Part 3
Measuring the quality of the enabling environment: Global Data Regulation Survey

Vivien Foster & Rong Chen
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The social contract for data

**VALUE**
The full value of data materializes when systems enable the use and reuse of data for different purposes.

**TRUST**
A trust environment is created when the rights and interests that all stakeholders have in data are safeguarded.

**EQUITY**
All share equitably in the benefits of data when investments and regulations create a level playing field.
Data governance provides means to enforce the social contract

<table>
<thead>
<tr>
<th>National</th>
<th>Laws and regulations</th>
<th>Economic policies</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure policies</td>
<td>Universal broadband coverage</td>
<td>Safeguards Enablers</td>
<td>Antitrust Trade Taxation</td>
</tr>
<tr>
<td>Domestic data infrastructure</td>
<td></td>
<td></td>
<td>Government entities Other stakeholders</td>
</tr>
<tr>
<td>International</td>
<td>Cybersecurity conventions Interoperability standards</td>
<td>International tax treaties Global trade agreements</td>
<td>International organisation Cross-border cooperation</td>
</tr>
<tr>
<td>Global technical standards Regional collaboration</td>
<td></td>
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</tbody>
</table>
From Contact Tracing to Vaccine Certificates: Enablers & Safeguards in the time of COVID-19

Source: who.int
A multidimensional legal framework for trusted data

Source: WDR 2021 team
Rationale for Global Data Regulation Survey

**Objective**
- Provide a comprehensive assessment of the quality of the data governance environment
- Develop a diagnostic tool to examine regulatory environment for data economy

**Methodology**
- Standard questionnaire sent to local lawyers specializing in ICT and data governance
- Detailed desk review of legal texts as of June 1, 2020

**Team**
- World Development Report 2021
- DEC indicators group- Digital Business Indicators
Country coverage for 2020 Global Data Regulation Survey

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIC</td>
<td>14</td>
<td>Australia, Estonia, UK</td>
</tr>
<tr>
<td>UMIC</td>
<td>21</td>
<td>Armenia, Brazil, China</td>
</tr>
<tr>
<td>LMIC</td>
<td>30</td>
<td>Ghana, India, Kenya, Vietnam</td>
</tr>
<tr>
<td>LIC</td>
<td>15</td>
<td>Ethiopia, Rwanda, Uganda</td>
</tr>
</tbody>
</table>
Building blocks of the data regulation diagnostic

- Enabler
  - E-commerce/e-transactions
  - Enablers for public intent data
  - Enablers for private intent data
  - Safeguards for personal data
  - Safeguards for non-personal data
  - Cross-border data flows
  - Cybersecurity and cybercrime

Data Regulation Diagnostic

Enabler

Safeguard
Calculation of indices for Safeguards and Enablers

For each dimension \( i \) under the index, the score for country \( j \) is calculated as follows

\[
X_{ij} = 100 \times \left( \frac{GP_{ij} - GP_{min, i}}{GP_{max, i} - GP_{min, i}} \right)
\]

\( GP \) is the number of the adopted regulatory good practices in country \( j \) under dimension \( i \), \( GP_{min,max} \) are the minimum and maximum number of good practices measured under dimension \( i \).

Averaging a country’s scores across all dimensions produces its scores on each index. This is then color-coded according to a traffic light rating as follows:

<table>
<thead>
<tr>
<th>Score (76-100)</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score (51-75)</td>
<td>Moderate</td>
</tr>
<tr>
<td>Score (26-50)</td>
<td>Evolving</td>
</tr>
<tr>
<td>Score (0-25)</td>
<td>Basic</td>
</tr>
</tbody>
</table>
More countries are more advanced on Enablers than Safeguards

Correlation = 0.37
Uneven regulatory development across different building blocks and country groups

<table>
<thead>
<tr>
<th></th>
<th>Enablers</th>
<th>Safeguards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>E-commerce/e-transactions</td>
<td>Public intent data</td>
</tr>
<tr>
<td>HIC</td>
<td>86</td>
<td>69</td>
</tr>
<tr>
<td>UMIC</td>
<td>74</td>
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<td>LMIC</td>
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<tr>
<td>LIC</td>
<td>59</td>
<td>28</td>
</tr>
<tr>
<td>Global</td>
<td>73</td>
<td>50</td>
</tr>
</tbody>
</table>
On average, just 40% of the regulatory environment for Safeguards is in place around the world
Glaring gaps in the regulatory requirements for cybersecurity for data processors
Uneven progress on regulatory framework for personal data protection

Data protection law enacted
Data protection authority created
Individual right of redress to object to use of personal data
Regulatory limitation on algorithmic decision-making
Individual right to challenge accuracy and rectify personal data
Regulation of data sharing with third parties
Requirements to incorporate privacy by design

No exception to limitations on data collecting and processing by governments
Necessity and proportionality test for government exceptions
Purpose limitation requirement
Data minimization requirement
Data storage limitations

High-income
Upper-middle-income
Lower-middle-income
Low-income
Little attention has been paid to regulatory regimes for cross-border data flows

- High income
- Upper middle income
- Lower middle income
- Low income

Conditions for cross-border data transfer

Existence of adequacy level governing cross-border data transfer

Existence of data transfer arrangements with foreign countries
Example: Kenya

Safeguarding data

A leader in adopting data protection and security measures among LMICs

While overall adoption of cybersecurity measures is low across countries surveyed, Kenya’s new Data Protection Act is an outlier among lower-middle-income countries. It requires good practice measures such as pseudonymization and data encryption, restoring data access after a breach, and managing risks.
On average, almost 50% of the regulatory environment for Enablers is in place around the world.

Enabler indicator

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Significant progress is being made with open access to public intent data
By contrast, sharing of private intent data remains in its infancy.
Sharing “High value” datasets

France and the EU require “high value” or “public interest” datasets to be made available according to open standards and in machine-readable formats. Alternatively, companies such as Waze have forged data partnerships with governments: through its Connected Citizens Program, the traffic app has partnered with over 1,000 cities and public sector entities to exchange traffic data to inform mobility projects, support emergency response and share data with citizens.
Illustrative research application

Regulating Personal Data
Data Models and Digital Services Trade

Martina Francesco Feresuca
Erik van der Marel

Change in the growth and composition of trade in services over four decades

Source: WDR 2021 team calculations based on WITS (World Integrated Trade Solution) database.
Globally, there are three broad models with contrasting approaches to both domestic and cross-border data regulation.
This affects patterns of cross-border trade in digital services between the three different blocks.

**Bilateral trade in digital services**

Source: OECD-WTO BaTIS database.

Note: Only data for the 20 biggest exporters of digital services are visualized. Other economies are grouped into the "other" category.
Choice of regulatory model is found to significantly affect the extent of trade in digital services.
Potential for further research

Operational applications

• Global Data Regulation Diagnostic has many potential applications in policy dialogue and design of policy reform applications going forward both for the World Bank and the wider development community.

• Plans are underway to update the survey and conduct regular data collection to track progress in the adoption of regulatory frameworks over time and allow benchmarking.

Research applications

• Primary relevance appears to be for cross-country panel econometrics targeted at measuring the impact of the regulatory environment on economic outcome variables of interest.

• In addition to the issue of trade, the dataset may be useful for examining other aspects of digital economy, including adoption of digital technologies and expansion of digital services activities.
THANK YOU