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Valuing data

Challenges and opportunities in realizing the value of data for development

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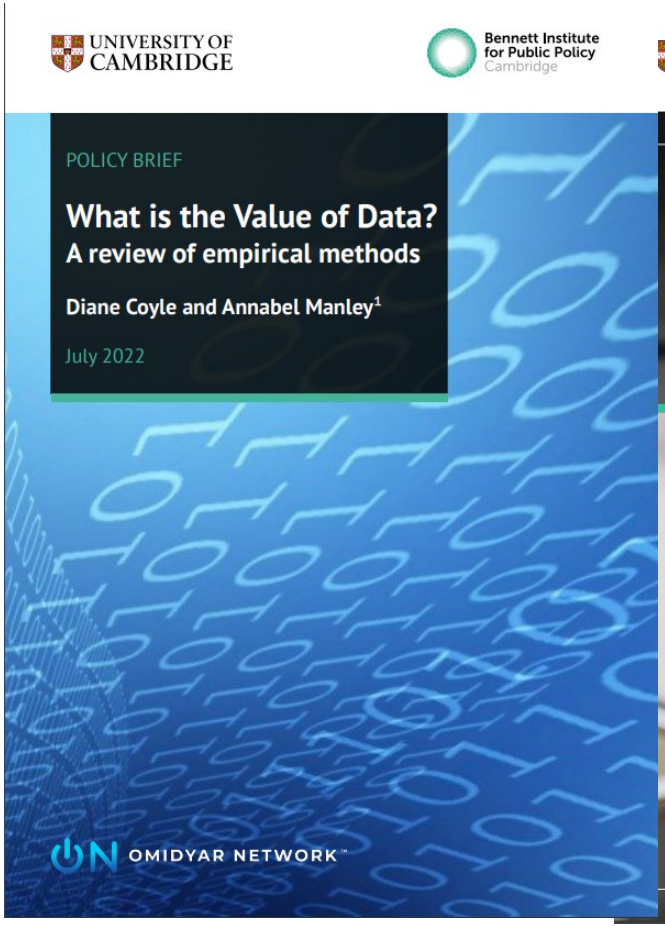
Outline

1. Background: Underpinning research and evidence
2. Key Findings: Characteristics and conditions in which data become valuable
3. Case study: The creation, capture and distribution of value in the transportation sector
4. Policy recommendations for CTSD and Member-States: Measuring and maximizing value creation for individuals, private actors and economy as a whole

1. Background



2. Key Findings: Characteristics and conditions in which data become valuable

What are data?

Data are the new oil!

^ NOT

Economic and informational lenses on the social value of data

Analytical (economic) lens	Contextual (informational) lens
Positive and negative externalities	Provenance
(Non-)excludability	Data type
Increasing/decreasing returns	Data subject/sensitivity
Depreciation	Generality (reference data)
Fixed and marginal costs	Accuracy
Complementary investments	Interoperability/accessibility

See Coyle et al 2019
https://www.bennettinstitute.cam.ac.uk/media/uploads/files/Value_of_data_Policy_Implications_Report_26_Feb_ok4noWn.pdf

A closer look at positive externalities

Key conclusions on features of data that affect their value

- 'Market solutions' by themselves are **inefficient**
- **Social and private value diverge** & some valuable uses are non-monetizable
- Value lies in **use**, and there are heterogeneous use values
- Data have a **relational** character. This means that solutions cannot all be individual. There is also a danger of foreclosing valuable uses

- **So then, what do these features imply for governance and policy choices?**

3. Case study: Unpicking value creation and distribution in data use in urban transport

https://flic.kr/p/zjW1G

Data and Transport: Opportunities for the SDGs and value creation

- Transport is a critical aspect of making cities and human settlements inclusive, safe, Mobility, and associated transportation infrastructure and human settlements inclusive, safe, resilient and sustainable
- There are **multiple levels** at which data can create value in transport, which can be complementary and/or competing:
  - The individual
  - The firm level (e.g. private providers, third-party information applications)
  - The aggregate or geographical area (e.g. around congestion and environmental outcomes)

Data and Transport: Where and how data are used

- With an increasing focus on ‘digital by default’ and mobility as a service, data are being integrated into urban transport services in multiple areas:
  - At the point of service, e.g. automated fares, smart cards and smart phones with opportunities for personalisation
  - Through data-based systems, e.g. the combination of smartcards GPS-enabled vehicles, intelligent transport systems
  - In decision-making, often informed by the use of smart cards and automated fare systems

Data and Transport: Conditions and trade-offs around data capture and distribution

- An information lens highlights:
  - The importance of interoperability (e.g. financial and transport data)
  - Areas with high demands for real time, accurate and granular data
  - Trade offs in value for individuals, firms and in the aggregate

- An economic lens highlights:
  - Excludability (e.g. via concentration of data by a few firms)
  - Negative externalities affecting individual and firm level value creation (e.g. around congestion)
  - Costs (e.g. linked to the physical service and willingness to pay)

Data and Transport: Emerging considerations for governments

Conditions and features affecting the value created through data use in urban transport reveal the need for governments to consider:

- Explicit effects to mitigate inequality and exclusion, including place-based
- Recognizing and managing trade-offs between public and private value
- Challenges for individuals linked to both visibility and invisibility in data sets
- The importance of coordination

4. Policy recommendations for CSTD

- **Supporting research into the scale and distribution of costs** of data use, especially in developing country contexts, as well as options for balancing costs with value distribution.
- **Facilitating open dialogue between governments and with civil society on approaches** by government to positive and negative externalities, comparing 'what works'
- **Capitalizing on linkages with other UN bodies and civil society** to better understand and mitigate inequalities for historically marginalized groups
- **Providing advice** on the identification and use of appropriate indicators for economic and social value creation through data

4. Policy recommendations for Member-States

- Recognizing the importance of **coordination** across government departments as well as with the private sector and civil society to realize social value through data use
- Explicitly seeking to identify and support those who are likely to be excluded from data-driven services, **promoting inclusive design**, and ensuring meaningful alternatives exist
- Considering both **context and use case** in the set up and use of data in public services
- Working with researchers, civil society, other member-states and the private sector to better understand **trade-offs and complementarities** in value creation, and using this to inform regulation and public sector support

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