

**Master in Advanced European
and International Studies**

European Integration and Global Studies



Table of Contents

I.	INTRODUCTION AND PROBLEM STATEMENT	1
II.	THE BRUSSELS EFFECT.....	3
1.	DEFINITIONS	3
2.	THEORETICAL DERIVATION	4
3.	CONTEXT AND DIMENSIONS OF THE EU'S EXTERNAL INFLUENCE.....	6
a)	<i>Internal dimension</i>	6
b)	<i>External dimension: emerging external regulatory agenda</i>	9
4.	CONDITIONS.....	10
a)	<i>Market size</i>	11
b)	<i>Regulatory capacity</i>	12
c)	<i>Inelastic targets</i>	14
d)	<i>Stringent regulations</i>	15
e)	<i>Non-divisibility</i>	18
5.	DEMARCATON OF THE BRUSSELS EFFECT FROM THE CALIFORNIA AND BEIJING EFFECTS.....	20
6.	CONCLUSION	21
III.	THE EU'S REGULATORY APPROACH IN THE DIGITAL SPHERE	22
1.	A HUMAN-CENTRIC APPROACH: THE THIRD WAY OF DIGITALIZATION	24
2.	DIGITAL SOVEREIGNTY.....	26
3.	MAIN TOOLS AND LEGISLATION.....	27
a)	<i>GDPR</i>	28
b)	<i>Digital Services Act and Digital Markets Act</i>	30
c)	<i>EU AIA</i>	30
4.	ADDITIONAL TOOLS	33
5.	EU-U.S. TRADE AND TECHNOLOGY COUNCIL.....	33
IV.	THE EXAMPLE OF THE GDPR AS AN "EXPORT HIT"	35
1.	BACKGROUND	35
2.	DE FACTO EFFECTS	37
3.	DE JURE EFFECTS	41
4.	ASSESSMENT OF THE IMPACT OF THE GDPR AND ITS IMPLICATIONS	42
V.	OUTLOOK: IMPLICATIONS FOR THE FUTURE OF AI REGULATION.....	44
1.	(EXPECTED) EXTENT AND IMPACT OF THE EU AI-ACT.....	45
2.	POTENTIAL FOR A BRUSSELS EFFECT	46
VI.	CONCLUSION.....	53

List of Tables

Table 1: Overview of recent proposed or passed EU legislation in the digital sphere	28
Table 2: Summary of the EU Commission’s proposed AI Act.....	32

Glossary of Abbreviations

AI	Artificial Intelligence
B2C	Business-to-Consumer
CBA	Cost-benefit analysis
DMA	Digital Markets Act
DSA	Digital Services Act
ECJ	European Court of Justice
EP	European Parliament
ERA	European Regulatory Agency
EU	European Union
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GPAIs	General-purpose AI systems
GPT	Generative Pre-trained Transformer
IMF	International Monetary Fund
MNC	Multi-national company
MSA	Market surveillance authority
MEP	Member of the European Parliament
NGO	Non-governmental organization
OECD	Organization for Economic Co-operation and Development
SMEs	Small and medium-sized enterprises
TTC	Trade and Technology Council
TEU	Treaty of the European Union
TFEU	Treaty on the Functioning of the European Union
UNCTAD	United Nations Conference on Trade and Development
WTO	World Trade Organization

I. Introduction and problem statement

“In Europe, the bird flies by our rules “. This tweet of the EU Commissioner Thierry Breton regarding the purchase of Twitter by Elon Musk in 2022 gives a preview of the European Union’s human-centric digitalization approach, aiming at proactively shaping the digital regulatory landscape alongside European values. Restricting the over-arching power of platforms and multinational “tech giants“, the EU has achieved that even affluent tech entrepreneurs like Mark Zuckerberg promote EU regulation in the digital sphere globally, for instance by stating that “People around the world have called for comprehensive privacy regulation in line with the European Union’s General Data Protection Regulation, and I agree. I believe it would be good for the Internet if more countries adopted regulations such as GDPR as a common framework. New privacy regulation in the United States and around the world should build on the protections GDPR provides.” (Zuckerberg 2019).

This instrumentalization of regulatory efforts by tech entrepreneurs raises the question, of how the EU managed to externalize its own regulation and thus exercise regulatory influence. Another input to raise this question comes from the EU’s economic power in the digital sphere, which is quite limited. The EU lacks affluent globally operating tech companies with substantial market shares. Consequently, it is often perceived as a “powerless spectator” (Christakis 2020,16) compared to the U.S. or China. However, against these perceptions, the Union managed to leverage its main political capital – its regulatory power. In the last years, the EU has been quite active in passing legislative proposals in the digital sphere and successful in setting global standards. The unilateral ability to regulate the global marketplace has first been described as the “Brussels Effect” by Anu Bradford in 2012. By regulating its own market, the EU exercises global regulatory power and exports its regulations. Bradford argues that due to the Brussels Effect, the European Union continues to be a relevant political actor on a global scale (Bradford 2019, 4). To examine if this is also the case in digital policy, one can analyze the potential Brussels Effect in the digital sphere. As Mr. Zuckerberg’s quote anticipates, the General Data Protection Regulation 2016 is a crucial legislative act to examine in this context. This is where the conditions of a Brussels Effect according to Anu Bradford’s theoretical

framework can be analyzed to explain how a European regulation can have an extraterritorial effect and shape a policy field globally. Moreover, thinking a step ahead, it is essential to examine the link of this potential Brussels Effect in digital policy to the future of artificial intelligence (AI) regulation which is on the agenda of many regulators in the world. A “pause” for the development of the most advanced AI systems has been promoted in an open letter by various tech entrepreneurs and scholars. They claim to give regulators time to catch up due to the “profound risks to society and humanity” (Metz/ Schmidt 2023). While the regulation of AI is becoming an emerging issue in many countries, the EU has already set down a legal framework with its proposal for an “AI Act” (2021). Investigating the new legislative proposal and its concept of societal risk assessment is necessary to deduce whether it has the potential of gaining extraterritorial effect. Will AI regulation be part of the EU’s regulatory power in digital policy?

In a world where the role of technologies as ideological influencers for the export of governance models is growing, the evolution of the Brussels Effect might have important global implications. Therefore, the Brussels Effect will be explained in general terms in chapter two. After an introductory presentation of the definitions and derivation of Bradford’s theory, the EU’s “regulatory DNA” will be analyzed by looking at the context and internal and external dimensions of the EU’s external influence. This includes having a look at relevant institutional structures as well as drivers for a pro-regulative stance and the emerging external regulatory agenda. This step is followed by presenting Bradford’s five conditions for a Brussels Effect. It is also crucial to demarcate the Brussels Effect from the regulatory influence of other (emerging) global actors. Following this general presentation of the conditionality, the EU digital policy will be illustrated in chapter three. After having looked at these theoretical frameworks of analysis the globalization of the GDPR as an “export hit” will be assessed. From those observations, one can deduct the implications for AI regulation by looking at the potential of the EU AI Act to exercise extraterritorial effect. This approach aids in examining how the European Union is shaping the digital sphere globally with its regulatory power and what are the implications for the future of AI regulation. The main objective will be to apply and understand the “Brussels Effect” in digital policy and thus explain the regulatory power of the EU in this area.

II. The Brussels Effect

Firstly, the theoretical frameworks need to be evaluated. Anu Bradford's "Brussels Effect" will be analysed as a main instrument of the EU's regulatory power. After a short definition and theoretical derivation, the internal and external dimensions of the Brussels Effect will be illustrated. This is followed by the conditions of the effect and a demarcation. Understanding the context and preconditions of the Brussels Effect is crucial to link the theory to the field of digital policy later on.

1. Definitions

The main theoretical instrument to assess the EU's regulatory power is the so-called Brussels Effect. The "Brussels Effect" refers to the "EU's unilateral ability to regulate the global marketplace" (Bradford 2019, 1). It can be both unintentional, pushed forward by market conditions, or an active effort to export regulations. Bradford further conceptualizes that the EU does "not have to do anything except regulate its own market to exercise global regulatory power" (2019, 2). Thus, she names the interplay between EU regulation and market forces as the main driver of the externalization of those regulations, giving rise to the Brussels Effect. (Bradford 2019, 2).

Anu Bradford distinguishes the "de facto Brussels Effect" and the "de jure Brussels Effect" (2019, 2). The de facto Brussels Effect seeks to explain how global actors such as firms react to stringent EU regulations by adjusting their conduct. It focuses on the business incentives to extend the EU regulation – without the interference of a foreign government. The de jure Brussels Effect, on the other hand, concerns the foreign government that adopts an "EU-style regulation" (2019, 2), for instance as a response to the preceding de facto Brussels Effect. The de jure Brussels Effect is mostly pushed forward by lobby groups of affected foreign companies to guarantee their domestic competitiveness against companies that do not export to the EU and that did not have to adjust their conduct to EU regulations (Vogel 1995). Looking at the number of factors that influence a jurisdiction's decisions to adopt a regulation and the difficulty to separate motivations that lead a government to adopt an EU-style law, Bradford

suggest that the term “de jure Brussels Effect” can be used in a broader sense to describe “mechanisms that transmit EU rules to foreign jurisdictions” in general (2019, 2). Empirically, Bradford argues that “de facto regulatory convergence” is much more evident than de jure regulatory convergence. For instance, most of the US competition laws and rules on food safety have not been changed by U.S. legislators, while many U.S. firms “voluntarily” choose to comply with EU standards in the form of uniform production across its consumers.

2. Theoretical derivation

There are different ways in which legal norms and policies travel from one jurisdiction to another and thus shape political and legal landscapes in certain policy areas. Comparative legal scholarship can be found particularly in the context of so-called legal transplants. Moreover, policy transfer and diffusion are discussed in subcategories of comparative political science (Hadjiyianni 2021, 248). The political scientist Fabrizio Gilardi categorizes four pathways of policy diffusion (2016, 8): Firstly, policies can be transferred abroad by coercion. A prominent example of this pathway is the EU’s accession process and the requirement to incorporate the “*acquis communautaire*”, i.e. the collection of rights and obligations in EU law into the national legal system. Secondly, competition and market access can be drivers for policy diffusion. This link was first discussed in David Vogel’s “California Effect”. In his work, Vogel explains that the U.S. state of California, with a large market and a focus on stringent consumer and environmental regulations, managed to set standards for all the other states in the U.S. Accordingly, many firms that intend to export to California, standardized their production according to Californian standards for all its U.S. American consumers because of the benefits coming from uniform production and economies of scale (Vogel/ Kagan 2004, 4-5). Thirdly, policy diffusion can occur by learning, i.e., by “complex processes of using the experience of other countries in assessing the consequences of particular policy choices when formulating domestic policies” (Hadjiyianni 2021, 248). The importance of “learning” in political science is also emphasized by the meta-theory of constructivism. Scholars like Alexander Wendt argue that (political) actors act based on ideas or values and their interpretation of a situation, e.g., by learning and comparing their conduct endogenously (1992, 416 ff.). The theory is used to explain the normative power of the EU and the processes

of European integration. For instance, the conditionality of EU accession is linked to value-based criteria that candidates must comply with. The idea of normative power is an opposing force to “traditional” concepts of power in the sense of “hard power” (economic power, military power) (Bradford 2019, 24). Goldthau and Sitter nominate the EU as a “soft power with a hard edge” and argue that the EU is making up for its lack of hard power through its regulatory tools (2015, 942). Lastly, Gilardi coined the category of “emulation”, i.e., the adoption of policies because they are perceived normatively desirable (Gilardi 2016, 8; Hadjiyianni 2021, 248). Bradford’s Brussels Effect includes multiple categories at the same time, depending on the regulation or policy field which is at stake. For instance, the externalization of the general digital policy of the EU, embedded in a value system and strategy, can be categorized as a process of emulation (Biedenkopf 2015). Bradford’s theoretical framework on the Brussels Effect also builds on theories of regulatory competition and convergence (Drezner 2005, 841). Bradford claims to provide a corrective “to the debates that portray the EU as a weak and declining player that has acquiesced its global role to a preoccupation with numerous existential crises.” (2019, 4). She further links the effect on current debates about the roles of governments and markets in a globalized world economy. Her framework particularly addresses the criticism of globalization leading to a “race to the bottom” (Tonelson 2002, 14-15) where governments lower their regulatory standards to increase their global economic competitiveness. Economists have shown that international trade has, in fact, evoked a “race to the top”, where global market integration has led to more stringent domestic regulations (Spar/Yoffie 2000, 31-51). This is also the essence of Vogel’s work on the California Effect. The Brussels Effect builds on this California Effect, expanding the dynamics from the U.S. federal system to the global market. Furthermore, Bradford conceptualizes additional conditions for a regulatory convergence to flourish, while the theory of the California Effect is limited to market size and scale economies as the reason for “external regulatory clout” (2019, 5). Offering an even more diverse theoretical framework for regulatory influence abroad, the scholar claims the general character of her theory. She argues that “what today amounts to the Brussels Effect may one day be described as the “Beijing Effect” – assuming that the requirements of her theories are met (2019, 5). In addition to that, the theory of the Brussels Effect also originates from existing literature on the

relationship between regulatory convergence and regulatory power. Different scholars, such as Daniel Drezner argued that rival standards can emerge between jurisdictions. The dominance of one or another depends on the jurisdiction's relative power position to seek supporters for their regulatory preferences (Drezner 2005, 850). Building on this, Bradford, however, claims that the outcome of the regulatory race with the conditions of the Brussels Effect is predetermined: the more stringent regulator prevails. To sum up, the Brussels Effect stems from these different drivers of policy convergence – coercion, learning, market access, and emulation i.e., normative desirability. This becomes evident by looking at the context and conditions of the EU's external influence which will be analyzed in the following.

3. Context and dimensions of the EU's external influence

Bendiek and Stuerzer argue that the Brussels Effect has an internal as well as an external dimension. The analysis of these two dimensions is important to put the global regulatory power of the EU into a broader context. Moreover, it aids in analyzing the motivations for “exporting” EU standards and shaping the digital sphere globally.

a) Internal dimension

To understand the origins of the EU's unilateral regulatory power, one has to analyze its “regulatory DNA”, i.e., relevant actors and domestic (historical) processes that drove such a development.

(1) Relevant institutional structure

Relevant institutions for law- and decision-making in the EU are on the one hand the three intergovernmental or supranational EU institutions of the Council of the European Union (Council), the European Parliament (EP), and the European Commission (Commission), and on the other hand national parliaments of the member states, as well as the European Court of Justice (ECJ) for the interpretation and enforcement of regulations (Horspool/Humphreys 2010, 39-70). The Council and the EP are co-legislators. The Council is composed of national

governmental ministers, meeting on different “configurations”. The EP is the only directly elected EU organ and consists of 751 MEPs. The Commission is the executive organ of the EU and holds the exclusive right of initiative for legislation. It is composed of 27 Commissioners, one from each member state. As the “guardian of the treaties”, the Commission is ought to be politically independent and to defend the common interests of the European Union as a whole. Therefore, there is strong commitment to European integration (Hix 2006, 141). The Commission’s powerful position is characterized by its proactive agenda-setting, its rights to challenge non-complying member states before the ECJ and its right to negotiate in international treaties (when mandated by the legislators). Particularly in the field of exclusive competencies of the EU, the Council has equipped the Commission with regulatory powers. An evident example is the field of competition law. The Commission initiates and drafts regulations (Bradford 2019, 15). Via regulation, it can expand its competencies (Majone 1996, 61,64). Giandomenico Majone observed that the Commission has built an “empire of laws and regulations even though it lacks budgetary means of traditional budgetary powers of states” (e.g., tax allocation) (1996, 64). Lastly, the ECJ and its case law play a crucial role to develop and enforce EU legislation. The ECJ’s authoritative interpretation of critical legislative acts has led to the emergence of legal principles (e.g., the supremacy of EU law¹ or the “direct effect”²) and to the extension of transferred competences (for example Art. 114 TFEU). According to Mark Pollack, all of these institutions have a “shared organizational preference for greater integration” vis-à-vis the member states (Pollack 2003, 384-385; Bradford 2019, 17). Another critical part of EU regulation and legislation is the role of national parliaments and jurisdiction which form a part of the EU’s political and legal apparatus. Many EU laws have their origins in member states (Vogel 2012, 244). For instance, the EU’s environmental regulations were influenced by German and Dutch environmental laws (Selin/ VanDeveer 2006, 10-11). Additionally, national parliaments have conditional control and information rights.

¹ ECJ - Case C-6/64, *Faminio Costa v. E.N.E.L.*, 1964 E.C.R. 585.

² ECJ - Case C-26/62, *Onderneming van Gend & Loos v. Neth. Inland Revenue Admin.*, 1963 E.C.R.3.

(2) The process of European integration as a driver for regulation

The establishment of the single market has been the main material driver for stringent regulations and policy spillovers in the Union. Market integration required harmonization of environmental, social (or other legal) standards to guarantee a uniform regulatory environment within the Union. Pushing forward European integration, most regulations had a “dual purpose” (Bradford 2019, 10): the specific, material purpose of its regulation and the broader purpose of greater market integration (Damro 2012, 687). Two main instruments for the EU’s regulatory agenda are the principle of minimum harmonization and mutual recognition of national standards.³ Minimum harmonization (compared to full harmonization) requires EU regulations to be as limited as possible to guarantee the functioning of the single market while giving member states the opportunity to opt for even more stringent regulations. According to the mutual recognition principle, member states “must recognize each other’s regulation as sufficient, as long as they equally protect the public interest in question” (Bradford 2019, 10). Moreover, the EU has the tendency to harmonize standards upwards which facilitates regulatory rulemaking by assuming the standards of member states with more stringent rules which is crucial for the emergence of the Brussels Effect as discussed later. In negotiations, generally, the lowest standard is assumed when the consent of all members is needed. However, within decision-making in the EU, this is often not the case, for several reasons. Firstly, historically stringent rules in the field of consumer health and safety were framed to represent a counter-balancing social component to the quickly proceeding economic integration and liberalization (Zacker 1991, 249, 264). Secondly, the Commission has “found it easier to convince regulatory laggards to respond to their citizens’ demands for greater protections rather than trying to persuade the first movers to back down and repeal their domestic protections” (Bradford 2019, 11). For instance, low-regulation member states could be persuaded to agree to sign the Social Protocol annexed to the 1992 Maastricht Treaty by offering structural funds as compensation for higher costs resulting from higher social protection standards.⁴ A third technique to facilitate regulatory rulemaking by harmonizing up

³ECJ - Case C-120/78, Rewe-Zentral AG v. Bundesmonopolverwaltung für Branntwein, 1979 E.C.R. 00649; (“Cassis de Dijon” judgement).

⁴Treaty on European Union (Maastricht, Feb. 7, 1992), Protocol on Social Policy, 1992 O.J. (C 191) 196.

includes the alignment of interests through “dual purpose regulations”. For instance, claims for legal certainty for businesses and claims for higher social standards by civil society stakeholders such as NGOs can go hand in hand by (high) harmonization instead of differing national standards. This contributed to a “fertile ground for compromise” among different stakeholders (Bradford 2019, 12). Bendiek and Stuerzer call these consensus-based and inclusive deliberations within the EU its “political capital” which serves as an instrument for their globalization by offering legal certainty and political commitment (2023, 1). Additionally, package deals are a tool to facilitate regulatory rulemaking and are linked to these compromise-finding processes. Package deals refer to the “practice of deciding on multiple legislative proposals together in order to harness support for them from a wide variety of interest groups” (Bradford 2019, 13-14). Furthermore, treaty changes regarding the voting system have facilitated decision-making and upward harmonization. Since the 1978 Single European Act there has been a continuous move towards qualified majority voting of the Council (requiring 55% of the votes of member states, representing a minimum of 65 % of the EU’s population) instead of unanimity in selected policy fields (U.K. 2004). Lastly, the regulatory landscape within member states is relevant. There are pro-regulation member states, often wealthier countries with high growth rates and competitive economies that are equipped with more negotiation weight. These countries often have domestic regulatory experience and expertise. Therefore, many technical experts that advise the Commission are recruited from these countries (Bradford 2019, 14). In summary, one can detect the process of European integration as a driver for regulation, but at the same time, the externalization of these regulations is reinforcing domestic political agendas. Bendiek and Stuerzer argue that “the Europeanisation of international standards and third parties’ regulatory policies provides incentives to member states to comply with and agree on European regulation” and consequently deepens integration further (2023, 5).

b) External dimension: emerging external regulatory agenda

Having been observed as an incidental by-product of internal motivations earlier, recently there is a more conscious external EU agenda, dating back to the establishment of the World Trade Organization (WTO) in 1995. Even though most EU regulations have always served

intra-European integration purposes, Bradford argues that there has been an external positioning of the EU as a “global regulatory hegemon” (2019, 21). Reviews of Commission communications indicate that “the Commission is becoming more self-conscious of the need to externalize EU rules as well as its increased ability to do so” (Bradford 2019, 21). For instance, the institution announced that “[t]here is a window of opportunity to push global solutions forward. The EU is in a good position to take a lead, promoting its modern regulatory framework internationally” (Commission Staff 2007, 8). According to Bradford, the external motivations supplement the internal agenda of EU institutions.” (2019, 23). Motivations for an external dimension of the EU’s regulatory power are versatile. Firstly, there are economic incentives to protect the competitiveness of the European industry (Tucker 1998, 3), particularly by freeing European companies from adjustment costs abroad (Bradford 2019, 23). Secondly, externalizing the European regulatory experience can help increase the legitimacy of its rules (Vogel 2012, 13), leading to less conflict in international fora such as the WTO (Bradford 2019, 23). Thirdly, there may be ideological motivations due to the conviction about the normative desirability of the European governance model (Bradford 2019, 24). Additionally, in the last decade, the geopolitical context has been relevant. For instance, WTO rulings are being drowned out by rising trade competitiveness between the US and China. Lastly, the EU may assume the role of a global standard setter to prove its remaining relevance globally.

4. Conditions

Having analyzed the theoretical background of the EU’s regulatory power to understand the context of the Brussels Effect, one can now move on to its conditions. Bradford argues that there is a set of criteria to be met to affirm a unilateral regulatory power. Unlike previous theoretical frameworks suggested, market size is an important but not the only important condition. What distinguishes the EU, and its Brussels Effect is the combination of a large internal market and an “institutional architecture” (Bradford 2019, 25) that gives room for regulatory influence. According to Bradford’s model if a) large market size is combined with b) sufficient regulatory capacity to exercise authority, and if these c) stringent regulatory standards are being adopted and enforced by institutional structures, a jurisdiction can display

unilateral regulatory globalization. This is even more the case when the targets of regulation are d) inelastic and concern e) non-divisible conduct or production. In the following these general conditions will be further explained, narrowing them down to the specific context of the European Union. This can help explain “why the EU – and not, for example, the United States – wields unilateral influence across a number of policy areas” (Bradford 2019, 26).

a) Market size

The first relevant factor is the market size. The larger a market, the bigger its economic power (Drezner 2005, 843). The EU’s large important market emphasizes its affluence and outweighs adjustment and opportunity costs for trading partners to adapt to policies and regulations that come with its usage (Christen/ Meyer 2022, 14). The European Union holds the world’s largest single market with free movement of goods and services (Dempsey et al. 2021, 6). According to Chad Damro the EU’s identity is “crucially linked to its experience with market integration” (2012, 682) presenting a strong bond between the single market and the EU’s ability to globalize its regulatory measures. Factors that enhance a jurisdiction’s market power include the value of access (measured in the adjustment costs associated with market entry such as initial setup costs or recurring compliance costs). Therefore, producers are likely to comply with the stringent rules of a jurisdiction comparing adjustment costs to the advantages of market entry (Young 2003, 457, 459). With a gross domestic product (GDP) of \$ 16,6 trillion in 2022 (IMF 2022), the EU is the third largest economy in the world (in nominal terms), accounting for 1/6 of global trade (Rao 2023). While the US, Chinese, and Japanese markets compete with the European market in terms of market power, the EU outstands with its significant consumer market. Bradford argues that the European consumer market is bigger compared to the U.S. consumer market, and more affluent than the (size-wise larger) Chinese consumer market. Even though these dynamics may change with the fast emergence of the Indian and Chinese economies, with increasing purchasing powers of consumers, for now, most firms do not have many incentives to abandon the European market (Bradford 2019, 28). Additionally, as Bradford argues, the value of access to the EU’s single market has been growing due to its Enlargement and Neighbourhood Policies. The market benefitted from a higher integration as new countries entered the Union as well as due to the association

agreements within the context of the European Neighbourhood Policy (Bradford 2019, 28). Looking at export markets, countries such as India, the United States, and secondarily China or Brazil are important trading partners. For instance, 87 % of the US export of pharmaceutical products, 45% of textiles produced in India, 40 % of toys produced in China, and 51 % of coffee produced in Brazil go to European consumers (Bradford 2019, 29).

However, the limits of the Brussels Effect in terms of market size lay in the availability and attractiveness of alternative markets. Bradford gives the example of hazardous waste management in the EU. “Illegal transfers of hazardous waste remain common as producers have considerable incentives to evade costly regulations by finding jurisdictions that do not enforce waste management standards” (2019, 30). Accordingly, externalization of regulatory power is easier to accomplish by preventing imports to the own market instead of when policies that limit exports to third countries are at stake (O’Neill 2004, 156-58). To conclude the condition of market size is crucial as the allowance or denial of market entry represents an effective leverage of the EU to enforce compliance with its rules.

b) Regulatory capacity

Secondly, one has to analyze the regulatory capacity. As opposed to the market size, a state’s regulatory capacity reflects its political economy and affirmative decisions to create institutions, equip them with regulatory capacity, and connect market power with regulatory influence (Bach/ Newman 2007, 827). According to Bradford, regulatory capacity refers to “a jurisdiction’s ability to promulgate and enforce regulations” (2019, 31). Necessary tools, therefore, are expertise and resources to obtain authority over market participants. In particular, the authority must have the means to impose non-compliance costs and sanctions. Countries which do not hold a high degree of regulatory capacity are unlikely to be able to externalize global regulatory authority. Bradford gives the example of China – among other examples of Asian economies – whose economy is growing at a very fast pace but lacks independent bureaucratic institutions overseeing national market rules (Kalyanpur/ Newman 2018). As a supranational organization sui generis, the EU holds an essential benefit here compared to “regular state actors”: Since the adoption of the Single European Act in 1986, the

member states transferred major regulatory competences to the Union. Giandomenico Majone states that the “Europeanisation of policy making” led to an “exponential growth [...] of the number of directives and regulations produced by the Brussels authorities each year” (1997, 139 f.). While the treaties foresee regulatory competences only in policy areas in which the member states have granted such a transfer (“principle of conferral”)⁵, in practice the EU has extended its regulatory capacity due to different institutional changes under the premise of deeper integration: Firstly, the development of extending and completing the single market had the side effect of extending the Union’s regulatory toolset (Bradford 2019, 32). Art. 288 TEU sets out the legislative instruments. Regulations are the main tool used. These are binding legislative acts and must be applied in their entirety in the member states as opposed to directives that only set a goal and give member states leverage to transform the legal content into their national law or non-legislative or non-binding acts such as decisions, recommendations, or opinions. Secondly, the powers and administrative means of the Commission, the Council, and the EP, which are the key actors in EU policymaking have been extended exponentially in the last decades. Moreover, the EU has a double-track regulatory apparatus: its own bureaucratic force for regulation within the three key institutions on the one hand and the ability (and obligation) to delegate enforcement of its regulation to the member states (Bradford 2019, 32, 33). Here, particularly the role of the Commission and EP are essential. The nature of the Commission as a supranational institution affects the objectivity and motivations of its staff. Its administrative apparatus “revolve[s] around a teleological vision of the EU, one that sees deeper integration as the means of achieving broader political goals” (Ellinas/ Suleiman 2011, 924, 941). The expertise of the Commission is complemented by European regulatory agencies (ERAs) which provide “additional expertise, personnel and information” (...) under the Commission’s patronage and leadership” (Peterson 2015, 185). Additionally, the Commission holds monitoring and sanctioning instruments such as imposing fines in the case of infringement proceedings in competition law.⁶ As an ultima ratio, the Commission can deny access to the EU market in the form of (temporary) bans

⁵ Art. 5 Treaty on the European Union (TEU).

⁶ Article 23(1) of Council Regulation (EC) No. 1/2003 of 16 December 2002 on the implementation of the rules on competition laid down in Art. 81 and 82 of the Treaty.

(Bradford 2019, 34).⁷ Furthermore, the gradual empowerment of the EP and more specifically, the introduction of the co-decision procedure as a default mode of legislation, has helped strengthening the legitimation of EU decision-making. Since the Lisbon Treaty, the directly elected Parliament acts as a supporting decision-making institution to the Council. Serving the interests of its voters, the EU citizens, the EP “is known for its pro-regulation stance, typically supporting enhanced environmental regulation and consumer protection” (Bradford 2019, 35). All in all, one can observe a growth in the EU’s regulatory competences which was further pushed forward by the above-mentioned changes linked to progressing market integration. Lastly, the ECJ’s role as an “activist court” (Kelemen/ Schmidt 2012, 19) has contributed to the extension of the EU’s regulatory powers.

c) Inelastic targets

Moreover, there must be inelastic targets. Immobile (and thus inelastic) targets are more stable towards market forces as opposed to mobile targets. For instance, looking at consumer markets, the fixed location of the consumers within the EU determines the application of EU regulations to a product. Therefore, producers cannot switch to an alternative market with favorable regulations without losing access to the regulated market. This makes the producer inelastic or immobile (Bradford 2019, 48). On the contrary, mobile targets, such as capital, can be easily transferred to another jurisdiction to avoid falling under the scope of a regulated market. Elasticity is a characteristic in the fields of corporate law and maritime law (Bradford 2019, 49).

Most EU regulations, particularly in the environmental field or in competition law are constructed in a way that makes them inelastic so that authorities do not have to fear their “regulatory targets” (Bradford 2019,49) to be able to circumvent regulation; “[An] inelastic consumer market allows the EU to regulate up to the point where the regulatory burden is less than the significantly higher cost of exiting the European consumer market entirely.” (Bradford 2019, 51). Looking at the difficulties regarding the elasticity of capital, the

⁷ Art. 6 of the Regulation (EU) 2019/ 515 of the European Parliament and of the Council of 19 March 2019 on the mutual recognition of goods lawfully marketed in another Member State and repealing Regulation (EC) NO. 764/2008.

Commission has in the past (so far unfruitfully) proposed major corporate tax reforms, particularly in the digital sphere (“digital tax”) (Khan 2018). These considerations go hand in hand with discussions about regulatory races and “forum shopping”. Weighing the benefits and risks of economic globalization, in many regulatory fields one can observe a “race to the top” instead of the often proclaimed “race to the bottom” (empirically observed in the field of mobile capital) (Vogel/ Kagan 2004, 13). The focus on inelastic targets also gives ground to why a “Washington Effect” (i.e., a process of unilateral regulatory globalization caused by the U.S.) is less likely than the observed Brussels Effect. This is due to the choice of the United States to regulate elastic targets (particularly in the financial sector) (Bradford 2019, 53). For these reasons, a Brussels Effect is more effective on inelastic targets (Christen/ Meyer 2022).

d) Stringent regulations

A potential regulatory capacity must be backed up by political motivations to deploy regulatory influence by imposing stringent regulations. Guasch and Hahn have found that “domestic preference for stringent regulation is more likely to be found in countries with higher levels of income” (1999, 137 f.). Countries with higher economic growth can more easily afford the costs of stringent rules. However, among highly developed countries, one can detect different trends and narratives in the regulative field. Bradford conceptualizes four main (general) reasons for the EU’s “pursuit of distinctly stringent rules” (2019, 39).

Firstly, there has been a shift in citizens’ perceptions since the 1990s. By the end of the 1980s, the European Union had passed the regulatory activity of the United States in the field of consumer and environmental protection. Europeans demanded more regulation, stressing that the “health, safety, and environmental risks” caused by businesses are “politically unacceptable” (Vogel 2012, 22-42; Bradford 2019, 37). The (at that time) newly developing “precautionary risk culture” (2019, 38) was triggered by a set of events such as discussions about radioactive waste following the Chernobyl nuclear disaster or the intoxication of the Rhine River in Germany by a chemical spill in 1986 (Vogel 2012, 22-42). Secondly, regulation was an essential part of pushing forward European Integration and the completion of the Single Market by the early 1990s, causing spillovers to new policy areas such as environment and social policy. Moreover, the reform of EU politics (e.g., extension of qualified majority

voting) made law- and policymaking more effective. This broader integration agenda was therefore underpinned by an agenda to realize stringent regulations (Bradford 2019, 39). Thirdly, ideology plays an important role in the EU's overall predisposition to promote stringent rules. Looking at the "traditional" market – government dichotomy, Europeans are found to be in favor of government intervention to outweigh market failure (Smith 2012). Particularly compared to U.S.-American capitalism, the European economic system is marked by its social market economy and welfare policies. Furthermore, in the last decades, the aspect of sustainable development was added to the agenda. These socio-economic characteristics are fundamental parts of European values, enshrined in the Treaties of the Union. Bradford argues that the single market is backed up by this "regulatory philosophy" (Bradford 2019, 39), leading to today's levels of regulatory activism. The pro-regulation agenda was influenced by its most influential and historically important member states, such as France and Germany. Both countries are historically associated with state interventions in economic governance. The social market economy was developed in Germany in the 1950s (Clift 2012, 565). Similar socioeconomic policies and welfare systems can be observed in Nordic countries and in the Netherlands. Additionally, the relatively strong role of the government also characterized and still characterizes post-communist EU member states (Lane 2007, 470). Most European countries (for different historic reasons) prefer features of a "coordinated market economy" instead of a "liberal market economy"⁸ (Pistor 2005). To sum up, one can observe a consensus in social protection responsibilities within the EU (Bradford 2019, 41). Lastly, Bradford gives the procedural argument of the "relative importance of public regulation over private litigation and lower threshold for intervention by regulators in cases of uncertainty" for the pursuit of stringent rules. She argues that the EU's use of regulatory instruments stems from the preference for ex-ante government regulation instead of ex-post private litigation (Bradford 2019, 41). As an American scholar, Bradford draws this conclusion as a contrast with rulemaking in the U.S. Unlike the focus on private litigation that can be observed in the U.S.-American legal system, the EU's administrative system relies more on stringent regulatory standards to minimize risks. This is evident in the Union's institutional structure as well.

⁸ Treaty of Lisbon Amending the Treaty on European Union and the Treaty Establishing the European Community, Dec. 13, 2007, 2007 O.J. (C306), Art. 1(4).

Compared to a traditional national court's limited scientific expertise, the pro-active European Commission consists of specialized Directorate Generals. Holding the right for initiative of new regulations, the Commission turned into a technocratic agency that holds expertise in different policy areas and thus is able to prepare ex-ante regulations. This choice between private tort law and public regulation anticipates a broader systematic legal differentiation between the common law legal system and continental European legal systems. Apart from these legal differences, there is also a general "precautionary attitude" (Bradford 2019, 43) in the EU which gives regulators more room to exercise preventive control before harm occurs. Nevertheless, the ECJ's activism should not be underestimated, particularly in the field of consumer protection and data protection (Bradford 2019, 43). Another process-driven reason for the EU's stringent regulations concerns the role of cost-benefit analysis (CBA) and precaution according to Bradford. Like many other jurisdictions, the EU analyses the costs and benefits of regulatory action before creating legislative proposals⁹. This EU CBA is more holistic and flexible compared to CBA in other jurisdictions such as the U.S., giving more space for regulators to intervene. Moreover, there is an EU-wide adoption of the "precautionary principle", dictating that "precautionary regulatory action is proper even in the absence of an absolute, quantifiable certainty of the risk, as long as there are reasonable grounds for concern that the potentially dangerous effects may be inconsistent with the chosen level of protection" (Harrell 2012). Originating from German environmental policy, this principle was first set up in the Maastricht treaty. In the decades ahead, the principle emerged as a key component of the EU's regulatory activism. Additionally, the ECJ has incorporated the principle into the "general principles" of EU law.¹⁰ Nevertheless, these stringent regulations are not evident in every policy field of the Union. There are several policy areas where harmonization had failed for different internal political reasons. One of the main issues here is the question of corporate tax harmonization (12,5 % in Ireland vs. almost 30% in Germany) (Castle 2011; Statista 2021). Another limit for the EU's global regulatory power is instances where other states have even higher standards than the EU, e.g., in subfields of consumer protection and food safety.

⁹ Communication from the Commission on Impact Assessment, COM (2002), 276 final (June 5, 2002).

¹⁰ Joined Cases T-74, T-76, T-83, T-84, T-85, T-132, T-137, T-141/00, *Artegodan GmbH v. Commission* 2002 E.C.R. II-4948.

e) Non-divisibility

Lastly, a Brussels Effect requires non-divisibility. In fact, for a stringent standard to be globalized, corporations must have the incentive to opt-in to extend the regulatory condition to their global operations. There needs to be an active decision on complying with the new standard. The probability of doing so increases when non-divisibility can be guaranteed. “Non-divisibility refers to the practice of standardizing – as opposed to customizing – production or business practices across jurisdictions and hence applying a uniform standard to govern the corporation’s global conduct.” (Bradford 2019, 54). In economic terms, this applies particularly when scale economies can maintain a given production process instead of having to diversify production processes (Drezner 2005, 844-845). When producers do not adjust their production for every single market they are serving, this leads to a limitation of product variety. Developing from this analogy of a “tyranny of the market” (Waldfogel 2007), Bradford argues that with the Brussels Effect, “it is the duality of both the market and the government that gives rise to uniform production” (2019, 55) as many producers solely offer the “EU-variant” of their product globally (2019, 55). This serves as an additional argument for why producers are complying with the most stringent regulations. Bradford further distinguishes between three varieties of non-divisibility: legal, technical, and economic non-divisibility (2019, 55).

Legal non-divisibility refers to legal conditionality as a driver of uniform standards, in the form of spill over effects from the more stringent jurisdictions to other jurisdictions. Accordingly, due to interdependencies between international regulations, companies opt to standardize their global business operations to avoid costs of differing legal liability costs. Examples can be found in the fields of competition law and price fixing (Bradford 2019, 57). Technical non-divisibility refers to the technological difficulty to spread production or service across different markets. This type of non-divisibility is highly significant in the field of data protection. Another example given by Bradford includes the EU’s regulations of food safety, more specifically the use of pesticides in the farming industry. Producers in the farming industry are less likely to use certain EU-banned pesticides on their fields where non-EU market-targeted crops are also yielded due to the technical difficulty to prevent cross-pollination. There is always a remaining

risk that pesticides used in one field have an influence on crops in neighboring fields (that have to conform with EU regulations). This led to a standardized production process in large parts of the farming industry (Bradford 2019, 58). Lastly, economic non-divisibility refers to the fact that companies tend to refrain from producing different product varieties for different markets due to economic pressures for standardization. The first one entails the “importance of scale economies associated with uniform production” (Bradford 2019, 58). According to Bradford, this type of non-divisibility is the most prevalent one for the relevance of global standards. Examples include EU chemical regulations and industries relying on highly integrated global supply chains (2019, 59). Economies of scale by standardization decrease unit and consequently production costs (Levitt 1983, 39-49). In fact, this aspect of economic non-divisibility in the context of economies of scale was used to demonstrate the “California Effect”. Economies of scale bear numerous advantages apart from cost advantages of production, such as quality control and adjusting to changing market conditions (Bradford 2019, 61). Apart from scale advantages, single standards also contribute to the establishment of a global brand and image (Vogel 2012, 16). For instance, companies that take advantage of low standards on environmental practices or child labor in foreign jurisdictions risk their image in jurisdictions with more stringent standards due to increasing consumer awareness and activism (Bradford 2019, 62). Despite these considerations, most economic conduct remains divisible and therefore composes limits of the Brussels Effect, i.e., unilateral globalization of an EU regulatory standard. This is the case when the costs of product diversification are proportionate and local preference customization is needed or wanted. Examples include products and services which are subject to Intellectual Property Laws (e.g., patent protections) or when national differences such as languages are concerned (e.g., distribution of books and magazines) (Bradford 2019, 62). Additionally, consumer preferences, e.g., the change of sugar levels of certain products from market to market may hinder non-divisibility (Schwartz 2015). To conclude, a unilateral externalization of standards by a single jurisdiction requires a “large domestic market, sufficient regulatory capacity, a preference for stringent standards, tendency to regulate inelastic targets, and non-divisibility of production” (Bradford 2019, 63). Nevertheless, the importance of these specific conditions may vary from policy area to policy area. Particularly the first three conditions are discussed as being crucial in literature. Bradford

argues that these conditions are generic and can help explain any jurisdictions' unilateral standard-setting power such as a "Washington Effect" or the "Beijing Effect" if the conditions were to be affirmed. However – of course – they are as relevant when describing the Brussels Effect and the EU's regulatory power on a global scale (2019, 64).

5. Demarcation of the Brussels Effect from the California and Beijing Effects

In order to grasp the importance of the Brussels Effect and to explain the impact of the EU's regulatory power, it can be helpful to demarcate it from potential influences of other actors in the global regulatory landscape, for instance in the sense of a "California" or "Beijing Effect". This demarcation gets particularly relevant in the field of digital policy as will be explained at a later point. All the mentioned jurisdictions can "influence actors beyond their borders by setting regulatory standards" (Bendiek/ Stuerzer 2023, 18). The main political weight of the Brussels Effect comes from the idea that private companies will design their terms of business in compliance with European standards and lobby foreign governments to adopt legislation convergence with EU law for legal certainty, all to guarantee market access in Europe. In comparison to that, the California Effect (which served Bradford as a theoretical predecessor) explains the importance of the market size of the state of California which has the biggest GDP in the U.S. Bradford transfers this effect on a global level by looking at the EU. She argues that the Brussels Effect is broader in reach as Californian law still has to be consistent with U.S. federal law while the EU, as an organization sui generis has a specific legal character. Bendiek and Stuerzer further evaluate that the Brussels Effect has even more leverage due to enhanced political credibility resulting from intensive domestic debate and compromise in the European Governance system (2023, 12). On a federal level, in the context of a "Washington Effect", as discussed above, regulatory activity and interest are limited to specific policy fields and mobile targets. Looking at the (purported) Beijing Effect, Matthew Erie and Thomas Streinz argue that China's growing global influence beyond its border can be explained by a "combination of push and pull factors" (2020). It is particularly linked to data governance and technological services. The scholars give empirical evidence for China's rising influence in developing economies due to provisions of technological know-how and equipment which can build a basis for a potential "Beijing Effect". The essential difference here is that the Brussels

Effect is mainly addressed towards national economies that are bigger than the European one while China's influence is currently directed towards developing countries. Moreover, scholars argue that the Beijing effect only serves as an economic benefit while the Brussels Effect has a "liberal" component. This is debatable, however, particularly in the field of digital policy and data economy. Moreover, the Chinese legislative process is less transparent and there is less legal certainty as Chinese National Intelligence Laws can be adopted or amended quickly (Bendiek/ Stuerzer 2023, 18). These considerations make it less likely for a Beijing or California Effect to occur in the near future, giving at the same time more weight to the relevance of a Brussels Effect.

6. Conclusion

The EU's internal and external regulatory capacity, stringent regulations, and large and affluent consumer market size are fundamental preconditions that push forward the European Union's regulatory power. Combined with inelastic regulation targets and non-divisibility in certain policy fields, the EU can unilaterally set global standards and has a regulatory advantage compared to other global players such as the U.S. or China. This effect is backed up internally by the EU's institutional structure and its domestic drivers for regulation which create a favorable environment for regulatory activity. Externally, the EU is developing an emerging outward agenda which gives more leverage to a Brussels Effect. Not only market access and coercion but also learning and perceptions of normative desirability are crucial for the Brussels Effect. After having set this theoretical framework, the analysis will now continue with the particular field of digital policy. After a short introduction to the EU's approach to digital policy (including the relevant legislation and regulatory tools), the conditions of the Brussels Effect will be applied to the GDPR. The learnings from this analysis will be connected to another essential field of digital policy, AI regulation.

III. The EU's regulatory approach in the digital sphere

The assessment of the influence of the EU in the digital sphere calls for an anticipated analysis of its regulatory approach and common digital policy. Linkov et al. define digitalization as the enhanced interconnection of digital technologies to improve communication services and trade between people, organizations, and things (2018, 440). Digitalization precedes the technical process of “converting [analogue] information streams to digital bits” (Brennen et al. 2016, 3; Ritter et al. 2020, 180-190; Bednarcikova/ Repiska 2021, 2). It consists of the application of digital technological innovations into pre-existing systems (Fielke et al. 2020, 180). Digital transformation refers to the “unprecedented impact on society, industry, organizations stimulated by advances in digital technologies” (Feroz et al. 2021, 1530). Regulators such as the EU aim to legally frame the field of digital transformation to assess risks and vitalize potentials as effectively as possible. Digitalization trickles down to almost all dimensions of societal and economic life. Therefore, the field of digital policy aims to regulate technological infrastructure and digital content on the one hand and the socio-political, ecological, and economic spheres that are being significantly shaped and evolved by digitalization on the other hand (e.g., health sector, labor markets) (Reiners 2021, 267). Moreover, one can observe in the broader, global political-economic sphere, a market dominance of global tech companies that hold tremendous power, exceeding their economic nature. For instance, platform operators such as Meta have been found to facilitate the manipulation of political elections or give momentum to crimes due to their accumulation of big data and a high number of users. Examples are the Cambridge Analytica Scandal and the Livestream of the Christchurch Massacre in New Zealand (Bradford 2019, 132). While digital regulation also advances in U.S. states like California or Illinois, or in several Asian countries, the Union has proven leadership in specific areas (Dempsey 2022). Endeavours to regulate the digital sphere were intensified in the 2010s. In a first intensive phase of development between 2015 and 2017 the Commission followed the example of proactive member states such as Estonia and pushed forward the idea of a Digital Single Market, e.g., by creating investment and innovation-friendly environments on the one hand and safeguarding a consumers' rights perspective on the other. This two-pronged approach is a characteristic of the European political system. Between 2017 and 2020 the digital agenda was equipped with a foreign and

security policy dimension looking at data traffic with third states, cybersecurity, and actions against disinformation. Pre-existing legislation was dynamized and framed into societal contexts (Reiners 2021, 269 – 272). The endeavors peaked in the current Ursula von der Leyen-led Commission that introduced a “Europe fit for the digital age” as one of its six headline priorities for its strategic agenda.¹¹ In March 2021 the European Commission officially presented the “2030 Digital Compass: The European way for the Digital Decade”, a strategic policy program to reach numerous digital objectives by 2030. The “Digital Decade” includes the EU’s visions for 2030 “to empower citizens and businesses through digital transformation”.¹² The focus of activity is set upon strengthening the EU in crucial digital spheres (such as artificial intelligence or cyber security) through investments and by setting standards with global exemplary effect (Reiners 2021, 272). The Digital Decade is strongly linked to other strategic priorities such as the European Green Deal. Generally, different policy areas are affected by the digital agenda (Reiners 2021, 269). In its 2020 Communication, the European Commission announced three over-arching objectives “to ensure that digital solutions help Europe to pursue its own way towards a digital transformation that works for the benefit of people” and that respects EU values: 1) a technology that works for people, 2) a fair and competitive economy and 3) an open, democratic and sustainable society. According to the Commission “[for] Europe to truly influence the way in which digital solutions are developed and used on a global scale, it needs to be a strong, independent, and purposeful digital player in its own right. In order to achieve this, a clear framework that promotes trustworthy, digitally enabled interactions across society, for people as well as for businesses, is needed” (European Commission 2020, 3). Generally, the EU’s regulatory activity in the digital sphere shows geopolitical, economical, societal, and ecological dimensions. However, the concept of “digital sovereignty” and a “human-centric approach” are framed as being the leitmotifs by the relevant institutions and actors. In the following, it will be illustrated what the EU aims at with a human-centric approach to digitalization, how it is connected to the concept of “digital sovereignty” and what kind of tools the EU has, to execute the regulatory power in the digital sphere, potentially via a Brussels Effect.

¹¹ Ursula von der Leyen: A Union that strives for more. My agenda for Europe, 16 July 2019

¹² Decision (EU) 2022/2481 of the European Parliament and of the Council of 14 December 2022 establishing the Digital Decade Policy Programme 2030 (1)

1. A human-centric approach: The Third Way of Digitalization

Authorities have introduced the self-image of a European, “third” way of digitalization and digital governance. The European approach aims to ensure the computability of digitalization with the European Union’s values of human dignity, freedom, democracy, equality, rule of law, and human rights. Digital governance is aimed to be based on technological sovereignty as a tool to achieve a sustainable and competitive European economy and an open and democratic society (Reiners 2021).

The EU’s “third way” digital governance represents an alternative to the strategic rivalry between the Chinese and the U.S.-American (or more broadly Anglo-Saxon) models of digital governance. The EU High Representative Joseph Borrell has called the link between market power and digital policy design in the context of technological supremacy a “battle of narratives” where the Union must maintain her own values and pathway.¹³ The two geopolitical superpowers’ system rivalry is taking new dimensions and bringing along crucial changes of dynamism in the international system (see for instance, Demarais 2022). Therefore, particularly since 2017 the techno-political landscape in the digital sphere is shaped - on the one hand - by China’s authoritarian state surveillance model, characterized by technological “industrial policy”, protectionism, issues of intellectual property theft, digital repression, and strategic foreign direct investments. On the other hand, the U.S. is competing with its commercial/ capitalist model characterized by free markets, liberalism, and global tech giants (Barker 2021; Reiners 2021). EU-U. S. disagreements on trade and technological sovereignty under the Trump administration have shown weaknesses of the transatlantic bond. Moreover, the case of Edward Snowden and scandals such as Cambridge Analytica have diminished public support and trust in the U.S. narrative of digital capitalism among Europeans (Barker 2021). On a global scale, the role of technologies and narratives of digital transformation as ideological influencers for exporting governance models has increased. A vivid example is the export of high-tech mass surveillance technology by China to authoritarian regimes (Barker 2021; Frantz et al. 2020, 3). The EU’s “third way” emphasizes a geopolitical

¹³ High Representative Josep Borrell at EU Ambassadors Annual Conference 2022: Opening speech. https://www.eeas.europa.eu/eeas/eu-ambassadors-annual-conference-2022-opening-speech-high-representative-josep-borrell_en (accessed 9 June 2023).

framing of digital transformation and accordingly, a strategic agenda for the EU to leverage its regulatory powers in digital policy. The main goal is seen in steering the “megatrend” digitalization toward a sustainable transformation (Reiners 2021, 286). Moreover, it is essential to secure the trust of the public towards new technologies and the government or the EU’s capabilities to effectively intervene and guarantee legal certainty for economic development (Bendiek/ Berlich et al. 2015, 1). In addition to that, the size of the digital economy as well as the geopolitical effects emphasize the need for a common European approach instead of member states acting on a national level. To further understand the motivations of EU policymakers, one has to consider the perception of the digital world in the European Union. Pfeiffer and Carr observe that the digital narrative within the EU is “dominated by concerns about [...] security and that of their personal data” (2021, 6). Charles Michel, President of the European Council, emphasized this narrative at the 2021 Master of Digital Event by presenting observations of “abuse of personal data”, and “over-exploitation of data by companies in pursuit of profit” or by states for the purposes of surveillance. He stresses that European “[c]itizens will not accept to be transformed into objects, to see their personal and consumption choices guided by secret algorithms”. These concerns give a hint about the risk-averse and pro-regulation approach of the EU. This regulatory environment has been further pushed forward by disagreements on data protection within the EU’s transatlantic partnership (Carr/ Pfeiffer 2021, 13). Official Commission documents prove the external dimension of the EU’s regulatory activity in the digital sphere. In its 2020 Communication, the Commission emphasizes that “[the] European model has proven to be an inspiration for many other partners around the world as they seek to address policy challenges, and this should be no different when it comes to digital. In geopolitical terms, the EU should take leverage of its regulatory power, reinforce industrial and technological capabilities, diplomatic strengths, and external financial instruments to advance the European approach and shape global interactions.” (European Commission 2020, 13). To conclude, the EU justifies its “third way” of digital governance by emphasizing that it has its own values to defend globally, particularly looking at the general pro-consumer, pro-regulation attitudes.

2. Digital sovereignty

A second leitmotif that is frequently recited in strategic documents and speeches of the Commission in the framework of the digital decade is the idea of “technological” or “digital” sovereignty (Bendiek/ Stuerzer 2023, 4). Generally, two main understandings of the concept of “digital sovereignty” are eminent: digital sovereignty as regulatory power vs. digital sovereignty understood as strategic autonomy. Bendiek and Stuerzer argue that “the key tool for European re-sovereignisation is Europe’s regulatory power based on its norms and values.” (2022, 3). This is closely linked to the Brussels Effect which will be assessed in the context of digital policy and the GDPR in the next chapter. While critical voices emphasize the “misplacement” of the word *sovereignty* (in its traditional meaning and concept by the political scientist Carl Schmitt) within an EU context (Christakis 2020, 1), the concept as understood in the framework of regulatory activity and policy convergence seems coherent with the general framing of the EU’s role in the digital sphere. However, looking at the latter understanding or dimension of digital sovereignty as strategic autonomy, i.e., the “ability to act independently in the digital world” (Madiega 2020) the situation is more ambivalent. It is discussed that the dependencies on U.S.-American or Asian hard- and software producers and global value chains impose limits to the possible digital sovereignty (in the sense of strategic autonomy) of the EU (Baker 2021; Bendiek/ Stuerzer 2023, 4). On a global economic scale, the European Union is perceived as a “powerless spectator” (Christakis 2020, 16) compared to the U.S. or China. Nevertheless, the concept of “European strategic autonomy” has become a “buzzword” (Järvenpää et al. 2019; Christakis 2020, 40) in digital policy. According to Christakis, the “quest for strategic autonomy” is based on geopolitical concerns, technological dependencies (e.g., in the microprocessors sector), and the COVID 19-pandemic (2020, 41). These concerns have raised vulnerabilities in supply chains (Barker 2021). Therefore, the Commission is working on investment plans in the fields of quantum computing, microchips, cloud computing, cybersecurity, and artificial intelligence. Considerations of digital sovereignty can also lead to unjustified protectionist measures (see e.g., debates on data localization; Christakis 2020, 99). Balancing the degree of the quest for strategic autonomy is highly disputed and has the potential to disrupt or weaken the EU’s regulatory power that is based on considerations of normative desirability (Christakis 2020, 38). On the bigger picture,

the two understandings are often presented as being conflicting. Common criticism such as “Europe has missed the boat on building giant internet platforms” (Kelly 2020) or “referees don’t win” (Wolff 2020; Christakis 2020, 36) are justified in the sense that regulation alone will not lead to global leadership. Nevertheless, scholars argue that in the digital sphere, one can observe a “titanic struggle for regulatory dominance” looking at the discussion on the importance of international standard-setting (Sandbu 2020; Gross/Murgia/Yang 2019). The EU’s regulatory legacy and leadership thus equip it with a competitive advantage if the Brussels Effect proves to impact. In conclusion, both dimensions of digital sovereignty are essential to sustain the EU’s regulatory supremacy (Christakis 2020, 38).

3. Main tools and legislation

Keeping the above-explained leitmotifs and narratives in mind, one can analyze the set of tools that the EU has built up to transform the digital regulatory landscape and to push forwards its digital policy (Christakis 2020, 17). Firstly, there are numerous hard rules in the form of regulations and directives (Table 1 below). These go from provisions on cybersecurity to data protection to the regulation of hardware. Most legislation is initiated and enacted on the basis of the Digital Single Market Strategy (2015), falling under the shared competences to regulate the Single Market¹⁴, competition law which is an exclusive competence of the Union¹⁵ or under the Charta of Fundamental Rights (data protection)¹⁶. The focus will be laid on the GDPR, the Digital Services Act and Digital Markets Act and the proposed AI Act. Even though there are other important legislative works in the field of digital governance, these three legislative acts particularly represent “a seismic shift in how the EU regards digital policy, moving from voluntary codes to legally binding regulatory structures to ensure more accountability, transparency and responsible behaviour from market participants” (Dempsey et al. 2022). The legal basis for the EU’s regulatory activity is Art. 8 of the Charter of Fundamental Rights of the EU and Art. 114 TFEU for the AI Act and DSA/DMA in the framework of the digital market strategy.¹⁷

¹⁴ Art. 4 (2) TFEU.

¹⁵ Art. 3 (1) TFEU.

¹⁶ Art. 8 Charter of Fundamental Rights of the European Union, Art. 2 TEU.

¹⁷ EU AI Act Explanatory Memorandum Art. 2 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52021PC0206>.

Norm	Regulation	Description	Year of introduction
Digital Service Act and Digital Markets Act	COM(2020) 825 final and COM(2020) 842 final (EU) 2019/1024	Transparency requirements for large-scale digital platforms to create a safer digital space	Proposed in 2020
Open Data Directive	2022/0047 (COD)	Open data and the re-use of public sector information	2019
Data Act	COM(2020) 767 final	Fair access to and use of data	Proposed in 2022
Data Governance	2021/0136 (COD)	Framework for the re-use and sharing of data	Proposed in 2020
Digital Identity	(EU) 2016/1148	Provision of a European digital identity that can be used online, offline, in private and public sectors across the EU	Proposed in 2021
NIS Directive (NIS 2.0 Directive)	(EU) 2019/881	Network and information security that regulates capabilities, cross-border collaboration, and national supervision of critical sectors	2016, re-calibration for an improved framework (NIS 2.0) since 2021
EU Cybersecurity Act	2021/0106 (COD)	Cybersecurity certificate framework for information and telecommunication products and services for products for the EU Single Market, controlled by the EU Agency for Cybersecurity	2019
Artificial Intelligence (AI) Act	COM(2022) 46 final	Risk-assessment framework to regulate the access of AI technological products to the EU Single Market	Proposed in 2021
Chips Act	2021/0291(COD)	Framework of measures for strengthening Europe's semiconductor ecosystem	2022
Radio Equipment Directive		Common charger for electronic devices	2022

Source: Christen/ Meyer (2022: 51)

Table 1: Overview of recent proposed or passed EU legislation in the digital sphere

a) GDPR

The General Data Protection Regulation of 2016¹⁸ (GDPR) entered into force in May 2018 and replaced the 1995 Data Protection Directive.¹⁹ Starting with the history of EU data protection on a broader level, the first step to elevate data protection governance was the status change of privacy rights to a fundamental right in the 2009 Lisbon Treaty. Building on the Lisbon Treaty, the EU Charter of Fundamental Rights further consolidated the right to privacy, including the right to the protection of personal data.²⁰ On the basis of this data protection on the “constitutional” level, the GDPR regulates principles of fair and secure data processing and collection, limitations of quantity and purpose of data collection as well as limits of data storage.²¹ Moreover, the GDPR legally consolidates further obligations such as the “right to be

¹⁸ Regulation 2016/679, of the European Parliament and of the Council 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/EC, 2016 O.J. (L 119) 1.

¹⁹ Council Directive 95/46, On the Protection of Individuals with Regard to the Processing of Personal Data, 1995 O.J. (L 281) 31.

²⁰ Charter of Fundamental Rights of the European Union, arts. 7-8, Dec. 12, 2007, 2007 O.J. (C 303) 1.

²¹ GDPR Art. 5 (1) (a)-(f).

forgotten” and “privacy by design”. The first enables data subjects to ask for the erasure of data and the latter requires manufacturers to design their products and services in a way that respects GDPR obligations.²² Looking at procedural effects, the GDPR requires member states to create independent data protection authorities, working together with a European Data Protection Board.²³ Additionally, it introduces a sanctioning system consisting of administrative fines up to € 20 million or up to 4 % of the company’s total worldwide annual turnover of the preceding financial year, whichever is higher.²⁴ The scope of the GDPR extends to all companies processing, holding, or collecting personal data of persons residing in the EU, no matter the company’s location or the location of the data processing. As long as goods or services are offered to EU residents or action takes place within the EU, the GDPR will be applied. Lastly, the EU forbids the transfer of data from the EU to third countries if the transfer lacks adequate levels of protection of data privacy rights.²⁵ This so-called adequacy decision is an important tool of the Commission and/or Data protection authority to restrict and influence the data flow to third countries. After approval, the data transfers to the third countries in question will be “equivalent” to Intra-EU data transfers,²⁶ facilitating these flows. So far, the European Commission has granted the criterion of adequate protection to Andorra, Argentina, Canada, Faroe Islands, Guernsey, Israel, Isle of Man, Japan, Jersey, New Zealand, Republic of Korea, Switzerland, (after Brexit) the United Kingdom and Uruguay (European Commission n.d.). Interestingly, the U.S. has not been provided with an adequate decision due to lacking legislation to protect personal data and the absence of independent data protection authorities on a federal level. The ECJ even dismissed in 2020 the EU-U.S. Privacy Shield which was the EU-U.S. data transfer framework due to concerns about government surveillance and lacking protection mechanisms in the U.S.²⁷ This is also an illustration of how the ECJ has been active in further promoting and expanding the scope of the GDPR.

²² GDPR Art. 17, 25.

²³ GDPR Art. 51, 68.

²⁴ GDPR Art. 83.

²⁵ GDPR Art. 45.

²⁶ “Schrems I” – C-362/14, Maximilian Schrems v. Data Protection Commissioner, 2015 E.C.R. 650.

²⁷ “Schrems II case” Facebook Ireland Limited v. Data Protection Authority, C-311/18 (2020).

b) Digital Services Act and Digital Markets Act

Another important package of legislation is the Digital Services Act (DSA) that got adopted together with the Digital Markets Act (DMA) in 2022. The legislative predecessor of the two acts was the E-Commerce Directive 2000 (“2000 Act”)²⁸. It mainly targeted the development of electronic commerce, the free movement of information society services, and consumer trust in online commerce. Moreover, it was the first piece of EU regulation that set concrete principles for the liability of digital platforms for content uploaded on them (Dempsey et al. 2022, 9). Since the 2000 Act, there have been no legislative reforms despite the massive changes in digital technologies and business models. The DSA and DMA were proposed in December 2020, claiming to amend the 2000 Act, and set more stringent standards of transparency and responsibility on platform service providers. The legislative package significantly increases platforms’ liability for content posted on them (Madiega 2021), particularly targeting tech giants and “gatekeepers”, i.e., “large, systematic online platforms” (Bendiek/ Stuerzer 2023, 11) such as Meta or Amazon. The DSA imposes new information, transparency, and hate speech or illegal contents moderation obligations to those firms while the DMA regulates the protection of small and medium-sized enterprises (SMEs) and requires gatekeepers to allow commercial users access to data they generate on the platforms at stake (Dempsey et al. 2022, 9-12).

c) EU AIA

The European Union is one of the first jurisdictions to create a regulatory framework for artificial intelligence (AI) systems. Artificial intelligence systems are “machine-based system[s] that can, for a given set of human defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments” (OECD 2019, 7). The basis for the legislative proposal was set in 2018. The Commission had announced its “Artificial Intelligence for Europe” strategy in an extensive document on public fears, updates of the EU safety framework to address liability gaps and legal uncertainty, investments, and grants for AI-based

²⁸ Directive 2000/31/EC.

start-ups. Building on this strategy, in 2020 the Commission published its “White Paper on Artificial Intelligence – A European approach to excellence and trust”, following an extensive stakeholder consultation. The European Parliament and European Council explicitly requested a regulatory proposal. This regulatory proposal was embedded into a broader legislative package, the “European Approach to Excellence in AI”.²⁹ The proposal aims to hold liable all providers and deployers putting into service high-risk AI systems in the EU, regardless of the origin of the providing entity.³⁰ Therefore, it imposes an extra-territorial scope. The proposal establishes a legal framework based on risk assessment of AI-based products or services for people’s health, safety, or fundamental rights. Importantly, AI use cases that do not impose risks on these concepts and fundamental rights are understood to be protected by other, already existing frameworks (see Table 2 below). According to the Commission’s impact assessment around 5-15 % of all AI system would fall into the high-risk category, endangering European values.³¹ It mainly targets providers, developers and deployers and thus imposes accountability away from the end-user. Furthermore, it entails transparency reporting obligations (Art. 52 AIA). Accordingly, deployers must label AI products and inform natural persons of their exposure to emotional intelligence, biometric categorization, and deep fake systems (Dempsey 2022, 15). The act also imposes an extensive set of monitoring and documentation obligations towards deployers (Dempsey et al. 2022, 14). Looking at enforcement mechanisms, member states are required to establish market surveillance authorities (MSAs) to safeguard compliance with the AI Act. The proposal enables MSAs to impose fines of up to € 30 million or 6% of the company’s annual turnover, whichever is higher for high-risk systems and for all others fines of up to € 20 million or 4% of the global turnover, whichever is higher.³²

²⁹ Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act) and Amending Certain Union Legislative Acts COM/2021/206 final.

³⁰ Art. 2 (1) EU AI Act.

³¹ Commission Staff Working Document. Impact Assessment accompanying the Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence (AIA) and Amending Certain Union Legislative Acts. Art. 71.

³² Art. 71 AI Act.

CATEGORY	SCOPE	REQUIREMENTS	SANCTIONS
Unacceptable Risk: Prohibited (Title II)	<ul style="list-style-type: none"> - Subliminal techniques or exploiting vulnerabilities of specific populations which cause harm - "Social scores" used by public authorities or on their behalf - Real-time remote biometrics in public spaces used by law enforcement (with some exceptions) 	These uses are prohibited.	Fines up to 6% of global revenue or 30mn euros, whichever is higher
High-Risk Systems: Conformity Assessment (Title III)	<p>Annex II:</p> <ul style="list-style-type: none"> - AI systems that are products or safety components of products covered by 12 product safety regulation regimes and that require third party conformity assessments, including medical devices (including for in vitro diagnostics), toys, and machinery. <p>Annex III:</p> <ul style="list-style-type: none"> - Remote biometric identification and categorisation of natural persons (e.g. a system classifying the number of people of different skin tones walking down a street) - Management and operation of critical infrastructure (road traffic and the supply of water, gas, heating, and electricity) - Education and vocational training, where systems are used for e.g. admission and grading - Employment, worker management, and access to self-employment opportunities, including systems that make or inform decisions about hiring, firing, and task allocation - Access to and enjoyment of essential private services and public services and benefits - Specific uses of law enforcement - Specific uses in migration, asylum, and border control management - Administration of justice and democratic processes, in particular when used to research and establish facts or applying the law to some facts 	<p>Providers of high-risk systems must perform a conformity assessment to make sure that they are compliant with requirements including:</p> <ul style="list-style-type: none"> - Risk management system - Data requirements - Technical documentation - Record-keeping - Transparency on the system's functioning - Human oversight - Accuracy, robustness, and cybersecurity - Post-market monitoring 	Fines up to 4% of global revenue or 20mn euros, whichever is higher, for everything except the data requirements, where the same fines apply as for the prohibited systems
Limited Risk: Transparency Obligations (Title IV)	<ul style="list-style-type: none"> - AI systems interacting with natural persons - Emotion recognition systems or biometric categorisation systems - AI system that generates or manipulates image, audio, or video content that appears real 	Notify the user that they are engaging with an AI system	Fines up to 4% of global revenue or 20mn euros, whichever is higher
Minimal Risk: Voluntary Codes of Conduct (Title IX)	All AI systems that are not either prohibited or high-risk	Providers can choose to comply with voluntary codes of conduct. The Commission and Member States will encourage the creation and voluntary compliance with these codes.	Not applicable as there are no requirements.

Source: Siegmann/ Anderljung (2022, 15).

Table 2: Summary of the EU Commission's proposed AI Act

4. Additional tools

Additionally, the EU has developed significant soft laws in the digital sphere. Soft laws imply voluntary norms such as “codes of conduct”. For instance, the Commission’s 2018 Code of Practice on Disinformation was the first incentive worldwide where private companies voluntarily agreed on self-regulatory provisions to fight disinformation. Even though most of these soft laws are transformed into hard laws eventually, they present an efficient way to push forward new regulatory trends. These soft laws are as relevant in the context of the Brussels Effect. Moreover, the EU can make use of its regulatory authorities such as the Data Protection Authorities as well as the ECJ’s case law (Christakis 2020, 17-21).

5. EU-U.S. Trade and Technology Council

Lastly, inter-institutional and international cooperation is another necessary yet conflictual tool that the EU possesses to push forward digital governance alongside its own rules. Even though the idea of regulatory power presumes a landscape of regulatory competition, global rulemaking requires multilateral cooperation (Damro 2015). Despite disagreements in the regulatory shaping of the digital transformation, the U.S. and EU still share liberal, democratic values, particularly in the area of fair competition as opposed to Chinese policies in this regard. Accordingly, the European Commission proposed a Trade and Technology Council (TTC) as a forum for cooperation and to “lead digital transformation” (European Commission 2021). The two main goals include cooperation in developing international standards and in regulatory policy and enforcement (Siegmann/ Anderljung 2022, 67). The Biden Administration caught up with the proposal that was ignored during the Trump Administration. In September 2021 the TTC met for the first time in Pittsburgh, Pennsylvania in ten working groups. As the initiator, the EU proposed its approach of a “values-based digital transformation [...] based on the Brussels Effect” (Bendiek/ Stuerzer 2022, 5). Particularly in fields where transatlantic cooperation is inevitable (e.g., chip production), it is a promising forum to find fruitful grounds for compromise. Additionally, the TTC could be expanded to other countries “committed to

democratic technology governance” (Bendiek/ Stuerzer 2022, 8).³³ The crucial benefit that the EU can bring compared to the technologically stronger equipped U.S. is its “political capital” (Bendiek/ Stuerzer 2023, 13) in international negotiations due to its regulatory power in the digital sphere.

To conclude, the EU is approaching the field of digital policy with a specific narrative of a human-centric and value-based governance model as an alternative to other digital governance models (such as the U.S. or Chinese ones). The narrative and leitmotif of digital sovereignty has been critically evaluated. The two understandings of the concept are both essential to sustain the EU’s regulatory power and imply a geopolitical and geostrategic framing of digital policy in general. In its digital governance the EU has a broad toolset. Taking into consideration recent legislation in the field of digital policy, the most crucial pieces are the GDPR, the DSA/DMA and the proposal for the AI Act. Due to the availability of data around the impact and success of the GDPR (the DSA and DMA have been passed only last year) but also due to its reputation in the global regulatory landscape, in the following, the GDPR will be analyzed as a potential precedence of the Brussels Effect in the digital sphere. After checking Bradford’s conditionality on the GDPR, one can examine ahead towards the field of AI regulation, and the potential of the proposed AI Act to trigger a Brussels Effect in the future.

³³ In fact, recently on 16 May 2023, the first ministerial meeting of the EU-India Trade and Technology Council took place in Brussels, emphasizing the development of TTCs as fora of cooperation in international technology policy.

IV. The example of the GDPR as an “export hit”

Regulatory globalization is not evident in all policy dimensions and aspects of international trade, as various external and internal factors (such as geoeconomic aspects or international rules) may place limits (Christen/ Meyer et al. 2022). Therefore, it is interesting to look at the field of digital policy. Analyzing the GDPR as an “export hit”, illustrates the potential of the Brussels Effect in the digital sphere and thus could give proof of the global impact of EU regulation in this area. This is particularly relevant regarding the earlier discussed “third way” of digitalization and the way the EU’s regulatory activity is being framed. Moreover, the role of data in the digital economy is crucial. Clive Humby’s notorious “Data is the new oil” analogy³⁴ illustrates the importance of data as an asset in the digital economy. The GDPR is assessed as being one of the most impactful digital policies on a global scale. In its evaluation of the GDPR of 24 June 2020, the European Commission held that the GDPR “has already emerged as a key reference point at international level and acted as a catalyst for many countries around the world to consider introducing modern privacy rules. This trend towards global convergence is a positive development that brings new opportunities to better protect individuals in the EU when their data is transferred abroad while, at the same time, facilitating dataflows” (European Commission 2020a, 12). In the following, the background as well as the de jure and de facto Brussels Effect of the GDPR will be examined to understand why it is considered as an “export hit” and to try to deduct further implications for the field of digital policy.

1. Background

The GDPR is a compilation of historical developments of data protection law in different member states starting in the 1970s and 1980s (Hoofnagle et al. 2019, 69-72; Ukrow 2018, 239-247). For instance, the German Constitutional Court’s 1983 Census judgment (“Volkszählungsurteil”),³⁵ created the concept of a “fundamental right to informational self-determination” which build a legal and conceptual foundation for the later EU data protection

³⁴ Clive Humby (2006), speech at Association of National Advertisers conference.

³⁵ *Bundesverfassungsgericht*, judgement of 15 December 1983, Az. 1 BvR 209, 269, 362, 420, 440, 484/83.

laws (Bradford 2019, 137). Historically, sensitivity towards government data collection has been eminent in Europe since World War II, the Nazi regime, and state surveillance in East Germany after the war by the Ministry for State Security (Stasi) (Shaw 2013; Freude/ Freude 2016). Systematically, EU data protection regulation initially served the internal motive of market integration as harmonized standards helped solve the issue of “conflicting national laws that were emerging as a trade barrier, inhibiting commerce in Europe” (Bradford 2019, 136). During the enactment of the GDPR’s predecessor, the 1995 Data Protection Directive, the Commission used the internal market competence to balance out lacking competence in the field of “fundamental privacy rights legislation” (Bradford 2019, 137). Again, it was an upward harmonization process as it was easier to lobby low-regulation member states to strengthen their standards than the other way around (Bradford 2019, 137). However, additionally, there is also an eminent external dimension of the EU’s data protection regulation. The Commission noted already in 2009 and 2010 that the EU must promote international standards for personal data protection by stringent data protection rules. According to Bradford “[this] vision of the EU as providing a benchmark for the whole world, affected the drafting of the GDPR” (2019, 22). There was a clear intention to set global standards which was also backed up by the broad territorial scope. Following the rationale of “if we do not shape standards now, others do”³⁶ (Bradford 2019, 137), the EU opted to defend data protection globally according to its own values and rules. The adoption of the GDPR was strongly lobbied against by foreign governments (particularly the U.S. government) and companies, mostly with the argument that it would impede research and innovation while pro-regulation member states, NGOs, and particularly individual citizens supported the adoption. Surveys show that the European public is strongly in favor of stringent data privacy rules (Eurobarometer 2016). Looking at transatlantic relations, data protection is a field of differing, if not opposing paradigms. As opposed to the EU’s regulatory activity in consumer law and privacy rights, the U.S. data privacy laws are restricted to a few sensitive policy fields such as banking (Shaffer 2000, 23 -28). The private sector evolves around the private autonomy of the consumers that enter into contractual relationships if they agree on the self-imposed data protection policies

³⁶ Interview with Bruno Gencarelli, Head of the International Data Flows and Protection Uni, European Commission, Directorate General Justice and Consumers, in Brussels, Belgium (Jul. 17, 2018).

of the individual company (Bach/Newman 2007, 833). The disagreements can be traced back to broader ideological understandings about market regulations and interventions and connected to that, the level of consumer protection vs. private autonomy (Bradford 2019, 141). On the other hand, it is also natural that the U.S. government is more engaged to lobby liaising with the U.S.-tech giants which make up an increasing share of its economic power. The EU does have more leverage in this area, again using its “political capital” of regulatory power to make up for the lack of tech companies with large market shares. On a global level, earlier mentioned scandals of unauthorized data collection (Snowden case, Cambridge Analytica) have enhanced public support of the European sensibilization for data protection (Gady 2014, 12-23). The GDPR is already quite impactful within the EU. It substantially increased consumer awareness and the emancipation of citizens regarding their rights to protect their personal data (EU Agency for Fundamental Rights 2020). It contributed to the awareness that the exchange of one’s personal data is a form of economic activity that should lay in the control of the individual (Christakis 2020, 17). It is crucial to keep in mind the specific “ideological” narrative of data privacy that the EU is promoting internally and globally which creates a fundamental characteristic of European data protection regulation and further has an effect on other regulations in the digital sphere (Siegmann/ Anderljung 2022, 76). This goes hand in hand with the perception that the EU has filled a “perceived regulatory vacuum” globally (Greenleaf 2021, 9). Looking at general difficulties of regulation in the field of technology, the EU’s “technology-neutral regulation” (Smuha 2017, 8) with the GDPR, i.e., setting the focus on the data subjects to be protected every time that personal information is processed – regardless of the specific technology used, circumvented the issue of disagreements of definitions and scopes. This is often an issue when only one specific technology is targeted by a regulation, e.g., in the field of AI regulation as there are disagreements about the definition of AI systems.

2. De facto effects

To assess the Brussels Effect in the context of the GDPR one has to come back to Bradford’s conditions for the de facto and de jure Brussels Effect.

First, the EU market must be a relevant, large market in the global data economy. Dominant global players in the tech industry such as Google or Meta have a significant high market share in EU member states. 25% of Meta's revenue is generated in Europe (Kwan 2022, 77), showing the importance of the European market for the U.S. tech industry. According to studies generated by PricewaterhouseCoopers, 68% of American companies were expected to spend between \$ 1 and 10 million on GDPR compliance, and 9 % of American companies even more than \$ 10 million (PwC 2017). This illustrates the stakehold that EU legislators have financially on those companies. Consequently, most multinational companies ("MNCs") cannot circumvent or substitute access to the European market. This increases the size and affluence of the European market. In addition to that, there must be a certain regulatory capacity on the side of the EU. Looking at the backup that the GDPR received from the ECJ and data protection authorities, the EU has strong resources to promulgate and enforce regulation and thus obtain authority over its market participants. The GDPR enables national data protection authorities to fine companies up to 4 % of their global revenue in case of non-compliance.³⁷ In 2019, the French Data Protection Authority imposed a groundbreaking fine amounting to € 50 million on Google for infringement of data protection laws on grounds of the GDPR (Satariano 2019). While 91 fines were issued in the 1st year of application of the GDPR, by the end of 2021 more than 990 fines were imposed by data protection authorities (Siegmann/ Anderljung 2022, 37), emphasizing the sanctioning capacity. Nevertheless, there is the issue of inconsistency among member states and their respective data protection authorities. For instance, the Irish data protection agency only has a modest budget of \$ 9 million while it has to deal with tech companies generating revenues in tremendously higher dimensions such as Airbnb, Apple, Meta, or Google which all have their European headquarters in Dublin (Satariano 2018; Bradford 2019, 142). Therefore, national inconsistency can to some degree limit the EU's regulatory capacity. However, from a general perspective, the Union does obtain means of authority. In addition to that, data subjects are supposed to be inelastic targets. The GDPR made data subjects highly inelastic, as "European" data is protected without territorial restrictions. Therefore, actors cannot take refuge in other markets to circumvent falling under the scope of the regulated EU market. As long as European data subjects are concerned, the

³⁷ Regulation (EU) 679/16, Art. 83, 2016 O.J. (L119) 1.

scope of the GDPR reaches out to non-European jurisdictions. Furthermore, there must be stringent regulations. As evaluated before, there is a high intra-European consensus and political motivation towards a high level of data protection and upward harmonization. This is also in the interest of businesses that can benefit from legal certainty in the regulatory environment as well as other stakeholders such as NGOs that advocated for regulation on data protection for decades (Bradford 2019, 61-63). Lastly, the Brussels Effect requires legal, economic, and technical non-divisibility and thus the practice of standardizing across jurisdictions. In the field of digital policy, this condition is most of the time the most critical one as companies often have legal, economic, or technical leverages. For instance, starting with legal divisibility, the company Meta has its headquarters in Dublin, Ireland which is an EU member state. Consequently, Meta had to treat non-EU users on grounds of EU privacy laws. This is why with the entry into force of the GDPR, “Facebook has revised its terms and conditions, moving users in Asia, Africa, Australia, and the Middle East away from the EU and placing them under its U.S. legal structure” (Bradford 2019, 57; Ingram 2018). In addition to that, there are several reasons for “jurisdictionally tailored privacy policies” such as requirements for data localization within jurisdictions (e.g., in Russia, China, or until 2022 in India) which impose legal divisibility. Looking at technical non-divisibility, one has to analyze whether there are technological limits to separate production processes or the provision of services. In the case of European data protection standards, the difficulty of detecting if a user is a European data subject, makes tech companies adjust their ways of data collection and storage to EU standards on a global level (Singel 2008). Moreover, the GDPR has a crucial impact on product design. Art. 25 GDPR introduces the concept of “privacy by design”:

“[...] [The] controller shall, both at the time of the determination of the means for processing and at the time of the processing itself, implement appropriate technical and organizational measures, such as pseudonymization, which are designed to implement data protection principles, such as data minimization, in an effective manner and to integrate the necessary safeguards into the processing in order to meet the requirements of this Regulation and protect the rights of data subjects.”

Consequently, the stringent EU standard becomes a determinant for the technological design of a product or service, facilitating the condition of technological non-divisibility. Generally, this is a strong intervention in the production process and gives regulators a powerful legislative tool. Lastly, looking at economic non-divisibility, there are two determinative factors that are eminent in the field of the data economy. First, economic non-divisibility is still relevant to take advantage of scale economies and secondly – as mentioned above - single standards are relevant for obtaining a global brand reputation and meeting “enhanced consumer demand” (Bradford 2019, 144). For instance, it would be harmful to Google’s reputation if U.S.-American users’ data would be less protected than European users’ data (Bradford 2019, 61). This is particularly effective to stir a de facto Brussels Effect. It gives companies the incentive to adjust their rules to their global operations. Many gatekeepers today have only one global privacy policy following EU standards.³⁸ To conclude on the condition of non-divisibility it becomes evident that companies still hold a margin of leverage, thus limiting the Brussels Effect (e.g., in the legal dimension), however, the concept of “privacy by design” imposed by the GDPR represents a strong tool to ensure technological non-divisibility. Furthermore, looking at the size and importance of the European market and the stance of consumer emancipation, economic non-divisibility can be influenced more easily. In general, the de-facto Brussels effects of European data protection regulation are empirically evident among the most dominant tech companies in the global marketplace. These large companies that liaison with the European market already had to comply with EU laws and therefore not only had no “additional compliance costs” (Bradford 2019, 148) but also had incentives “to lobby for the EU standard at their home market as well” (Bradford 2019, 148), mainly to obtain competitiveness on the domestic market. Examples of these lobbying efforts can be found in press releases and statements of functionaries of U.S. tech giants. For instance, Facebook (now Meta) founder Mark Zuckerberg openly promoted the GDPR (as mentioned in the introduction). This illustrates that even global tech-giants which in the current global economy partly move in legal black holes (e.g., looking at competition law and taxation issues), adjust, and move forward “EU-like” stringent data protection laws to

³⁸ compare e.g., Google Privacy Terms (<https://policies.google.com/privacy?hl=en-US>).

safeguard the operability of their goods and services. This particularly stems from the economic dependence on data collection of many tech companies (Bradford 2019, 148).

3. De jure effects

Looking at de jure Brussels effects in the field of data protection and the GDPR, one can observe that 137 countries globally have adopted privacy laws (UNCTAD 2023). Most of these countries (e.g., Brazil, Japan, South Africa, Colombia) (Scott/ Cerulus 2018) emulate EU data protection laws as the GDPR is considered the “gold standard” (Khan/ Bradshaw 2018) providing a stringent legal framework. Apart from lobbying efforts coming from the industry, the above-mentioned “adequacy recognition” is another incentive for foreign governments to imply “EU-style privacy laws” (Bradford 2019, 150) to safeguard open data flows with the EU. It serves as a criterion of conditionality, coupled with economic incentives to embrace a de jure Brussels effect. Other jurisdictions such as Japan have followed the example of the EU and have also published a “whitelist of countries” where Japanese data can flow under national conditions (so-called border control data export limitations) (Siegmann/ Anderljung 2022, 76). Looking at the United States, one cannot find comprehensive data protection laws on a federal level. Some states such as California have passed legislation on privacy laws. In 2018, the state of California passed the “Consumer Privacy Act” (Wakayabashi 2018), containing some provisions similar to the GDPR (e.g., a right to be forgotten)³⁹. The U.S. government even tried to circumvent an extraterritorial effect of the GDPR through its data transmission agreements (the Safe Harbour Agreement 2000 and the Privacy Shield 2015) that aimed to safeguard unlimited transatlantic data transmission. Nevertheless, the ECJ held those agreements invalid due to non-compatibility with EU data privacy standards (Siegmann/ Anderljung 2022, 75). Moreover, there has also been a regulatory influence on China. The 2017 Cyber Security Law contains some fundamental GDPR concepts (DLA Piper 2023 – compared to GDPR). However, looking at the limitation on the private sector and the government’s repressive internet governance, the de jure effect of the GDPR in Chinese domestic law exists probably only “on paper” (Bradford 2019, 154) and is not in line with the

³⁹ California Civil Code § 1798.105 (a) (West).

values that the EU aims to externalize with its data protection framework (Siegmann/ Anderljung 2022, 75).

4. Assessment of the impact of the GDPR and its implications

To conclude, the GDPR got “exported” via the de facto and de jure Brussels Effect, “making data protection a powerful manifestation of the Europeanization of the global regulatory environment” (Bradford 2019, 132). Particularly the combination of market size and inelastic targets (in this case data subjects) enforce the Brussels Effect (Gstrein/ Zwitter 2021, 4). Extraterritoriality is a key feature of European data protection law (Siegmann/ Anderljung 2022, 69), facilitating the convergence of its concepts abroad.

Keeping the GDPR’s regulatory “success” in mind and zooming out to the general approach in EU digital policy, however, critics emphasize the need to avoid a fragmentation of the digital market by passing any costs (e.g., of compliance) to non-European businesses. The above-discussed “referees don’t win” criticism is pervasive in different fields of digital policy. For instance, scholars discuss the risk of “missing out” on new digital development (Christen/ Meyer et al. 2022, 51). Looking at lacking production capacities and digital infrastructure (Bendiek/ Stürzer 2022), therefore a sustainable digital strategy to obtain the EU’s regulatory power also depends on strong coalitions with like-minded partners and extending the EU’s “digital sovereignty” to some extent also on strategic autonomy. China’s advances in digital infrastructure investments in the context of its “Belt and Road Initiative” and the European dependence on technologies produced overseas clearly limit the impact that the EU’s regulatory influence can have in shaping the digital sphere. Regardless of necessary regulations due to social or ethical challenges, tech companies should not be “dismantled” (Bendiek/ Stuerzer 2021, 15). Christen, Meyer at al. conclude that the “continuation of the Brussels Effect in the digital sphere (i.e., the continuation of the success of the GDPR) rests on the EU’s ability to gradually develop technology-enabled tools that guarantee stronger compliance and more effective implementation and enforcement of its proposed regulations and to cooperate with multiple stakeholders” (2022, 52). Moreover, there is a need for enhanced capacity-building through private-public investment efforts. “Higher risk-aversions in European investment decisions” impede research and development within the EU

(Obendiek 2021, 5). According to critics it is crucial to mitigate “existing asymmetries in the digital space” and to make sure that enforcement means of regulatory efforts do not stop short (Obendiek 2021, 5).

Despite these challenges, the GDPR represents the first “precedent of extraterritorial application of EU legislation” in the sphere of data protection and data transfer (Christen/ Meyer et al. 2022, 20). Not only did it have an important internal effect on consumers, looking at the perception and awareness among “data subjects” within and outside of the EU, but it also evoked reactions within globally operating tech firms that depend on data flows and data collection economically. Therefore, there are strong lobby efforts to evoke a de jure Brussels Effect. The concept of adequacy as a conditionality for data flows with the EU is another tool to create a de jure Brussels Effect. The case of the GDPR, therefore, is a strong example of how a consolidated legal framework that was born in the EU can be globalized, both directly – by extending the scope regarding data subjects in question or adequacy decisions and indirectly by creating economic or technological pressures to tech companies to adjust their global operations to EU standards and thus also influence domestic legislation overseas. One of the usual criticisms that the GDPR would constitute a “competitive disadvantage” for Europe on the global scale did not hinder the GDPR to be an export hit, leading to an effect of “slow convergence” in the field of data protection (Humerick 2018; Smuha 2017, 17). However, the mentioned points of criticism should not be neglected to make sure that the conditions of the Brussels Effect (such as regulatory power and market size) stay as impactful as they are now. The field of data protection law is only one example in which the EU is exercising regulatory power and thus shapes the global market space and consumer perception in the digital sphere. Similar observations can be made in the field of hate speech and platform regulation (Bradford 2019, 160). Looking at current developments in the digital economy, therefore, it is crucial to analyze whether EU regulation efforts on artificial intelligence bear a similar potential of unilateral regulatory globalization.

V. Outlook: implications for the future of AI regulation

The convergence successes of EU regulation in the field of data protection have raised the question of whether the regulatory power of the EU via the Brussels Effect will also be relevant in the field of artificial intelligence regulation, specifically of the AI-Act. Similar to observations regarding the GDPR, the EU may have incentives to fill “a perceived regulatory vacuum” (Greenleaf 2021, 9). Considerations that support such an analogy to the GDPR are based on the similarities of the market structure and stakeholders. Actors are mostly multinational technology companies such as Google or IBM and both legislative acts aim to regulate business-to-consumer (B2C) contractual relations. Moreover, regulatory targets are quite similar. The analogy is also based on technological aspects as data collection is used for machine learning algorithms, an essential technique in AI-based technologies (Siegmann/Anderl jung 2022, 70).

General-purpose AI technology can be used in nearly any domain and has the potential to enhance individual as well as collective socio-economic welfare (Smuha 2021, 3). However, it is also potentially disruptive. According to a study by McKinsey Global Institute, 30-60% of workplaces bear the potential of being completely automated (2018). Looking at these societal consequences of the AI revolution, it is particularly important that governments and international players safeguard social acceptance. The hypothesis of humans becoming economically redundant will have impactful societal effects (Bendiek/ Stuerzer 2021, 15). Therefore, regulation is needed not only for social cohesion but also to obtain the EU’s “internal unification” (Bendiek/Stuerzer 2021, 15). Dempsey et al. compare the field of AI regulation to the field of pharmaceutical drugs. They conclude that pharmaceutical drugs and some AI-based technologies have similar impacts on “human cognitive and neurological capacities”, however, AI is left with little regulation (2021, 1). As Dempsey et al. put it is the primary role of regulators to “establish and ensure the quality of life and security for [their] citizens and residents” (2021, 16). The European Commission has started tackling this responsibility. In her State of the Union speech in 2020, Von der Leyen announced the promotion and implementation of “a coordinated European approach on the human and ethical implication of artificial intelligence” (2020, 13). In the following, the expected extent

and impact of the EU AI-Act will be analyzed. This is followed by an assessment of the potential of a Brussels Effect in the field of AI regulation. The relevance of such an assessment is crucial as the data economy is an essential part of AI technology (thus strongly linking EU data protection and AI regulation). AI regulation is also currently one of the most urgent areas of digital policy. Therefore, the EU is strongly interested in sustaining its regulatory lead globally.

1. (Expected) extent and impact of the EU AI-Act

Having briefly introduced the AI Act earlier, it is important to analyze the bigger framework of the Act. The objectives are to ensure that AI systems in the single market are safe and respect fundamental laws and values, that there is legal certainty for research and innovation, to simplify governance and enforcement efforts, to facilitate market integration with AI products, and to prevent market fragmentation.⁴⁰ As mentioned above, the act introduces a risk-based approach. The unacceptable risks include cognitive behavioral manipulation of persons or vulnerable groups and social scoring as well as real-time and remote biometric identification systems. In addition to that, there are some fields of AI system usage where high risk is assumed such as surveillance systems, critical infrastructure, or education. Furthermore, the Digital Europe and Horizon Europe programs have set an investment plan covering € 1 billion per year for AI. Adding the planned mobilization of additional funds from private sectors and member states, the Commission has mobilized in total a € 65 billion investment volume annually by 2025⁴¹ (Dempsey 2021, 30). Moreover, the Act tried to obtain room for flexibility for research and innovation by creating “legal sandboxes”⁴² (i.e., exceptions) that particularly small and medium-sized enterprises (SMEs) can take advantage of. The potential of new AI technologies like OpenAI’s ChatGPT give more pressure to the assumption that regulation will always fall behind technological innovations. The release of ChatGPT in November 2022 and the emergence of other general-purpose AI systems (GPAIs) or large language models, already stirred up the legislative process of the AI Act and have

⁴⁰ EU AI Act. Explanatory Memorandum. 1.1.

⁴¹ EU AI-Act Impact Assessment, p. 70.

⁴² Legal sandboxes are regulatory tools that allow businesses to test new products, services or businesses for a limited period of time for business and regulatory learning experience (Madiaga/ Van de Pol 2022).

evoked questions about implementation (Demircan 2023). The technologies themselves are not “new” per se, however, the increasing (almost exponential) use is relatively new (Smuha 2021, 23). These developments emphasize the velocity of technological progress pushed forward by the usage of AI technology as a peculiarity of the regulatory objectives. Nevertheless, fixed legal-ethical frameworks could help to deal with all kinds of innovation in the Fourth Industrial Revolution such as quantum technology, virtual reality, etc. (Kop 2021, 10).

Looking at the progress of the AI Act in the ordinary legislative procedure, the proposal was amended by the MEPs – reacting to new challenges -, e.g., in the fields of transparency and risk-management rules (“draft negotiation mandate”). Now, the transparency rules explicitly include obligations for providers of foundation models.⁴³ For generative foundation models like ChatGPT this imposes stringent transparency requirements, e.g., to design their models to prevent them from generating illegal content or publishing summaries of data used for training (European Parliament 2023). Moreover, the EP strengthened national authorities’ competences and proposed to establish an “AI Office” (European Parliament 2023a). The next step in the decision-making process will be the plenary vote in the EP in mid-June 2023. The last step will include interinstitutional negotiations with the Council and the Commission (trialogue negotiations) on the final form of the AI Act. The final approval is expected by the end of 2023 or early 2024.

2. Potential for a Brussels Effect

The EU AI Act is one of the first and most comprehensive attempts to regulate AI worldwide. As M. Kop puts it, the “race for AI dominance is a competition in values and technology” (Kop 2020). In terms of international law, it presents a significant global development if the AI Act’s regulatory framework were to achieve for the concept of AI transparency and trustworthiness what the GDPR has achieved for the concept of privacy (Dempsey et al. 2022). One can detect analog societal reassurances and narratives to the GDPR by looking at how the EU is framing

⁴³ Foundation models are large-scale models that build the base of a wide range of further, more specialized technologies by being trained on massive amounts of data (e.g., GPT-3). <https://www.microsoft.com/en-us/research/blog/ai-explainer-foundation-models-and-the-next-era-of-ai/>

its regulatory activity in the field of AI, promoting crucial concepts such as “privacy” and “values”. Another signal is the close cooperation in fields of investment or data availability and exchange within the Union (Dempsey 2021, 12). When assessing the potential for a de facto and de jure Brussels Effect, it is crucial to differentiate between different industries or systems that make use of AI-based technologies as well as particular parts or legal concepts of the Act. As Siegmann and Anderljung put it, “[what] holds for AI, in general, might not hold for the specific industries and AI systems that the EU AI regulation will apply to” (2022, 49). The AI Act is rather broad as AI use is potentially limitless. Therefore, one must assess particular obligations or policy fields within the AI Act. For instance, it is rather likely to see a de facto effect regarding products under existing safety regulations such as medical devices, worker management systems, biometric identification, or legal technologies (high-risk systems). A well-known example of a high-risk system would be LinkedIn’s algorithm for personalized job advertisement and candidate recommendations (Engler 2022). The same applies to general AI systems where compliance with the act is “likely to be a strong signal” (Siegmann/ Anderljung 2022, 54) regarding consumer protection and corporate reputation. Another point of differentiation concerns specific requirements imposed by the AI Act. For instance, requirements about documentation or data are more likely to produce a de facto Brussels Effect. The potential of a Brussels Effect differs among regulation fields within the AI Act, depending on evidence on causal links, and information on AI supply chains. Coming back to the conditions for a Brussels Effect, firstly, it is essential to consider again the relative market size and relevance of the European market in the AI sector. In 2021 the European Union spent \$ 17 billion (annual growth of ca. 27% from 2022 to 2025) on the AI industry. Globally, the EU’s share of AI spending counts to about 20% (IDC 2021). Typical for the digital sector, the AI industry is (mostly) dominated by multinational firms, accordingly, the market has a globalized and oligopolistic structure (Siegmann/ Anderlung 2022, 3), which makes the de facto Brussels Effect favorable. Nevertheless, there is an important feature of probable AI use that could lead to partial regionalization of markets. For instance, in sensitive policy areas such as education, border control, or financial services, the Union will prefer “homemade” technologies for safety reasons (Siegmann/ Anderljung 2022, 31). Other jurisdictions will probably have the same approach, making access to the EU market rather secondary. Taking

into consideration the regulatory capacity of the EU in the field of AI regulation, one can detect that firstly, the Commission is trying to enhance research expertise by building technical expert groups (for instance the high-level expert group on artificial intelligence, 2022) despite the difficulties that come with AI technologies being a relatively new area in the research landscape. Moreover, the AI Act is also coherent as it imposes maximum harmonization which is in line with the aims of the act. The regulatory coherence will be further pushed forward once there is more information on the planned European Artificial Intelligence Board and the market surveillance authorities set forward by the proposal (Siegmann/ Anderljung 2022, 36). Compared to the GDPR, it is difficult to assess sanctioning capacities. While there are classified penalties in the legislative proposal, the efficiency of enforcement organs cannot be predicted. Those might face the same budgetary issues as data protection authorities, thus limiting the regulatory capacity in terms of sanctioning capacity. Another important factor in the global regulatory landscape is the “first mover advantage”⁴⁴ (Siegmann/ Anderljung 2022, 38-39). Even though the relatively slow regulatory process within the EU legal systems compared to national law- and decision-making is limiting this advantage (for instance Brazil’s lower parliamentary house agreed on a proposed AI law in September 2021 and China in early 2022), the comprehensiveness and amount of published supporting documents to the extensive draft, forced other proactive jurisdictions to “check their compatibility” with the EU AI approach (Siegmann/ Anderljung 2022, 39; FES 2023).

Assessing the stringency of the EU AI Act, one can detect different nuances in regulatory discourses globally. For instance, in the U.S. AI regulatory concerns are focused on national security more than consumer protection which again represents the different regulatory cultures. As discussed above, digital companies have more influence in U.S. politics which is detectable in higher lobby spending within the relevant stakeholder group. The case of China is similar to the situation with the GDPR, more stringent rules are probable, but limited to private sectors looking at the level of state censorship and imposed digital repression (Siegmann/ Anderljung 2022, 24). Consequently, the EU AI Act has the potential of being one of the more, if not the most stringent regulation in the field of AI. Assessing the inelasticity of

⁴⁴ The “first mover advantage” is an economic concept where a company can gain a competitive advantage on the market by being the first to obtain control of resources or to launch a new product or service.

the AI Act, it can be observed that its extraterritoriality is much more limited compared to the GDPR (Greenleaf 2021, 3). It is mainly a regulation of product liability; therefore, the inelasticity of the targets is more flexible than in the field of data protection. Nevertheless, the AI Act's scope covers all providers and deployers producing or putting into service high-risk AI systems in the EU, regardless of the origin of the entity⁴⁵, thus making it impossible for those deployers that want to take advantage of the EU consumer market to circumvent the regulations of the Act. As discussed with the GDPR, non-divisibility is the most crucial condition to consider when analyzing a Brussels Effect in digital policy. The decisive economic factor is particularly the cost of maintaining two separate products (one for EU markets and one for other, less regulated markets). The regular production process of an AI product is mostly composed of a design phase, a data selection, collection, and generation step where the model is being trained, a system deployment, and lastly an evaluation or review phase (Siegmann/ Anderljung 2022, 46). A risk in terms of non-divisibility is the possible separation of the system (so-called forking) within the process. For instance, the potential of high-risk AI systems evoking a Brussels Effect is supported by the economic consideration that it would require an early forking process in the training process of the model to meet the Act's requirements. This leads to increasing costs and decreasing economies of scale. Most deep learning models (e.g., GPT-3) would fall under this case as complying with some requirements of the EU AI Act would require changes in the training process of the foundation model (Siegmann/ Anderljung 2022, 47). Nevertheless, there - increasingly - are technological possibilities to separate production processes more cheaply. Examples are additive manufacturing or geo-blocking (Bradford 2021).⁴⁶ Apart from questions about technological non-divisibility, a de facto Brussels Effect might be more probable in cases of controversial usage of AI technologies (such as legal tech). Complying with the most stringent standards can help safeguard a company's image regarding consumer protection (Siegmann/ Anderljung 2022, 54). The potential de jure Brussels effect is even more difficult to assess as we are

⁴⁵ Art. 2 EU AI Act.

⁴⁶ Geo-blocking is a technology that limits a user's access to internet content based on the geographical location (as determined by IP address) which allows for divisibility of the internet. Additive manufacturing (such as 3D-printing) is a production method where goods with different features can be produced by changing the digital blueprint. This allows for mass customization and thus reduces the costs of compliance to different standards (Bradford 2019, 275, 275).

dealing with a legislative proposal. Particularly, it is difficult to detect causal links to the EU's regulatory activity as the AI revolution is a modern phenomenon that is – more or less - “naturally” on the agenda of many political decision-makers. N. Smuha describes a development from a “race to AI” to a “race to AI regulation” (2021). For instance, China adopted its “Next Generation AI Development Plan” in 2017 and Trump published the U.S. American AI Strategy. However, the EU is the first jurisdiction to publish such a comprehensive attempt to regulate AI. One can analyze how the EU promotes its AI Act for instance via multilateral cooperation, and if it triggers a learning approach in other jurisdictions and lawmakers (Siegmann/ Anderljung 2022, 63). The proactive promotion of a regulatory narrative that was detectable with the GDPR is evident for the AI Act as well. For instance, the ethical guidelines that served as a preparatory document were introduced to the OECD AI principles (OECD 2022). The highest potential of diffusion can be seen in the risk-based approach as well the general categorization of “trustworthy AI” as overarching concepts (Siegmann/ Anderljung 2022, 61), shaping a global socio-economic narrative on how to deal with new AI-based technologies. For instance, in New Zealand “EU language” has been explicitly included in the national AI strategy (Leufer/ Lemoine 2020, 10). While causal links of a Brussels effect are unlikely to be detected in U.S. federal law, the TTC could help push forward transatlantic cooperation and multilateralism. China will probably have stringent AI regulation as well however – similar to data protection laws – the public sector will be exempt from these regulation efforts (Siegmann/ Anderljung 2022, 24, 69), which – once again - indicates an ideological derailment of initial common ground. It also links back to the demarcation of the Brussels Effect to a possible Washington or Beijing Effect. All in all, it can be expected that building on the blueprint of the EU AI Act's risk assessment, many jurisdictions are likely to introduce sectoral regulatory regimes for AI. The narrative and political capital put into the EU concept of “trustworthy AI” might influence AI companies globally (Siegmann/ Anderljung 2022, 74).

The biggest criticism that the regulatory proposal is facing includes concerns about being “innovation-inhibiting” rooting from the strict evaluation criteria. If interoperability with European rules remains uncertain, this might impede investments into AI applications (targeted globally or to European markets). In addition to that, considerations that challenge

a possible Brussels Effect include weaknesses of the analogy with the GDPR. According to critics, data protection regulation has unique features (such as the extraterritoriality of its regulatory targets, the specific legal design, and adequacy decisions). With data protection, the EU has reached a global narrative change towards the fundamentality of data privacy which has “increased the revenue from non-differentiation” of producers (Siegmann/Anderljung 2022, 76). Moreover, the design of the GDPR requires early forking if companies and producers choose to create two products – one complying with EU requirements and a non-complying one. Therefore, technical divisibility or differentiation is connected to substantially higher costs, which makes division or differentiation less attractive (Siegmann/ Anderljung 2022, 76). Also, there are general developments that challenge the future of the Brussels Effect (particularly in the digital sphere). On the one hand, these include internal challenges such as influences by populist anti-EU sentiments within the Union. On the other hand, external challenges include geopolitical pressures combined with China’s “relative increase in regulatory capacity” and a diminishing of the EU’s relative market and regulatory capacity. Again, technical considerations such as geo-blocking could impede the condition of non-divisibility (Bradford 2021).

To conclude, one can observe that fundamental concepts of the EU AI Act have a high potential for diffusion to other jurisdictions, for instance, the risk-assessment-based approach or the general concept of responsible AI development. The narrative that the EU is imposing might have an effect on how relevant companies frame their products and their image towards safety and consumer protection. Nevertheless, an analogy to the “export hit” of the GDPR shows up some weaknesses due to the peculiar characteristics of data protection. The main problems are also connected to the fact that AI use is tremendously versatile, and the AI Act is accordingly broad. Thus, making general assumptions about very different fields of regulation is difficult. However, even if the Brussels Effect might not be as defined as with the GDPR, the EU is still leading the regulatory environment thus aiming to sustain its regulatory power in the digital sphere. But this should not lead to a neglect of the investment framework and innovation capacities. Coming back to the Union’s regulatory power generally in the digital sphere, one has to consider also the main limits. For instance, Marietje Schaake, a former Dutch MEP criticizes the EU’s executive power in national security issues which

impedes its regulatory advantage in the digital sphere (2020), thus underlying the above-discussed lack of strategic autonomy. Moreover, there are internal obstacles that are limiting the Brussels Effect, for instance, the failure of creating an EU-wide “digital services tax” which gives a hint at the existing lack of consensus in certain fields of digital policy (Christakis 2020, 28). Particularly when unanimity in the decision-making process is required, this missing consensus slows down regulatory activity. To give a last example of criticism, the question rises whether unilateral regulatory power is even sustainable (Christakis 2020, 29). A lack of cooperation will only lead to conflicting digital sovereignties. In this regard, the potential of the EU-U.S. TTC as well as other cooperation fora in the digital economy (for instance the EU-India TTC) bears the potential of fruitful common approaches as opposed to an international state of distrust and protectionism.

VI. Conclusion

The “Brussels Effect” is a fundamental externalization of the EU’s regulatory power. In numerous policy fields, one can observe a diffusion or globalization of EU regulation. This stems from the EU’s pro-regulation stance. The main features that favor an ability to globalize standards generally are the EU’s institutional structure, the process of market integration as an ongoing driver as well as its emerging external regulatory agenda. The EU’s internal and external regulatory capacity, stringent regulations, and large and affluent consumer market size are fundamental preconditions that push forward the European Union’s regulatory power. Combined with inelastic regulation targets and non-divisibility in certain policy fields, the EU can unilaterally set global standards. Having set responsible digital transformation as one of the top political priorities for the next decade, the European Union, as initiated and pushed forward by the Commission, has mobilized, and gathered a set of impactful tools and regulatory activities in digital policy. The GDPR, DSA/DMA, and AI Act represent the most impactful legislation of the last eight years. The international consensus of a regulatory vacuum facilitates the potential of EU regulatory power in digital policy. Although the conditions of a Brussels Effect can also help explain other jurisdictions’ unilateral power to globalize standards, the example of the GDPR shows why such an effect is currently and within specific policy fields such as data protection law particularly likely to be found with EU regulation. Keeping in mind specific features of the digital economy (such as the dependency on data collection and flows), the GDPR’s design facilitated the emergence of a Brussels Effect. The EU consumer market is too affluent to be substituted due to the high revenues of global players in the EU. Moreover, the EU’s stringent regulation and regulatory capacity were productively externalized by creating data protection authorities and thus means of enforcement that can impose significant fines. The extraterritoriality of the scope of the GDPR regarding its “data subjects” makes the targets inelastic. Lastly, non-divisibility as the crucial criterion is facilitated technologically by the GDPR’s privacy-by-design approach and economically thanks to consumer emancipation and reputation considerations. Legal non-divisibility imposes some challenges that need to be overcome. A de jure Brussels Effect is pushed forward by the de facto Brussels Effect and by the concept of adequacy decisions. All

in all, the GDPR indeed represents an “export hit” as it evoked both a de facto and a de jure Brussels Effect. Thus, the European Union has substantially shaped the global digital regulatory sphere and market by externalizing its data protection laws. Deducting from these findings to an outlook perspective, one can observe that the EU is working on exercising its first-mover advantage in the field of AI regulation. Accordingly, EU narratives on responsible, human-centric, value-based digital transformation are likely to be pushed forward and determine the main concepts of the global AI regulatory landscape. Examples are the risk-assessment approach or the concept of “trustworthy AI”. This being said the concrete potential of a Brussels Effect is difficult to assess as the AI Act did not finalize the legislative process yet. Moreover, the analogy to the GDPR shows signs of weakness due to the peculiarity of EU data protection regulation. Either way, the wish to keep control of societal effects and promote EU values seems only logical regarding disagreements with the approaches of geopolitical powers such as China or the U.S. In the end, the EU approach is also based on a perception of normative desirability. The de facto and de jure Brussels Effect summarize the pre-conditions and characteristics of EU policy design that support this process. Apart from that, it is also crucial to look at other relevant legislation in the digital sphere, for instance, the DSA and the DMA which are shaking up the regulatory landscape, or the 2022 Chips Act which is very relevant under the geopolitical framing of digital transformation and linked to the quest for strategic autonomy of the EU. We can observe a quickly evolving and multidimensional policy field that is tackled from different dimensions by the EU. Nevertheless, the dynamics of the observed Brussels Effect in digital policy are not future-proof and could change with evolving geopolitical balances. An important counterweight for the EU could be to empower both dimensions of digital sovereignty by strengthening strategic autonomy. The EU should prioritize obtaining its first-mover advantage in order to obtain its regulatory power as conceptualized by the Brussels Effect.

The discussion around the AI Act also raises many new questions regarding the scope and normative desirability of AI regulation. It is one of the primary roles of the state (and in the framework of its competences of the EU) to establish and ensure quality of life and security for citizens and residents; But can regulators keep up with the pace of the AI revolution and technological innovations that will follow? Will the European Union be able to sustain its

regulatory power? While these questions remain open until the AI Act shows effect, we have discussed the Brussels Effect in digital policy with the example of the GDPR and how it aids the European Union in using its political capital of regulatory power globally to shape the multifaceted digital sphere.

PLAGIARISM STATEMENT / *DECLARATION SUR L'HONNEUR CONTRE LE PLAGIAT*

I certify that this thesis is my own work, based on my personal study and/or research and that I have acknowledged all material and sources used in its preparation. I further certify that I have not copied or used any ideas or formulations from any book, article or thesis, in printed or electronic form, without specifically mentioning their origin, and that the complete citations are indicated in quotation marks.

I also certify that this assignment/report has not previously been submitted for assessment in any other unit, except where specific permission has been granted from all unit coordinators involved, and that I have not copied in part or whole or otherwise plagiarised the work of other students and/or persons.

In accordance with the law, failure to comply with these regulations makes me liable to prosecution by the disciplinary commission and the courts of the French Republic for university plagiarism.

Je certifie que ce mémoire est un travail original, basé sur mes propres études et recherches et que toutes les sources utilisées dans sa rédaction ont été indiquées. Je certifie, de surcroît, que je n'ai ni recopié ni utilisé des idées ou des formulations tirées d'un ouvrage, article ou mémoire, en version imprimée ou électronique, sans mentionner précisément leur origine et que les citations intégrales sont signalées entre guillemets.

Je certifie également que ce mémoire n'a pas été précédemment soumis pour évaluation dans une autre unité, sauf si une permission spécifique a été accordée par tous les coordinateurs d'unité impliqués, et que je n'ai pas copié en partie ou en totalité ou autrement plagié le travail d'autres étudiants et/ou personnes.

Conformément à la loi, le non-respect de ces dispositions me rend passible de poursuites devant la commission disciplinaire et les tribunaux de la République française pour plagiat universitaire.

Alma, Aysenur

Name/*Nom* :

11 June 2023

Date:



Signature :

Bibliography

- Bach, D. / Newman, A.L. (2007). "The European Regulatory State and Global Public Policy: Micro-Institutions, Macro- Influence", *14 J. EUR. PUB. POL'Y*.
- Barker, T. (2021). Geopolitische Diplomatie und die europäische Digitalstrategie, in: Chris Piallat (ed.), *Der Wert der Digitalisierung. Gemeinwohl in der digitalen Welt als Teil der Reihe Digitale Gesellschaft* (No. 36)
- Bednarcikova, D./ Repiska, R. (2021). "Digital Transformation in the Context of the EU and the Use of Digital Technologies as a Tool for Business Sustainability". *SHS Web of Conferences 115, 01001*.
- Bendiek, A./ Berlich, C./ Metzger, T. (2015). "Die digitale Selbstbehauptung der EU". *SWP-Aktuell 71, 2015*.
- Bendiek, A./ Stuerzer, I. (2022). "Advancing European Internal and External Digital Sovereignty: The Brussels Effect and the EU-US Trade and Technology Council". *SWP Comment. No. 20 March 2022*.
- Bendiek, A./ Stuerzer, I. (2023). "The Brussels Effect, European Regulatory Power and Political Capital: Evidence for Mutually Reinforcing Internal and External Dimensions of the Brussels Effect from the European Digital Policy Debate". *Digital Society 2:5*
- Biedenkopf, K. (2015). EU Chemicals Regulation: Extending Its Experimentalist REACH, in: Jonathan Zeitlin (ed.), *Extending Experimentalist Governance? The European Union and Transnational Regulation (OUP)*.
- Bradford, A. (2019). *The Brussels Effect. How the European Union Rules the World*. New York 2020; online edn; Oxford Academic, 19. Dec. 2019.
- Bradford, A. (2021). *The European Union in a globalized world: the "Brussels Effect"* in *Governing Globalization Issue #2, Revue Européenne du droit*.
<https://geopolitique.eu/en/articles/the-european-union-in-a-globalised-world- the->

brusselseffect/#:~:text=By%20the%20de%20facto%20Brussels,hate%20speech%20in%20social%20media (accessed 1 May 2023).

Brennen J.S./ Kreiss, D. (2016.) *Digitalization. The International Encyclopedia of Communication Theory and Philosophy*. John Wiley & Sons, Inc. New Jersey, USA.

Castle, S. (2011). "Europeans Introduce Corporate Tax Plan". *New York Times*, March 17 2011. <https://www.nytimes.com/2011/03/17/business/global/17iht-eutax17.html> (accessed 6 June 2023).

Christakis, T. (2020). *European Digital Sovereignty. Successfully Navigating Between the "Brussels Effect" and Europe's Quest for Strategic Autonomy*. Multidisciplinary Institute on Artificial Intelligence/ Grenobles Alpes Data Institute, e-book.

Christen, E. / Meyer, B./ Oberhofer, H. et al. (2022). "The Brussels Effect 2.0. How the EU Sets Global Standards with its Trade Policy". *FIW-Research Reports*, October 2022, N° 7, https://fiw.ac.at/fileadmin/Documents/Publikationen/Studien2022/FIW_RR_07_2022_Brussels-Effect.pdf (accessed 15 April 2023).

Commission Flash Eurobarometer (2016) 443 Report -ePrivacy.

Clift, B. (2012). "Comparative Capitalism. Ideational Political Economy and French Post-Diriste Responses to the Global Financial Crisis". *17 J. New. Pol. Econ.*

Damro, C. (2012). "Market Power Europe". *19 J. EUR. PUB. Pol'Y.*

Damro, C. (2015). "Market Power Europe: Exploring a dynamic conceptual framework". *22 J. EUR. PUB Pol.Y No. 9.*

Commission Staff Working Document (2007). On the External Dimension of the Single Market Review, SEC (2007).

Demarais, A. (2022). "How the US-Chinese Technology War is Changing the World". *Foreign Policy*. <https://foreignpolicy.com/2022/11/19/demarais-backfire->

sanctions-us-china-technology-war-semiconductors-export-controls-biden/
(accessed 18 May 2023).

Demircan, M. (2023). "ChatGPT and other LLMs: Where does the EU AI Act stand?"
<https://www.linkedin.com/pulse/chatgpt-other-llms-where-do-eu-ai-act-stand-muhammed-demircan/> (accessed 3 May 2023).

Dempsey, M./ McBride, K./ Haataja, M./ Bryson, J.J. (2022). "Transnational Digital Governance and its Impact on Artificial Intelligence".

Drezner, D.W. (2005). "Globalization, Harmonization, and Competition: The Different Pathways to Policy Convergence". *12 J. EUR. PUB. POL'Y.*

Ellinas, A. & Suleiman, E.S. (2011). "Supranationalism in a Transnational Bureaucracy: The Case of the European Commission". *49 J. COMMON MKT. STUD. 924, 941*

Engler, A. (2022). "The EU AI Act will have Global Impact, but a Limited Brussels Effect".
<https://www.brookings.edu/research/the-eu-ai-act-will-have-global-impact-but-a-limited-brussels-effect/> (accessed 1 May 2023).

Erie, M./ Streinz, T. (2021). "The Beijing effect: China's Digital Silk Road as Transnational Data Governance". *New York University Journal of International Law and Politics 54.1.*

European Commission (n.d.). Data Protection. Adequacy decisions.
https://commission.europa.eu/law/law-topic/data-protection/international-dimension-data-protection/adequacy-decisions_en (accessed 20 April 2023).

European Commission (2020). Shaping Europe's Digital Future. https://eufordigital.eu/wp-content/uploads/2020/04/communication-shaping-europes-digital-future-feb2020_en_4.pdf (accessed 9 April 2023).

European Commission (2021). Press Release. EU-US launch Trade and Technology Council to lead values-based global digital transformation.

https://ec.europa.eu/commission/presscorner/detail/en/ip_21_2990 (accessed 1 May 2023).

European Commission (2022). High-Level Expert Group on Artificial Intelligence. Shaping Europe's digital future. June 7, 2022

European Parliament (2023). AI ACT: a step closer to the first rules on Artificial Intelligence. Press Release 11-05.2023 <https://www.europarl.europa.eu/news/en/press-room/20230505IPR84904/ai-act-a-step-closer-to-the-first-rules-on-artificial-intelligence> (accessed 4 June 2023).

European Parliament (2023a). Proposal for a Regulation on a European approach for Artificial Intelligence. Legislative Train Schedule. <https://www.europarl.europa.eu/legislative-train/theme-a-europe-fit-for-the-digital-age/file-regulation-on-artificial-intelligence> (accessed 4 June 2023).

European Union Agency for Fundamental Rights (2020). Survey: Your Rights Matter: Data Protection and Privacy. https://fra.europa.eu/sites/default/files/fra_uploads/fra-2020-fundamental-rights-survey-data-protection-privacy_en.pdf (accessed on 20 April 2023).

Feroz, K./ Zo, H./ Chiravuri, A. (2021). "Digital Transformation and Environmental Sustainability: A Review and Research Agenda". *Sustainability*, 13, 3.

Fielke, S./ Taylor, B./ Jakku, E. (2020). "Digitalization of agricultural knowledge and advice networks: A state-of-the-art-review". *Agricultural Systems* 180, 102763.

Frantz, E./ Kendall-Taylor, A./ Wright, J. (2020). Digital Repression in Autocracies, <https://www.v-dem.net/media/publications/digital-repression17mar.pdf> (accessed 23 December 2022).

Freude, A./ Freude T. (2016). "Echoes of History: Understanding German Data Protection", *NEWPOLITIK 2* (Oct. 1, 2016).

- Friedrich Ebert Stiftung (FES) (2023). China's Regulations on Algorithms.
<https://library.fes.de/pdf-files/bueros/bruessel/19904.pdf> (accessed 1 May 2023).
- Gady, F.S. (2014). "EU/U.S. Approaches to Data Privacy and the 'Brussels Effect': A Comparative Analysis", 4 *GEO. J. INT'L AFF.*
- Gillardi, F. (2016). "Four Ways We Can Improve Policy Diffusion Research". 16 *State Politics and Policy Quarterly*.
- Goldthau, A./ Sitter, N. (2015). "Soft power with a hard edge: EU policy tools and energy security". *Review of International Political Economy*, 22:5.
- Greenleaf, G. (2021). "The 'Brussels Effect' of the EU's AI Act on data privacy outside Europe". 171 *Privacy Laws and Business International Report 1*.
- Gross, A./ Murgia, M./ Yang, Y. (2020). "Chinese tech groups shaping UN facial recognition standards". *Financial Times*. December 1, 2020.
- Gstrein, O./ Zwitter, A. (2021). *Identity and Private Governance*. Lausanne.
https://www.researchgate.net/publication/355781814_IDENTITY_AND_PRIVACY_GOVERNANCE (accessed 6 June 2023).
- Guasch, J.L./ Hahn R.W. (1999). „The Costs and Benefits of Regulations: Implications for Developing Countries". 14 *World Bank Res. Observer*.
- Hadjiyianni, I. (2021). "The European Union as a Global Regulatory Power. Oxford Journal of Legal Studies". Vol. 41 No. 1.
- Harrell, S. (2012). "Beyond 'REACH'? An Analysis of the European Union's Chemical Regulation Program Under World Trade Organization Agreements". 23 *Wis. Int.'L. L.J* 471.

- Hix, S. (2006). The European Union as a Polity, in: Knud Erik Jorgensen et al. (eds.) *Handbook of European Union Politics*. 1st ed. 2006.
- Hoofnagle, C.J./ van der Sloot, B. et al. (2019). "The European Union general data protection regulation: what it is and what it means". *Information & Communications Technology Law*, 28:1, 65-98.
- Horspool, M./ Humphreys, M. (2010). *European Union Law*. 6th ed. 2010.
- Humerick, M. (2018). "Taking AI Personally: How the EU must learn to balance the interests of personal data privacy & Artificial Intelligence". *Santa Clara High Technology Law Journal* 393.
- Ingram, D. (2018). "Exclusive: Facebook to Put 1.5 Billion Users Out of Reach of New Privacy Law". *Reuters* (Apr. 19, 2018). <https://www.reuters.com/article/us-facebook-privacy-eu-exclusive/exclusive-facebook-to-change-user-terms-limiting-effect-of-eu-privacy-law-idUSKBN1HQ00P> (accessed 17 April 2023).
- International Monetary Fund (2022). World Economic Outlook Database. <https://www.imf.org/en/Publications/WEO/weo-database/2022/October/weo-report?a=1&c=998,&s=NGDPD,PPPGDP,PPPPC,&sy=2021&ey=2022&ssm=0&scsm=0&sc=0&ssd=1&ssc=0&sic=0&sort=country&ds=.&br=1> (accessed 15 May 2023).
- Järvenpää, P./ Major, C./ Sakkov, S. (2019). "European Strategic Autonomy: Operationalizing a Buzzword". *International Center for Defence and Security*.
- Kalyanpur, N./Newman, A.L. (2018). "Mobilizing Market Power: Jurisdictional Expansion as Economic State" 628 (International Organization 2018). https://www.cambridge.org/core/services/aop-cambridge-core/content/view/880511974FC84FF93C95403A11788147/S0020818318000334a.pdf/mobilizing_market_power_jurisdictional_expansion_as_economic_stat ecra62.pdf [<https://perma.cc/8J8R-36VZ>] .

Kelemen, R.D. & Schmidt, S. K. (2012). "Introduction—the European Court of Justice and Legal Integration: Perpetual Momentum?". *19 J. EUR. PUB. POL'Y 1*

Kelly, E. (2020). "Decoding Europe's new fascination with 'tech sovereignty'". *Science/Business*. <https://sciencebusiness.net/technology-strategy-board/news/decoding-europes-new-fascination-tech-sovereignty> (accessed 18 May 2023).

Khan, M. et al. (2016). "Google, Facebook and Apple Face 'Digital Tax' on EU Turnover". *Financial Times*. <https://www.ft.com/content/e38b60ce-27d7-11e8-b27e-cc62a39d57a0> (accessed on 3 February 2023).

Khan, M./ Bradshaw, T. (2018). Apple and Facebook Call for EU. Style Privacy Laws in US. *Fin. Times*. (Oct. 24, 2018). <https://www.ft.com/content/0ca8466c-d768-11e8-ab8e-6be0dcf18713> (accessed 17 April 2023).

Kwan, C. (2022). "Meta's threat to leave Europe hints at warning big tech influence. ZDNet". <https://www.zdnet.com/article/metass-threat-to-leave-europe-hints-at-big-tech-influence-waning/> (accessed 6 June 2023).

Lane, D. (2007). "Post-Communist States and the European Union". *Journal of Communist Studies and Transition Politics*.

Leufer, D./ Lemoine, L. (2020). "Europe's Approach to Artificial Intelligence: How AI Strategy is Evolving". <https://www.accessnow.org/wp-content/uploads/2020/12/Europes-approach-to-AI-strategy-is-evolving.pdf> (accessed 3 May 2023).

Levitt, T. (1983). "The Globalization of Markets", *Harv. Bus. Rev.* May 1983 (<https://hbr.org/1983/05/the-globalization-of-markets>)

- Madiega, T. (2020). "Digital Sovereignty for Europe". *EPRS Ideas paper*.
[https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/651992/EPRS_BRI\(2020\)651992_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/651992/EPRS_BRI(2020)651992_EN.pdf)
- Madiega, T. (2021). "Digital Services Act". *European Parliamentary Research Service: Briefing Digital Services Act*.
- Madiega, T./ Van de Pol, A. (2022). « Artificial intelligence act and regulatory sandboxes." *European Parliament Research Service. Briefing*.
[https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733544/EPRS_BRI\(2022\)733544_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733544/EPRS_BRI(2022)733544_EN.pdf) (accessed 9 June 2023).
- Majone, G. (1996). The European Commission as Regulator, in *Regulating Europe*.
- Majone, G. (1997). "From the Positive to the Regulatory State: Causes and Consequences of Changes in the Mode of Governance ", *17 J. PUB. POL'Y* 139, 144.
- McKinsey Global Institute (2018). "AI, automation, and the future of work: Ten things to solve for". <https://www.mckinsey.com/featured-insights/future-of-work/ai-automation-and-the-future-of-work-ten-things-to-solve-for>
- Metz, C./ Schmidt, G. (2023). "Elon Musk and Others Call for Pause on A.I., Citing 'Profound and Risks to Society'". *New York Times*.
<https://www.nytimes.com/2023/03/29/technology/ai-artificial-intelligence-musk-risks.html> (accessed 12 May 2023).
- Obendiek, A. (2021). "Take Back Control? Digital Sovereignty and a Vision for Europe". Policy Paper. https://opus4.kobv.de/opus4-hsog/frontdoor/deliver/index/docId/4540/file/Policy-Paper_Obendiek.pdf (accessed 1 May 2023).
- O'Neill, K. (2004). "The Changing Nature of Global Hazardous Waste Management: From Brown to Green?". in Vogel, D./ Kagan, A. (eds.). *Dynamics of Regulatory Change*

- Organization for Economic Co-Operation and Development (OECD) (2022). AI Policy Observatory. The OECD Artificial Intelligence (AI) Principles. <https://oecd.ai/en/ai-principles> (accessed 3 May 2023).
- Peterson, J. (2015). "The Commission and the New Intergovernmentalism", in Bickerton et al. (eds.) *The New Intergovernmentalism: States and Supranational Actors in the Post-Maastricht Era* 185, 197
- Pfeiffer, S./ Carr, R. (2021). "Error 404: Trust not found – A European Survey on Digital (Dis-trust)". Munich Security Brief. https://securityconference.org/assets/02_Dokumente/01_Publikationen/Munich_Security_Brief_Error_404_Trust_Not_Found.pdf (accessed 23 March 2023).
- Pistor, K. (2005). "Legal Ground Rules in Coordinated and Liberal Market Economies". ECGI – *Law Working Paper No. 30/2005*, https://www.ecgi.global/sites/default/files/working_papers/documents/SSRN-id695763.pdf
- Pollack, M. (2003). "The Engines of European Integration: Delegation, Agency, and Agenda Setting in the EU".
- PricewaterhouseCoopers (2017). Pulse Survey: US Companies Ramping Up General Data Protection Regulation (GDPR) Budgets. GDPR Series.
- Rao, P. (2023). European Union. These are the EU countries with the largest economies. World Economic Forum. <https://www.weforum.org/agenda/2023/02/eu-countries-largest-economies-energy-gdp/> (accessed 15 May 2023).
- Reiners, W. (2021). "Die Digitalisierungsstrategie der Europäischen Union – Meilensteine und Handlungsfelder zwischen digitaler Souveränität und grüner Transformationen". *Integration* 4/2021

- Ritter, T./ Pedersen, C.L. (2020). "Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future". *Industrial Marketing Management*, 86.
- Sandbu, M. (2020). "Globalisation need not mean deregulation". *Financial Times*.
- Satariano, A. (2018). "New Privacy Rules Could Make This Woman One of Tech's Most Important Regulators: With Europe's sweeping new data privacy law, Ireland is in the middle of a standoff between regulators and tech companies". *New York Times*. <https://www.nytimes.com/2018/05/16/technology/gdpr-helen-dixon.html> (accessed 6 June 2023).
- Satariano, A. (2019). "Google is Fined \$ 57 Million Under Europe's Data Privacy Law". *New York Times*. <https://www.nytimes.com/2019/01/21/technology/google-europe-gdpr-fine.html> (accessed on 17 April 2023).
- Schaake, M. (2020). "EU risks being dethroned as world's lead digital regulator". *Financial Times*. August, 23 2020
- Schwartz, D. (2015). "Why Coke is Lowering its Sugar Levels in Canada". *CBC News* (Mar. 1, 2015), <https://www.cbc.ca/news/health/why-coke-is-lowering-its-sugar-levels-in-canada-1.2961029>.
- Scott, M., Cerulus, L. (2018). "Europe's New Data Protection rules Export Privacy Standards Worldwide". *Politico* (Jan. 31, 2018). <https://www.politico.eu/article/europe-data-protection-privacy-standards-gdpr-general-protection-data-regulation/> (accessed on 17 April 2023).
- Selin, H./ VanDeveer, S. (2006). "Raising Global standards: Hazardous Substances and E-Waste Management in the European Union". *Environment*, Dec. 2006.
- Shaffer, G. (2000). "Globalization and Social Protection: The Impact of EU and International Rules in the Ratcheting UP of U.S. Privacy Standards". *25 Yle J. Int'l L.* 1, 43.

- Shaw, T. (2013). "Privacy Law and History: WWII-Forward". *The Privacy Advisor*
<https://iapp.org/news/a/2013-03-01-privacy-law-and-history-wwii-forward/>
(accessed on 15 April 2023).
- Siegmann C./ Anderljug, M. (2022). The Brussels Effect and Artificial Intelligence. How EU regulation will impact the global AI market. [Report]
- Singel, R. (2008). "EU Tells Search Engines to Stop Creating Tracking Databases". *WIRED*.
<https://www.wired.com/2008/04/eu-tells-search/> (accessed 17 April 2023).
- Smith, M.P. (2012). "Environmental and Health Regulation in the United States and the European Union". *Protecting Public and Planet 2*.
- Smuha, N. (2021). "From A 'Race to AI' to a 'Race to AI Regulation': Regulatory Competition for Artificial Intelligence. *Law, Innovation & Technology*. Vol. 13 Iss. 1.
- Spar, D.L./ Yoffie D.B. (2000). A Race to the Bottom or Governance from the Top?. in Prakash, A.& Hart, J.A. (eds.) *Coping With Globalization* 31. Oxford. Routledge.
- Statista (2021). Combined corporate income tax rates in Europe in 2021, by country.
<https://www.statista.com/statistics/1253236/combined-income-tax-rate-europe/> (accessed 9 June 2023).
- Tonelson, A. (2002). *The Race to the Bottom: Why a Worldwide Worker Surplus and Uncontrolled Free Trade Are Sinking American Living Standards*. New York, NY. Westview Press.
- Tucker, E. (1998). "Plastic Toy Quandary that EU Cannot Duck". *Fin. Times*. Dec. 9, 1998.
- U.K., House of Commons (2004). The Extension of Qualified Majority Voting from the Treaty of Rome to the European Constitution,
<https://commonslibrary.parliament.uk/research-briefings/rp04-54/> (accessed 10 March 2023).

Ukrow, J. (2018). "Practitioner's Corner – Data Protection without Frontiers? On the Relationship between EU GDPR and Amended CoE Convention 108". *European Data Protection Law Review* (4:2)

United Nations Conference on Trade and Development (UNCTAD 2023).
<https://unctad.org/page/data-protection-and-privacy-legislation-worldwide>
(accessed 17 April 2023).

Vogel, D. (1995). *Trading Up: Consumer and Environmental Regulation in a Global Economy*. Cambridge MA. Harvard University Press.

Vogel, D./ Kagan, R. (2004). *Introduction to Dynamics of Regulatory Change: How Globalization Affects National Regulatory Policies*. Cambridge MA. Harvard University Press.

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

Wakayabashi, D. (2018). "California Passes Sweepy Law to Protect Online Privacy". *New York Times*. <https://www.nytimes.com/2018/06/28/technology/california-online-privacy-law.html> (accessed 19 May 2023).

Waldfoegel, J. (2007). *The Tyranny of the Market: Why You Can't Always Get What You Want*. Cambridge, MA. Harvard University Press.

Wendt, A. (1992). "Anarchy is what States Make out of it. The Social Construction of Power Politics." *International Organization* Vol. 46 No.2., pp. 391-425

Wolff, G. (2020). "Europe may be the world's AI referee, but referees don't win". *Politico*. <https://www.politico.eu/article/europe-may-be-the-worlds-ai-referee-but-referees-dont-win-margrethe-vestager/> (accessed 18 May 2023).

Young, A.R. (2003). "Political Transfer and 'Trading UP'? Transatlantic Trade in "Genetically Modified Food and U.S. Politics". *55 World Pol.*

Zacker, C. (1991). "Environmental Law of the European Economic Community: New Powers Under the Single European Act". 14. *B.C. INT'L & Comp. L. Rev.*

Zuckerberg, M. (2019). "The Internet needs new rules. Let's start in these four areas". *Washington Post* (March 30, 2019).

https://www.washingtonpost.com/opinions/mark-zuckerberg-the-internet-needs-new-rules-lets-start-in-these-four-areas/2019/03/29/9e6f0504-521a-11e9-a3f7-78b7525a8d5f_story.html?fbclid=IwAR2dyE8yvRAI2SIUUsAJEj6nwcZatkpOWaS0k_cxHWSRkrpJI_qUZDpiDLw (accessed on 17 April 2023).