indices and service lives. Specific guidelines, together with handbooks on methodology and practice, will provide a useful way of working towards solutions that give the appropriate level of confidence in the resulting measures”.(SNA 10.104)

Continual, testing, refinement, clarification will likely continue before and after data's inclusion in the SNA.