



BEYOND THE BRUSSELS EFFECT

LEVERAGING DIGITAL REGULATION FOR STRATEGIC AUTONOMY

ABSTRACT

The paper analyses Europe's alleged primacy in the regulation of emerging technologies and assesses whether the so-called 'Brussels effect' can help the EU achieve prominence as a global regulator in the digital space. It finds that the Brussels effect, while existing, is not only exaggerated in public debate but is also at risk of gradual erosion over the coming years. Moreover, current trends in global technology governance suggest that unilateral rule making will not be a viable strategy in the future and that the EU will be able to retain a leading role only if it develops a coalition-building strategy, as well as a self-standing, semi-open technology stack. The paper provides five policy recommendations that may help the EU thrive in an increasingly competitive and strategic terrain.



AUTHOR

ANDREA RENDA
Senior Research Fellow,
Centre for European
Policy Studies (CEPS)

FRIEDRICH
EBERT
STIFTUNG

Fondation
Jean Jaurès

TABLE OF CONTENTS

Introduction: the 'Brussels effect' and the EU digital agenda	4
1. EU's attempt at a 'third way' in digital policy	6
2. Beyond the Brussels effect: can the EU thrive as a regulatory superpower in the digital world?	10
2.1 The rise and possible fall of EU regulatory influence in the digital world	12
2.1.1 GDPR enforcement and prospects for future legislation...	12
2.1.2 From openness to sovereignty: is the EU betraying its values	13
2.2 EU strategy and the digital economy: the 'capacity gap' is shrinking and the institutional density is increasing	14
2.3 Digital regulation is moving away from traditional lawmaking, becoming embedded in protocols and standards	15
3. Policy recommendations	17
3.1 The EU needs to boost its strategic advice and foresight, not just rely on the Brussels effect	17
3.2 Policy coherence, inside and outside the EU territory	18
3.3 A refined approach to digital sovereignty	19
3.4 Build and promote the EU (semi-open) technology stack.....	20
3.5 'Make or break' GAIA-X, and explore ways to promote EU law as code	21
References	22

FEPS
FOUNDATION FOR EUROPEAN
PROGRESSIVE STUDIES



**THE FOUNDATION FOR EUROPEAN
PROGRESSIVE STUDIES (FEPS)**

European Political Foundation - N° 4 BE 896.230.213
Avenue des Arts 46 1000 Brussels (Belgium)
www.feps-europe.eu

**FRIEDRICH
EBERT
STIFTUNG**

FRIEDRICH-EBERT-STIFTUNG EU-OFFICE

Rue du Taciturne 38, 1000 Brussels (Belgium)
<https://brussels.fes.de/>
@fes_brussels

Fondation
Jean Jaurès

FONDATION JEAN JAURÈS

12 Cité Malesherbes, 75009 Paris
www.jean-jaures.org/
@j_jaures

Introduction: the ‘Brussels effect’ and the EU digital agenda

The European Union (EU) often claims for itself the role of global regulator. Indeed, there are several features of the EU legal system that provide it with an advantage when it comes to exporting regulatory solutions. EU legal traditions are already echoed in the legal systems of many countries around the world, due to historical ties, which have led to past diffusion of European legislation. Moreover, the EU’s constant need to reach a synthesis between member states’ different legal traditions, political orientations, policymaking styles, and levels of economic development often makes the resulting EU law an attractive reference for a wide range of other countries: the ‘law on the books’ ends up becoming very complete and detailed, which facilitates implementation. Compared to EU law, United States (US) legislation is often harder to emulate, especially for countries with weak institutional capacity.

The EU’s prominence in setting global rules and standards is often praised by policymakers, perhaps more than by academics. Among the latter, Vogel (2010) discussed how the EU gradually achieved primacy in risk regulation compared to the US over the 1990s and 2000s; Philippon (2020) observed how the EU became the leading force in market regulation, and specifically competition law, as the US gradually reduced its efforts to engage in competition-oriented legislation. Hadjiyianni (2020) recently provided a comprehensive account of the impact of the EU as global environmental

regulator. Bradford (2012, 2020) coined the term ‘Brussels effect’ to signify Europe’s global footprint when it comes to triggering emulation in other legal systems. The term has now become commonplace in Brussels, triggering enthusiasm among EU policymakers, as well as repeated attempts to awaken this desirable effect in upcoming legislation. At the same time, as will be argued in the remainder of this paper, the Brussels effect is not the only, and perhaps not the most important, way in which the EU potentially influences global governance.

The poster child of the Brussels effect is the General Data Protection Regulation (GDPR), the first real attempt to affirm the fundamental right to data protection in a domain (the Internet) dominated by the unconstrained circulation of personal and non-personal data. The GDPR, in force since May 2018, is now being more or less faithfully emulated in countries as diverse as Brazil, India and Japan; and even in key US states like California, in stark contrast to the absence of a comprehensive federal approach to data protection.¹ Unsurprisingly, the ‘success’ of the GDPR raised expectations that the EU could, and should, become a leading player in regulating digital markets. This is an evident aspiration of the Von der Leyen Commission, especially in the domain of digital markets, where GDPR has left a deep trace, and where the need to strengthen digital sovereignty has been seen, from the very outset, as a strategy to preserve and relaunch industrial competitiveness.

1 Importantly, while third-country adoption of GDPR-like rules may seem spontaneous, it may also have been caused by the regulation’s extra-territorial impact (ie, it applies to anyone who wants to process personal data belonging to European citizens, irrespective of where data processors are located) and by its reliance on a conditionality that triggers cross-jurisdiction data flows: that the European Commission issues an ‘adequacy decision’, declaring a given third-country’s data framework provides adequate protection of personal data. In other words, the diffusion mechanisms of GDPR go way beyond spontaneous emulation.

This led the Commission to embark on a season of unprecedented activism in proposing regulatory measures and industrial-policy initiatives, potentially triggering a massive transformation in what used to be, until recently, a largely unregulated space, and paving the way for the emergence of a ‘third way’ to cyberspace, as an alternative to the US and the Chinese ones. As explained in more detail in Section 1 below, these new initiatives range from attempts to sharpen the regulation of large-scale digital platforms (DMA, DSA) to the first-ever comprehensive proposal to regulate artificial intelligence (AI); new rules on data governance; and new proposals on digital identity, interoperability, and cybersecurity.

The underlying rationale for the current EU regulatory activism in the digital domain is deeply related to the Brussels effect: should the EU manage to create a world-class regulatory framework for digital technologies, it would then trigger emulation in other legal systems, which, in turn, would lead to a more effective promotion of EU values and standards at the global level. Moreover, to the extent that it manages to incorporate EU industrial policy objectives in this new frontier of the *Acquis Communautaire*, the Commission would also be able to go beyond the promotion of EU values, such as the protection of fundamental rights, thus leveraging the Brussels effect to achieve ‘competitive sustainability’, a goal that was evoked, among other things, in the EU communication on industrial strategy, as well as in its recent update.²

However, counting on the Brussels effect as wind in the sails of the geopolitical Commission is far from a safe bet, especially in the digital domain. Firstly, while certainly notable, the Brussels effect is probably exaggerated in the current political discourse. Secondly, there are several reasons to believe that the success of the GDPR is not as solid as it may appear at first sight, and this fragility may reverberate on ongoing regulatory initiatives that seem to follow in the same footsteps. Thirdly, the ongoing evolution of digital technologies seems to pose several challenges to Europe’s traditional style of rule making, thereby jeopardising its prominence in the regulatory landscape. In this paper, I briefly illustrate these three arguments and sketch an agenda aimed at preserving the EU’s pivotal role in setting standards for the digital environment. Accordingly, the remainder of this working paper is structured as follows. Section 1 explores the emerging ‘EU way’ to the regulation of cyberspace. Section 2 explores emerging trends in global technology governance, arguing that both the shrinking capacity gap between the EU and other countries on digital policy, as well as the increasing institutional density in this area, are likely to force Brussels away from unilateral rule making; and discusses the ongoing conflation of legal rules with standards and technical protocols, which represents yet another challenge for the EU. Section 3 presents five policy recommendations to be implemented in the short term.

2 The European Commission has also shown awareness that simply betting on its regulatory prominence is unlikely to lead to the desired results. For example, in the White Paper on artificial intelligence, adopted in February 2020, the Commission announced its goal to create both an ‘ecosystem of trust’, largely based on a comprehensive, horizontal, extra-territorial regulatory framework; and an ‘ecosystem of excellence’ nurtured by enhanced funding of research and innovation, as well as dedicated alliances and industrial policy initiatives in this domain. All in all, however, the level of EU investment in digital technologies in the coming years will be dwarfed by the planned investment in other global superpowers, notably, the US and China.

1. EU's attempt at a 'third way' in digital policy

Back in the early 1990s, when it started becoming a mass phenomenon, the World Wide Web was more similar to the Wild West than to a regulated domain. Built on open standards and with the promise of permissionless innovation, the Web was intentionally left unregulated at the international level (see, eg, the 1996 WIPO Treaty) and in the US, where rules such as the 1996 Telecommunications Act, the Digital Millennium Copyright Act, and the Communications Decency Act reflected the belief that a neutral Internet could not be accompanied by any attribution of responsibility for online intermediaries, such as Internet Service Providers and (a few years later) large digital platforms. The EU followed suit, by adopting a similarly hands-off approach in the e-commerce Directive and in the Information Society Directive at the turn of the millennium. These choices, while understandable, led to the Web developing into a highly re-intermediated space, where the unrestricted flow of data led to a handful of platforms aggregating most of the value, leaving the remaining market players and end users in a situation of dependency. The emergence of cloud-based platforms determined an unprecedented decoupling in the economy, with many businesses losing competitiveness and value, and large platforms alone charting a successful path that led many of them to hit the historic trillion-dollar threshold in market valuation, and to double that achievement in just a few months during the pandemic.

The extraordinary power accumulated by digital platforms, together with the lack of control over their activities in the US, have led to concerns, in terms of both economic sustainability and political viability. Several scandals, from Cambridge Analytica to the recent revelations by

Frances Haugen on Facebook, led to mounting concerns that the 'surveillance capitalism' which resulted from three decades of self-regulation is no longer tenable in the US (Zuboff 2019). In the EU, the reaction became more vibrant with the GDPR and focused on fundamental rights; however, political leaders gradually came to realise that the ongoing expansion of the self-regulated, platformised Internet beyond mass-consumer markets and social networks, into several industrial sectors, could represent an existential threat to the EU's industrial puissance. At the same time, China's model did not appear to be a viable alternative for EU leaders: rather than surveillance capitalism, the creation of a Great Firewall, and the deepening of ties between the government and large tech giants, led to the emergence of state surveillance, often to the detriment of fundamental rights and certainly far from the EU's democratic values.

The Von der Leyen Commission immediately realised that the ongoing concentration of data and power in the hands of a handful of large, non-EU, tech giants represented an existential threat to both the EU 'way of life' and overall industrial competitiveness. This called for a redefinition of the rules of the game, to allow the EU to gradually increase its overall share of the global data economy, and depart from its state of dependence on the US, where an estimated 90% of European data is reportedly stored (European Commission 2021). The COVID-19 pandemic further amplified the perceived need to reduce the EU's dependence on other countries in key inputs to the European economy, including (for what concerns the digital economy) in the supply of semiconductors.

As a result, the first two years of the Von der Leyen Commission have been characterised by repeated calls for 'open' strategic autonomy and enhanced digital sovereignty and by an unprecedented activism in proposing new legislation in the digital sphere. Many of the newly proposed rules, from the Digital Services Act to the Digital Markets Act, the AI Act and the Data Governance Act, have been associated with attempts to build a 'new GDPR', and thus, a possible replication of the Brussels effect.

Figure 1 below shows the possible evolution of Europe's technology stack compared to the traditional simplified (four-layer) OSI representation (which features a physical layer, a logical layer, application layer, and a content layer). It features a denser set of lower, physical layers in which the Internet of things (IOT) and the edge layer offer new opportunities for decentralised and fully distributed architectures, posing new challenges and creating new prospects for connectivity. The latter becomes more diversified and relies on a mix of fixed and wireless technologies that should be tailored to the specific local situation and use case, ranging from low-power wireless networks (LoRa, etc) to satellite, 5G, Wi-Fi, and optical fibre networks. This massive new infrastructure will generate and transport data to be stored and elaborated in the cloud, where the European Cloud Federation will specify the protocols and technological constraints that should ensure a controlled flow of data, possibly putting the end user at the centre. Data will flow either freely (in the original C2C, end-to-end, and neutral version of the Internet, as well as in B2C services mediated by digital platforms), or in a more managed way (in B2B platforms, government-to-citizens or G2C, and government-to-business or G2B services). At the top of the stack, as usual, the end user can be found alongside its needs, rights, and skills (so-called 'wetware').

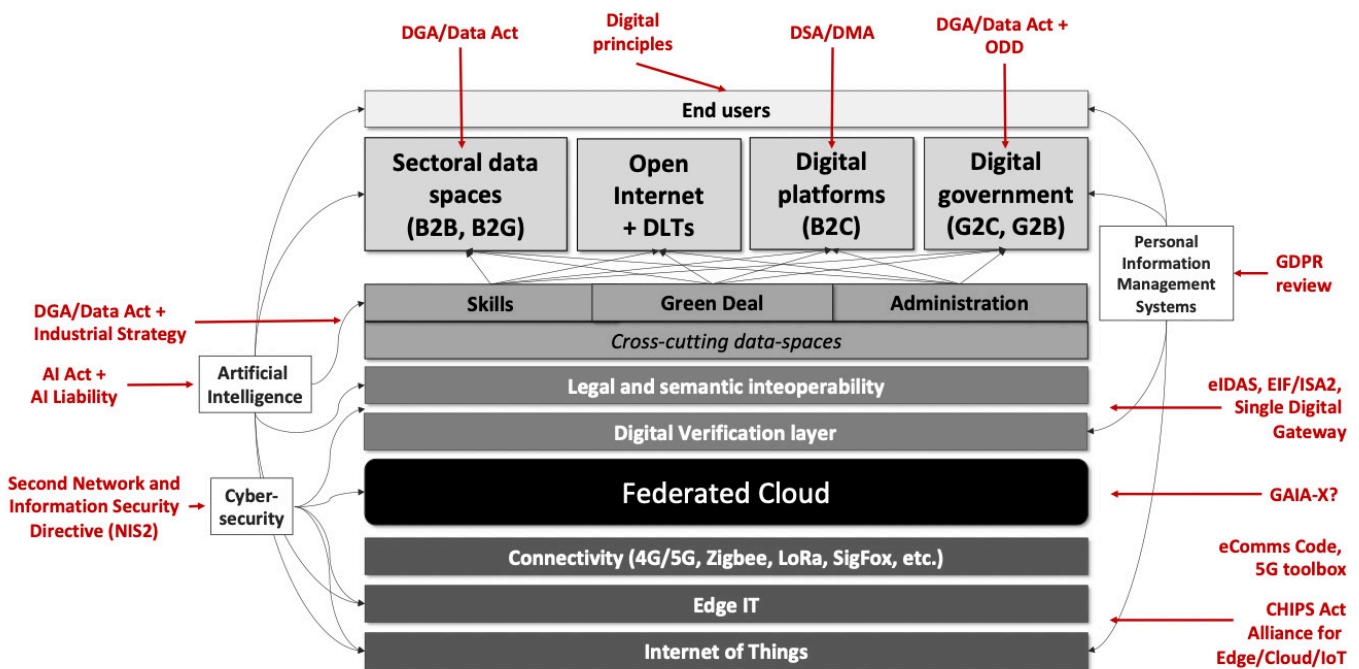
As shown in red in Figure 1, the extraordinary activism of the European Commission in the digital space covers virtually all layers of the technology stack, with the only (partial) exception of the open Internet.

The main initiatives can be grouped as follows:

- Initiatives aimed at reducing the market power of large digital platforms and promoting fairer and more transparent commercial practices in online intermediation and content moderation. These include the Digital Services Act and the Digital Markets Act, which add to the pre-existing platform-to-business regulation, as well as to an existing stream of antitrust investigations, which is seen by many as a world-leading example, yet also a too-lengthy and barely effective tool when it comes to exerting an impact on cyberspace.
- Initiatives aimed at fostering a transition from the free flow of all digital data, towards 'managed data', at least in specific industrial sectors or ecosystems, and more generally to ensure a fairer distribution of value along supply chains: these include the Data Governance Act and the upcoming Data Act, as well as the emerging GAIA-X project, which will arguably be scaled up into a fully fledged European Cloud Federation.
- Measures aimed at ensuring human- and citizen-centric technology adoption and the protection of fundamental rights online. These include the AI Act, the emerging EU digital principles, as well as the possible implementation of protocols and standards to ensure user control over personal data, and the forthcoming review of the GDPR.

- Enhanced security and digital identity measures to ensure the validation of transactions and the interoperability of data flows between administrations. These range from the EU digital identity and EIDAS framework to cybersecurity measures (NIS2) and the future reform of the European Interoperability Framework and notably the ISA2 programme (Renda et al. 2021).
- Industrial policy measures aimed at fostering the EU's excellence and competitiveness. These include the announced industry alliances for edge/cloud/IOT, as well as the flagship on AI and the announced CHIPS Act to promote European semiconductor production.

Figure 1: Europe's technology stack and (in red) emerging/upcoming regulatory measures for each layer



Source: Author's elaboration, based on Renda (2020)

Legend: DGA = Data Governance Act; DLT = distributed ledger technology; AI stands for artificial intelligence; GDPR is Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation); ODD is Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information; eComms Code is the DIRECTIVE (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code; NIS2 is the Proposal for a Directive of the European Parliament and of the Council on Measures for a High Common Level of Cybersecurity Across the Union, Repealing Directive (EU) 2016/1148; the CHIPS Act is the European Commission Proposal for a Regulation of the European Parliament and of the Council establishing a framework of measures for strengthening Europe's semiconductor ecosystem (Chips Act), Brussels, 8.2.2022 COM(2022) 46 final.

The monstrous effort produced by the European Commission to create a consistent, brand-new technology stack in a previously less regulated environment must be acknowledged and welcomed. At the time of writing, however, the connections between these sparse initiatives, as well as between them and the new industrial strategy of the European Commission, appear weak, at best. The Commission and other EU institutions will have to develop stronger links between the GDPR and data governance measures, and reconcile the many proposals, to create new enforcement and oversight institutions, by creating a proper 'ecosystem of enforcement' at both the EU and member state levels (De Streel and Ledger 2021). Moreover, given the emphasis of the EU industrial strategy on 14 'industrial ecosystems', the data strategy could also adopt ecosystems as the reference space. In addition, the provisions on algorithmic governance contained in the AI act and in the DSA/DMA could be looked at as a continuum, in need of full coherence. As will be argued below, strengthening the consistency of the internal regulatory framework for digital technologies is a key prerequisite for strengthening the EU's influence on the global arena.

2. Beyond the Brussels effect: can the EU thrive as a regulatory superpower in the digital world?

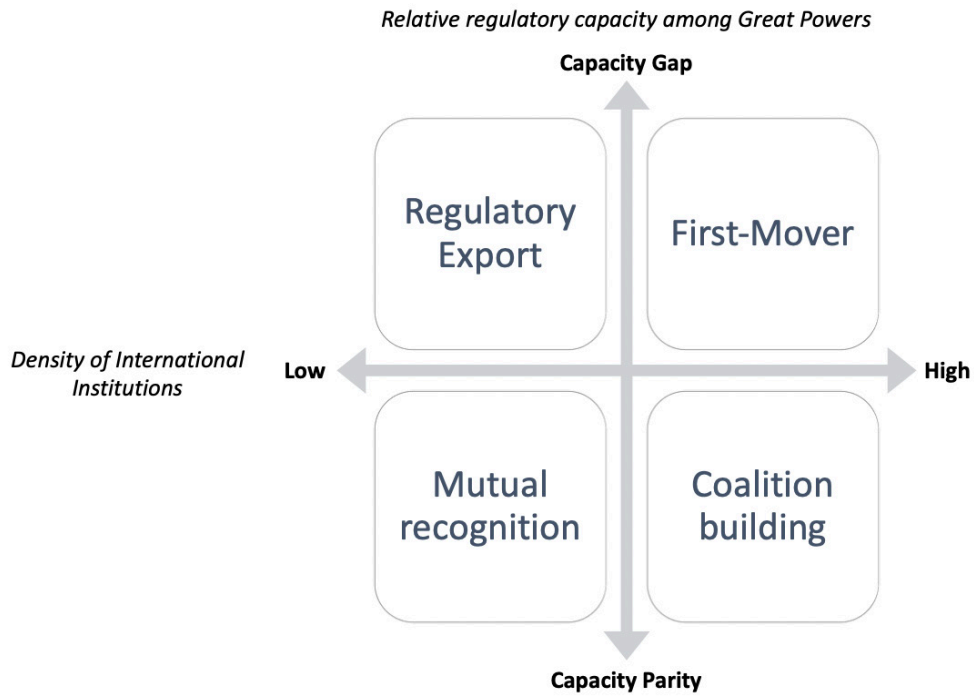
As already mentioned, the academic literature has been less impressed by the 'Brussels effect' than many policymakers. The idea that the definition of rules to be emulated by other countries could make the EU a global regulatory superpower refers to situations of regulatory competition, in which countries compete by unilaterally defining their regulatory frameworks, rather than cooperating to define global or international rules (Damro 2015). In these competitive, non-cooperative settings, countries can rely on their force of attraction due to the strength of their economies, a factor that has traditionally played in favour of the EU, still the richest integrated market in the world. However, this is likely to become a weaker source of influence over time, as the weight of the EU in the global economy is expected to gradually shrink.

In reality, rules diffuse not only through regulatory competition, but rather through international standards and regulatory cooperation. And here, the EU appears to perform less well, according to the scholarly literature. Young (2015), for example, observes that the EU's influence seems to be considerably weaker in regulatory cooperation settings than suggested by the literature on regulatory competition, and that the literature tends to exaggerate the EU's role as a global regulatory leader by focusing only on regulatory competition (eg, Bradford 2012, 2020). Newman and Posner (2015) look at the external factors that can affect the EU's chances of exporting rules to other countries, and identify four major strategies, which depend on the density of international institutions in the domain at hand, and on the relative regulatory capacity among great powers (see Figure 2 below).

Based on this conceptual framework, the Brussels effect becomes a viable strategy whenever there is a significant gap between the EU and other regulatory superpowers, in terms of regulatory capacity, and whenever institutional density is relatively low, or at least whenever the EU can credibly claim to have gained a first-mover advantage. Do these conditions apply in the digital technology domain? As argued below in more detail, there are reasons to doubt that reliance on the Brussels effect will effectively help the EU advance in its quest for strategic autonomy in the coming years.

Below, I explore current problems and possible future changes in the EU's capacity to influence global digital governance; the possible evolution of EU strategy in the global terrain of technology governance; and the prospects for EU leadership, stemming from the ongoing evolution of technology regulation.

Figure 2: Possible regulatory strategies according to regulatory capacity and institutional density



Source: Author's elaboration based on Newman and Posner (2015)

2.1 The rise and possible fall of EU regulatory influence in the digital world

Looking at the emerging EU technology stack, the EU appears to be significantly advancing in the digital technology domain thanks to an ongoing centralisation of competences; the possible creation of new regulatory bodies that could more effectively pursue the implementation of EU rules; the earmarking of new resources to be spent on the digital transformation, both at the EU level and at the national level, in the context of the Resilience and Recovery Facility; and the launch of the 'Team Europe' approach to strengthen the consistency of EU external action. At the same time, the level of investment in new technologies and, more generally, existing analyses of the prospective distribution of the gains from new technologies at the global level appear to project a shrinking of the EU's global share of technology investment and of the global economy. This may, in turn, reduce both the attractiveness of the EU as a partner, as well as the strength of the single market as a catalyst of regulatory emulation. Europe's inability to exercise legal empathy – ie, respect for and dialogue with other legal systems – may hamper its ambition to lead the world on digital regulation. Emphasis on digital sovereignty and strategic autonomy may lead the EU to miss the important opportunity to forge coalitions with developed and developing countries and trigger increased adoption of its proposed technology stack, especially at a time in which China is making important progress on its Digital Silk Road plans. An important response to the latter was recently given by the Commission with the launch of the Global Gateway initiative; however, only time will tell whether this ambitious new plan will prove effective in strengthening the EU's share of global digital infrastructure or if it will arrive too late and perhaps too suddenly.

In this respect, future plans to enhance the attractiveness of the EU approach to digital regulation will depend on the solidity of the current framework and its openness to third countries. This is why ensuring sufficient enforcement for existing legislation and clarifying what the EU implies by 'open strategic autonomy' will be key in the years to come.

2.1.1 GDPR enforcement and prospects for future legislation

While world-renowned and actively emulated abroad, the GDPR features problems when it comes to implementation and effective enforcement. Among others, early studies on specific countries reported rather low levels of compliance, and a recent report by Access Now (2021) shed light on a wide heterogeneity in the levels of enforcement across the EU27. Overall, there is an emerging perception that the benefits of GDPR may not be fully materialising for European citizens, which, in turn, may lead to a gradual erosion in recognition of the EU data protection framework as a reference for countries around the world. Moreover, a recent report by the European academy networks (EASAC 2021) concluded that "[i]t has become apparent that the implementation of the GDPR has introduced impediments to ... international transfer of data outside the EU/EEA, creating problems for academic researchers, health care professionals, and others in the public health sector" with "no workable mechanism for sharing health data for public sector research". This warning for an area of research privileged under the GDPR indicates greater impediments for other areas of research. As a review of the GDPR has already started in the Commission, in accordance with the provisions of Article 97, the time seems ripe to consider how to reconcile the principles and objectives of the GDPR with the goal of facilitating research around the world.

The GDPR enforcement and innovation-friendliness problems can be extended to the broader context of digital policies, where governments have traditionally struggled with the concrete implementation of regulatory provisions that heavily rely on market players themselves (eg, in algorithmic take-down of content), as well as on the ability of regulatory authorities to perform advanced monitoring, eg, through algorithmic inspections. At the time of writing, this problem appears likely to present itself in many of the proposals described in Section 1 above. For example, the DSA and DMA both establish rather unclear oversight and enforcement mechanisms, with the creation of networks of national authorities and the possible establishment of new institutions at the EU level; likewise, the role of the AI board and national authorities in the AI Act, and the data innovation network in the DGA are likely to trigger a vibrant debate in the European Parliament.

Overall, the emerging risk is that the recognition which the GDPR has received until now may wane due to difficulties with enforcement and that even bigger problems emerge with the new suite of regulatory proposals tabled during the first two years of the Von der Leyen Commission. As a result, the continuation of the Brussels effect would rest on the EU's ability to gradually develop technology-enabled tools that would guarantee stronger compliance and more effective implementation and enforcement. The translation of legal codes into software codes, or 'law as code' measures, currently pursued within the GAIA-X project, would be the perfect response to this emerging risk, but it is still a rather weak prospect, also considering the problems that GAIA-X seems to be facing in its first years of deployment.³

2.1.2 From openness to sovereignty: is the EU betraying its values?

Another emerging issue to be considered in light of the analysis presented in Sections 1 and 2 is the significant paradigm shift pursued by the European Commission in proposing new policy initiatives that will shape its technology stack going forward. In particular, in the domain of technology policy, the EU has traditionally supported the development of open standards, as well as open-source software (Büthe and Von Ingersleben-Seip 2020). However, the EU data strategy and new industrial strategy measures appear less oriented towards openness and more geared towards the adoption of 'managed data', which can create concerns, especially in non-EU countries, where these initiatives are increasingly seen as potentially undermining the ability to interact with the EU data environment. This is particularly the case when it comes to domain-specific data spaces, where operators from the same domain (eg, automotive, agriculture, finance, energy, health) pool and jointly manage their data to optimise service provision and license the whole data pool to third parties wishing to provide value-added services. The so-called 'soft infrastructure' embedded in data spaces is meant to enhance participants' ability to exercise control over their (business) data.

3 See C. Goujard and L. Cerulus, Inside Gaia-X: How chaos and infighting are killing Europe's grand cloud project, Politico, 26 October 2021. <https://www.politico.eu/article/chaos-and-infighting-are-killing-europes-grand-cloud-project/>

This approach, in turn, is expected to enable greater control over access to proprietary data and make it harder for cloud-based technology giants to capture the value generated by real economy players. At the same time, it may create new obstacles for non-EU operators to access the data space.

While legitimate and justifiable in many respects, the need to pursue a more nuanced agenda to gradually increase the EU's share of the data economy may introduce an element of discontinuity in the EU's relationships with third countries, potentially reducing the credibility of the EU as trade partner, as well as its image as a leader in development and cooperation policy (Scasserra and Martínez Elebi 2021). Should the EU agenda lead to ring-fencing the single market, its consistency with the notion of 'open strategic autonomy' would probably become weak at best. Open strategic autonomy requires balancing trade openness and a general orientation towards international cooperation with a firm, assertive approach against unfair and coercive practices and the violation of rights. Accordingly, EU institutions may want to ensure that the attempt to increase control over personal and industrial data will not introduce obstacles to non-EU firms wishing to access the single market. The same applies for the future European Cloud Federation, which should emerge from the GAIA-X project, and for the newly proposed CHIPS Act, which marks an attempt to boost the production of microchips in the EU, among other things, by a relaxation of the rules on state aid.

In developing these policies, it will be important to avoid one unintended consequence: that while trying to introduce measures that counter-balance the power of non-EU technology giants, the EU ends up introducing digital trade barriers for developing countries and adopting a counter-productive, quasi-autarchic approach to technology policy.

2.2 EU strategy and the digital economy: the 'capacity gap' is shrinking and the institutional density is increasing

Beyond existing problems, as described in Section 2.1 above, it is important to note that the strategy that the EU will be able to pursue in the coming years, to propose its leadership of global technology governance, is going to be increasingly constrained by the rise of regulatory initiatives in other parts of the world, as well as by the deterioration of multilateral order and the ensuing increase in institutional density at the international level. This is likely to reduce what Newman and Posner (2015) define as the 'capacity gap', ie, the relative advantage enjoyed by the EU, in terms of regulatory capacity, vis à vis other countries.

More specifically:

- In the regulatory space, the US and China, and other important players, such as the United Kingdom, India, Brazil, Japan, and Korea, are multiplying their efforts to propose solutions that would address the current imbalances and lack of protection of individual rights in cyberspace.

Good examples include the ongoing debate on platform regulation in the US, which seems likely to become an important addition to a rather weak antitrust effort to tackle the remarkable market concentration observed in the digital domain;⁴ and China's new privacy law and an unprecedented wave of platform regulation measures, ranging from competition enforcement to opening corporate data hoards.⁵ The future will likely feature a gradual erosion of the EU's first-mover advantage, with countries around the world being able to consult and compare the scope, weight, and effectiveness of alternative regulatory frameworks.

- For what concerns institutional density, several sectors are seeing an intensification of international efforts to establish forums for cooperation, often more concentrated on individual blocks than oriented towards genuine global cooperation. A good example is the domain of AI, where the proliferation of ethical principles, the emergence of new platforms such as the Global Partnership for AI and the Council of Europe's CAHAI, among many others, leave the EU in the position of participant, rather than leader, let alone pioneer of global rule making.

2.3 Digital regulation is moving away from traditional lawmaking, becoming embedded in protocols and standards

There are at least two other reasons to believe that the EU's regulatory prowess in the digital sphere may be severely put to the test in the coming years.

Firstly, the need to improve the quality and effectiveness of regulation in the digital domain will force countries to move from traditional lawmaking to 'law as code', and this, in turn, will lead to legal rules being increasingly embedded in technical standards, such as semantic and legal interoperability standards. This, in turn, will imply that the EU will be forced into a double move: on the one hand, as already explained, a need to move from unilateral lawmaking with extraterritorial effects towards coalition building, and, on the other hand, from the rather familiar world of rule making into the much more competitive domain of international standardisation, where public and private powers increasingly compete to develop the terrain for future market dynamics. The question then becomes whether the EU has a similar grasp on standardisation bodies as it does to global rule making, and whether it would make sense for the EU to sharpen and relaunch its standardisation strategy. Current progress made by the EU in translating its rather rich set of policy priorities into technical standards appears very limited, also due to the recent shift from open standards towards more proprietary ones, as discussed above. The recently denounced 'crisis' of GAIA-X, a victim of the extreme ambition and difficulty of the overall project, as well as the contrasting needs of preserving openness and pursuing a 'made in Europe' agenda, appears to cast rather long shadows for the EU in this new battlefield.

4 <https://www.competitionpolicyinternational.com/new-bipartisan-senate-bill-seeks-to-limit-big-tech-deals/>

5 <https://www.brookings.edu/blog/techtank/2021/09/14/chinas-new-regulation-of-platforms-a-message-for-american-policymakers/>

Secondly, the translation of legal rules into fully fledged technology stacks can accelerate the shift of power away from the EU in the regulatory space. The emergence of China's almost self-sufficient technology stack, exported alongside rules and standards in the Digital Silk Road, led many developing countries to witness a rising global Cold War, with the US actively seeking allies to develop a competitive, equally self-sufficient, stack. The EU has gradually stepped up its efforts in this domain and is now trying to scale up its Indo-Pacific connectivity strategy to make sure it can try to resist the impact and speed of the Digital Silk Road. But the lack of key technologies and the persisting fragmentation of external action in developing countries risk undermining the effectiveness of these efforts. Accordingly, the EU may have to build an alliance with other like-minded countries to secure a role in the future global regulation and governance of technology (Okano-Heijmans and Vosse 2021).

3. Policy recommendations

The previous sections have framed the issue of the EU's future leadership in the domain of digital policy by reaching a series of findings, which can be summarised as follows. Firstly, regulatory prowess does not, in and of itself, suffice to thrive as a global regulatory superpower, as the European Commission seems to have realised. Secondly, the 'Brussels effect' is only one out of many diffusion channels that can be identified for the EU's digital policy acquis. Thirdly, even if the Brussels effect is considered as a prominent feature of EU digital policy, it is likely to become more fragile and rivalled by other regulatory frameworks in the coming years. Fourthly, and relatedly, external constraints seem to be forcing the EU to move away from unilateral rule making towards coalition building, and from rule making towards international technical standardisation. Finally, the EU shift away from open standards, especially in the domain of data governance, and its relatively low investment in digital technology compared to other countries, may affect its credibility in the future.

As a result, significant action will be needed to promote the EU as a strong player in the global governance of digital technologies. Five lines of action are proposed below.

3.1 The EU needs to boost its strategic advice and foresight, not just rely on the Brussels effect

Based on the findings of this paper on the present and future of the Brussels effect, it seems urgent and important for the EU to step up its investment in strategic advice. This implies, among other things:

- Investing in a dedicated structure that maps the behaviour and features of different actors in the global digital space. This may take the form of an internal multi-disciplinary think tank (or an ad hoc expert group), which would receive inputs from the External Action Service, the Joint Research Centre, and academia.
- Engaging in ongoing foresight on possible alternative futures, and developing ad hoc plans and negotiation tactics, according to alternative possible states of the world. This would be additional to the foresight work of the Joint Research Centre, which focuses on megatrends and horizon scanning, and would provide EU decision-makers with actionable insights and strategic advice.
- Modelling negotiation and non-cooperative outcomes by looking at the EU's strength and lead-actor ability vis à vis other players in the global digital space

Modelling negotiations outcomes requires running (computer-aided) simulations and a deep understanding of the EU's alternative to the current relationships with other countries (so-called 'best alternative to negotiated agreement' or BATNA). This, in turn, requires much more than observing and modelling the preference and behaviour of other players in the global technology space: it requires deep knowledge of the industry alliances being formed at the international level, and also within the EU, as well as the existing ties between EU and non-EU players in key sectors, such as 5G, cloud computing, and AI (see Timmers 2022).

A deeper understanding of the strategic positioning of the EU and its alternative strategies for the future would also be useful to understand how to negotiate with international partners. For example, very often, the mandate and competence of negotiators may be too narrow to cover the possible space of negotiation outcomes: increasingly, countries may be led to strike rather broad agreement to the whole technology stack (and even beyond). One possible example, looking at existing complementarities, is the Trade and Technology Council between the US and the EU, where Europe's relative strength in 5G technologies and data protection, and its ambition on industrial data and edge/cloud architectures, may trigger reciprocal concessions on a rather broad set of issues (eg, platform regulation and web tax).

3.2 Policy coherence, inside and outside the EU territory

The EU becomes a stronger model for the rest of the world, and a stronger negotiator, whenever it is able to present a rock-solid, cohesive internal regulatory framework. At the moment, there still seems to be a lot to do to realise the vision outlined in Section 1 above. In particular, the following outstanding issues are awaiting solutions:

- Reconcile the different regulatory proposals (especially on the enforcement side). Currently, there seems to be a disconnect between GDPR, the data spaces, GAIA-X, and possible technical protocols to ensure user control over data. There is also a need to reconcile and connect the provisions of the AI Act and the algorithmic governance provisions contained in the DSA and the DMA. And it is not possible to imagine that each of the proposals tabled will come with a self-enforcement and oversight mechanism, be that a body, and agency, a board, or a network of regulators.⁶
- Link the new digital proposals to the emerging industrial strategy. To mention one example, both the industrial strategy and the DMA use the term ecosystem, but with completely different meanings. When it comes to industrial ecosystems, if the EU seriously wants to rely on this notion as the basis for the future industrial strategy, then the upcoming data spaces will have to match the ecosystems, and the upcoming transition pathways announced in the recent update of the industrial strategy should equally embed a strong data governance component.

⁶ At the time of writing, it seems that the DMA will be enforced only at the EU level. But it is still unclear whether the competence will fall on DG COMP or a group of directorate generals.

Likewise, incorporating the Industry 5.0 approach (ESIR 2021) in the policy measures related to the digital sector is important to ensure that technology moves in the direction of the green transition, as well as Europe's human-centric approach (Renda and Schaus 2021).

- Revisit the data strategy and cloud federation in line with the external action of the EU. At the moment, the EU agenda for external action appears to be insufficiently geared towards creating value in partner countries. In particular, the data strategy and the future cloud federation, while aimed at counterbalancing the US tech giants, are not currently focused on addressing China's Digital Silk Road on the ground, but rather on advancing Europe's digital sovereignty vis-à-vis American cloud giants (Renda 2021; Sahin and Barker 2021). By adopting a more flexible, legally empathic approach to convergence, in the context of trade agreements and other external action instruments, the EU may be able to gain more ground in proposing its own approach to digital policy as a model for the rest of the world. In this respect, one of the most challenging aspects of the new Global Gateway initiative will be to lay the foundations for a wide adoption of the European Cloud Federation as a basis for developing countries to engage with the EU approach to digital regulation.

3.3 A refined approach to digital sovereignty

Projecting the EU approach to digital transformation to the rest of the world may require a refined approach to the concept of digital sovereignty, so far mostly referred to as 'European' sovereignty. For example, a joint letter adopted by the German, Danish, Estonian, and Finnish Prime Ministers in March 2021 referred to the need to "foster the digital single market in all its dimensions where innovation can thrive and data flow freely". However, it is still not clear whether digital sovereignty is a concept that should apply, in the EU's vision, to all countries adopting the EU technology stack, and thus, also to non-EU countries adhering to the EU's vision. In other words, should digital sovereignty be a purely European concept, or a concept developed in Europe, which applies at the global level?

The latter option, especially if embedded in the Global Gateway initiative, would make the EU a champion of value creation and retainment at the local level, with citizens and enterprises from all countries being able to gain control over their own digital destiny. The above-mentioned letter seems to acknowledge this need, by observing that digital sovereignty is not about "excluding others or taking a protectionist approach"; however, the external dimension of EU digital sovereignty seems to be still far from clearly leading towards a more open approach, especially when dealing with developing countries.

3.4 Build and promote the EU (semi-open) technology stack

As mentioned in previous sections, the proposals presented by the Von der Leyen Commission potentially configure a stand-alone technology stack, where the EU does, however, lack key capacity and industrial know-how to build and deploy each of the layers. Obviously, the EU cannot and should not become an autarchic player in cyberspace and should continue to make use of non-EU technologies to the extent that they do not compromise EU values or pose dependency, security, or sustainability problems. That said, an EU technology stack could be built around key principles, which could mirror the Industry 5.0 approach evoked in the previous recommendation. The EU approach to digital technology could then be adequately communicated to other countries and used as a starting point in negotiations (eg, in the TTC). Layers that are to be considered strategic and subject to sovereignty should be a subset of the technology stack layers: they may include, as outlined below, areas that are often underrated in the analysis of the EU's strengths in global technology, such as digital identity, data interoperability frameworks, government as a platform, and data spaces, especially for industrial data. For the identification of critical hardware underpinning these layers, such as chips, cloud infrastructure, and supercomputers, see Timmers (2022).

Rather than betting on the Brussels effect, a key distinctive trait of the future EU agenda should be an emphasis on the emerging EU (and member state) solutions for digital identity, as well as its emerging data governance approach.

Frameworks such as EIDAS and the solutions developed in the context of the European Interoperability Framework and ISA2 for the reuse of common solutions in governments have already made their way, with very little visibility, to developing countries. In the future, as both the EIF and ISA2 are being relaunched, hopefully with more emphasis and a binding framework within the EU, the EU will have an opportunity to start making these solutions the basis for a unique approach to the role of government in the digital economy.

Once more, it will be important to ensure that the EU approach aims at self-sovereign digital identity also when applied outside the EU. This implies that users should remain able to control the verifiable credentials that they hold and that their consent is required to use those credentials. The EU is already a leader in this field thanks to proposed solutions such as IHAN and MyData, which should be further developed and integrated into the nascent EU technology stack (see Figure 1 above), and then actively promoted at the global level.

3.5 'Make or break' GAIA-X, and explore ways to promote EU law as code

As mentioned in previous sections, the ability of the EU to embed its values into code is an important cornerstone for a future 'Brussels effect' to be achieved through diffusion of technical standards and protocols, rather than by legal transplant or emulation. However, the GAIA-X project appears to be proceeding slowly, and not without challenges, due to the difficulty of translating EU law into code, in addition to transaction costs.

The importance of 'law as code' for EU strategic autonomy and for the EU technology stack can hardly be overestimated. Accordingly, a more comprehensive research and innovation strategy on this front may have to be developed, both to promote the success of GAIA-X and its scale-up into a full pan-European project and to develop a 'plan B' in case GAIA-X eventually collapses under the weight of its emerging problems.

References

- Access Now (2021), Three Years under the EU GDPR: an Implementation Progress Report, available at <https://www.accessnow.org/cms/assets/uploads/2021/05/Three-Years-Under-GDPR-report.pdf>
- Bradford, A. (2012) "The Brussels Effect," *Northwestern University Law Review*, 107: 1.
- Bradford, A. (2020) *The Brussels Effect. How the European Union Rules the World* Oxford: Oxford University Press.
- Büthe, T., and Von Ingersleben-Seip, N. (2020), "Review of Current Governance Regimes and EU Initiatives Concerning Open Standards and OSS, Including Effects on Innovation and Competition," TRIGGER project, D4.1, <https://trigger-project.eu/wp-content/uploads/2020/06/D4.1-Review-of-current-governance-regimes-and-EU-initiatives-concerning-....pdf>.
- Damro, C. (2015) "Market power Europe: exploring a dynamic conceptual framework", *Journal of European Public Policy*, 22, no. 9: 1336-1354, DOI: [10.1080/13501763.2015.1046903](https://doi.org/10.1080/13501763.2015.1046903)
- De Streel, A., and Ledger, M. (2021) "New Ways of Oversight for the Digital Economy," CERRE Issue Paper, February.
- EASAC – European Academies Science Advisory Council. (2021) "International Sharing of Personal Health Data for Research," <https://easac.eu/publications/details/international-sharing-of-personal-health-data-for-research/>.
- ESIR (2021) "Industry 5.0 – A Transformative Vision for Europe," ESIR Policy Brief, No. 3, European Commission Directorate-General for Research and Innovation.
- European Commission (2021) "2030 Digital Compass: the European way for the Digital Decade," COM (2021) 118 final.
- Hadjiyianni, I. (2019) *The EU as a Global Regulator for Environmental Protection: A Legitimacy Perspective*, Hart Publishing.
- Okano-Heijmans, M., and Vosse, W. (2021) "Promoting open and inclusive connectivity: The case for digital development cooperation", *Research in Globalization*, 3: 100061.
- Nagel, L., and Lycklama, D. (2021) "Design Principles for Data Spaces," Position Paper, International Data Spaces Association.
- Newman, A. L., and Posner, E. (2015) "Putting the EU in Its Place: Policy Strategies and the Global Regulatory Context," *Journal of European Public Policy* 22 no. 9: 1316–1335.

Philippon, T. (2020) *The Great Reversal: How America Gave Up on Free Markets*. Cambridge, MA: Harvard University Press.

Renda, A. (2020) "Single Market 2.0: The European Union as a Platform." In *The Internal Market 2.0*, edited by S. Garben and I. Govaere, 187–212. Oxford: Hart Publishing.

Renda, A. (2021) "Making the Digital Economy 'Fit for Europe'." *European Law Journal*: 1–10. <https://doi.org/10.1111/eulj.12388>.

Renda, A., and Schaus, M. (2021) "Towards a Resilient and Sustainable Post-Pandemic Recovery," Executive Summary of the Final Report of the CEPS Task Force on the New Industrial Strategy for Europe, <https://www.ceps.eu/wp-content/uploads/2021/06/IP-TF-Report-Executive-summary.pdf>.

Renda, A., Iacob, N., and Campmas A. (2021) "Study Supporting the Final Evaluation of the Programme on Interoperability Solutions for European Public Administrations, Businesses and Citizens (ISA²), European Union, ISBN 978-92-76-38406-9, DOI 10.2799/94683, https://ec.europa.eu/isa2/sites/default/files/210826_isa2_final_evaluation_-_final_study_-_clean.pdf.

Sahin, K., and Barker, T. (2021) "Europe's Capacity to Act in the Global Tech Race: Charting a Path for Europe in Times of Major Technological Disruption." (DGAP Report, 6). Berlin: Forschungsinstitut der Deutschen Gesellschaft für Auswärtige Politik e.V., <https://nbn-resolving.org/urn:nbn:de:0168-ssoar-73445-7>.

Scasserra, S., and Martínez Elebi, C. (2021) "Digital Colonialism. Analysis of Europe's trade agenda." Transnational Institute, Trade & Investment Policy Briefing, October, https://www.tni.org/files/publication-downloads/digital-colonialism-report-tni_en.pdf.

Timmers (2022), "Strategic Autonomy Tech Alliances" (European Strategic Autonomy series), Foundation for European Progressive Studies (forthcoming).

Vogel, D. (2012), *The Politics of Precaution: Regulating Health, Safety, and Environmental Risks in Europe and the United States*. Princeton, NJ: Princeton University Press.

Young, A. R. (2015) "The European Union as a global regulator? Context and comparison," *Journal of European Public Policy* 22, no. 9 (2015): 1233–1252.

Zuboff, S. (2019) *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*. London: Profile Books.

About the author



ANDREA RENDA

Andrea Renda is a Senior Research Fellow and Head of the CEPS Unit on Global Governance, Regulation, Innovation and the Digital Economy (GRID). He is Part-Time Professor of Digital Policy at the School of Transnational Governance of the European University Institute, in Florence (Italy). He is also Visiting Professor of Competition Policy and the Digital Economy at the College of Europe in Bruges (Belgium). He is a Fellow of the World Academy of Arts and Science, a CITI Fellow at Columbia University's Centre for Tele-Information and a member of the European Parliament's STOA International Advisory Board. He was a member of the EU High Level Expert Group on Artificial Intelligence and is currently a member of the advisory group on Economic and Societal Impacts of Research (ESIR), for the European Commission, DG Research and Innovation.

STRATEGIC
AUTONOMY
pathways to progressive action

This policy brief is published as part of 'European Strategic Autonomy: Pathways to Progressive Action', a project co-organised by the Foundation for European Progressive Studies, the Brussels office of the Friedrich-Ebert-Stiftung and the Fondation Jean-Jaurès.

About FEPS

The Foundation for European Progressive Studies (FEPS) is the think tank of the progressive political family at EU level. Its mission is to develop innovative research, policy advice, training and debates to inspire and inform progressive politics and policies across Europe.

FEPS works in close partnership with its 68 members and other partners -including renowned universities, scholars, policymakers and activists-, forging connections among stakeholders from the world of politics, academia and civil society at local, regional, national, European and global levels.

European Political Foundation - N° 4 BE 896.230.213 | Avenue des Arts 46 1000 Brussels (Belgium)

www.feps-europe.eu | Twitter/Instagram: [@FEPS_Europe](https://twitter.com/FEPS_Europe) | Facebook: [@FEPSEurope](https://www.facebook.com/FEPSEurope)

Cover photo: Shutterstock.

Copy Editing: Rosalyne Cowie



This Policy Brief was produced with the financial support of the European Parliament. It does not represent the view of the European Parliament.

ON SIMILAR TOPICS

