

Why data governance matters:

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Overview

World is transitioning to new economy built on data

Data is different and not so easy to govern. No one best approach for the different types of data.

All nations are in early stages of learning how to govern various types of data to facilitate economic growth (most advanced on personal data)

Why data governance matters

Data is different from other goods and services

- Data = most exchanged item
- Can be a good, service, or both
- Can be a global public good
- If governments restrict → can have spillovers for human rights, scientific progress and internet stability
- Cross-border data flows occur on a global commons, so how nations regulate data at the national and international levels is important to political/economic stability.



What is the data-driven economy?

- Goods and services built on data (not the same as e-commerce)
- Need lots of data (volume); different types of data (variety) and good data that is correct (quality and veracity)
- Foundation of many cutting-edge sectors, such as AI, data analytics, and advanced surveillance technologies
- Built on six different types of data that can be endlessly combined



Data driven sectors are often built on information asymmetries

- Firms with more computing power better positioned to extract and use data
- Firms with more data and money better positioned to exploit big data sets
- More data → more possible goods and services, which generate more data and more market power
- Also applies across countries. Data-driven firms are concentrated in middle-income and wealthy countries

Information asymmetries and absolute advantage

US and China: biggest companies, biggest share of cloud, data, AI and profits

Huge advantage, although other countries are specializing in specific sectors such as autonomous vehicles (Germany) or machine learning tools (Canada)

But comparative advantage can change as technologies change



Developing countries are the future of the data-driven economy, but these countries are not consistently open to cross-border data flows



U.S. is home to 18 of 30 largest internet firms, but 80% of their users came from outside of U.S.

These users live in markets that are not open

Moreover, many of these countries do not yet have rules governing many types of data or participate in trade agreements that facilitate cross-border data flows Many developing country officials

- Don't yet see data as an asset
- May hoard data or fail to use data to help citizens
- Recognize that they don't control cloud infrastructure and may call for infant industry protection
- Recognize that data-driven economy will lead them to export data but import data-driven services. Yet for their companies to succeed, they will need access to data and data analysis
- Recognize policy incentives are off: as example desire to promote employment and desire to modernize using data

World has 192 nations with a patchwork of domestic data plans and



Countries compete for data and the governance of various types of data \rightarrow 3 data realms

EU has a growing # of trade agreements with binding provisions on cross-border data, most recent EU/Japan. Requires countries that want to exchange personal data to become "adequate" in their protection of personal data. Also EU-common data space for public data. Must be open machine readable. Focus on trust. More than 12 countries have built on GDPR, EU online data protection.

US calls for open data and free flow of data, but is increasingly restrictive of data (net neutrality, content moderation etc.) Less credible on soft power, no federal law governing online personal data. Others are not following US model.

China –Great Firewall may have helped create huge firms with economies of scale and scope re. data, but quality of data is questionable. Data protection building on GDPR. Use Belt and Road to build support/clients for Chinese data firms.

How does data governance affect comparative advantage? Data governance refers to norms of behavior (i.e., informal or formal rules) for the collection, flow, and analysis of information, often in digital form.

These <u>rules</u> are determined over time through <u>collective action</u> by organizations in the public, private, and nonprofit sectors. They address who owns, controls, and can monetize various types of data.

Implications: How nations govern data can affect . . .

- Data veracity
- Supply of data
- Trust in data

Trust in dataGrowing
consumption
data-driven
servicesComparative
advantage
data
governance

Data governance can also affect new uses of data in the data-driven economy

Smart cities:

- Firms and municipalities collaborate on public services that generate data
- Concern grows over privacy, and
- Concerns over who controls and benefits from the public data created

Smart manufacturing:

- Data-driven manufacturing will alter comparative advantage in manufacturing
- Data is essential to smart manufacturing
- Access to data and data governance will be the most important element of comparative advantage once technology is widely diffused



US, EU, China have different approaches to AI data governance

- <u>China</u> employs a government-managed approach
- <u>EU</u> employs a government-coordinated (-regulated) approach focused on trust
- <u>US</u> employs a market-driven approach, but is similarly focusing on trust
- Rules to achieve comparative advantage:
 - US and AI provisions proposed for USMCA and WTO ecommerce
 - China and technical standards for AI, also beefing up personal data protection
 - EU and GDPR, public data space, promotion of data trusts and other forms of trusted data governance

G-20 AI plans show diversity in data governance – no model is dominant

Country	Year of AI plan	Data governance	Open Public Data	Proprietary Data	Personal data	Mixing of data	Public consultation on Al Plan
Argentina	No Strategy	-	-	-	-	-	-
Australia	No Strategy	-	-	-	-	-	-
Brazil	No Strategy	-	-	-	-	-	-
Canada	2017	No	No	No	No	No	No
China	2017	Yes	Yes	No	Yes	No	No
France	2018	Yes	Yes	Yes	Yes	Yes	Yes
Germany	2019	Yes	Yes	Yes	Yes	No	Yes
India	2018	Yes	Yes	Yes	Yes	No	No
Indonesia	No Strategy	-	-	-	-	-	-
Italy	2018	Yes	Yes	No	Yes	No	Yes
Japan	2017	Yes	Yes	Yes	Yes	No	No
Mexico	2018	Yes	Yes	No	Yes	Yes	No
Republic of Korea	2017	Yes	Yes	No	Yes	No	Yes
South Africa	No Strategy	-	-	-	-	-	-
Russia	No Strategy	-	-	-	-	-	-
Saudi Arabia	No Strategy	-	-	-	-	-	-
Turkey	No Strategy	-	-	-	-	-	-
ИК	2018	Yes	Yes	Yes	Yes	No	No
US	2019	Yes	Yes	No	Yes	Yes	No
EU	2018	Yes	Yes	Yes	Yes	No	No



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