ECIPE Study

Europe’s Quest for Technology Sovereignty:
Opportunities and Pitfalls

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European Commission’s economic policy mandates

- Ursula von der Leyen: “It is not too late to achieve technological sovereignty in some critical technology areas. We will jointly define standards for this new generation of technologies that will become the global norm.”

- Margrethe Vestager mandated to develop an EU industrial strategy that “mobilise[s] the EU toolbox to support the development of key value chains and technologies that are of strategic importance for Europe [...] because they contribute to technological sovereignty.”

- French Finance Minister Bruno Le Maire in Joint Declaration with Thierry Breton: “On digital sovereignty, you know that this is one of the projects that the President of the Republic [of France] defends with great determination and that we want to implement here.”
Why are we here?

– Some European policymakers calling for “European Technology Sovereignty” or “European Digital Sovereignty”

– European Commission began to “institutionalise” certain ideas of sovereignty in its recent industrial and digital strategy communications

– Political perception: loss of sovereignty when government does not control the evolution of digital technologies and companies

– But: lack of political consensus whether technology or digital sovereignty is the best way to ensure a stronger digital Europe
Sovereignty, autonomy and economic interdependence

<table>
<thead>
<tr>
<th>Political sovereignty</th>
<th>Technology sovereignty</th>
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<tbody>
<tr>
<td>– Historically used to describe supreme authority within a territory and independency from external political entities</td>
<td>– In recent years used to describe various forms of control and autonomy over digital technologies, business models and types of digitally-provided content</td>
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<td>– Sovereignty for states enshrined in international law: people “free to choose own form of government”</td>
<td>– Independence from foreign technology and digital services providers</td>
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<td></td>
<td>– Covid-19: reliability in times of crisis</td>
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Often ambiguously formulated with respect to individual sovereignty (person-level) and/or collective sovereignty (EU- / state-level)
Sovereignty, autonomy and economic interdependence

— Problematic if policy-makers suggest to become truly independent from others

— Governments cooperated/contracted with other governments about rules in interstate relations, e.g. trade and investment policymaking, competition policy

— Accept certain limits on national sovereignty because alternative forms to govern intergovernmental relations might come with negative consequences

— EU is based on shared sovereignty: paradoxical to stress need for European technology sovereignty
Europe has strong interests to collaborate with others

– By 2050, the EU and the US will steadily lose ground to the rising economies of India and China: share of EU-27 in global GDP will fall to some 9%; US GDP expected to stand at 12% of world GDP in 2050

– Rising powers like China and India may gain tremendously in market clout and increase political pressure on others to conform to their laws, but none of them will come close to the same dominance in global rulemaking that the US and Europe had in the period that followed the Second World War

– Global economic power will be rather more distributed
Europe needs to become example that others want to follow

– No single economy can set *the* global standard alone in the new multi-polar world

– Neither Europe nor the US will be able to rely on their own market size as the main source of maintaining influence in the global economy

– EU needs to improve capacity to influence global rules and performance by being home to innovative and internationally competitive companies

– When quantity does not count in the EU’s favour anymore, European policymakers will have to improve regulatory skills at home to encourage innovation and become an example that others want to follow
## Revealed technology advantage (RTA)

<table>
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<tr>
<th>Technology</th>
<th>China</th>
<th>US</th>
<th>Europe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semiconductors</td>
<td>1,3</td>
<td>0,6</td>
<td>0,4</td>
</tr>
<tr>
<td>IT methods</td>
<td>1,4</td>
<td>1,1</td>
<td></td>
</tr>
<tr>
<td>Computer technology</td>
<td>1,8</td>
<td>1,1</td>
<td></td>
</tr>
<tr>
<td>Basic communications</td>
<td>1,1</td>
<td>0,8</td>
<td>0,7</td>
</tr>
<tr>
<td>Digital communication</td>
<td>3,3</td>
<td>1,1</td>
<td>0,9</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>1,9</td>
<td>0,8</td>
<td>0,6</td>
</tr>
<tr>
<td>Audio-visual technology</td>
<td>1,9</td>
<td>0,6</td>
<td>0,4</td>
</tr>
<tr>
<td>Electrical machinery</td>
<td>1,0</td>
<td>0,7</td>
<td>0,5</td>
</tr>
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Source: JRC-OECD (2019, p. 30). Note: RTA indices were compiled for the major economic areas where the top worldwide R&D investors have their headquarters.
Europe’s overlooked tech successes

— Thierry Breton: “Here are some fake news: They say that Europe is falling behind. I’m sorry, but it’s not true. We have everything that is needed in Europe.”

— European Commission: more than 7,000 EU platform businesses
### Narratives underlying “European Technology Sovereignty”

<table>
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<th>Category</th>
<th>Description</th>
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<tr>
<td><strong>Culture</strong></td>
<td>- Europe is different from other parts in the world in our defence of values and market regulations</td>
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<tr>
<td><strong>Control</strong></td>
<td>- Need for European policy instruments to control the outcomes of the digital economy in general and how citizens and companies use modern digital services</td>
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| **Competitiveness** | - Capacity of European multinational enterprises to compete on world markets  
                      - Fears about declining European influence and standard-setting powers                                                                                                                                   |
| **Cybersecurity** | - Need for European policies to protect personal and business data                                                                                                                                                                                                     |

#### Political manifestations:

| Culture | - European standards for data protection based on European values  
          - European data spaces and data-sharing policies                                                                 |
| Control | - European ownership of key technologies  
          - European taxes on (foreign) digital services  
          - European standards for artificial intelligence (AI) |
| Competitiveness | - “European Cloud”  
                      - European payments system  
                      - Native “EU-born” European technology giants/champions |
| Cybersecurity | - European cybersecurity standards  
                      - Potential exclusion of non-EU suppliers of infrastructure |
Good ambitions, but ambitions not exclusively European

- European values intended to guide a large package of new EU legislation on data, artificial intelligence and industrial policies

- Europe not so different from other countries in its end goals, e.g. the US and OECD

- If other countries regulate their digital economies in a different way than Europe, it does not mean that their values are fundamentally different

- EU digital and technology policymaking at risk to emphasize common European values where shared values may not exist, undermining economic freedom and open markets
Lessons from Covid-19

- During the Covid-19 crisis digital services made European citizens stronger

- Werner Stengg (Cabinet Vestager): “The only thing that really worked during the height of the crisis was digital.”

- Technology kept Europe open for business, enabling Europeans to work from home, receive essential home deliveries, home schooling, online deliveries and to use online payments, etc.

- Based on energy, ingenuity and reliability of domestic and foreign firms

- A new strategic ambition for Europe that puts less emphasis on independence and prescriptive policies, which would render Europeans less sovereign
Pitfalls of “European Technology Sovereignty”

– Defined in a **protectionist** way, technology sovereignty would reduce Europe’s international competitiveness and access to cutting-edge technologies

– Reduction of attractiveness to international investments and R&D

– An isolationist approach to sovereignty would only lead to **notional sovereignty**: the EU would be free to adopt its “own” standards, but they would not provide the much desired economic and innovation benefits

– In reality, such ambitions would render Europe obsolete in the shaping of international laws and norms that will guide the digital future
Opportunities from “European Technology Sovereignty”

An open and non-discriminatory approach to technology sovereignty would create new opportunities for European companies to compete at the frontier of technological development.

Can indeed improve the autonomy of Europe and its myriad of firms – small and large.

A cooperative approach would have a positive impact on Europe’s long-term global political influences: Europe should aim for closer market integration and regulatory cooperation with trustworthy partners such as the US, the G7 or the larger group of the OECD countries.
Openness, human capital and a “Real Single Market”

– An autonomy-based approach to technology sovereignty aims to improve Europeans’ ability to understand, access and use new technologies and technology-enabled business models, including technologies emerging from the next wave of innovation in ICT.

– Requires provision of education and human capital.

– Requires unprecedented emphasis of knocking down regulatory barriers in Europe’s incomplete Single Market, which currently prevent the easy traverse of technologies, goods and services across borders and the scale-up of innovative companies.