Enhancing Access to and Sharing of Data

Reconciling Risks and Benefits for Data Re-use across Societies

The promise (and risks) of data access and sharing

Data access and sharing is more important today than ever before. The effective use of data can help boost productivity and improve or foster new products, processes, organisational methods and markets. This is particularly evident in data-rich sectors such as health care, transportation and public administration, as well as in new production platforms in manufacturing and services. With the increasing adoption of artificial intelligence and the Internet of Things across economies, the supply of, and demand for, data will grow even in traditionally less data-intensive fields. One self-driving car, for example, can generate up to 5 terabytes of data per hour, but requires access to additional third-party data to operate securely in different traffic, weather and street conditions.

Access to data is therefore crucial for competition and innovation in the digital economy – not only for businesses, but also for governments and individuals. Overall, data access and sharing is estimated to generate social and economic benefits worth between 0.1% and 1.5% of gross domestic product (GDP), in the case of public-sector data, and between 1% and 2.5% of GDP when also including private-sector data.

Yet there are also risks associated with data access and sharing. Data breaches, most notably, may violate the privacy of individuals when their personal data is involved and harm the commercial or non-commercial interests of organisations (e.g. through the infringement of intellectual property rights). Other risk factors include potential violations of agreed terms and expectations around data re-use, loss of control of individuals and organisations over their data and related uncertainties about "data ownership". These risks may make individuals, businesses, and governments more reluctant to share data, thereby compounding barriers to accessing data. For example, some individuals may object to their health-related data being re-used for research purposes due to confidentiality concerns, even if they are aware of the social benefits that such re-use could deliver.

Evidence presented in a new OECD report, *Enhancing Access to and Sharing of Data*, shows how new approaches to enhancing access to and sharing of data – and mitigating associated risks – can help increase the social and economic value of data re-use. The report also examines good practice and policy initiatives in OECD countries and partner economies to address some of the most critical barriers to data access and sharing.

Challenges for policy makers

To facilitate, encourage and enhance data access and sharing for the benefit of all, policy makers must address three major, multidimensional challenges:

1. Balancing the benefits of enhancing data "openness" with the risks, while considering legitimate private and public interests (e.g. through control mechanisms that leverage the various degrees of data "openness").

2. Reinforcing trust and empowering users through pro-active stakeholder engagement and communities of data users and holders (e.g. by encouraging the establishment and use of trusted third parties such as data custodians).

3. Encouraging the provision of data through coherent incentive mechanisms – including reward and evaluation systems – and sustainable business models, while acknowledging the limitations of data markets to fully meet demand (e.g. when data is needed to address societal challenges).

Policy makers should avoid the "data policy pitfall" of seeking one-size-fits-all solutions; data should not be treated as a monolithic entity. The value of data access and sharing depends on the type of data and the context in which

they are re-used, including the social, economic, and cultural environment in which activities take place. Personal data, for example, typically requires more restrictive access regimes than (non-personal) public sector data. Industrial data, on the other hand, is usually proprietary and may therefore require more restrictive data access and sharing than public sector data, which is often shared as open data.

In promoting data access and sharing, policy makers will need to account for:

- the sensitivity of the data and the degree to which personal data can be re-identified
- the overlapping rights and interests of all relevant stakeholders
- the manner by which data are generated, in order to better account for the interests of various stakeholders
- the low capacity to process and analyse data due to a shortage of data-related skills and infrastructures.

Policy trends

The report examines over 200 policy initiatives across 37 countries, which reveal the following trends:

- Most policy initiatives (more than 65%) still focus on public-sector data, and the majority of these initiatives focus on open access to government data.
- Few countries have policy initiatives to facilitate data sharing within the private sector and between government and the private sector, even though sharing and re-use of data held by the private sector is the most frequently cited emerging challenge.
- Only 12% of all policy initiatives aim to increase data analytic capabilities in either the public or private sector, despite the need for complementary investment in data-related skills and infrastructures.

Encouraging, facilitating and enhancing access to and sharing of data

There are several approaches along the continuum of data "openness" that policy makers may wish to consider when encouraging, facilitating and enhancing data access and sharing. Below are some of the most prominent.

- **Contractual agreements** are a crucial to enhance data access and sharing, especially if leveraged through data markets. Voluntary contract guidelines can help reduce uncertainties and transaction costs by defining the default rights and obligations that parties can consider when negotiating data sharing agreements.
- **Open data** is the most common approach to data openness, and the most frequently used by governments for public sector data, though legitimate private and public interests may justify more restrictive approaches.
- **Data portability** promises to empower users by giving them more control over their data, but it may also expose them to new risks, such as confidentiality breaches.
- **Restricted data-sharing arrangements** are used if data are considered too confidential to be shared openly with the public or where legitimate (commercial and non-commercial) interests conflict with open sharing.

Building on this report, the OECD is working toward general principles for enhancing access to and sharing of data, which will provide guidance for developing and improving national data governance frameworks for data sharing across sectors and countries.

Further reading

OECD (2019), *Enhancing Access to and Sharing of Data: Reconciling Risks and Benefits for Data Re-use across Societies*, OECD Publishing, Paris, https://doi.org/10.1787/276aaca8-en.