Free Flow of Data and its Impact on the Digital Economy

Maria Ptashkina

DECODE Symposium 2018

CCCB

16 October 2018

Data-Driven Economy (DDE)

- Data can play **different roles** in the digital economy

Intrinsic to commercial transactions	• A need for **free flow** of data, including on a cross-border basis (this is the "fifth freedom" of commerce) • Addressed in **trade agreements** such as the Trans-Pacific Partnership or USMCA
Intangible capital asset	• Big data trains **artificial intelligence** (AI) and enables the creation of machine knowledge capital • **Incompatible with "free movement"** in the sense of "uncompensated movement"
Infrastructure for a digitalized economy	• **Government data**: tax and banking, education and health data • Must be strictly **safeguarded**; diametric **opposition to the "cloud"** model for business

Economics of DDE

- **Powerful economies of scale**
  - Quality of predictions improves with quantity of data
  - High fixed cost of maintaining AI expertise
- **Economies of scope**
  - Sharing data across applications in multiproduct firms
- **Knowledge externalities**
  - Global vs. local externalities
- **Network externalities**
  - Positive feedback loop
- **Pervasive information asymmetries**
  - Business model based on exploitation of information asymmetry
- **Replicator economics**
  - Machine knowledge capital can be expanded at near-zero marginal cost and distributed globally with near-frictionless ease
  - Digital products replicable and non-rival

Conceptual Differences in Data Treatment

Issue	US Approach	EU Approach
Market structure and strategy	- Large **first mover advantage** - Naturally seeks **maximum openness** to exploit the benefits and **lock in the competitive advantage** of technological giants	- Emphasis on **minimising the adjustment costs** and risks of the digital transformation
Domestic regulatory approach	- **No federal legislation** regulating the collection and use of personal data - **Diverse** state regulations, industry "best practices," and various private standards	- **Clear guidelines** for the member states on the protection and use of personal information - General Data Protection Regulation
International trade agreements	- Obligates parties to **allow cross-border data flows** and does **not provide** for strong **privacy** protection	- Silent on data localization, **emphasis on privacy**

- Disguised protectionism vs. legitimate public policy objectives

Policy Battlefield

Privacy Regulations:
Policies that restrict the collection and use of data

| Development of AI | vs. | Consumer confidence |

Data Localization:
Restrictions on ability of firms to transmit data on domestic users to a foreign country

| Market openness | vs. | National security |

Access to Government Data:
Restrictions on the access and use of tax and banking data, education data and health data

| Development of AI | vs. | Ethical concerns |

Source Code Disclosure:
Demanding information on the underlying algorithms

| Intellectual property rights | vs. | Transparency, critical infrastructure |

Conclusion

- Data can play **different roles** in the digital economy, in some instances data should **flow freely** across borders, while in others **data transfer should be limited**

> *Q: What are the ways to distinguish and regulate these different roles?*

- Certain features of the data-driven economy create the conditions for the **market failure**

> *Q: Do these features create a qualitatively new type of market failure?*

- Market structures define the **differences in conceptual understanding** of the data flow conditions

> *Q: How to align the incentives of the major players?*

- These conceptual differences translate into **diverse policy responses**

> *Q: What is the role of international governance?*