Law and economics analysis of EU GDPR

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Entailments and controversies of GDPR

First update of the framework of data protection directive since 1995

- Centrality of the internet in cross-border exchange, production supply-chains and citizenry
  - 21% of all economic growth of past five years attributed to the internet
  - Biggest impact is on services industries, representing 75-80% of all economic activities amongst EU members states
  - New economic interdependence – extra-EU exports represent 17% of GDP in EU27
  - 50% of developing country exports in services depend on the internet (UNCTAD)

Key elements of the COM proposal

- Moving from directive to regulation
- One size fit all approach, regardless of data types
- Explicit consent
- New or ‘harmonised’ administrative obligations
  - Data processing officers (except small enterprises), 10% of large sized enterprises
  - Data protection impact assessments
  - Data breach notification
  - New institutions
  - EU wide liability similar to competition law, fines of 0.5 to 2% of global turnover
- The right to be forgotten
- Restriction for foreign economic operators: No transfer of EU citizen data as a starting point
Law and economics analysis of the proposed EU General Data Privacy Regulation (GDPR)

- **Economic analysis of a multi-layered problem**
  - Comparison of several policy approaches to a policy objective
  - Economic implications, costs of implementation, cost and benefit analysis
  - Allocation efficiency, Pareto efficiency or ‘buying off’ losers
  - Redistribution, political economy
  - Extraterritorial (cross-border) effects between economies

- **Data privacy laws and regulations have dynamic impact:**
  - Economic restrictions leading to production loss vs. legal predictability
  - Internal trade efficiencies (loss or gain?) vs external trade and investment barriers
  - Affects global trade flows
  - Intermediate and final price changes
  - Shift in consumption vs market confidence
  - Consumer welfare
Internet usage is a key determinant for economic competitiveness.
How services supply-chains are currently enabled

- Equivalent vs adequate
  - Andorra, Argentina, Canada, Faroe Islands, Guernsey, Isle of Man, Israel, Jersey, New Zealand, Switzerland and Uruguay

- US Safe harbour framework

- Binding corporate rules (BCRs)

## Share of world trade in services

<table>
<thead>
<tr>
<th>World top 15 Services traders (80% of world trade)</th>
<th>Share of world services trade</th>
<th>'Adequate' privacy legislation</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU27</td>
<td>23.5%</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>15.1%</td>
<td>No*</td>
</tr>
<tr>
<td>China</td>
<td>6.9%</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>4.9%</td>
<td>No</td>
</tr>
<tr>
<td>India</td>
<td>4.7%</td>
<td>No</td>
</tr>
<tr>
<td>Singapore</td>
<td>3.8%</td>
<td>No</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>3.2%</td>
<td>No</td>
</tr>
<tr>
<td>China, Hong Kong SAR</td>
<td>3.1%</td>
<td>No</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>2.9%</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Switzerland</strong></td>
<td>2.4%</td>
<td>Yes</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>2.2%</td>
<td>No</td>
</tr>
<tr>
<td>Australia</td>
<td>2.0%</td>
<td>No*</td>
</tr>
<tr>
<td>Brazil</td>
<td>1.7%</td>
<td>No</td>
</tr>
<tr>
<td><strong>Norway</strong></td>
<td>1.6%</td>
<td>EEA country</td>
</tr>
<tr>
<td>Thailand</td>
<td>1.5%</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: IMF EBOP 2011; European Commission, DG Justice

(* Recognized as adequate for air carrier PNR data only)
Methodology and assumptions

- A computable general equilibrium model (CGE), using GTAP 8
  - Acknowledged multi-region and multi-sector framework, used for international policy analysis
  - All basic commodities, services and utilities
  - All economies in the world grouped into the EU, the equivalent countries, the US, rest of the world (RoW)

Cost calculations based on European Commission’s own impact assessments
- Additional governmental costs estimated by the Government of UK (UK ICO)
- Only unquantified “boost” in exports foreseen by the European Commission

Cost impact only applied on select part of the services industry
- Inside the EU
  - Cost applied only according to use of data processing services
  - Hampering the factor productivity of capital and skilled labour only
- Exporters into the EU face various degree of restrictions and increased cost of trade
- Only indirect effect when services are inputs to other industries

No benefits estimated, we seek the gains necessary to offset known costs
- 2.9 bn in cost reduction from harmonization envisaged by the European Commission
- Boost demand (and competitiveness) and consumer confidence thanks to a safer and consistent regulation
Three scenarios of GDPR

- **Baseline**
  - Current state of economy, based on 2012
  - Before the implementation of GDPR

- **Scenario one (s1) — least restrictive outcome**
  - Internal costs introduced to the EU economy
  - EU equivalent countries can continue to trade as today
  - Trade with the US face additional costs from aligning with new regulation
  - RoW trades same as today

- **Scenario two (s2) — Strict implementation**
  - As per above
  - Personal data can no longer be transferred to the US and the RoW
  - Switch data processing capacities inside the EU or equivalent countries
  - Increasing costs in service consumption mainly affected by GDPR

- **Scenario three (s3) — Implementation of right-to-be-forgotten rule**
  - As per above
  - Removal of all personal information upon request
  - Full technical implementation is “technically impossible” (ENISA)
  - Potential effect of RTF on production factors in entities based in the EU
  - Will effect others, too, but result of “model” rather than “in model”
» Scenario 1: least restrictive

- Primarily a question of EU/US economic exchange
  - The transatlantic marketplace: half of world GDP, 3 trillion USD (2.4 trillion euro) in bilateral investments (Eurostat)
  - The US is the largest investor in the EU, the largest importer from the EU
  - Share of services in transatlantic trade steadily increased over the past ten years, peaking at 42% (Eurostat)
  - Change in EU competitiveness because of increase in service input prices – that, in model, affects EU exports to the US

![Change to Transatlantic trade graph]

Source: Own calculations
» **Scenario 2: strict implementation**

- **Assumption that no data transfer can be made**
  - MCCs, BCRs, intra-organisational transfer assumed to be blocked

- **Price shocks on the supply side**
  - Foreign operators investing in EU data processing capacities, or leaving EU market
  - Skilled labour in ICT is 30% more expensive in the EU compared to the US; 60% compared to processors in the rest of the world
  - Data processing is 15-58% of input cost in production cost of the services sectors — leading to effective price increases 4-41%
» The right to be forgotten

- **Costs on data processors**
  - UK Case studies show average 110,000 GBP to the retail sector, up to 500,000 GBP
  - Additional costs of at least 9bn bn Eur to the European economy (1% of turnover)
  - Factor productivity losses of -0.64% to -7.98%
» Summary: impacts on the total EU economy
Summary: impacts on the euro crisis recovery

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU GDP forecast</td>
<td>-0.30%</td>
<td>0.10%</td>
<td>1.60%</td>
</tr>
<tr>
<td>Scenario 1 Low</td>
<td>-0.30%</td>
<td>-0.25%</td>
<td>1.24%</td>
</tr>
<tr>
<td>Scenario 2 High</td>
<td>-0.30%</td>
<td>-1.20%</td>
<td>0.28%</td>
</tr>
</tbody>
</table>

Source: European Commission; own calculations
Summary: social aspects

- **EU Consumer welfare loss**
  - Scenario 1 (least restrictive): 624 euro per household and year
    - No welfare gains on any of the other groups of economies
  - Scenario 2 (strict implementation): 1041 euro per household and year
    - Very minor welfare gain for ‘equivalents’
  - Scenario 3 (addition of right to be forgotten): 3512 euro per household and year
    - Less welfare gain for ‘equivalents’
  - In all scenarios, ~90% of all welfare losses in the world occur in Europe

- **Offsetting the negative effects**
  - All final consumption must be boosted by at least 13%
Summary: Policy aspects

- Privacy as a fundamental right
  - European institutions and agencies are exempt in GDPR – extended to member states
  - Vertical relation between state and citizen, but regulating horizontal relation between private entities
  - This mandate on private contracts (and non-contractual parties) applied extraterritorially

- Redistributional effects
  - Horizontal economic measure with little internal redistribution
    - “Reverse progressive” tax on SMEs, private consumption (vs. large multinationals)
    - Services (vs government services, agriculture),
    - Efficiently run (exporting) firms vs poorly run companies
  - Factor productivity losses slowing down the EU economy in relation to others
  - Primarily a loss in consumption through cost rises, leading to job losses, e.g. Welfare
  - “Moving wealth from the EU to Switzerland”

- Why does trade impact affect the EU negatively?
  - Global disruptions on trading patterns – Single market is the world’s largest market hub
  - The EU largest services exporter in the world – due to superior efficiency
  - Productivity losses punish the economy than import substitution helps it
  - Increasingly mercantilist and unilateral nature of EU regulations

- Policy options