The politics of internet privacy regulation in a globalised world: an examination of regulatory agencies' autonomy, politicisation, and lobbying strategies

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Elise Antoine

Declaration

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Abstract

The rapid proliferation of new information technologies has not only made internet privacy one of the most pressing issues of the contemporary area, it has also triggered new regulatory challenges because of their cross-border character. This PhD thesis examines the politics of internet privacy regulation at the global level. Existing research has largely investigated the extent to which there is no international privacy regime, when and why data protection regulations in the European Union affect member state laws and trade relations, and how interest groups shape data protection regulations in the EU. Little scholarly attention, however, has been accorded to the decision-making processes and policies produced beyond the legislative arena. Non-legislative and technical modes of policy-making are yet becoming more prominent in global politics. This research focuses on global data protection and internet privacy rules determined by leading, but little-known, internet regulatory agencies, in particular: the Internet Corporation for Assigned Names and Numbers, World Wide Web Consortium, Internet Engineering Task Force, and Institute of Electrical and Electronics Engineers. It investigates three distinct but interconnected questions regarding regulatory agencies' autonomy, politicisation, and interest groups' lobbying strategies. Each of the three questions corresponds to one substantive chapter and makes distinct contributions, using separate theoretical frameworks, methods, and analyses. Taken together, the chapters provide important theoretical arguments and empirical evidence on the making of internet privacy regulation, with a special emphasis on the role of corporate interests.

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List of Abbreviations and Acronyms

CEN	European Committee for Standardisation
DNT	Do-Not-Track
DNS	Domain Names System
EC	European Commission
ECMA	European association for standardising information and communication systems
ETSI	European Telecommunications Standards Institute
EU	European Union
GAC	Governmental Advisory Committee
GDPR	General Data Protection Regulation
ICANN	Internet Corporation for Assigned Names and Numbers
IEEE	Institute of Electrical and Electronics Engineers
IEEE SA	Institute of Electrical and Electronics Engineers Standard Association
IETF	Internet Engineering Task Force
IP	Internet Protocol
ISO	International Organisation for Standardiation
ITU	International Telecommunication Union
ITU-T	Telecommunication Standardisation Sector of the International Telecommunication Union
OASIS	Organisation for the Advancement of Structured Information Standards

OMA	Open Mobile Alliance
OGF	Open Grid Forum
NGO	Non-governmental Organisation
RFC	Request for Comments
RIPE	Regional Internet Registry for the European region
UN	United Nations
US	United States
W3C	World Wide Web Consortium
3G	Third Generation
3GPP	Third Generation Partnership Project

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CHAPTER 1. Introduction

1.1 Research topic and questions

As the internet becomes further integrated into all aspects of the global culture and economy, data protection and internet privacy become the most pressing issues of the contemporary era.

Privacy threats are not new, but the development of technology is giving states and corporations much more access to private information than they once had; 60 % of the world's population is using the internet today, compared to 7% in 2000.[1] As technology has evolved, personal information has expanded to include medical and financial records, location details, web search history, online purchases, facial images, social media posts, videos, and connections. Governments and multinational corporations now have an unprecedented ability to collect, manipulate, redistribute, and even sell information about personal habits and preferences. The Facebook-Cambridge Analytica scandal in 2018 notoriously exposed how personal data from millions of individuals could be collected illegally. The scandal revolved around Cambridge Analytica, a British consulting firm that faced accusations of illicitly gathering personal information from Facebook users. This included personal information such as user identities and friend networks. Cambridge Analytica then employed this data to construct voter profiles and execute targeted advertising campaigns for political motives, notably during the 2016 US Presidential elections and the 2016 Brexit referendum. This received substantial attention from the media, with several newspapers claiming that the misuse of personal data had altered the outcome of both the US presidential election and the UK Brexit referendum (Cadwalladr and Graha-Harrison, 2018; Hern, 2018; Smout, 2018). According to Epstein, the illegal collection and use of data poses a direct

[1] https://data.worldbank.org/indicator/IT.NET.USER.ZS

threat to democracy as personal information can "be used to determined how we vote and even how we think" (2018: 300). While the relationship between the use of personal data and voting remains more complex, scandals such as the Facebook Cambridge Analytica have highlighted public concerns about internet privacy. In this context, there has never been a greater need to understand the mechanisms underpinning the regulation of data protection and internet privacy at the global level.

The regulation of internet privacy has been subject to increased scholarly attention and inquiry. For instance, scholars have investigated why and to what extent there is no international privacy regime (Bennett and Raab, 2006, 2020). They have also assessed the extent to which global regulatory interdependence has resulted in a race to the bottom or rather race to top for states fashioning new internet privacy policies (Long and Pang Quek, 2002; Bennett and Raab, 2006; Zimmer, 2008). However, scholarship on internet privacy regulation at the global level remains rather limited. The majority of existing studies tend to focus on data protection regulations in the European Union (EU), investigating how the 1995 EU Data Protection Directive and the more recent General Data Protection Regulation (GDPR) have influenced existing member state laws and trade relations with third countries (Farrell, 2003; Wu, 2008; Bennett and Raab, 2006; Bennett, 2018; Ryngaert and Taylor, 2020), as well as how interest groups have influenced these important regulations (Rossi, 2016; Kalyanpur and Newman, 2019; Christou and Rashid, 2021).

The literature mostly overlooks the primary internet regulatory agencies that set the rules[2] for internet privacy at the global level, namely: the Internet Corporation for Assigned Names and Numbers (ICANN), World Wide Web Consortium (W3C), Internet Engineering Task Force (IETF) and Institute of Electrical and Electronics Engineers (IEEE). Non-legislative and technical modes of policy-making are yet becoming more prominent in global politics (Mattli and Woods, 2009; Büthe and Mattli, 2011). Internet regulatory agencies are public-private bodies that are often referred to by the literature as the

[2] The terms policies, rules, standards and regulations are used interchangeably in this thesis. As discussed in the second section of this introduction, regulations can indeed be defined as sets of rules established by expert bodies prescribing the quality of a given practice, procedure or product.

'internet technical community' (Bygrave and Bing, 2009; DeNardis and Wilson, 2009; DeNardis, 2014). Work within internet regulatory agencies is largely accomplished in working groups organised around key problem areas, and decisions are mostly reached through 'rough consensus' (i.e., decisions are reached without major objections by any participant). While ICANN is primarily responsible for coordinating the domain names system (i.e., the database in which internet domain names are translated into internet addresses), IETF, W3C and IEEE are known for developing key internet standards ensuring the internet's growth. IEEE and W3C have notably developed critical standards for wireless networking (e.g., WiFi standard), and international text processing (e.g., Extensible Markup Language) respectively. However, the IETF remains probably the regulatory agency that has the largest impact on the technologies used to develop the internet (Bygrave and Bing, 2009).

This thesis examines the politics of global internet privacy regulation within the internet regulatory agencies. My central argument is that actors (i.e., internet regulators, interest groups), logics of action (i.e., lobbying, institutional arrangements) and constraints (i.e., politicisation, policy complexity) can be linked together to explain the making of data protection and internet privacy regulation at the global level. There are indeed many interesting puzzles still to be solved, such as, how do the internet regulatory agencies operate and formulate policies? To what extent are the policies produced the subject of (intense) public debates and political conflict, and why? Which interest groups participate in the decision-making processes, and what factors determine interest mobilisation patterns within these venues? To what extent are policy processes 'captured' by a concentrated group of companies and business associations with vested interests and superior resources, or alternatively, open to a broad range of interests? These are important questions that speak to broader issues of political representation and legitimacy in decision-making. Interest groups may contribute to legitimate and democratic decision-making by aggregating and facilitating the involvement of citizens (Rasmussen et al., 2014; Binderkrantz et al., 2015). They might also provide policy and timely relevant information to busy policy-makers in order to assist them in winning their own political battles rather than to pressure them (Hall and Deardorff, 2006). At the same time, interest groups may endanger democratic decision-making by influencing decision-makers to adopt policies that favour concentrated interests like corporate interests at the expense of the general public (Schattschneider, 1960; Gray et al., 2004;

Michalowitz, 2007; Klüver, 2013; Chalmers, 2015). Understanding the participation of interest groups, especially corporate interests, is thus essential for assessing the democratic character of policy-making processes. It is even more so when it comes to internet privacy regulation, which shapes fundamental civil liberties and business organised globally.

The rules set by the internet regulatory agencies are particularly critical for the internet to perform as a global network of computer networks. Specifically, they allow multiple systems and electronic devices to operate together. This means that they enable the world to function, especially as the internet continues to transform the ways in which people work, organized, create and share information. When it comes to data protection, the rules produced are sometimes described as tools that enable internet users to express their privacy preferences and/or to communicate confidentially (e.g., encryption), and enable service providers to be transparent about their practices. Importantly, internet rules and guidelines are not developed by politically accountable public officials, but by unelected decision-makers who heavily rely on private sector interests for expert and technical input. The provision of expertise, however, is not apolitical. Corporate interests, in particular, have much to lose if compliance with internet privacy rules requires making considerable changes to existing business practices. Today's economic system is characterised by powerful digital companies such as Amazon, Facebook and Google (Davis, 2015: 413), whose business models rely considerably on data generated on the internet. In 2018, the combined market value of Microsoft, Amazon, Apple, Facebook and Netflix had reach $3.5 trillion (Winseck, 2022: 231). Perhaps more tellingly, Google accounts for more than 90% of all web searches globally (Winseck, 2022: 231). Clearly, the company dominates the search market worldwide, to the point where it has become synonymous with internet search services (Tusikov, 2017). But the impact of the internet on businesses extends beyond mere market dynamics. As information now flows through social networks via applications (like Twitter) and search engines (like Google), technology companies are undermining governments' ability to reside at the centre of an information network (Margetts, 2009), raising concerns about the growing power of "Big Tech" (Popiel, 2018; Culpepper and Thelen, 2020; Christou et al., 2020; Christou and Rashid, 2021).

The regulation of data protection and internet privacy has significant societal ramifications, especially since the internet serves as the underlying infrastructure for nearly all applications that enable

the global information society (Cogburn, 2008; Margetts et al., 2016). Privacy has historically been described as an "integral part of humanity", the "beginning of freedom", an "essential" component of "democratic government", "a fundamental human right" (Solove, 2008: 1-3). While the importance of privacy in protecting freedom and democracy is widely acknowledged, there is no agreement about what exactly constitutes privacy. It seems, however, that the concept of privacy primarily encompasses the following elements: the control over personal information, the freedom from surveillance, and, closely related, the protection from searches and attention (Warren and Brandeis, 1890; Westin, 1967; Solove, 2008). But data protection and internet privacy are not only domestic and international legal concerns touching on issues of human rights. They are also big business. The personal data created by interaction with internet services have generated a new wave of opportunity exploited by technology and internet companies to capitalise on. Corporate interests increasingly depend on them to generate revenue and reach profitability. This PhD dissertation seeks account for the politics of global internet privacy regulation by investigating three distinct but interconnected questions. Specifically, it examines (1) internet regulatory agencies' autonomy from corporate interests, (2) the politicisation of internet privacy regulation, and (3) interest groups' lobbying strategies on global internet privacy regulations. Each of these questions corresponds to one substantive chapter of the dissertation and is a self-contained piece of research. In addressing these questions together, the present work uncovers the factors shaping global data protection and internet privacy regulation. In terms of generalising beyond my case, it is important to note that internet privacy is not one-of-a-kind. Rather, it shares similarities with other policy areas like, finance or trade, which are characterised by a well-established history of relatively technical and global rule-making. I elaborate on the three interconnected questions below.

(1) Internet regulatory agencies' autonomy

Internet regulatory agencies are institutionally insulated from politics and promote a multi-stakeholder approach where any actor or interest wishing to participate in the policy-making process can formally do so. However, formal arrangements only partially mirror agencies' informal practices. Given the central role that corporate interests play in the technical operation of the internet, the issue of agencies' autonomy from such vested, concentrated interests is particularly important. Therefore, the first question

addressed by this thesis is the following: *What factors determine internet regulatory agencies' informal autonomy from corporate interests*? Answering this question provides insights about the factors determining interest inclusion and participation in the internet privacy policy process. It also allows us to understand the political and politicised nature of the policy decisions made by these regulatory agencies.

(2) The politicisation of internet privacy regulation

Insofar as the decisions made by the internet regulatory agencies are not merely technical, different interests might mobilise in public debates, expanding the scope of political conflict. The second research question examines the politicisation of internet privacy regulation, asking: *To what extent is the politicisation of internet privacy regulation determined by 'focusing events' such as the Edward Snowden revelations in 2013*? Investigating this question casts valuable light on the amount of attention given to internet privacy regulation as well as the configuration of actors engaged in this issue, allowing us to get a sense of the policy environment in which internet regulators operate at the global level. Politicisation and its driving forces are an important object of research as the concept of politicisation suggests that public debates involving a growing range of actors take place, which is a key ingredient of democratic politics.

(3) Lobbying on global internet privacy regulation

Understanding advocacy behaviour on global internet privacy policies is important not least because of an increasing shift in policy-making powers to global institutions. To influence policy processes, interest groups can use a variety of strategies, such as contacting and meeting decision-makers directly (i.e., 'inside lobbying'), or contacting journalists and issuing press releases to involve a broader audience or the public (i.e., 'outside lobbying'). The final research question addressed by this thesis investigates the linkage between the use of inside and outside lobbying strategies by interest groups, posing: *How is the use of inside lobbying strategies by interest groups related to the use of outside lobbying strategies*? Understanding interest groups' participation in political processes is also critical for assessing the quality of democratic representation. If different lobbying strategies provide groups with different opportunities

to be heard, then increased use and combination of various strategies by concentrated, vested interests may distort the political system of representation significantly.

1.2 Overarching theoretical framework

The subject of data protection and internet privacy regulation is inherently interdisciplinary insofar as it raises critical questions in the study of political science, economics, law, public administration, philosophy, business, and communication. In this thesis, I aspire to contribute to a better understanding of the politics of global internet privacy regulation by addressing these various disciplinary intersections. Nonetheless, I approach my research largely from a political science perspective, bringing together insights from an emerging literature on global regulatory politics with insights from the literature on the politics of interest representation. I argue that actors (i.e., internet regulators, interest groups), logics of action (i.e., lobbying, institutional arrangements) and constraints (i.e., politicisation, policy complexity) can be linked together to explain the making of data protection and internet privacy regulation at the global level. This section presents a brief overview of the existing literature that founds the present thesis.

1.2.1 Actors

In its broadest sense, the internet is a multifaceted entity that encompasses the hardware and software technical infrastructure, the applications, and the content that is exchanged using these applications (Solum, 2009: 49). In its narrowest sense, the internet consists of millions of computers running a variety of applications that generate, manipulate, and retrieve large amounts of data. As such, the internet can be defined as a global network of networks whose usage raises important issues such as privacy and data protection.

I seek to examine the politics of internet privacy regulation in the context of global and seemingly technical venues such as ICANN, IETF, IEEE and W3C. By regulation, I mean a set of rules established by expert bodies prescribing the quality of a given practice, procedure or product (Büthe and Mattli, 2011: 24). As such, regulation can be described as a mode of governance. Governance is a

broader concept that refers to the distribution of resources and capacities associated with the exercise of power among a wide range of state, non-state, and supranational actors (Barnett and Duvall, 2004; Scott, 2004).

Focusing on regulatory agencies can appear puzzling at first. Several scholars suggest that nation-state actors remain the primary governors of the global economy, including in the cyberspace (Goldsmith and Wu, 2006; Wu, 2008; Drezner, 2004, 2008; Farrell, 2006). They notably refer to the "great powers" (Drezner, 2008) such as the United States (US) and the EU. In particular, Goldsmith and Wu (2006) argue that, despite globalisation and the empowerment of non-state actors through the development of networks, only governments have a legitimate legal authority to define, shape, and enforce policies that constrain individual and collective behaviours. On the other hand, an emergent body of research suggests that most of the policy decisions regarding the internet (and consequently internet privacy) occur within hybrid private-public regulatory bodies in which various public and private actors interact (Christou et al., 2020). These regulatory bodies are said to express the ongoing reconfiguration of authority in world politics. They notably reflect the fact that non-state actors are increasingly engaged in authoritative decision-making, confounding the realms of public policy and private authority in global governance (Verbruggen, 2013; Cashore et al., 2021). Importantly, they are expected to cope more effectively with complex socio-economic issues by providing expert, impartial and rational solutions (Hofmann, 2007). Regulation by such expert organisations, rather than governments, is thus believed to result in better policy outcomes. These bodies notably include the ICANN, W3C, IETF, IEEE, (Camp and Vincent, 2004; Bygrave and Bing, 2009; Christou et al., 2020). In this thesis, I refer to these expert bodies as internet regulatory agencies.

Understanding global internet privacy regulation thus requires focusing on internet regulatory agencies and the private actors who comprise them. Despite pointing out the central role of governments, the state approach does not ignore the role of non-state actors in global politics. Drezner (2004, 2008) indeed points out that states can still substitute different governance structures, delegating regime management to private actors who possess a comparative advantage in collecting policy relevant information and expertise. He adds that this collaboration does not diminish their ability to govern insofar as the delegation strategy is a conscious choice of states. According to Drezner, states "will

manipulate private forms of authority to achieve their desired ends" (2004: 479). Similarly, Farrell (2006) suggests that nation-states use non-state actors to achieve their preferred policy outcome in certain circumstances. For instance, they choose to do so when there is a substantial divergence of policy preferences among states. In sum, this strand of research asserts that states tend to rely on non-state actors for functional purposes. Therefore, non-state actors are conceived as agents of state interests rather than independent actors.

Although scholars such as Drezner and Farrell primarily seek to demonstrate that globalisation does not lead to a diminution of the states' ability to govern, they do emphasise the crucial position of non-state actors, like multinational corporations, in global governance and especially in the realm of regulation. Furthermore, even when decided by states themselves, delegation leaves room of manoeuvre for non-states actors to determine regulatory outcomes. In the case of the Safe Harbor Arrangement, for instance, Farrell highlights that the EU and the US were defending different approaches regarding data protection regulation, but they did find a compromise thanks to private actors (Farrell, 2006). These private actors were perceived by both sides as key actors controlling key resources and/or infrastructures (Farrell, 2006: 26-27). In this context, non-state actors can act as critical actors in global politics, even when states are considered as the primary governing actors. They can do so as they benefit from substantial economic resources and technical expertise, which are prerequisites for active participation in international regulation (Büthe and Mattli, 2011: 18).

Furthermore, as global internet privacy regulation primarily occurs in non-legislative venues, non-state actors are likely to play a dominant role in the policy-making process. The increasing role played by non-state actors in global politics has been investigated by several scholars (e.g., Ronit and Schneider, 2000; Fuchs, 2007, Hofmann, 2007; Mattli and Woods, 2009; Büthe and Mattli, 2011; Porter and Ronnie, 2011; Stone, 2013; Green, 2018). For instance, Fuchs suggests that business has become "a pivotal participant in global governance and an important source of global rules and regulation" (2007: 164). When it comes to internet regulation, the key role played by non-state actors is often explained by the transnational structure of the internet itself and its history of development (Bygrave and Bing, 2009; Eriksson and Giacomello, 2009; Mathiason, 2008). According to Solum, "closely related to the idea that cyberspace is an independent realm outside the control of national governments is the notion that the

internet should be governed by special transnational institutions that are outside the control of national governments and instead answer to the 'internet community' or the 'community of network engineers'" (2009: 59). One quality frequently attributed to the internet is indeed its ability to undermine state interventions due to decentralised structured, surpassing territorial borders. This seems to allow multiple actors to escape from the control of the nation-state while allowing various sources of authority to work together to define and enforce rules.

In this light, it is suggested that "there is no single governor of the internet" (Bygrave and Bing, 2009: 92), "not even on a domestic level" (Eriksson and Giacomello, 2009: 207). Therefore, the range of potential internet governors, in terms of actors able to shape global policy outcomes, can include intergovernmental organisations, committees of engineers, interest groups. The politics of global regulation are no longer a matter of state cooperation, and interest groups, in particular, are benefitting from increased access to global regulatory institutions (Dellmuth and Bloodgood, 2019).

1.2.2 Logics of action

Actors participate in policy-making following different logics of action. Participants in the decision-making processes of the internet regulatory agencies are often considered as the designers, guardians, and developers of critical norms for internet communications and principles upon which the functionality of the internet is based (Bygrave and Bing, 2009: 94). Yet knowledge on participation in these regulatory venues remains limited as "procedures for decision-making are complex and often opaque, and core decision-making often takes place outside the public gaze" (Christou at al., 2020: 5). Although participants in internet agencies are said to play a role as engineers, the policies they establish are not merely a function of scientific and rational considerations, but also a function of the distribution of power. The language accompanying internet policy processes is certainly technical, but "the essence of global rule-making" is always political (Büthe and Mattli, 2011: 20).

The existing literature has sought to shed light on the administration of these global agencies responsible for regulating the internet. Scholars notably study the processes of developing and adopting policy recommendations (i.e., mainly internet standard), from the submission of a proposal to the document publication. Lie and Alvestrand (2009), for instance, provide fruitful insights on the internet

regulatory agencies' formal practices, looking at the development of core internet standards within the frameworks of the IETF and W3C. Camp and Vincent (2004) also draw a comparison between IETF, W3C and IEEE on the basis of participation, transparency, authority and openness in decision-making, while presenting the strengths and weaknesses of these internet regulatory agencies. Interestingly, existing studies often place heavy emphasis on individual figures that have gained authority as internet governors (e.g., Bygrave and Bing, 2009). Notable examples include Jon Postel (administrator of the Internet Assigned Numbers Authority, which is affiliated with ICANN) and Tim Berners-Lee (founding director of W3C). These authoritative pictures are, however, part of larger governance structures and mechanisms, i.e., the 'rules of the game', which require greater empirical scrutiny. Despite the increased importance of these policy venues and the growing body of literature on the standard-making process that characterises them (Bygrave and Bing, 2009; Marsden, 2011; Gencer, 2012; Brown, 2013; Grown and Marsden, 2013; DeNardis, 2014; Simcoe, 2014; Christou et al., 2020), little is still known about how these venues operate and, especially, how they interact with private and organised interests. A key point emphasised in existing studies on internet governance is that internet regulatory agencies, and the decision-makers in these agencies, do not operate in isolation. Because regulatory agencies have limited capacities, authority, and information, and they must largely rely on a diverse range of actors, from governments to firms and civil society organisations, to formulate and implement internet policies. This raises a critical question regarding their autonomy, understood as degree of freedom experienced when making decisions (Dowding and Hees 2007: 4; Maggetti 2007: 272).

Most of the studies of regulatory autonomy focus on agencies' insulation from political interests, pointing out that the boundaries between regulators and governments are not absolute (Wonka and Rittberger, 2010; Maggetti, 2007; Hanretty and Koop, 2012, 2013). However, the notion of autonomy also refers to insulation from the regulated sector. This aspect characterises any regulatory body, as Büthe and Mattli (2011) point out in their analysis of the internationalisation and privatisation of rule-making. Internet agencies also need legitimacy as the regulatory decisions they issue are generally voluntary measures. As Black points it out, regulatory bodies "require not only that others accept them, but that they will change their behaviour because of what the standards say(s)" (2008: 148). Thus, the regulated sector is usually involved through consultation procedures or participation in advisory and/or

supervisory boards. In this context, regulatory capture is likely to occur, i.e., the rules produced will reflect the regulated interests' preferences instead of the public interest. Even though some scholars argue that capture is inevitable as regulations are primarily designed for the benefit of business interests (e.g., Stigler, 1971), it can be suggested that regulatory agencies can avoid being too close to the regulated sector and fulfil broader public purposes. According to Pagliari (2013), financial regulators have substantially diminished their reliance on the regulated sector after the financial crisis of 2008 and the policy failures revealed. The determinants of agencies' autonomy, therefore, require further examination. My aim in this research is to bring some clarity to this question by investigating the effect of formal autonomy, policy complexity, media attention and agency's age on agencies' informal autonomy from corporate interests. Eventually, the issue of regulatory autonomy underlines the political and politicised nature of the decisions made by these agencies (i.e., they are not apolitical).

As previously emphasised, internet privacy has broad societal implications. It might spark the interest of various groups seeking to shape global data protection and internet privacy rules. As business models increasingly depends on the internet and the collection of personal data (OECD, 2014), corporate interests, in particular, might strive for influence. Influence is generally defined an actor's ability to shape a decision (e.g., McFarland, 1987; Michalowitz, 2007; Baumgartner et al., 2009). To influence the policy-making process and policy outcomes, interest groups can use a variety of lobbying strategies, namely inside and outside strategies. Whereas outside lobbying strategies primarily aim at influencing policy-makers through the mobilisation of a larger audience or the public, inside lobbying aims at influencing policy-makers through direct interactions (Beyers, 2004; Hanegraaff et al., 2016; Dellmuth and Tallberg, 2017). Inside lobbying is not usually visible and includes face-to-face meetings, telephone calls, e-mail exchanges, and participation in expert committees. In contrast, outside lobbying includes media compaign, public speeches, meetings with journalists. Empirical evidence suggests that inside lobbying is not more effective than outside lobbying in influencing policy outcomes (De Bruycker and Beyers, 2019). The use of different strategies by organised interests may thus be explained by other factors, such as interest groups' characteristics (Gais and Walker, 1991; Kollman, 1998). Scholars focusing on interest groups' permanent characteristics suggest that concentrated interest groups (like business) favour direct contacts with policy-makers, while groups representing more dispersed interests

(like civil society organisations) privilege indirect contacts with policy-makers via a broader audience. However, another strand of research suggests that all groups eventually adopt a mix of inside and outside strategies (Baumgartner and Leech, 1998; Binderkrantz, 2005; Mahoney, 2007; Chalmers, 2013; Dür and Mateo, 2016). The selection of lobbying strategies might thus be driven by other factors or constraints.

1.2.3 Constraints

An important constraint is the degree of policy complexity. Policy complexity is widely acknowledged to be an important factor in policy-making, shaping lobbying success, interest group activities and mobilisation biases (Pagliari and Young, 2016; Rasmussen and Carroll, 2014; Klüver, 2013; Klüver et al., 2015; Røed and Wøien Hansen, 2018). A policy issue or area can notably be characterised as complex by virtue of its degree of technicality (Littoz-Monnet, 2017: 2).

In this thesis, I propose that interest groups invest in both inside and outside lobbying strategies when the policy at stake is complex. The rationale is that by being present in the news covering a complex policy issue, interest groups establish themselves as experts and trustworthy interlocutors of insider channels of participation. As previously mentioned, regulators do not work in isolation, but strongly rely on private actors, particularly corporate interests, to get informational knowledge regarding complex matters and make relevant policy decisions. As the same time, the complexity of an issue or a policy can create substantial information asymmetries between different interest groups. Accordingly, it can increase the mobilisation costs for those groups that lack expertise and policy-relevant information (Broscheid and Coen, 2007; Rasmussen and Carroll, 2014). The role of policy complexity needs, therefore, to be considered.

But complexity is not only the constraint shaping regulatory politics and, specifically, internet privacy regulation. Another important constraint relates to the degree of politicisation. A politicised issue is an issue that is the subject of public debates and/or conflict. The concept of politicisation has become an important subject in academic debates, particularly regarding the European integration and its democratic legitimacy (e.g., Hooghe and Marks, 2009; Statham and Trenz, 2013; Leupold, 2015; De Wilde et al., 2016). Politicisation is not about decision-making or legislative change, even though it can

be related to it. Rather, politicisation is about how a matter becomes a subject of political debates and/or controversies in the first place. As such, it can include, but is not limited to, another potential constraint, i.e., salience. Salience is generally understood as the level of attention given to a specific issue (Oppermann and Viehrig, 2009; Culpepper, 2010). The concept of salience has primarily been developed within the electoral studies literature (e.g., Fournier al., 2003, Damore, 2004; Belanger and Meguid, 2008). It was then used to investigate the policy-making process outside of the electoral process, i.e., when "quiet politics" become "loud" (Culpepper, 2010; Pagliari, 2013; Chalmers, 2015). While salience focuses on the importance individuals or groups assign to an issue, politicisation goes beyond that by involving the mobilisation of political actors. Politicisation thus relates to the structuring of political conflict in terms of visibility, scope, direction and intensity.

Politicisation can occur at the institution's level, referring to debates over the institutions' decision-making procedures and their legitimacy (e.g., regarding international organisations such as the World Trade Organization), as well as at the policy field's level, referring to debates over societal topics and related public policies (De Wilde and Zürn, 2012; Rixen and Zang, 2013). Regardless of the level scholars choose to focus on, they share a broad understanding of the concept, emphasising the increasing involvement of a broad range of actors in politics (De Wilde and Zürn, 2012; Green-Pedersen, 2012; Statham and Trenz, 2013; Hutter al., 2016; Leupold, 2015; De Bruycker, 2017). Existing literature explains the process of politicisation as a function of several factors, from national economic structures (Leupold, 2015) to the accumulated effect of authority transfers at the global level (De Wilde and Zürn, 2012; Rixen and Zangl, 2013; Ecker-Ehrhard, 2014; Grande and Hutter, 2016; Rauh and Zürn, 2020). A situation of high politicisation can also be attained when private interests express their claims in the public sphere to make them visible to the public or a broader audience (Kollman, 1998; Beyers, 2004; Thrall, 2006; Gheyle and De Ville, 2019). In other words, politicisation can also be driven by the actions of interest groups. The line between the notions of logic of actions and constraints can thus be porous. However, in this thesis, I propose to examine the extent to which "focusing events" (Kingdon, 1984; Birkland, 1997, 1998) can determine politicisation patterns.

Kingdon indeed suggests that the process through which a broader range of actors get involved in political debates might start following a focusing event (1984). A focusing event can be defined as

an event that is sudden, relatively uncommon, and which may be harmful (Birkland, 1998: 54). Because of these traits, focusing events can put the spotlight on existing, but out of sight, policy issues. Specifically, they provide a temporal and physical manifestation of a deficiency, or to say it differently, a symbol-rich example of policy failure (Birkland, 2006). By this means, they serve as an impetus for actors to point out these failures (Baumgartner and Jones, 1993). Data protection and internet privacy rules are often presented as highly complex issue, and which, therefore, engage a limited range of actors. But focusing events can play a critical role by raising the levels of public attention and political contestation.

By exploring regulatory agencies' autonomy, politicisation and lobbying strategies, this thesis covers distinct but strongly related aspects of global internet privacy regulation. While the case of global internet privacy regulation is not unique and shares similarities with other policy areas, it serves as a least-likely case for analysing some of the logics of action and constraints discussed. This is particularly evident regarding politicisation. Internet privacy rules are widely perceived as a-political, merely reflecting what appears to be technical solutions to technical challenges. They thus represent a least-likely case of politicisation. This is also the case for interest groups' use of outside lobbying. Indeed, outside strategies are often associated with policies that benefit from higher degrees of public visibility (Dür and Mateo, 2016; Keller, 2016) and are produced by legislative venues, where voters can be mobilised (Kollman, 1998; Mahoney, 2007; Hanegraaff et al, 2016).

1.3 Outline of the thesis

The remainder of the thesis consists of one chapter providing background and contextual information, three substantive chapters (each a self-contained piece of research either published or currently under review in a peer-reviewed journal) and a concluding chapter.

In order to provide important background information and context for the three substantive chapters, Chapter 2 presents the internet regulatory agencies operating at the global level. It outlines the history of these agencies, their main tasks, and their organisational characteristics. Chapter 2 also

discusses the existing policy frameworks of data protection and internet privacy. An encompassing global regulatory regime regarding internet privacy has not yet evolved. Instead, a patchwork of rules and guidelines has been issued by internet regulatory agencies.

Chapter 3 examines the determinants of the agencies' informal autonomy from corporate interests using a mixed-method research design combining quantitative analyses of twelve internet regulatory agencies and eleven in-depth interviewees with senior officials of these agencies. The empirical analysis suggests that internet regulatory agencies clearly fall along a spectrum, with some agencies being very limited in their autonomy and others relying on a broad range of interests to develop important internet policies. The results indicate that informal autonomy significantly varies with the degree of policy complexity, the level of media attention, and the agency's age. In contrast, the degree of formal autonomy, despite setting out which actions and actors are permitted or required in the decision-making process, only determines informal autonomy to a limited extent.

Chapter 4 investigates the politicisation of internet privacy regulation, conceptualising it as a combination of issue salience, actor expansion and actor diversity. It tests the extent to which major worldwide events such as the global revelations made by Edward Snowden in 2013 contribute to the politicisation of internet privacy rules determined by ICANN, IETF, IEEE and W3C. This chapter has been previously published in a peer-reviewed journal, as: Antoine, E. (2022). "The politicisation of internet privacy regulation", *European Journal of Political Research*. Using a systematic analysis of news media coverage over a 20-year period, the findings suggest that focusing events greatly contribute to the politicisation of seemingly technical rules, in particular regarding the range and number of actors involved in public debates.

Chapter 5 focuses on interest groups' lobbying strategies regarding internet privacy regulation, investigating the relationship between the use of inside and outside lobbying strategies. Specifically, it examines the effect of policy complexity and groups' resources on the linkage between different lobbying strategies, using unique data retrieved from 26 expert groups belonging to ICANN, IETF, IEEE and W3C, and 800 news articles. The findings indicate that the relationship between inside and outside strategies is a rather sophisticated one that is largely determined by the degree of policy complexity and works differently for interest groups with different levels of resources.

The last chapter offers concluding remarks by emphasising the previous chapters' findings and going through the theoretical and empirical contributions of this PhD thesis. Even though this thesis specifically focuses on data protection and internet privacy, the findings have broader implications regarding the study of global public policy and regulation more broadly. In relation of these contributions, the concept of corporate power is also discussed. Finally, Chapter 6 brings the thesis to a close by discussing the limitations of the analyses and suggesting avenues for future research.

CHAPTER 2. Background: internet regulatory agencies and internet privacy regulation

This chapter serves as an essential foundation, offering crucial background and contextual information for the subsequent three substantive chapters. Its primary focus is to illuminate the internet regulatory agencies that constitute the subject of investigation within this thesis. These agencies, among the most inscrutable, opaque, and enigmatic international regulatory authorities, hold jurisdiction over the intricate web of global communication, education, and commerce known as the internet. Furthermore, this chapter aims to shed light on the data protection and internet privacy rules that exert influence over fundamental civil liberties and establish the framework for business practices on a global scale. By exploring these multifaceted dimensions, a comprehensive understanding of the complex interplay between regulation, technology, and society can be achieved.

2.1 Internet regulatory agencies

The regulation of internet privacy (and the internet more generally), is enacted via various routes, from national laws and supranational treaties or accords, to seemingly technical decisions, referred to as 'internet specifications' or 'internet standards'. The former is determined by public policy-making bodies, while the latter is determined by non-legislative and rather informal policy-making bodies comprised of public and private actors. I refer to the latter as internet regulatory agencies.

While public policy-making bodies largely develop a set of privacy principles, more informally established agencies regulating the internet develop global tools that can limit or enhance these

principles (Marsden, 2011). The present thesis focuses on the latter due to their global dimension and the important role played by non-state actors in internet governance, as discussed in Chapter 1. Furthermore, the political aspects of these agencies and the policies they produce have received surprisingly little attention (for an exception, see Christou et al., 2020), unlike institution like the EU and legislation like the GDPR (e.g., Rossi, 2016; Kalyanpur and Newman, 2019). Figure 2.1 below illustrates the landscape of global internet privacy regulation. It shows that internet privacy is regulated through public frameworks establishing privacy principles that can be binding (e.g., EU GDPR) as well as non-binding (United Nations' Guidelines Concerning Computerised Personal Data Files). It also shows that internet privacy is regulated through global public-private frameworks produced by agencies regulating the internet infrastructure and its subsections (like the web). In addition to ICANN, IETF, IEEE, and W3C, core internet agencies include: the Telecommunication Standardisation Sector of the International Telecommunication Union (ITU-T), Organization for the Advancement of Structured Information Standards (OASIS), European association for standardizing information and communication systems (ECMA International), 3rd Generation Partnership Project (3GPP), Open Mobile Alliance (OMA), European Telecommunications Standards Institute (ETSI), Open Gride Forum (OGF), and Regional Internet Registry for the European region (RIPE). Dotted lines in Figure 2.1 represent collaboration between two agencies such as common policy projects (e.g., the internet standard WebCGM 2.2 was produced by W3C and OASIS)[3], and membership (e.g., the EU is formally represented in ICANN, ICANN representatives participate in the IETF policy-making process).

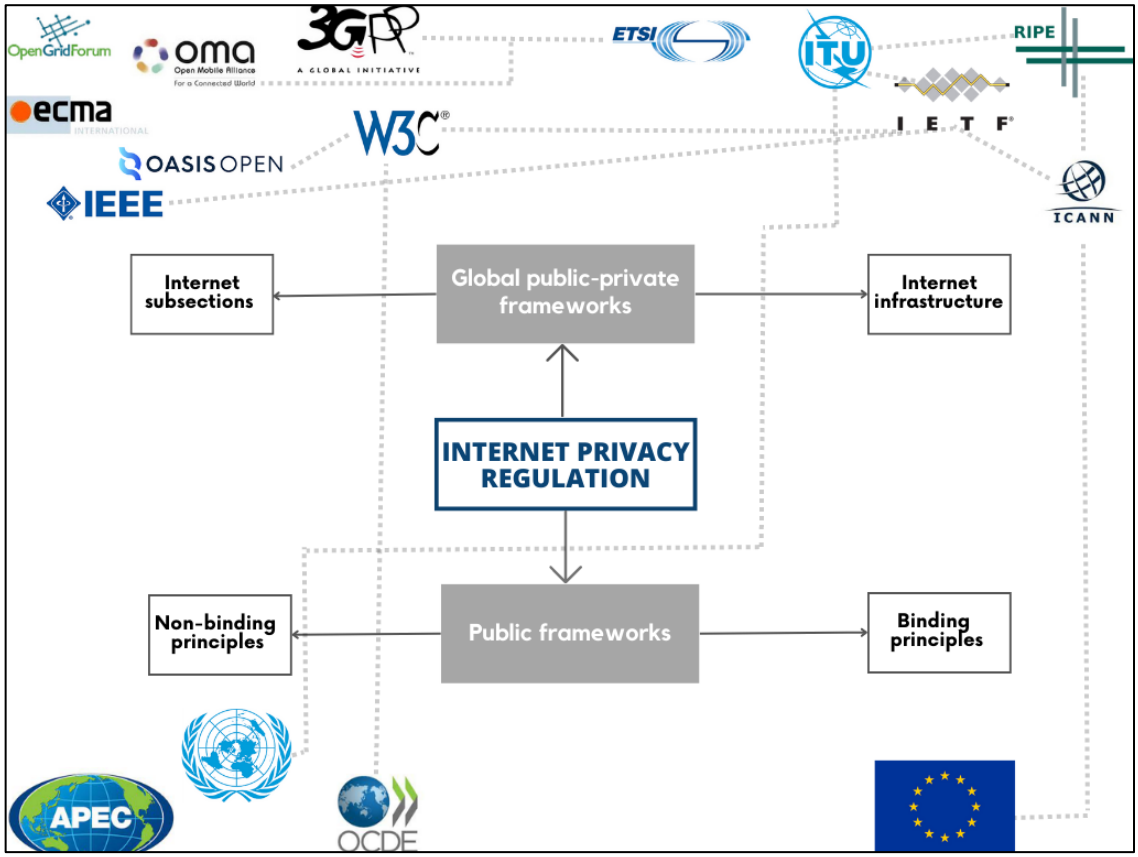
Scholars often use the notion of regulatory agencies to design "governmental entities that (a) possess and exercicise some grant of specialised public authority, separate from that of other institutions, but (b) are neither directly elected by the people, nor directly manage by elected officials" (Thatcher

[3] https://www.w3.org/2007/01/webcgm-pressrelease

and Stone Sweet, 2002: 2; Gilardi, 2005a, 2008; Maggetti, 2007). The internet regulatory agencies examined in this thesis possess some grant of specialised authority while being insulated from politics. However, they are not governmental entities. Comprised of public and private actors, they are expert bodies prescribing the quality of given practices and procedures, which is in line with the common definition of regulation (Mattli and Woods, 2009; Büthe and Mattli, 2011). Although these non-legislative bodies lack enforcement capabilities, the rules they produce are crucial and strongly determine how the internet can be used, and internet privacy protected. This can be explained by the nature of the internet as a global network, where adherence to and adoption of the rules developed are essential for participating in the network. Put simply, although public and private organisations are not mandated to adopt existing rules, they will need to do so if they intend to integrate their product or service into the network. Sometimes referred to as "private authority", the rules these regulatory agencies produce appear to display the same structuring effects as governmental policy (Rudder, 2008: 907).

There is not always a clear separation between these internet agencies' respective areas (Radu, 2019: 83), but a rough distinction can be made between agencies dealing with the physical infrastructure of the internet broadly (i.e., IETF and ICANN), and agencies that rather address subsections of the internet, like the web (i.e., W3C) or wireless access (i.e., IEEE), as displayed in Figure 2.1. In what follows, I describe how these agencies are structured, emphasising the context in which they were established as well as respective agendas and main responsibilities. I also outline how governments and politicians had a substantial role in the formation of these agencies, and how they became more insulated from politics over time.

Figure 2.1. Internet privacy regulation



2.1.1 Leading internet regulatory agencies

Just as there is no single regulation prescribing how the internet should be overseen, there is no single internet regulatory agency. The leading internet regulatory agencies include ICANN, IETF, IEEE, and W3C (Bygrave and Bing, 2009; Christou et al., 2020).

The Internet Engineering Task Force

The IETF was started formally in 1986 as a gathering of US government-funded researchers that rejected "kings, presidents, and voting" in favor of "rough consensus and running code" (Russell, 2006). Due to the decentralised structure of the internet, in addition to its technical nature, it was believed that nation-states or intergovernmental bodies were not suited to regulate the cyberspace. The small group of engineers thus wanted to create an alternative model of regulation. In 1986, this informal committee turned into the Internet Engineering Task Force, which is now one of the most important standards organisation for the Internet (Hofmann, 2007). IETF has also sometimes been described as the institution whose legitimacy is the most secure given the recognized technical merit of its standards (Nickerson and zur Muehlen, 2006: 472).

The IETF is notably known for having developed the Transport Layer Security standard that aims to ensure data privacy, notably between a web browser such as Microsoft and a server such as Wikipedia. IETF is administered by the Internet Society (ISOC), i.e., a non-profit corporation which primary purpose is to fund and administer the work of the IETF. One reason explaining the establishment of this institution was the issue of responsibility, i.e., whether IETF members might face litigation if internet standards harmed individuals (DeNardis, 2014: 42). Another driver was a decline in US government funding.

The IETF presents itself as an "open international community of network designers" who believe in "trough consensus and running code" (IETF, RFC 7282)[4]. It is thereby regarded as an example of epistemic community, whose recognised experts share knowledge and common interests (Haas, 1992). However, the extent to which the IETF only comprises experts who are not influenced by their corporate agenda remain open to debate, as further discussed in Chapter 3. The IETF traditionally holds

[4] https://datatracker.ietf.org/doc/html/rfc7282

4.5 day-meetings three times a year. Most of the IETF work takes place online, including on email lists, and documents, i.e., Request for Comments (RFC). From the beginning, RFC were not designed as a formal set of rules to regulate the internet. Instead, RFC were first used by a group of students around Steve Crocker and Vint Cerf to get feedback on a new idea regarding the internet infrastructure (Brown, 2013: 20). The RFC process was later adopted as a formal decision-making process, where anyone can indicate approval or disapproval. This open structure also means that meetings are open to the public, and anyone can draft a policy proposal and submit it the Internet Engineering Steering Group (IESG) which is responsible for managing the standard-making process. Barriers to participation are thus low and communication is high-speed. If there is enough interest in the proposal submitted, a working group is then formed. When the policy proposal is considered as ready by the members of the working group, it is sent to the IESG for approval. The IESG is formed 15-20 members appointed by a nominating committee every two years. Each of these members is also an Area Director heading up the working groups. A proposal becomes an internet standard when it obtains final approval from the Internet Architecture Board (IAB). A very singular characteristic of the IETF is that no formal membership or fees are required to join, unlike in W3C and IEEE. Its open structure is similar to ICANN, although ICANN is organised in a more formalised manner.

The Internet Corporation for Assigned Names and Numbers

ICANN is a complex structure comprised of different organisations representing the internet industry, governments and users. Specifically, it is run by a Board of Directors, with the help of several Supporting Organisations, such as the Generic Names Supporting Organization (GNSO), and Advisory Committees. Example of Advisory Committees include the Governmental Advisory Committee (GAC) which gather representatives of governments and international governmental organisations. Advisory Committees can only make suggestions, and do not take part in the official policy-making process. The GNSO is the ICANN's principal policy-making body and is composed of registries, registrars,

commercial users of the internet and non-commercial users (comprising civil society groups, academic organisations and consumer advocacy groups). ICANN's complex structure reflects the broad range of interests affected by internet regulation.

ICANN was founded in 1998 by the US government for coordinating the Domain Names System (DNS). Its creation primarily followed the claims of the private sector and individual internet users for stronger representation of their interests in the DNS administration (Hofmann, 2007). Indeed, domain names were initially attributed by the IETF on a "first come, first served" basis. Domain names represent crucial, but scarce, goods as they a presence and an identity on the internet. Although each stage of ICANN's policy-making process is open to public comments, the drawing up of documents remains limited to the members of the main supporting organisations. The criteria for participation in the supporting organisations and committees vary from strict professional requirements to open participation. On average, the ICANN holds about four public meetings a year, allowing the participants to meet face-to-face. These meetings are also open to the public. ICANN has attracted a significant amount of criticism, particularly due to the US government's role in its creation, which was seen as undermining its transnational legitimacy (Bygrave and Bing, 2009; Marsden, 2011). More importantly, ICANN has been accused of opaque, and arbitrary decision-making, favoring business interests at the expense of civil society interests (Bygrave and Bing, 2009: 111; Mueller, 2010: 8; Marsden, 2011: 118; Brown, 2013: 107). As a result of these critiques, ICANN has developed regularised pathways for participation, including formal consultative procedures for national governments as well as civil society organisations. This has notably resulted in a greater degree of formal-institutional autonomy (understood as the degree to which the agency can take decisions irrespectives of corporate interests' resources and preferences), as further discussed in Chapter 3.

The World Wide Web Consortium

Unlike ICANN and IETF, membership is required to participate in the W3C decision-making process. Non-members can get involved in various "community and business groups"[5] which have been created to allow various interests to hold discussions and publish ideas. However, policy proposals are only developed by the W3C members.

W3C was founded in 1994 and was launched at the offices of the European Commission (EC) Information Society Project by Commissioner Bangemann. This helped the W3C to secure funding from the EC, as well as from private sectors (Marsden, 2011: 108). W3C relies on these three host institutions for facilities and infrastructures: MIT (Computer Science and Artificial Intelligence Laboratory), the University of Keio in Japan, and the European Research Consortium in Informatics and Mathematics (ERCIM) in France. It is led by a director and a team made of full-time staff. The current director is Tim Berners-Lee, inventor of the World Wide Web. Formally, it is the W3C director who decides when a specification is moved from one stage to another, while also appointing the working groups chairs. As such, the director has broad discretionary powers. W3C's creation is often explained as a response to IETF's governance limitations. The goal was notably to establish an agency with faster policy processes than IETF (Baron et al., 2019: 91). Its creation also results from the industrial sector's strong interest in the regulation of the internet. The consortium has currently 434 members, about 150 of which are large corporations including Apple, Amazon, Facebook, Microsoft, Google, Cisco (Christou et al., 2020). W3C's membership is open to all types of organizations, with fees typically ranges from $6,500 to $65,000 for very large organizations in developed countries. Besides W3C's recent attempts to enhance openness and transparency, most of the work continue to happen behind closed doors, similarly to IEEE.

[5] https://www.w3.org/community/

Therefore, it remains difficult for non-members to retrace the standard-making process and understand the reasons lying behind a standard's design.

The Institute of Electrical and Electronic Engineers

The IEEE consists of a community of students, engineers, scientists, and allied professionals. Created in 1963, it has currently more than 419,000 members in over 160 countries. The Institute has produced over 1,300 standards, and more than 600 standards are currently under development. IEEE is a run by a Board of Governors annually elected by the IEEE members.

Within the IEEE, Internet standards are specifically developed by the IEEE Standard Association (IEEE SA). Its work has particularly been important for wireless networking such as Ethernet, Bluetooth and WiFi. While membership is not required for participation in standard-process, it, nevertheless, allows participants to ballot on standards. Annual fees vary between $1,500 to $16,000. The development of a new IEEE standard begins with the submission of a proposal for a new work area or standard to an IEEE SA Sponsor. IEEE Sponsors are usually IEEE Societies or Committees which are responsible for the IEEE technical work (there are as many as 31 Societies, such as "Access", "Mobile Communications Networks", "Virtualised and Software Defined Networks"). The Sponsor then forms a Study Group, which can be made up of individual or organisational members. Such a group can exist for up to six months. The members of the Study Group are advised to consider the prospective market demand and technical feasibility of the proposed project, as well as the range of interests which should lead and participate in the standard development process. Once the proposal is approved by the Sponsor, a working group is formed, and the work to develop the proposed standard can officially start. A standard is approved by the IEEE Standards Association when it is "consistent with good engineering

practice" and there is a consensus among "representatives from materially affected industries, governments or public interests.[6]

2.1.2 Other internet regulatory agencies

Despite the key role played by ICANN, IETF, IEEE and W3C in internet governance (Cogburn, 2008; DeNardis and Wilson, 2009; Brown, 2013; DeNardis, 2014), limiting our examination to these internet regulatory agencies would downplay the configurations of actors involved in the global regulation of data protection and internet privacy. Additional agencies need thus to be included in the analysis, specifically: ITU-T, OASIS, ECMA International, 3GPP, OMA, ETSI, OGF, RIPE. While these agencies are not as prominent in the literature on internet governance as ICANN, IETF, IEEE, and W3C, some studies outline their critical role in determining internet regulations (e.g., Bygrave and Bing, 2009; Christou et al., 2020). These agencies were also mentioned as important institutions of internet regulation by IETF's officials with whom I briefly interacted before conducting more in-depth interviews.[7]

The ITU-T corresponds to one of three sectors that make up the International Telecommunication Union (ITU). The ITU can trace its origins to 1865, when the first International Telegraph Convention was signed by 20 founding countries, and the International Telegraph Union was formed. It became an UN agency in 1949. In 1992, the ITU was restructured into three sectors which correspond to its three main areas of activity. ITU-T mostly develops critical rules and guidelines that seek to facilitate the hookup of devices to the internet, and it cooperates extensively with IETF. Unlike ITU-T, 3GPP, OMA, OGF and OASIS are rather informal organisations with a narrower technical focus

[6] https://standards.ieee.org/about/policies/sa-opman/sect1-3.html.

[7] I participated in an IETF workshop on "on Analysing IETF Data" which gave me the opportunity to discuss with IETF representatives (August 2021).

(Baron et al., 2019). OASIS was established in 1993 to address interoperability issues among products that support the Standard Generalised Markup Language (SGML), i.e., the precursor to Extensible Markup Language (XML). The scope of its missions has now expanded to include cloud computing and smart grid regulation. By 2019, OASIS had issued more than 80 standards (Christou et al., 2020: 55). Any organisation or individual can become an OASIS member. Membership fees vary according to the organisation's type and size, similar to W3C. 3GPP was set up in 1998 with the primary objective of producing rules and guidelines regarding wireless mobile telecommunications technology, i.e., 3G[8]. Its scope has progressively extended and now includes the regulation of technologies other than 3G. OMA was founded in 2002 and mostly produces mobile phone standards. Like 3GPP, OMA was created with a goal of developing standard for 3G mobile telecommunication networks service enablers. ETSI was established in 1988 by the European Conference of Postal and Telecommunications Administrations (CEPT) in response to the EC request to address issues related to telecommunications, broadcasting and other electronic communications. Its relationship with the EU has remained since, as the EC provides some of its funding. RIPE was the first Regional Internet Registry. It was created informally in 1989 to help with the coordination of the fast-growing interconnection between different networks in Europe. Its mission was to coordinate interconnection of IP networks inside Europe and to other continents. Finally, OGF is a relatively new internet regulatory agency, having been created in 2006. Its primary objective is to address issues related to grid computing and cloud computing. All the agencies selected have an international focus. This includes the ETSI, ECMA and RIPE, which were initially created to develop standards and/or coordinate the communication networks at the European level but have progressively adopted an international perspective (due to the global nature of the internet itself). Like ICANN, IETF, IEEE and W3C, all these internet agencies promote the participation of a multitude of actors. Further information the internet regulatory agencies is provided in Table A1 in the Appendix A.

[8] 3G stands for third generation of development in wireless technology.

Additional regulatory agencies could be mentioned and examined, such as the International Organisation for Standardization (ISO), or the European Committee for Standardization (CEN). Unlike the internet regulatory agencies examined in this dissertation, ISO and CEN have countries as members. Examining the politics of internet regulation within ISO and CEN would thus require a different approach. Furthermore, they produce standards covering various policy areas (e.g., environment, energy, health) and not the internet specifically.

2.1.3 Agencies' main organisational characteristics

Although some aspects of the working procedures of the global internet regulatory agencies have changed since their creations, most of their basic elements are still in place.[9]

An interesting feature of the internet regulatory agencies is that they promote a governance model where anyone wishing to participate can formally do so, i.e., multi-stakeholder model of governance.[10] Furthermore, their decision-making processes are relatively similar in that work is largely accomplished in working groups that are organised around specific areas (e.g., security, data transport). Individuals participating in the working groups are simultaneously volunteers (i.e., they do not get paid for their contribution to the policy process) and paid employees (from the commercial, non-profit or governmental organisation that employ them). Participants in the policy-making processes typically include: equipment and mobile system manufacturers (e.g., Ericsson, ZTE, Nokia, Qualcomm), mobile operators (AT&T, NTT, Verizon), application software companies (e.g., Microsoft, Oracle, Adobe), platform companies (e.g., Facebook, Amazon), professional associations (e.g., American Advertising

[9] All the agencies have accessible and sometime multi-lingual websites that provide background information on procedures, membership, policies developed, among others.

[10] The term multi-stakeholder was initially used by the Working Group on Internet Governance during the UN World Summit on the Information Society.

Federation, Interactive Advertising Bureau, Telecommunications Industry Association, Internet Services Providers' Association), as well as civil society organisations (e.g., Privacy International, Consumer Watchdog), think tanks and universities (e.g., Massachusetts Institute of Technology, Telecom Paris). The internet regulatory agencies are also made of employees, who coordinate all activities of the working groups and ensure proper and due processes. A substantial incentive for the internet regulatory agencies is to complete a standard as quickly as possible. This incentive is even stronger in agencies with relatively high membership fees, like W3C (Christou et al., 2020: 55).

In general, policy proposals can be submitted by the internet agencies' members themselves, or broader interests when consultation procedures are organized before a working group is formed (it is sometimes the case with W3C). If there is enough interest on a policy proposal, a working group is then formed. Once a working group is formed, the development of a policy proposal mainly relies on informal discussions through mailing lists and meetings among the members. During this period, a proposal typically progresses through a series of drafts. When consensus is reach inside the working group, a consultation procedure can take place so that members of the agency (and not from the working group only) also amend and comment on the policy proposal. It should be noted that, differently from the other internet regulatory agencies, ICANN furthermore opens proposals to public comments. Once this period of consultation is over, the proposal can be amended. It is eventually approved by the agency's board or review committee. It then become an internet standard. The policy development process in the internet regulatory agencies is generally described as bottom-up, consensus-based, and open to anyone. Admittedly, the extent to which the pursuit of consensus is motivated by strategic organisational self-interest is an open question. The approved policies are generally publicly accessible.

While the relatively open and inclusive structure of the internet regulatory agencies contributes to their legitimacy, the extent to which openness and inclusivity are reflected in actual practices remains unclear. Furthermore, participants are formally considered as individual representatives, and not representatives of corporations for which they work. However, it is hard to believe that this distinction

is effectively realised in practice, particularly for employees of technology corporations which strongly depend upon internet standards in their products and business models (Christou et al., 2020). Participants may indeed discuss internet rules in accordance with the agendas of their respective (commercial or governmental) organisations. Yet the voluntary rules issued bind not only participants and technology compagnies, but also the wider public, who may perceive them as captured by corporate interests (Fuchs and Kalfagianni, 2010; Porter and Ronit, 2011).

2.2. Data protection and internet privacy regulation

Data protection and internet privacy issues are addressed through various supranational accords, legislations, and treaties, which I refer to as public policy frameworks. Although these do not consistitute the focus of my thesis, they set important data protection principles that are reflected in the internet privacy rules produced by the internet regulatory agencies. In what follow, I first outline the supranational accords and laws regarding data protection and internet privacy issues, before discussing the set of global rules and guidelines issued by the internet regulatory agencies.

2.2.1 Public policy frameworks

Internet privacy is a relatively new policy issue, having been elevated to state and global political agendas as a result of the extensive proliferation of information technologies and the related concerns over the collection and transmission of personal information (Svantesson, 2011; Bennett and Raab, 2020). The notion of data usually refers to "signs, patterns, characters or symbols which potentially represent something (a process or object) for the 'real world' and through this representation, may communicate information" (Bygrave, 2010: 14). In other words, data can be defined as the syntactic dimension of information (Geller, 2022).

Since data is considered to communicate information, the various policy frameworks developed over the last thirteen years in Europe, North America, as well as in the Asia-Pacific region, have largely

converged to form a set of core data protection and internet privacy principles. These principles include transparency on data practices, data confidentiality, justification for data processing, storage limitation. These principles primarily aim to limit the quantity of data being processed for governmental or commercial purposes. As Geller points it out, there is an assumption that "the fewer data processed, the less harmful it will be" (2022: 164).

The Council of Europe's Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data was one of the first significant policy framework signed by states to protect internet privacy (de Terwangne, 2022). Referred to as the Convention 108, it entered into force in 1985. It states that every participating state is recommended to consider it in its domestic legislation. The privacy principles provided notably stipulate that "personal data should be obtained and processed fairly and lawfully, be stored only for specified and legitimate purposes, not be excessive in relation to those purposes, be accurate and kept up to date, and permit identification of the data subjects for no longer than is required" (Article 5 Convention 108). Other important examples include the OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data (in 1981), which seek to protect privacy with an emphasis on the commercial and economic issues raised by the collection of personal information (Bennett and Raab, 2003); the United Nations' (UN) Guidelines Concerning Computerized Personal Data Files (in 1990), which are primarily concerned with human rights (Kuner, 2009); and the APEC Privacy Framework (in 2004), which is a non-binding commitment and sets basic data protection principles across the Asia-Pacific Economic Cooperation member economies (Greenleaf, 2005). While the APEC Privacy Framework is seen as "comparatively low standard of data protection" (Greenleaf, 2005), the Convention and OECD Guidelines are seen as major international frameworks for internet privacy regulation. Even more important, however, are the EU Directive and more recent EU Regulation, the GDPR.

The EU is regarded as a prominent legislative arena in the governance of internet privacy (Bennett and Raab, 2006; Newman, 2010). The EU has long acted as a global leader for data protection,

with the 1995 Directive marking an important first step. From an economic perspective, the Directive was particularly important as several member states had no privacy regulations, thus creating an economic burden for firms in member states with privacy and data protection regulations (Newman, 2005: 12). Over thirty nations furthermore emulated the EU privacy rules, including Australia, Canada, and Japan, which yet long maintained more limited regulations. Even the US signed an international agreement requiring US firms active in European markets to comply with European rules, i.e., the Safe Harbor Agreement. The EU privacy principles set in the Directive of 1995 are still increasingly shaping the way businesses operate around the globe, and this stance has been strengthened even more so with the new regulation adopted in 2016, i.e., the GDPR.

Although further research into the factors that led to this new legislation would be required, the GDPR can be seen as a consequence of technical innovation. With states and non-state actors acquiring greater online access to private information, the 1995 Directive had become obsolete, necessitating the creation of a new legislative framework. The GDPR resulted from extensive consultations with major stakeholders on a review of the current legal framework for the protection of personal data, which lasted for more than two years. The European Parliament approved by its resolution of 6 July 2011 a report that supported the Commission's approach to reforming the data protection framework, and the Council adopted conclusions on 24 February 2011. It was seen as a central piece of legislation of a package of reforms aimed to "strengthen online privacy rights and boost Europe's digital economy" (EU Commission, 2012: 1). This led privacy expert and law professor Christopher Kuner to define the GDPR as nothing less than a "Copernican Revolution" in European data protection law (2012: 1). Indeed, the GDPR marks a pivotal point in the data protection and internet privacy regulation. Notably, it mandates companies to obtain an explicit consent from customers for the collection of their personal data, limits the further processing of it, and institutes more independent and powerful Data Protection Authorities capable of imposing substantial fines to corporations. The privacy principles set by the Regulation are

now regarded as a necessary condition for participation in the international networked economy (Bennett, 2018: 244).

In addition to the EU, the UN has also taken a more active role in the governance of internet privacy, with the appointment in 2015 of a Special Rapporteur on the Right to Privacy and a program of reports planned the future, with an emphasis on government surveillance (Bennett and Raab, 2020). Table 2.1 provides a list of the main supranational accords related to data protection and internet privacy and briefly summarises their content.[11]

Although the EU has been and continues to be one of the most influential legislative arenas regarding internet privacy, other important international arenas have emerged (Bennett and Raab, 2020). Since the development of its Guidelines Concerning Computerized Personal Data Files in 1990, the UN has showen signs of increased action, with the appointment of a Special Rapporteur on the Right to Privacy in 2015, as well as the planned development of a program of reports, with an emphasis on government surveillance. Interestingly, this appointment followed the global surveillance revelations made by Edward Snowden in 2015. The effect of this event is further discussed and examined in Chapter 4. Particularly active in the domains of privacy and security are also global internet regulatory agencies (Bennett and Raab, 2020). The policies they develop are presented in the next section.

[11] Data collection for this list relies on existing literature (e.g., Bennett, 1992; Greenleaf, 2005; Bennett and Raab, 2020; Gonzales Fuster et al., 2022) and interviews conducted for Chapter 3.

Table 2.2. List of supranational accords

Accord	Content	Year
Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data	The Convention contains basic principles for data protection which every participating country should consider in its domestic legislation. Principles notably include that personal data should be obtained and processed fairly and lawfully	1981
OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data	The Guidelines set out core principles for data protection: lawfulness and fairness, collection limitation, purpose-specification, security. There are evident parallels to the Convention	1981
United Nations' Guidelines Concerning Computerised Personal Data Files	Like the Convention and the OECD guidelines, The UN Guidelines lists several principles which are referred to as" minimum guarantees": lawfulness and fairness, accuracy, purpose-specification, interested-person access, non-discrimination, possibility to make exceptions, security, supervision and sanctions, and transborder data flows	1990
EU Directive 95/46/EC on the protection of individuals with regard to the processing of personal data and on the free movement of such data	The directive aims to protect the collection use and disclosure of personal information held by the private and public sector. The directive affects all companies dealing with data from European citizens	1995
Additional Protocol to the CoE	The additional protocol calls for a data protection authority, data export restrictions and access to the courts	2001
APEC Privacy Framework	The framework sets non-binding commitments aiming to protect privacy within and beyond APEC economies and enable regional transfers of personal information benefits consumers, businesses, and governments	2004
OECD Privacy Framework	The updated framework aims to help harmonise national privacy legislations, while upholding human rights	2013
APEC Cross-borders privacy rules system	Based on the APEC Privacy Framework, the system aims to facilitate cross border data flows between member economies that met the data protection standards set by the scheme	2015
EU Regulation 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (GDPR)	The regulation strengthens data protection rights for individuals and harmonises national data protection laws across Europe	2016

2.2.2 Global public-private policy frameworks

In addition to these policies setting important privacy principles, a myriad of rules and guidelines (also referred to as internet standards) are produced by global internet regulatory agencies. These data protection and internet privacy rules constitute the focus of the present research.

Standards and guidelines are common arrangements of global regulation, whereas national regulation is primarily about laws implemented and enforced by governments (Mattli and Woods, 2009). Importantly, the rules and guidelines issued by the internet regulatory agencies are often viewed as a means to implement and/or supplement the existing legislative frameworks by addressing practical needs, and to demonstrate best practice (Hirsch 2011; Bennett and Raab, 2020). The Do-Not-Track (DNT) standard is a great example of this. The DNT was issued by W3C in 2012, but it has now expired. The DNT was a browser setting intended to let internet end-users express a choice not to be tracked when surfing from site to site on the web, allowing to protect individuals from the collection and processing of personal data by companies. Simply put, this standard was designed to enable internet users to click on a pair of sneakers without being tracked and observed from site to site by advertisements. The DNT eventually expired because too many technology companies decided to remove it, highlighting the friction (between consumer protection and data-driven business strategies) that are entailed by such seemingly technical rules. Another case in point is the Transport Layer Security protocol developed by IETF which encrypts[12] data sent between a web browser and a website. It is thus aimed at ensuring the privacy of information communicated over the internet. As such, the rules issued by the internet regulatory agencies can allow for the creation of a software that allows for consumer's (i.e., or internet end-users) privacy, or which removes it. They can make private communications easier or facilitate government surveillance. More generally, they can create opportunities that benefit all

[12] Encryption is the method by which data is converted into a code.

internet users, or just a particular group of organised interests. Despite their technical nature, the rules developed by the internet regulatory agencies have, therefore, an intrinsic public policy dimension. Appendix A also includes an example of an adopted internet policy to illustrate what it looks like.

More fundamentally, the standards and guidelines developed by the internet regulatory agencies contribute to shaping the internet infrastructure. The internet infrastructure refers to the material aspect of the network, i.e., the physical structure, as well as the language by which different devices communicate over the global network (Eriksson and Giacomello, 2009; Christou et al., 2020). As such, they are not territorially binding. The rules issued are particularly important for the internet infrastructure in the sense that they aim to ensure and maintain the openness, security, and interoperability of the internet (Christou et al., 2020). Broadly speaking, interoperability can be described as the ability of different computer networks or systems to exchange information (e.g., between a web page with a web browser), preventing "an individual or organisation being locked in to a single dominant commercial entity" (Christou et al., 2020: 5). Interoperability is one of the "main network-design features that have made the internet an especially transformative medium" (Sylvain, 2010: 212). As any other communication technology, the internet enables people to communicate quickly, globally and at minimal cost. However, the internet seems to differ significantly from earlier modes of communication. Nachbar captures it compellingly when he writes: "the internet is no stranger to rules; as much as the internet benefits from a lack of rules, it is itself a set of rules, and the slightest deviation from these rules results in complete isolation from the rest of the network" (2001: 216).

One particular feature of the internet regulatory agencies is the lack of enforcement authority. Only in rare occasions, the rules developed can be adopted by governments and so become legally binding. More often than not, there are no legal sanctions for failing to comply with the rules designed. Nevertheless, because these rules allow interoperability and allow different systems to operate together, there is huge market pressure to adhere to the rules, making compliance not voluntary but required. As a result, even though these agencies do not have the same legislative authority as governmental bodies,

they share a common trait in that their rules are effectively mandatory. According to Lessig (1999), such rules can therefore influence behaviour just as much as government legislation. There are furthermore important distributional implications. For instance, some companies might lose dominance in their markets as a result of the adoption of an internet standard, whereas other might benefit from lower barriers to entry.

Although concerns about privacy in internet settings are not new, rules and guidelines addressing data protection and privacy issues are being increasingly developed (Christou et al., 2020: 175-176). They have largely been enhanced by new means of identity protection (Bennett and Raab, 2020: 456). Internet privacy rules are also increasing in importance due to new forms of data collection, storage and profiling. Interestingly, the protection of privacy is sometimes described as a case of spillover to internet regulatory agencies of a policy domain which has historically belonged to the state (Christou et al., 2020: 175). Because of the important and expanding role of internet privacy rules in internet governance and the global economy more broadly, the decision-making processes that lead to them deserves greater empirical scrutiny. Despite a few important studies on internet regulation and its standardisation process (DeNardis and Wilson, 2009; DeNardis, 2014; Bradshaw and DeNardis, 2019; Bygrave and Bing, 2009; Christou et al., 2020), knowledge on this matter remains limited.

The privacy regulations examined in this thesis were selected on the basis that they seek to protect personal data (e.g., private communications, users' personal preferences) against data misuse and surveillance practices. This is consistent with the definition of privacy as the "right to be left alone" (Warren and Brandeis, 1890) or as the "control over information" (Foddy and Finighan, 1980; Mason, 1986; May et al., 2004). The policies selected and examined in Chapters 4 and 5 are listed in Table 2.2 below. It should be noted that how internet privacy is framed and how this framing might have changed in the policy solutions developed are not covered in this research, although these are crucial research questions (Epstein et al., 2014).

Table 2.1. List of internet privacy policies examined in this thesis

Policy	**Agency**	**Year**
A Privacy Mechanism for the Session Initiation Protocol (SIP)	IETF	2002
A Solution Framework for Private Media in Privacy Enhanced RTP Conferencing	IETF	2021
An Architecture for Location and Location Privacy in Internet Applications	IETF	2011
Authentication: an API for accessing Public Key Credentials	W3C	2017
Automatic Certificate Management Environment	IETF	2019
Cryptographic Protection of Data on Block- Oriented Storage Devices	IEEE	2007
DNS Query Name Minimisation to Improve Privacy	IETF	2018
Data Privacy process	IEEE	2016
Decentralized identifiers	W3C	2019
Device API Privacy Requirements	W3C	2010
Do-Not-Track standard (DNT)	W3C	2012
Geolocation Policy: Expressing Privacy Preferences for Location Information	IETF	2003
IP Address Location Privacy and Mobile IPv6	IETF	2010
Layer 2 Tunneling Protocol (L2TP)	IETF	1999
Logging Recommendations for Internet-Facing Servers	IETF	2011
Open Pretty Good Privacy	IETF	1998
Pervasive Monitoring Is an Attack' informational note	IETF	2014
Privacy & Proxy Services Accreditation	ICANN	2015
Privacy Considerations for Internet Protocols	IETF	2013
Privacy Enhanced Mail (PEM)	IETF	1993
Privacy best practices for web applications	W3C	2017
Protection of IGO and INGO Identifiers in All gTLDs	ICANN	2012
QUIC: A UDP-Based Multiplexed and Secure Transport	IETF	2012
SMTP MTA Strict Transport Security	IETF	2018
Temporary Specification for gTLD Registration Data	ICANN	2019
The Messaging Layer Security (MLS) Protocol	IETF	2018
The Permissions API	W3C	2022
The Platform for Privacy Preferences (P3P)	W3C	2002
The TLS Protocol	IETF	1999
The Token Binding Protocol	IETF	2015
Thick Whois	ICANN	2013
Verifiable Claims Data Model and Representations	W3C	2022
Web of Things (WoT) Security and Privacy Guidelines	W3C	2019
Wide-Block Encryption	IEEE	2011
XML Encryption Requirements	W3C	2013

Conclusion

This chapter has presented the main policy-making bodies and policy frameworks addressing data protection and internet privacy issues, providing some background information. While various internet privacy policies could have been examined in the thesis, I decided to focus on the rules and guidelines that are issued by global internet regulatory agencies.

As this chapter has underlined, data protection and internet privacy rules have important political implications, despite their seemingly technical nature. Yet they are produced by agencies which work beyond the purview of democratic accountability, delegating decision-making powers to unelected regulators. The establishment of the internet regulatory agencies was primarily motivated by the desire to design efficient public policy which will improve the market, and in this case, make the internet work better (IETF, RFC 3935).[13] The increase in efficiency can, however, result in a loss in the amount of control that citizens may exert (Busuioc, 2009). The delegation of decision-making powers to non-legislative agencies notably expands the number of stakeholders involved in policy processes without being subject to democratic control (Papadopoulous, 2007; Busuioc, 2009). As discussed in this chapter, anyone can formally participate the internet regulatory agencies' decision-making process, but there are often critical barriers such as the amount of material resources required. Furtermore, the internet regulatory agencies are frequently accused of opaque and complex decision-making processes (Christou et al., 2020; Bennett and Raab, 2020). In this context, further analysis is required regarding the agencies' autonomy. In the next chapter, I elaborate on the internet regulatory agencies and their relationship with private interests (in particular corporate interests) by examining the factors that determine their degree of informal autonomy.

[13] https://www.rfc-editor.org/rfc/rfc3935

CHAPTER 3. Who is behind the wheel? Assessing internet regulatory agencies' autonomy from corporate interests

Despite the increasing importance of regulatory agencies in global politics, knowledge of their autonomy from corporate interests remains limited. This chapter investigates the determinants of internet agencies' informal autonomy from corporate interests. It uses a mixed-methods approach combining quantitative analysis of twelve internet regulatory agencies and eleven in-depth interviews with senior officials of these agencies. The analysis suggests that agencies' formal autonomy, despite setting out which actions and actors are permitted or required, only determines informal autonomy to a limited extent. Informal autonomy is rather determined by the degree of policy complexity (where more complex policies weaken informal autonomy), the level of media attention accorded to the agency (which increases informal autonomy), and the agency's age (which weakens informal autonomy).

3.1 Introduction

Regulatory agencies have become an important part of contemporary political systems and global politics, spreading across a wide range of sectors and countries (Coen and Thatcher, 2005; Gilardi, 2005b; Mattli and Woods, 2009; Büthe and Mattli, 2011). As discussed in Chapter 2, they mostly develop guidelines and technical rules (also referred to as standards), which, when they are not binding by law, are binding by market pressures. To produce these rules, regulatory agencies have limited capacities, authority, and information. They must therefore rely on a diverse range of actors, from

governments to firms and civil society organisations, which begs a critical question regarding their autonomy.[14]

Autonomy can be defined as the degree of freedom experienced when preparing and making decisions (Dowding and Hees, 2007: 4; Maggetti, 2007: 272). Two dimensions of autonomy are often distinguished: formal-institutional autonomy, which is derived from formal rules and working procedures (e.g., Gilardi, 2005a; Thatcher, 2005; Wonka and Rittberger, 2010; Wassum and De Francesco, 2020), and informal autonomy, which refers to agencies' effective autonomy in day-to-day decision-making processes (Maggetti, 2007: 272). Scholars have variously assessed the extent to which agencies are formally autonomous (Gilardi, 2005a; Thatcher, 2005; Wonka and Rittberger, 2010; Wassum and De Francesco, 2020), the determinants of agencies informal autonomy from their political principals (e.g., Gilardi, 2005b; Yesilkagit and Christensen, 2010; Hanretty, 2009; Hanretty and Koop, 2012; Gilardi and Maggetti, 2010; Wassum and De Francesco, 2020), as well as from private interests (e.g., Gormley, 1986; Maggetti, 2007, 2012a; Héritier and Eckert, 2008; Eckert, 2010; Ingold et al., 2013; Ossege, 2015; Gonzales and Verhoest, 2020). Studying autonomy from private interests is particularly critical as they represent the "second force in regulation" (Thatcher, 2005). Without autonomy from private interests, regulatory agencies may end up 'captured', meaning they develop policies designed for concentrated interests rather than the public interest (Stigler, 1971). However, largely missing from the literature is an examination of informal autonomy in agencies characterised by institutional autonomy from politicians and where multiple actors interact as it is the case with internet regulatory agencies. Such agencies are becoming prevalent in global politics (Mattli and Woods, 2009; Büthe and Mattli, 2011; Djelic and Den Hond, 2014), and the issue of autonomy in a multi-actor and multi-level context deserves more scholarly attention (Maggetti and Verhoest, 2014).

[14] Following Coban (2022), I use the notion of autonomy instead of independence as independence suggests that regulatory agencies can be fully isolated from stakeholders.

To fil this gap in the literature, this chapter systematically examines the factors determining agencies' informal autonomy from corporate interests. I focus on the leading internet regulatory agencies outlined in Chapter 2, namely: ICANN, IETF, IEEE and W3C. I also examine eight additional internet regulatory agencies which are also briefly presented in Chapter 2. Within the internet regulatory agencies, the relationship among different corporate interests is generally marked by cooperation rather than competition (Genschel, 1997; Grøtnes, 2008). Even when there is competition (e.g., between a platform company like Facebook and a technology company like Microsoft), the regulatory agencies provide various opportunities to resolve conflicts (Baron and Pohlmann, 2013). Yet facing undivided corporate interests may increase the agencies' risks of being captured (Pagliari and Young, 2016). This makes an examination of the internet regulatory agencies' autonomy all the more important.

To explain informal autonomy from corporate interests, this chapter draws on independent regulatory agencies (IRA) theories and uses a mixed-methods research design combining quantative and qualitative analysis. It analyses the structure and practices of the internet regulatory agencies using extensive data retrieved from the agencies' websites and working documents, as well as the Searle Center Database on Technology Standards and Standard Setting Organisations[15]. It also relies on eleven in-depth semi-structured interviews conducted with official members of the internet regulatory agencies.

Autonomy often prevails in a matter of degrees, rather by its presence or absence. Formal-institutional autonomy may be an important determinant of informal autonomy as it sets out which actors are important for the agencies' functioning. But it only tells us part of the story. My central argument is that informal autonomy is also a function of the complexity of the policies developed by the agency (where more complex policies weaken informal autonomy), the level of media attention accorded to the

[15] https://www.law.northwestern.edu/researchfaculty/clbe/innovationeconomics/data/technologystandards

agency (which increases informal autonomy) and the agency's age (which weakens or increases informal autonomy).

The analysis indicates that policy complexity and agency age have a significant impact on agencies' informal autonomy from corporate interests. Rather than general media and corresponding public attention, the attention accorded by the internet specialised community of actors also affects informal autonomy. In contrast and rather surprisingly, formal autonomy only determines informal autonomy to a very limited extent. Such a finding contributes to the broader academic debate on the legitimacy of global forms of governance (Take, 2012; Verbruggen, 2013; Ewert et al., 2020) in the context of the 'rise of the unelected' (Vibert, 2007). The case of internet regulatory agencies is furthermore well-suited to study the postulated relationship between policy complexity, media attention, age and autonomy from corporate interests given the agencies' technical mandate (i.e., a most-likely case). Importantly, the present chapter contributes to shedding light on the making of internet privacy regulation by examining internet regulators' logics of action and constraints. Internet regulatory agencies are not subject to public oversight, and they are not required to keep records of their proceedings. Yet, the rules they issue are far from being only technical decisions. They have, in fact, an intrinsic public policy dimension, "altering the balance of power between competing businesses and constraining the freedom of users" (Abbate, 1999: 179).

The remaining sections of the chapter proceed as follows. The next section presents my theoretical framework and derives hypotheses regarding internet regulatory agencies' informal autonomy (Section 3.2). I then describe the mixed-methods approach I use (Section 3.3), before presenting the findings of the empirical analysis (Section 3.4). I conclude with remarks about the findings' implications.

3.2 Explaining agencies autonomy

3.2.1 Features of regulatory agencies

The creation of regulatory agencies and their diffusion across the world have given rise to a large body of scholarship examining this shift towards "regulatory capitalism" (Levi-Faur, 2005). Research notably points to the role of credibility, policy complexity and political uncertainty to explain politicians' delegation of their decision-making powers to independent agencies (Majone, 2000; De Figueiredo, 2002; Moe 1990; Pollack, 2006; Wood and Bohte, 2004; Gilardi, 2005a; Wonka and Rittberger, 2010). According to the credibility hypothesis, policy-makers give strong signals of regulatory stability by delegating regulatory competencies to independent bodies and consequently limiting their own opportunities for direct political involvement (Majone, 2000; Pollac, 2006). The delegation of regulatory competencies to independent agencies may also result from informational transaction costs, which increase when politicians face a complex policy environment (Wonka and Rittberger, 2010). In an environment also marked by political uncertainty, establishing formally autonomous agencies helps governments to lock in their preferred policy status quo (Gilard, 2005a; Wonka and Rittberger, 2010).

The literature sometimes uses the notion of "private governance" or "private authority" to refer to this trend through which the apparent withdrawal of the state has prompted significant regulatory activity on the part of non-state actors (Bernstein and Cashore, 2007; Büthe and Mattli, 2011; Grabosky, 2013; Schleifer, 2019). Again, studies largely explain this development as a result of increasing complexity and rapid change. In finance, for instance, rapid innovation made it considerably challenging for legislators to keep up, even in advanced economies (Warren, 2010). One specific feature of this relatively new regulatory system is that agencies' authority is drawn directly from concerned audiences, including those the regulatory agencies seek to regulate, rather than from sovereign states (Bernstein and Cashore, 2007: 349).

According to Maggetti (2007: 275), a regulatory agency highly autonomous from politicians is a "footloose" agency that cannot rely on political support, and may thereby rely on other relevant stakeholders, such as corporate interests. Inclusion of different interests in decision-making processes is furthermore part of these agencies' efforts to create legitimate rules and guidelines (Bernstein and Cashore, 2007; Black, 2008). While it is certainly true that regulatory agencies rely greatly on private interests, this argument overlooks variations in autonomy. A central aim of this chapter is to conduct an explanatory account of the factors determining the degree to which politically insulated agencies can take decisions irrespective of corporate interests' resources and preferences. Resources guarantee organisational capacity while preferences refer to the policy stances defended. Accordingly, an autonomous agency is an agency that can rely on self-determined preferences and organisational competences (Verhoest et al., 2004; Coban, 2022). Bringing together insights from work on regulatory politics, I explain agencies' informal autonomy as a function of formal-institutional autonomy, policy complexity, media attention and agency's age. The notion of autonomy is different from the notion of capture insofar as the latter refers to the situation where industries systematically influence regulation to favor their interests at the expense of the public (Braithwaite and Makkai, 1992; Croley, 2011). The notion of autonomy is different from the notion of capture insofar as the latter refers to the situation where industries influence regulation to favor their interests at the expense of the public (Braithwaite and Makkai, 1992; Croley, 2011; Carpenter and Moss, 2014). If agencies are not autonomous from corporate interests, they are more likely to be captured. Autonomy, in other words, can prevent capture.

3.2.2 Explaining informal autonomy from corporate interests

There is a natural presumption that higher degrees of formal autonomy imply higher degrees of informal autonomy. Indeed, formal autonomy sets out which actors are needed and permitted to participate in decision-making processes (Pérez-Durán, 2018), enhancing or restricting the agency's freedom to pursue its goals and interests. If the agency's formal rules and working procedures allow for a broad

range of stakeholders to participate (e.g., non-governmental organisations, consumer groups), then this should translate into higher degrees of informal autonomy. Conversely, limiting opportunities to participate diminishes the range of actors assisting the agency. But previous research has shown that the relation between formal and informal autonomy is not that straightforward (Maggetti, 2007, 2012a; Hanretty, 2009; Hanretty and Koop, 2013). Formal arrangements only partially mirror agencies' informal practices (Carpenter, 2001; Maggetti, 2007). Hence, other factors need to be brought into the picture.

Specific features of the policy issue addressed by the agency, such as its complexity, might affect the agency's autonomy (Gormley, 1986; Gilardi, 2002; Ringquist et al., 2003; Elgie and McMenamin, 2005). Complexity refers to the degree to which an issue is relatively difficult to understand (Karsh et al., 2016). A policy issue or area can be characterised as complex because of its technicality or density (i.e., with several components), making the causal links between inputs and outputs difficult to understand and/or predict (Karsh et al., 2016). Specialised knowledge, or expertise, may thus be necessary to design policies which address complex policy issues. In other words, the greater the policy complexity, the greater the need for policy experts. Without the requisite expertise, decision-makers might not be able to comprehend the nature of given policy problems and to fully grasp the policy solutions made available. Empirical evidence indicates that, in complex policy areas, regulators rely considerably on private actors to understand the market and thereby design effective public policies that meet industry innovations and trends (Majone, 2001; Mattli and Woods, 2009). The provision of expertise is costly and corporate interests tend to have greater resources (in terms of staff and budget) than, for instance, civil society organisations (Coen, 1997; Baumgartner et al., 2009). But, as resource exchange theory suggests, corporate interests are also particularly predisposed to having the technical and market-based expertise needed to address complex regulatory issues (Bouwen, 2002; Crombez, 2002; Eising, 2007; Chalmers, 2013, 2014; Coen and Salter, 2020; Coen et al., 2021).

Therefore, the expectation is that regulatory agencies dealing with highly complex policies are less autonomous from corporate interests.

An additional factor that can determine informal autonomy while strengthening or limiting the effect of policy complexity is the amount of media attention. Media can indeed play the role of a watchdog group and ensure that autonomy from concentrated, vested interests is guaranteed. Indeed, an agency operating in the public spotlight may need to demonstrate that it is acting according to its formal obligations and the predefined notion of public interest, like consumer protection (Hopenhayn and Lohmann, 1996; Maggetti, 2012b; Koop, 2014). As media are less likely to cover highly complex issues (Eshbaug-Soha, 2006; Culpepper, 2010), agencies dealing with more complex policies are less likely to be the subject of media attention. But agencies developing complex policies are not spared from potential media attention (following, for example, political scandals; see Rimkutė, 2020). Therefore, the expectation is that agencies attracting greater media attention are more autonomous from corporate interests.

Finally, the institutional age of the agency also needs to be considered when explaining agencies' informal autonomy (Martimort, 1999; Maggetti, 2007, 2012; Gilardi and Maggetti, 2010). This factor allows us to go beyond a static analysis of the internet regulatory agencies' structures by considering a more temporal perspective on informal autonomy. On one hand, the literature suggests that the gains derived from cooperating may be preferred to the gains derived from non-cooperating (Martimort, 1999; Maggetti, 2007), reinforcing the cozy relationships between decision-makers and private interests. Consequently, routinised procedures contribute to leaving less scope for agencies' autonomy from corporate interests. This determinant can also be associated with the concept of path dependence (Haftel and Thompson, 2006; Yesilkagit and Christensen, 2010), which has initially been developed by the historical institutionalism (Thelen, 1999; Pierson, 2000, 2004). Institutions are conceived by this strand of research as formal and informal procedures, routines and norms embedded in political and economic structures. Particularly central to the historical institutionalist perspective is the argument that

institutions have self-reinforcing mechanisms or "increasing returns" (Pierson, 2000: 251) that sustain positive feedback and promote continuity over time (Haftel and Thompson, 2006). The implication is that 'old' regulatory agencies are expected to be less autonomous from corporate interests than 'young' ones. On the other hand, it can also be argued that agencies build up high their own expertise over time (Ossege, 2015), particularly as they strive to protect their distinct reputation (Carpenter, 2001, 2010; Maor and Sulitzeanu-Kenan, 2013). According to such an argument, 'old' regulatory agencies are expected to be more autonomous than 'young' ones. This alternative explanation will also be examined in this chapter. Table 3.1 gives a summary of the theoretical framework presented here as well as set of theoretical expectations that I will test in the analysis section, below.

Table 3.1. Summary of theoretical expectations

	Determinants of Agencies' Informal Autonomy			
	(1) Formal autonomy	(2) Policy complexity	(3) Media attention	(4) Agency age
Description	Formal rules enshrined in constitutional documents of the agencies allowing for broad interests' participation	Policy issues difficult to understand; highly technical	Coverage of the agencies by the media	Life cycle; time since the agency's creation
Expectations	Increases isolation from specific, concentrated interests	Increases the need for actors with expertise and technical knowledge	Monitors agencies' activities and practices, with reference to the official goal of guarantying public interest	Generates routinised procedures which decrease autonomy, **or** allows for the development of distinct resources and reputation
Impact on informal autonomy from corporate interests	Formal autonomy increases informal autonomy	Policy complexity weakens informal autonomy	Media attention increases informal autonomy	Age weakens **or** increases informal autonomy

3.3 Research design

To examine agencies' informal autonomy from corporate interests, I use a mixed-methods research design that combines quantitative and qualitative analysis. In this section, I provide details on the regulatory agencies selected for this study as well as the variables considered in the analysis and their operationalisation.

3.3.1 Data selection and collection

As discussed in Chapter 2, internet regulatory agencies were historically established to remove political pressures that could undermine internet freedom and efficiency (Hofmann, 2007). As discussed in Chapter 2, "rough consensus" and "running code" were thus chosen over "kings and presidents" (Russell, 2006). As a result, internet regulatory agencies are relatively institutionally insulated from politics, and they promote a governance model where anyone wishing to participate can formally do so (i.e., multi-stakeholder model of governance). They are not accountable to governments and various actors like business groups, civil society organisations, as well as national and international governmental organisations can get involved, although to varying degrees, depending on the agency's formal arrangements.

Table 3.2 presents the twelve regulatory agencies examined in this chapter. As mentioned in Chapter, 2, there is not always a clear separation between the internet agencies' respective areas and their tasks tend to overlap. A rough distinction can, nevertheless, be made between agencies dealing with the physical infrastructure of the internet broadly conceived (i.e., IETF, ICANN, RIPE), and the other agencies, which rather address subsections of the internet, like the web (e.g., W3C) or wireless access (e.g., IEEE). Further information on the agencies' characteristics can be found in Chapter 2.

Table 3.2. List of internet regulatory agencies examined

No.	Agency (acronym)	Year	Function
1	3rd Generation Partnership Project (3GPP)	1998	Development of specifications for mobile telecommunications
2	Ecma International	1994	Development of specifications, in particular regarding telecommunication systems and programming languages (e.g., Ecmascript)
3	European Telecommunications Standards Institute (ETSI)	1998	Development of specifications, in particular regarding wireless networking
4	Institute for Electronics and Electrical Engineers (IEEE)	1963	Development of specifications for wired and wireless internet access (e.g., WiFi)
5	Internet Corporation for Assigned Names and Numbers (ICANN)	1998	Coordination of the domain name system (i.e., the database in which internet domain names are translated into internet addresses)
6	Internet Engineering Task Force (IETF)	1986	Development of the communications protocols and other software determining how the internet operates
7	Open Gride Forum (OGF)	2006	Development of specifications for distributed computing (grid computing and cloud computing)
8	Open Mobile Alliance (OMA)	2002	Development of specifications for mobile telecommunications
9	Organization for the Advancement of Structured Information Standards (OASIS)	1993	Development of specifications for the web
10	Regional Internet Registry for the European region (RIPE)	1992	Management of the allocation and registration of internet number resources (e.g., Internet Protocol address)
11	Telecommunication Standardisation Sector of the International Telecommunication Union (ITU)	1992	Development of specifications in particular regarding wireless networking
12	World Wide Web Consortium (W3C)	1994	Development of specifications for the web

In this chapter, I test the effect of formal autonomy, policy complexity, media attention and agency's age on informal autonomy using a mixed-methods design. Mixed-methods research is often presented as a third research paradigm that aims to transcend the traditional dichotomy between quantitative and qualitative research (Johnson et al., 2007; Denscombe, 2008). Philosophical issues thus arise insofar as, broadly speaking, qualitative research is related to hermeneutics and constructivism, whereas quantitative research is related to positivism and empiricism (Denzin and Lincoln, 1994). The

implication is that quantitative and qualitative methods tend to rely on specific, and sometimes dissonant, research beliefs, goals and practices, despite a common overarching goal of producing good research (Mahoney and Goertz, 2006; Coppedge, 2009). For instance, it is often pointed out that qualitative research tends to adopt a "causes-of-effects" approach to explanation. In contrast, quantitative research tends to follow an "effects-of-causes" approach (Mahoney and Goertz, 2006: 230).

Although the use of a mixed-method design remains debated, research using a mixed-method research design can strongly benefit from it. A Mixed-methods design can be used for the purpose of broadening one's understanding (Cresswell and Clark, 2006), by getting two or three viewpoints. The research is then practical in the sense that all methods possible to address a research problem are used (Creswell and Clark, 2006). From this perspective, research relying on one primary technique can be enriched by adding other techniques during the research process, thereby offering a more comprehensive picture (Bryman, 2001). The use of mixed-method research in social sciences is also associated by with the attempt to enhance to validity of the results (Mele and Belardinelli, 2019). In this chapter, I combine quantitative measures with qualitative insights retrieved from interviews. I furthermore combine qualitative and quatitative information using a Fuzzy-set Qualitative Comparative Analysis (FsQCA) (Longest and Hill, 2008; Pappas and Woodside, 2021). FsQCA aims to capture combinations of sufficient conditions explanaining an outcome. It thus creates a bridge between qualitative and quantitative methods by computing the degree in which a case belongs to a set of configurations (Ragin, 2000).

Data for the quantitative analysis is retrieved from each internet agency's website (details can be found in Table A1 of the Appendix B). As some agencies' websites do not provide much information on the agencies' formal rules and procedures, data is complemented with another source of information, i.e., the Searle Center Database on Technology Standards and Standard Setting Organisations. This database gathers information on institutional membership in a sample of 191 international and national

standards organisations as well as the rules of 36 organisations on standard adoption procedures (details can be found in Table A2 of the Appendix B).

For the qualitative analysis, data is retrieved from internet agencies' working documents (i.e., meeting minutes, mail lists archives) and interviews. I conducted in-depth semi-structured interviews with official members with senior and strategic positions within six of the selected internet agencies. As the effect of the agencies' life cycle is examined in this chapter, I contacted and conducted interviews with agencies' officials who could offer a long-term perspective by currently holding senior positions (e.g., working group coordinator, member of the governing board) in at least one the regulatory agencies that are of interest to my study. In total, I was able to arrange eleven in-depth interviews. Questions included in the interview guide are found in Table A3 of the Appendix B. I gathered my interview data in London in the period from August to early October 2021. The interviews were conducted online as the interviewees were based in various countries and travel restrictions were imposed because of the Covid-19 pandemic. The data collection was registered at King's College London's Research Ethics Office (Minimal Risk Registration Number: MRSP-20/21-21841). Nine of the eleven interviews were recorded for my own use and subsequently transcribed.

3.3.2 The operationalisation of the explanatory variables

Formal-institutional autonomy from corporate interests

Existing studies on regulatory agencies typically measure agencies' formal autonomy from political interests through an index composed of various dimensions, namely: status of the agency head, relationship with government, internal organisation, and competences (Gilardi, 2005a; Edwards and Waverman, 2006; Wonka and Rittberger, 2010; Hanretty and Koop, 2012; Wassum and De Francesco, 2020). While my focus in this analysis is not on autonomy from politics, these dimensions can also capture agencies' formal autonomy from corporate interests.

Drawing on these studies, I develop an index of agencies' formal-institutional autonomy from corporate interests. The index relies on several variables which are listed and explained in the Appendix B (see Table A4). These variables relate to three different components (i.e., corresponding to different institutional features), specifically: (1) status of the governing board, (2) formal relationship with stakeholders, and (3) regulation on decision-making. The agencies' competences (i.e., consultative tasks or purely regulatory) are not considered in the index as the internet agencies develop guidelines and rules which are not binding by law, unless they are adopted by governmental entities. Each of the variables ranges from 0 (lowest level of autonomy) to 1 (highest level of autonomy).

The formal autonomy index is a sum of the variables. I divide it by the total number of variables so that the values taken range from 0 to 1, with higher values indicating greater formal autonomy from corporate interests. The minimal value of *Formal autonomy* is 0.20, the maximal value is 0.68, the mean is 0.40 and the standard deviation is 0.18. I computed a Cronbach's Alpha for all variables to measure internal consistency. Cronbach's alpha is a common test used to assess how closely related a set of items are as a group. The alpha coefficient was 0.81, suggesting a relatively high consistency.

Policy complexity

In their analysis of EU agencies' institutional independence, Wonka and Rittberger (2010: 742) take the agency staff size as a proxy for policy complexity. The rationale is that the more complex the agency's tasks, the more staff is required. However, staff can also be associated with an agency's informal autonomy, as I explain in the next section.

Therefore, I use a different approach, which follows the logic that a more complex document contains more information (Aizenberg and Müller, 2020: 1778). Based on the documents specifying the agencies' missions and objectives, I measure *Policy complexity* using a Type Token Ratio (TTR) of each

document (Aizenberg and Müller, 2020).[16] The TTR measures the linguistic complexity of a text by assessing how rich a text is in terms of words used. It is obtained by dividing the total number of unique words by the total number of words. Therefore, the higher the TTR, the higher the lexical complexity. The assumption is that if the agencies' missions stated appear relatively complex, this is likely to indicate a relatively high level of policy complexity in general. Obviously, this method is not without limits as the TTR is only calculated for the documents stating the missions and principles of the agency. The policies developed might be more or less complex than those statements. An alternative approach would thus consist of calculating the TTR of all policies developed, but unfortunately, the agencies' policies are not always publicly accessible. The minimal value of *Policy complexity* is 0.31, the maximal value is 0.69, the mean is 0.50 and the standard deviation is 0.13.

Media attention

I measure the level of media attention using a media coverage analysis of the internet regulatory agencies. *Media attention* is expressed as the raw number of news articles covering each internet agency between 2006 (i.e., year of the creation of the youngest internet regulatory agency) and 2020.

Data is retrieved from Factiva, an international database that collects contents from various sources of information, including major national newspapers like The Wall Street Journal (United States), The Financial Times (United Kingdom), and Chosun Ilbo (South Korea), as well as more specialised and technical newspapers such as Journal of Engineering. Examples of media sources used for the analysis are provided in the Appendix B (Table A5). Similar articles but published in different media sources are kept as they are an indicator of public attention. To collect relevant news articles, I use the full name of the agency, the connector 'or'[17], and the agency's acronym as search terms (e.g.,

[16] Documents related to the missions and objectives are retrieved from the agencies' websites.

[17] Using the connector 'or' enables Factiva to collect articles that include either term.

"Internet Corporation for Assigned Names and Numbers" or ICANN).[18] The search is limited to the article's title and first paragraph. The minimal value of *Media attention* is 30, the maximal value is 174600, the mean is 3251 and the standard deviation is 5596.

Age

I measure *Age* by looking at the agency's date of establishment. Specifically, I subtract the year of the establishment of the agency from the year of the data collection (i.e., 2020). This allows a basic consideration of temporal dynamics and, therefore of an institution's self-reinforcing mechanisms (Haftel and Thompson 2006: 267). The minimal value of *Age* is 15, the maximal value is 58, the mean is 28, and the standard deviation is 11.

3.3.3 The operationalisation of the dependent variable

It is particularly challenging to find meaningful ways to measure informal autonomy, understood as the ability to rely on self-determined preferences and organisational competences (Verhoest et al., 2004; Coban, 2022). To date, scholars have primarily relied on survey data (e.g., Maggetti, 2007; Ingold et al., 2013; Gonzales and Verhoest, 2020). I assess it using two empirical indicators.

The first indicator refers to the frequency of revolving door, which refers to the exchange of employees between a regulated industry and a regulatory agency. Using the frequency of revolving as a proxy for agencies' representatives' autonomy is consistent with Maggetti's work (2007). I take the percentage of the current members of the agencies' governing board that are currently working, or have previously worked, in companies or business associations. As a higher percentage indicates less autonomy, I reverse the scale.

[18] The acronym is not used in the case of OASIS. As this acronym can refer to another entity, more irrelevant articles are collected.

The second indicator refers to the resources of which the agency disposes of (Eckert, 2010; Maggetti 2007, 2012a). Research suggests that the more resources an agency has, the less it relies on the expertise and informational knowledge provided by private interests (Edwards and Waverman, 2006; Eckert, 2010) and thereby, the higher the degree of the agency's informal autonomy from corporate interests. Furthermore, holding resources potentially furthers the development of counter-expertise (Ossege, 2015). By questioning or dismissing an argument, agencies can make sure that broad interests are considered in decision-making processes. I use the agency's staff size (i.e., number of staff members) as a proxy for material resources.[19] I rescale it so that it is eventually based on a scale that ranges from 0 to 1.

Finally, I combine the two indicators into an additive *Informal autonomy* index. *Informal autonomy* runs from 0 to 1, with higher values indicating greater informal autonomy from corporate interests. The minimal value of *Informal autonomy* is 0, the maximal value is 1.65, the mean is 0.55 and the standard deviation is 0.53. Summary statistics on the dependent and independent variables are provided in the Appendix B (see Table A6).

3.4 Empirical analysis

In this section, I analyse how *Formal autonomy*, *Policy complexity*, *Media attention* and *Age* all together affect *Informal autonomy* from corporate interests.

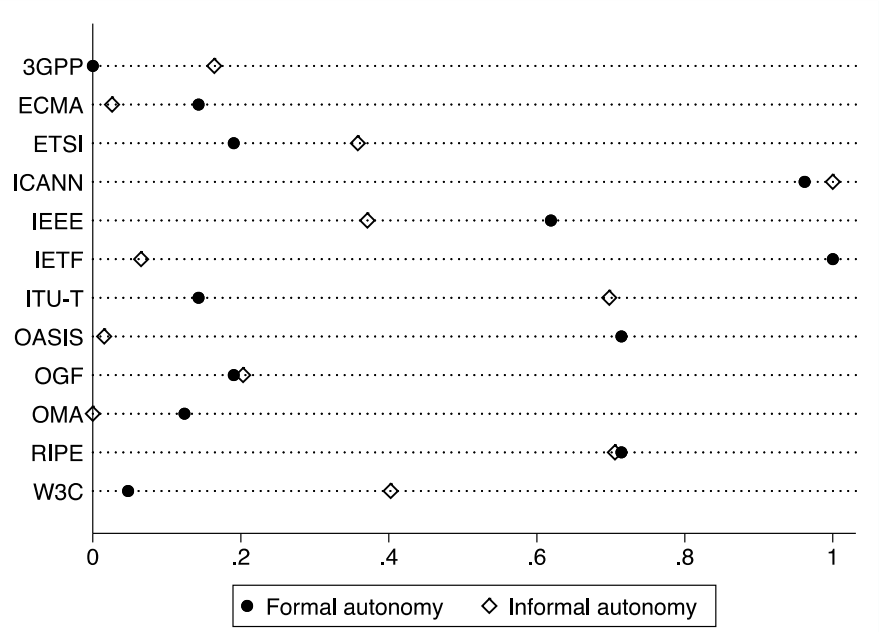
3.4.1 The limited impact of formal-institutional autonomy

A first observation to make is that *Informal autonomy* significantly varies across agencies. Figure 3.1 displays the levels of agencies' *Formal* and *Informal autonomy* from corporate interests. The variables

[19] Data for this measure is retrieved from the agencies' websites and Linkedln pages.

are recoded to lie between 0 and 1 by dividing the minimal value by the maximal, hence allowing comparisons. OMA displays the lowest level of *Informal autonomy*, whereas ICANN displays the highest level. Importantly, the interviewees seem to share similar perceptions (Interviews 1, 6, 8, 11).

Figure 3.1. Agencies Formal and Informal autonomy



Interesting is the fact that ICANN displays a high level of *Formal autonomy* as well. A particular feature of ICANN is that the agency is comprised of several committees and bodies which seek to represent diverse interests formally. In other words, different interests are formally involved and not only invited to participate. State actors are notably engaged through the Governmental Advisory Committee, while internet-end users and civil society more broadly are involved through the Regional At-Large Organizations and At-Large Advisory Committee. ICANN illustrates the multi-stakeholder approach that has been promoted to regulate the internet since the 2003 United Nations World Summit

on the Information Society. Furthermore, documents and meetings are open and accessible to anyone, and policy proposals are open to public comments. In contrast, any individual or organisation (commercial or governmental) needs to become a member to participate in the decision-making process of agencies with a narrower regulatory focus like OASIS.[20]

At first sight, *Formal autonomy* seems thus to be an important determinant of *Informal autonomy*. But a closer look at Figure 3.1 shows that there can also be a stark difference between *Formal* and *Informal* autonomy from corporate interests. Specifically, it appears that the levels of *Informal autonomy* of agencies like IETF and OASIS are significantly lower than their levels of *Formal autonomy*. But the quantitative data also suggests that agencies can be more autonomous in practice than their formal processes allow. Similar findings are furthermore found when an alternative measure of *Informal autonomy* is used. This is provided in the Appendix B (see Table A7 and Figure A1). I examine these variations further in what follows.

3.4.2 Policy complexity, internet infrastructure and expertise

The discrepancy between agencies' formal and informal autonomy suggested by the quantitative data is largely supported by the interview data. In particular, the interviewees pointed out that the formal rules in place do not materialise in practice despite the belief that all stakeholders need to be involved and considered in internet rule-making processes (Interviews 2, 4, 6).

Illustrative of this are the following quotes of two of the interviewees: "our formal processes are built to prevent us from being too dependent on certain interests. But our impact depends on some large companies, vendors or network operators, that play a critical role in their fields. Of course, we are open, and we try to involve a broad range of interests. Our processes are good for that. But at the end of the day, if Google, Mozilla or Microsoft eventually decide not to be part of our organisation, not to

[20] Agencies' membership usually falls into two categories, i.e., organisational and individual.

implement our standards, our work would be worthless. The voices of these particular actors are more important for our organisation, it's difficult to refute that." (Interview 4). Clearly, despite the formal arrangements set, internet agencies are greatly constrained in their ability to guarantee informal autonomy by keeping equal distance from all stakeholders.

The formal-institutional autonomy from politics seems to have translated into an informal dependence on corporate interests which have the capacity and, importantly, expert knowledge to ensure internet efficiency. A few interviewees emphasised the relative complexity of the rules developed by their agencies, and therefore the need for expert participants that possess a high degree of specialised knowledge on information technology systems (Interviews 2, 5, 8, 11). For example, the regulation of internet privacy entails ensuring that hackers and third-party companies cannot see what data is transmitted when individuals or organisations share their information with a website.[21] This requires knowing technical vocabulary and coding techniques. Together with technical knowledge and expertise must come the ability to follow a time commitment (Interviews 2, 3, 5, 8). The internet regulatory agencies cannot necessarily afford spending an indefinite amount of time on any single proposal as they have to keep up with the pace of technological innovation. There are also concerns that involving many participants (in particular from civil society organisations) may result in more overheads and a dilution of expertise available (Interview 5). The degree of *Policy complexity* therefore appears as an important determinant of *Informal autonomy*. As outlined in Chapter 2, all the agencies operate in a similar manner, and the development of a policy proposal largely consists of informal discussions among a limited number of participants (through mailing lists and face-to-face or online meetings). The policy proposal is then potentially open to public comments, before being sent for approval to the agency's board or review committee.

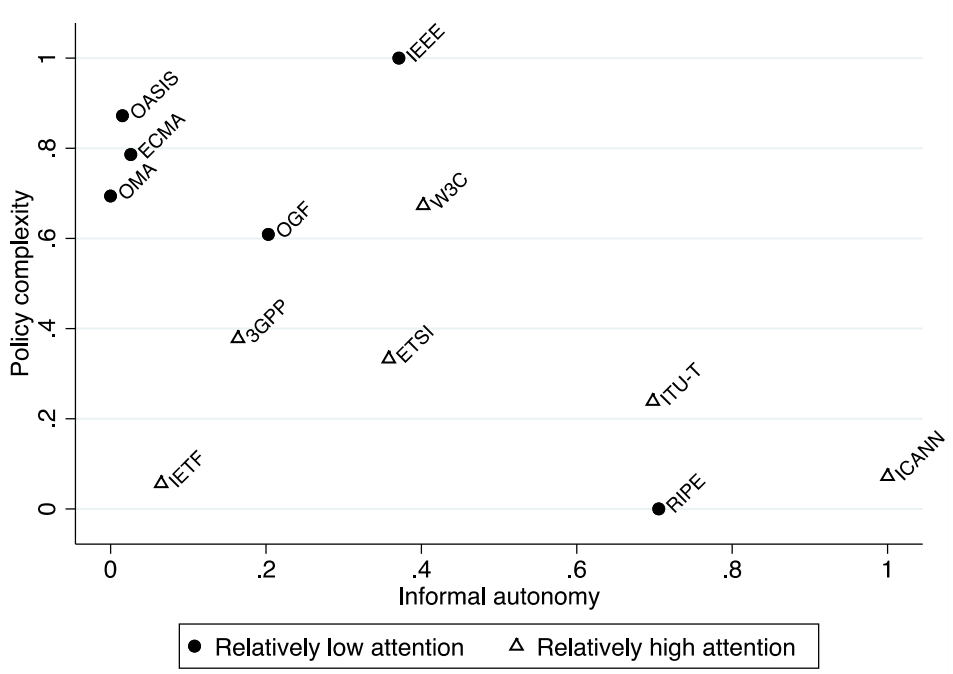
[21] This refers to the Transport Layer Security (TLS) Protocol developed by IETF. https://datatracker.ietf.org/group/tls/about/

Importantly, *Policy complexity* can also determine interactions with corporate interests within an agency. Both the agencies dealing with the broad physical infrastructure and subsections of the internet operate through various working groups that are set to deal with specific issues (e.g., Routing, Security, Web payments). As discussed in the previous chapter, these working groups are central in the development of a policy proposal that addresses a given policy issue (before the consultation and approval stages). Depending on the complexity of the issue, different interests are needed in the working groups. To take an example from W3C, one of its working groups aims to promote "awareness and understanding in accessibility standards" (i.e., the standards developed to make the Web accessible, primarily for people with disability), thereby aiming to develop values in technical work. Less specialised knowledge is here required, increasing *Informal autonomy* from corporate interests. In working groups set for dealing with more complex issues, the little autonomy from corporate interests explains why policies are sometimes proposed as 'fait accompli', giving some purchase to insights in empirical work on expert groups (e.g., Larsson, 2003; Chalmers, 2014). As one of the interviewees points out, "there are people that do some pre-cooked work and present it to the organisation as fait accompli. That's a risk" (Interview 5).

3.4.3 Media attention and the internet 'epistemic community'

The negative effect of policy complexity on *Informal autonomy* is reinforced by the lack of media attention and corresponding public attention, as illustrated in Figure 3.2. Figure 3.2 illustrates the levels of *Policy complexity* and *Informal autonomy*, distinguishing between agencies attracting relatively more media coverage (i.e., the amount of media coverage received is superior to the median) and agencies attracting relatively less media coverage (i.e., the amount of media coverage received is inferior to the median). It is notable that agencies like OASIS, ECMA, OMA and IEEE deal with relatively complex policies, receive little attention, and have lower degrees of *Informal autonomy*.

Figure 3.2. Policy Complexity, Media attention, and Informal autonomy



Among the agencies that deal with the internet infrastructure broadly rather than subsections, ICANN appears as the most visible agency. Although the reasons for this would need to be analysed further, a potential explanation lies in the agency's role in internet governance. As discussed in Chapter 2, ICANN was established in 1998 in response to a call from the US Department of Commerce for a new entity responsible for managing the domain names system (i.e., the database in which website names are translated into internet addresses). With the internet expanding, domain names represent critical global economic resources since they provide a presence on the internet for those possessing them (DeNardis, 2014). Among the internet agencies characterised by a narrower regulatory focus, ITU-T is also subject to media attention. This might be explained by the agencies' institutional characteristics and the official international recognition they benefit from. The ITU is indeed formally recognised as an UN-specialised agency.

When relatively visible, the agencies seem to respond to media attention by "showing how their model works in practice" (Interview 1). More importantly, there seems to be a substantial media impact when it comes to more specialised and well-circumscribed media sources like the Journal of Engineering rather than general news media sources, as highlighted by the interviewees (Interviews 1, 2, 3, 5, 11). This tends to suggest that the attention accorded by the "epistemic community" (Haas, 1992) or "club" (Tsingou, 2015) of internet governance matters, casting some light on why *Informal autonomy* can increase despite the institutional arrangements guarantying *Formal autonomy*. Attention thus seems to increase agencies' autonomy but not necessarily through the mechanism expected. Specifically, agencies seem to be responsive to concerns and demands from their targeted audience rather than the general public. One potential interpretation is that, by putting the agencies under the spotlight and drawing attention to their practices and procedures, questioning whether the agencies have "legitimate processes" (Tummarello 2013, para. 1), 'specialised' *Media attention* contribute to *Informal autonomy*. Further information on the news articles published is provided in the Appendix B (see Table A7).

3.4.4 Agency's age: the logic of reputation vs path-dependency

As formulated in the theoretical section, agencies can either develop their own expertise and build up a reputation over time, or, instead, they can develop routinised procedures that limits autonomy. The interview data seems to support the latter. The "force of habits" and the importance of "long-term relationships" were indeed frequently mentioned by the interviewees when discussing how the agency operates day-to-day (interviews 1, 3, 4, 6, 10), pointing out importance of self-reinforcing mechanisms. The internet and its regulation through standards were historically seen as a marginal topic, primarily in the interest of large technology and communication companies (DeNardis, 2014), with little space for states and the civil society (Christou et al., 2020). Neither the formal-institutional agencies' framework nor the expertise required to participate in internet rule-making processes has changed much since the

agencies' creation, constraining the relationship with the different actors involved and thus weakening agencies' informal autonomy from corporate interests.

3.4.5 Combinations of variables explaining Informal autonomy

Overall, the interview data suggest that, while media attention may contribute to autonomy, agencies' informal autonomy remains limited by the degree of complexity of the policy issue and the agency's age. The degree of formal autonomy, on the other hand, does not seem to be a significant determinant. A FsQCA can provide additional insights by revealing the combination of sufficient variables that explain the degree of agencies' informal autonomy. As FsQCA creates a bridge between qualitative and quantitative methods, it can used on different sample sizes, including small samples. Tables A8-A11 in the Appendix B contains further information on the analysis performed.

The results of the analysis primarily suggest that *Media attention* is key to *Informal autonomy*. Indeed, when low *Media attention* is combined with low *Formal autonomy* and 'young' *Age*, the degree of agencies' informal autonomy is likely to decrease. In other words, the lack of media attention and formal autonomy is likely to limit agencies' informal autonomy from corporate interests, even if the agencies have not yet had time to develop routinised procedures with such interests. However, the analysis also reveals that when there is high *Formal autonomy* and low *Policy Complexity* (which should lead to increased levels of *Informal autonomy*), *Informal autonomy* is likely to decrease when there is also low *Media attention* combined with high *Age*. The results thus indicate that formal-institutional procedures have a limited impact when they are combined with sparse media attention and agency age, which act as constraints on achieving higher levels of informal autonomy from corporate interests.

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Conclusion

The present chapter has examined internet regulatory agencies' autonomy from corporate interests. It is clear that the agencies fall along a spectrum, with some agencies relying more on corporate interests and others building more upon the participation of a broad range of interests. Theoretically, I have argued that agencies' formal-institutional autonomy can only partially explain informal autonomy from corporate interests. Central for explaining agencies' informal autonomy are the levels of policy complexity and media attention, as well as the agencies' age. In terms of methodology, I have developed novel measures of formal and informal autonomy, which may be beneficial for future research seeking to assess autonomy from the regulated sector.

The quantitative and qualitative finding have provided evidence for my argument. Specifically, the degree of policy complexity and the existence of self-reinforcing mechanisms seem to decrease agencies' informal autonomy. Media attention can, however, contribute to increase informal autonomy, in particular when it comes to specialised media sources. This factor is particularly significant. The analysis is admittedly circumscribed to a specific policy field, limiting the validity of the findings. We should yet expect to see similar findings regarding other global agencies with technical mandates and long-institutionalised relationships between regulators and the regulated sector, like in finance.

In line with the results provided by existing research, the present analysis has pointed out the complicated relationship between agencies' formal and informal autonomy (e.g., Maggetti, 2007; Hanretty and Koop, 2013). Internet regulatory agencies are characterised by an institutional model based on stakeholder diversity (i.e., multi-stakeholder model), where everyone has a right to participate, guarantying formal-institutional autonomy. Such a model is supposed to grant legitimacy (Cashore, 2002). And for the internet regulatory agencies, legitimacy is an indispensable resource to gain and exercises authority, especially as the rules they produced are not legally binding. But it appears that the reality of who gets to be heard remains more ambiguous. This does not mean that having a seat at the

table does not matter, but it rather indicates that having a seat does not fully materialise on the ground. Importantly, this chapter contributes to our understanding of how interest regulators operate in formal and informal institutional arrangements, as well as how constraints such as the level of policy complexity shape their interactions with corporate interests.

Further research would be required to examine how the degree of informal autonomy affects the policies produced as analysing its outcome (and its quality) is beyond the scope of the present chapter. Expertise is not value-neutral and so-called experts can serve self-interested objectives (Esterling, 2004; Chalmers, 2014). But the limited autonomy from corporate interests does not imply that the policies developed systematically and consistently undermine public interests in favour of vested interests. Although cleavages between corporate interests and organisations representing more public interests exist, much more fine-grained lines of conflict can cut across these conventionally assumed cleavages (Klüver, 2013). Furthermore, private interests are often in the best position to advise on policy problems and potential policy solutions (Coen et al., 2021) and a growing body of research suggests that regulatory capture is not necessarily a bad thing (Héritier and Ecker, 2008; Tai, 2017). The question of whether internet privacy policies serve the interest of the general public can thus be subject to vigorous debate. In the next chapter, I focus on the extent to which global internet privacy rules are politicised, examining the impact of major events such as the surveillance revelations made by Edward Snowden in 2013.

CHAPTER 4. The politicisation of internet privacy regulation: an examination of the impact of focusing events on issue salience, actor expansion and actor diversity.[22]

Despite a rich body of literature on politicisation, knowledge of this process and its driving forces remains limited. Specifically, little empirical analysis has been carried out to assess the impact of focusing events on politicisation within global and seemingly technical venues. This chapter empirically examines the effect of focusing events on the politicisation of global data protection and internet privacy rules. Building on existing studies, I conceptualise politicisation as a combination of three things: (1) issue salience, (2) actor expansion and (3) actor diversity. I use a systematic analysis of news media coverage over a 20-year period, resulting in an original dataset of 2,100 news articles. Controlling for different factors, my findings reveal that focusing events do contribute to the politicisation of internet privacy regulation, in particular regarding the actors involved in public debates.

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[22] Antoine, E. (2023). The Politicisation of Internet privacy: An Examination of the Impact of 'Focusing Events' on Issue Salience, Actor Expansion and Actor Diversity. *European Journal of Political Research*, 52: 530-550. doi: 10.1111/1475-6765.12562

4.1 Introduction

The non-legislative and technical modes of policy-making that characterise internet regulatory agencies are becoming more prominent in global politics, with unelected decision-makers heavily relying on private sector interests for technical input (Mattli and Woods, 2009; Büthe and Mattli, 2011). As Chapter 3 highlights, the expertise provided, by corporate interests in particular, is central to the agencies' capacity to make decisions and develop policies that address complex issues. The decisions made are allegedly driven by relevant information and scientific assessments, rather than partisan-motivated considerations. But the provision of expertise is not value-neutral, and such policy-making can have important distributional implications. Notably, corporate interests have much to lose if compliance with international standards requires making considerable changes to existing practices. Seemingly technical policies can entail controversial choices and feature intense debates, calling for a systematic analysis of politicisation.

Broadly considered, politicisation refers to the expansion of the scope of conflict in society (Schattschneider, 1960: 7), making a matter a subject of debates and/or contestation (De Wilde and Zürn, 2012: 139; De Wilde et al., 2016: 17). The concept of politicisation has become an important subject in academic debates, particularly regarding European Union (EU) governance and questions about the bloc's democratic legitimacy (e.g., Statham and Trenz, 2013, 2015; De Wilde et al., 2016). In a large n-study, Hutter et al. (2016) investigate the politicisation of European integration and point out the "politicising effect" of specific moments, like the Euro crisis in 2008. In the public policy literature, these moments can be referred to as "focusing events". The contributions of focusing events to the development of public policy have been widely addressed (e.g., Birkland, 1997, 1998, 2006; Baugmartner and Jones, 1993; Nohrstedt, 2008). Nevertheless, missing from the literature is an examination of the role of focusing events within more technical and specialised regulatory venues, with few elected actors (if at all), and, thereby, voters. Despite a rich body of literature on politicisation as

well as focusing events, we still know very little about the potential impact of focusing events on politicisation outside the EU context (Zürn, 2016) and beyond the electoral arena.

This chapter seeks to examine the extent to which focusing events contribute to the politicisation within global and seemingly technical venues of policy-making. I conceptualise politicisation as a combination of three key components: (1) issue salience (the amount of attention given to the issue), (2) actor expansion (the number of participants in debates) and (3) actor diversity (the degree of diverse interests represented in debates). My central argument is that focusing events largely contribute to politicisation in technical arenas by raising public attention and revealing potential policy failures.

To examine this question, I focus on twenty data protection and internet privacy rules determined by leading internet regulatory agencies. As mentioned in Chapter 2, the patchwork of standards and guidelines that exist at the global level have mostly been issued by ICANN, W3C, IETF and IEEE.In this chapter, I analyse the effect of three focusing events within these specific venues: the September 11th terrorist attacks in 2001, the global surveillance revelations made by Edward Snowden in 2013, and the Facebook-Cambridge Analytica scandal in 2018.

In terms of methodology, I map the politicisation process of internet privacy regulation using a large-scale and systematic media analysis of twenty critical policy recommendations (i.e., internet standards and guidelines) adopted by ICANN, IETF, IEEE and W3C. I collect data on the internet policies selected for this study over a 20-year period, resulting in an original dataset of 2,100 news articles. Although the present analysis focuses on internet privacy regulation, the effect of focusing events on politicisation can be generalised beyond this particular case to the politicisation of other issues developed by seemingly technical expert bodies, like in finance.

My analysis reveals that focusing events contribute to politicisation within global and seemingly technical venues, in particular regarding the actors involved in conflict. This study's contribution to the literature is thus threefold. Firstly, this study deepens our understanding of the extent to which focusing events affect politicisation. Importantly, it does so by focusing on policies and venues less covered by

existing research and where politicisation is least likely to occur given the technicality of the policy area. Politicisation and its driving forces are an important object of research as the concept of politicisation suggests that debates involving a growing range of actors take place, which is a key ingredient of democratic politics. Secondly, the present research extends the predominantly European governance-centred literature on politicisation by applying this concept to a global public policy issue. The present analysis thus contributes to the broader academic debate on the legitimacy of global forms of governance. Thirdly and closely related to the previous points, the empirical findings provide insight on the structure of political conflict over internet regulatory agencies' decisions. In doing so, they shed light on the constraints that shape the politics of internet privacy regulation. In what follows, I first review the driving forces of politicisation suggested by the existing literature and develop a theoretical model to explain how focusing events also affect politicisation, particularly within technical venues (section 4.2). I then describe my methods (4.3) and present the findings of the analysis (4.4). I conclude with remarks about their implications.

4.2 Politicisation and its driving forces

4.2.1. Existing approaches to politicisation

Two objects of politicisation can be distinguished, specifically: the polity and the policy. The polity refers to the institutional system, whereas the policies are the solutions provided to solve problems (De Wilde and Zürn, 2012: 140). An issue (i.e., polity or policy) is regarded as politicised when a growing range of actors with diverse preferences get involved in debates over that issue, expanding the scope of conflict (Kingdon, 1984; De Wilde and Zürn, 2012; Berkhout and van der Brug, 2013; Leupold, 2015; Hutter et al., 2016; De Bruycker, 2017). Politicisation can thus be seen as a combination of three things: issue visibility (referred to as salience), actor expansion (Grande and Hutter, 2014, 2016; Hutter et al.,

2016) and actor diversity (Pagliari and Young, 2016; Masini and Van Aelst, 2017). Whereas polity politicisation is associated with debates over the overall legitimacy of supranational decision-making, policy politicisation relates to debates on societal matters (Leuphold, 2016: 86). The two, however, are closely linked as policy politicisation can lead to broader struggles over the appropriateness of the institutional order and thereby move to polity politicisation (De Wilde et al., 2016). Politicisation being defined, I now point out the driving forces behind this process.

Politicisation can occur at several political levels, which, although they are distinct, interact with each other. One strand of literature supports a society-based perspective. It suggests that the rise of the standards of living fosters the involvement of citizens (i.e., all actors that are non-decision markers) in debates (Tarrow, 1998; Inglehart and Welzel, 2005). More specifically, better education and more sophisticated mass media enhance individuals' ability and interest in participating in debates over various policy issues. Initially this process occurs at the national level, but in the age of globalisation, these mechanisms are taken at the global level and drive global politicisation patterns (Furia, 2005).

The accumulated effects of authority transfers at the global level are also considered by the literature as a key determinant of politicisation (e.g., De Wilde and Zürn, 2012; Rixen and Zangl, 2013; Ecker-Ehrhard, 2014; Grande and Hutter, 2016; Rauh and Zürn, 2020). The rationale being that the transformation of an supranational institution like the EU "into a more encompassing political system" (Grande and Hutter, 2016: 23) increases debates over the institution’s procedures as well as policies. However, these effects of authority transfer interplay with sub-levels. Research indeed suggests that they can be filtered by additional factors, such as national economic structures (e.g., Leupold, 2015) or domestic politics (e.g., Ecker-Ehrhardt, 2014; Hoeglinger, 2016), hence explaining cross-national divergences in politicisation (e.g., De Wilde et al., 2016; Kriesi, 2016; Grande et al., 2019; Rauh et al., 2020). Institutional context also matters as the rules and incentives under which actors can express their preferences (like consultation procedures) expand or limit the scope of conflict (De Wilde and Zürn, 2012; Häge and Naurin, 2013).

Broadly considered, another strand of research specifically focuses on the strategies of political actors to account for politicisation (e.g., Koopmans et al., 2005; De Bièvre, 2018; Hutter and Kriesi, 2019), encompassing the literature on outside lobbying dynamics (e.g., Kollman, 1998; Beyers, 2004; Dür and Mateo, 2014). The explanation is that the expansion of conflict is strategically pursued by certain actors to favour their policy preferences. For instance, De Bièvre (2018) provides evidence that the politicisation of the Transatlantic Trade and Investment Partnership in Germany is primarily driven by wealthy NGOs.

Existing research has thus demonstrated that institutional and structural factors, as well as actors' strategies are important determinants of politicisation. The role of events is, however, less clear-cut. Studies on EU politicisation suggest that specific moments, such as the Euro crisis in 2008, have intensified political conflict (e.g., Hutter et al., 2016; Leupold, 2015; Hutter and Kriesi, 2019), but more theory is still needed to understand the impact of focusing events. Furthermore, little scholarly attention has been paid to the role of events within more technical venues (e.g., standard-setting bodies, technical committees). The role of events must not be overstated yet. Politicisation can already be in process when an event occurs, and that event may then be used as a politicisation strategy. But even in that case, focusing events are still critical forces that expand further the scope of conflict. I elaborate on this argument in what follows.

4.2.2 Conceptualising the effect of focusing events

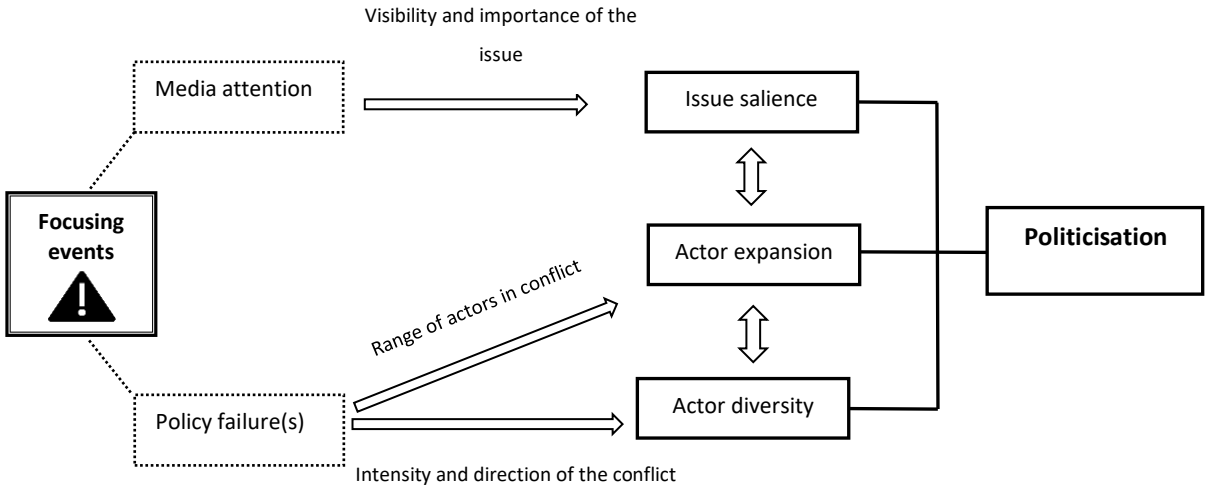
Although a focusing event is a key concept in public policy studies, there is no agreement on a common terminology. While Kingdon describes a focusing event as a "little push" (2003: 94) and includes fatal accidents but also personal experiences of policy-makers, Downs conceptualises focusing events as an "alarmed discovery" of a problem by the public (1972: 39). Examples of focusing events usually include natural disasters, industrial accidents, as well as scandals. Birkland’s definition is often used by political

science scholars as his definition is broad enough to cover different types of events while but also narrow enough to not simply cover anything that happens. Birkland defines a focusing event as:

> "an event that is sudden; relatively uncommon; can be reasonably defined as harmful or revealing the possibility of potentially greater future harms; has harms that are concentrated in a particular geographical area or community of interest; and that is known to policy-makers and the public simultaneously" (1997: 54).

Birkland's definition underscores that not all events can be described as focusing; the crucial traits are suddenness and implied harm. As a result of these traits, focusing events can contribute to politicisation in technical arenas. Specifically, they can increase the visibility of a given issue, the range of actors in conflict over that issue and the intensity of conflict, through two main mechanisms, as displayed in Figure 4.1.

Figure 4.1. Theoretical framework



The first mechanism relates to media attention. Specifically, focusing events attract media attention, putting the spotlight on existing, but out of sight, issues. This leads to increasing their salience, making "quiet politics loud" (Culpepper, 2010; Pagliari, 2013; Chalmers, 2015). Salience generally refers to the level of public attention, hence importance, given to a specific issue (Oppermann and Viehrig, 2009). The impact of focusing events on salience is notably suggested by public policy theories, in particular the multiple streams framework (Kingdon, 1984), the issue-attention cycle model (Downs, 1972) and the punctuated equilibrium theory (Baumgartner and Jones, 1993). Through this first mechanism, media play a critical role, particularly the news selections processes (Boydstun et al., 2014). This role would require further investigation, but the assumption here is that focusing events attract media attention primarily because of their implied harm. Events can thus propel seemingly technical policies and corresponding technical debates into the public spotlight.

Salience in turn affects the configuration of actors in conflict. Indeed, when an issue becomes more salient, more actors feel concerned and enter the conflict (Baumgartner and Jones, 1993). Regarding internet privacy regulation, this can imply that large technology companies like Microsoft are joined in debates by smaller technology companies. However, the concept of focusing events is not about "attention-grabbing" events only. Issues may be salient in media debates but may not attract political contestation. Looking at issue salience only disguises the magnitude and character of the conflict. It is thus important to consider another mechanism that links focusing events to politicisation.

The second mechanism is associated with the policy failures revealed by the event. Focusing events reveal (perceived) policy failures as well as potential future failures, and in this regard, they symbolise everything that is wrong (Birkland, 1998). This means they serve as an impetus for actors to promote competitive alternative ideas, challenging the policy status quo and the dominant coalition defending the status quo (Baumgartner and Jones, 1993). This is important as the concept of politicisation involves that the actors engaged in debates represent different positions (Berkhout and van der Brug, 2013: 4; Hutter et al., 2016: 20). By revealing policy failures, focusing events affect the

substance of politicisation, say the existing "policy paradigm" (Hall, 1993). A policy paradigm is a set of ideas that structures public policies in terms of overall goals as well as instruments enabling to reach those goals. As Hall points out, policy failures, which can be revealed by focusing events, "gradually undermine the authority of the existing paradigm and its advocates" (1993: 290). Policy failures thus lead to increasing the number of actors engaged in debates as well as the interests and opinions expressed. In the case of internet regulation and internet privacy regulation specifically, this suggests the inclusion of non-technology actors in debates. Indeed, internet regulation primarily engages technology companies (DeNardis, 2014; Christou et al., 2020), which operate in the design and installation of computer hardware components as well as software applications. In contrast, non-technology actors include companies operating in various sectors, as well as governmental organisations and non-state actors. At the same time, the increase in the number and range of actors can increase the issue salience. It should be noted that the potential shift to new policy arrangements then depends on further conditional factors that are not the focus of this chapter. Instead, the emphasis here is on the scope of political conflict over existing policy arrangements in technical arenas. The points mentioned here lead to a central hypothesis:

The presence of a focusing event contributes to politicisation in technical arenas.

4.3 Research design

4.3.1 Data selection and collection

This chapter aims to test the effect of focusing events on the politicisation of global data protection rules and within ICANN, IETF, IEEE, and W3C. In this section, I provide details on the cases selected as well as the variables considered in the analysis and their operationalisation.

Internet regulation has long been described as "an arcane and even marginal topic, of interest primarily to a few 'geeks'" (Verhulst et al., 2016: 96), or as an object of conflict primarily engaging technology companies (DeNardis, 2014; Christou et al., 2020). Still, the last decade has shown a shift toward greater attention to internet regulation, specifically regarding data protection and internet privacy issues (Culpepper and Thelen, 2019: 304). The design of data protection and internet privacy rules seems now to spark the interest of various companies, international organisations and a broad range of non-state actors, suggesting this issue has become highly politicised.

The selection of focusing events raises some challenges as there is no agreement on a common terminology. Nevertheless, three focusing events seem to be particularly relevant regarding global internet privacy regulation, namely: the September 11th terrorist attacks in 2001, the Edward Snowden revelations in 2013 and the Facebook-Cambridge Analytica scandal in 2018. Three reasons explain the selection of these events. First, the three events involved issues associated with internet privacy regulation. Although privacy and security issues were not new (Bennett, 1992), the terrorist attacks substantially shifted the emphasis of the public discourse from privacy to security needs while raising questions regarding the emerging new technologies and their regulation (Levi and Wall, 2004: 195). In contrast, the Edward Snowden revelations and the Facebook-Cambridge Analytica scandal put the spotlight on illegal surveillance activities operated by states and businesses, leading to public debates on the level of privacy protection required against surveillance and illegal data collection (Pohle and Van Audenhove, 2017; Kalyanpur and Newman, 2019; Christou et al., 2020). Other important events involved data protection and privacy issues, such as the AOL Search Leak (in 2003), where a large amount of personal information was released; Google Street View scandal (in 2007), where Google 'inadvertently' captured personal information during its mapping process; the News of the World scandal (in 2011), where journalists 'hacked' into digitally stored personal data. However, compared to these privacy-related events, the September 11th terrorist attacks, the Edward Snowden revelations, and the Facebook-Cambridge Analytica scandal received substantial coverage in media all around the world,

suggesting an impact at the global level. This is the second reason explaining the selection of the three events. Worldwide media coverage does not mean that the events have affected all countries similarly and with the same intensity. The US-centred nature of the events might, in fact, lead to stronger debates in this country. Third, widespread media coverage also indicates that the events selected are severe enough to be defined as harmful, which aligns with Birkland's definition of a focusing event (1997). Tables A1-A2 in the Appendix C provides details on the characteristics and media coverage of the events.

To analyse the effect of focusing events on the politicisation of internet privacy regulation at the global level and within seemingly technical venues, I select twenty internet policies adopted by internet regulatory agencies between 1990 and 2019. They are selected on the basis that they seek to protect personal data (e.g., private communications, users' personal preferences) against data misuse and surveillance practices. Policies specifically related to other internet issues (such as the accessibility for the disabled) are ignored. They are mostly standards and guidelines, which are common arrangements of global regulation (Mattli and Woods, 2009: 16). The list of the policies selected is found in the Appendix C (Table A3).

The regulation of internet privacy and data protection has evidently been marked by important national and supranational laws, one of the most significant being the European Union's Data Protection Regulation. Events like the Edward Snowden revelations have furthermore been shown to contribute to the EU regulation's change by making data protection issues front-page news (Bennett and Raab, 2020: 448) whilst creating a space for civil society to exert influence on decision-making (Kalyanpur and Newman, 2019: 463). Focusing on legislative frameworks thus certainly provides valuable insights on politicisation. However, I focus on technical internet policies as they are largely regarded as a-political, bringing only technical responses to technical challenges. The implication is that the internet privacy policies examined in the present chapter represent a least-likely case of politicisation. In other words, if focusing events do affect the scope of conflict over these technical policies, this will lend strong

evidence supporting my argument. Furthermore, relatively little is known about the data protection and internet privacy rules determined by global internet regulatory agencies. ICANN, IEEE, IETF and W3C deal with the core architecture and infrastructure for internet communication. They consist of government representatives, engineers, civil society organisations, as well as large corporations, including Apple, Amazon, Facebook, Microsoft, Google (Christou et al., 2020). There is no enforcement authority, and therefore, the rules they develop are not binding by law. However, there is a huge market pressure to adhere to the rules as they allow different systems to operate together.

Data for this analysis is then derived from news articles. Media indeed represent an indispensable source which allows us to examine the different dimensions of politicisation (Grande and Hutter, 2016; Hoeglinger, 2016). Data collection proceeded in two steps. First, I defined a time-period starting five years before the policy's promulgation. Decision-making processes within the internet regulatory agencies usually last between three and five years (Greenstein, 2006). The time-period ends ten years after the policy's promulgation since this chapter seeks to analyse the long-term effects of focusing events on politicisation.[23] As some of the policies have been reviewed during 1990 and 2019, the time-period for these policies ends ten years after the promulgation of their most recent versions. Second, I collected articles covering each of the internet privacy policies selected for this study over the specified time-period. I gathered articles from Factiva, an international database that collects contents from various sources of information, including major national newspapers like The Wall Street Journal (United States), The Financial Times (United Kingdom), Chosun Ilbo (South Korea), as well as more internet-specialised newspapers, such as Journal of Engineering. Further examples of newspapers are found in the Appendix C (see Table A4), as well as the search-terms used to collect the news articles (Table A5).

[23] More irrelevant articles are collected when the timeframe is extended beyond ten years.

4.3.3 Operationalisation of the variables

Politicisation

Building on existing studies (Hutter et al., 2016; Masini and Van Aelst, 2017), I operationalise Politicisation by focusing on three components: (1) issue salience, (2) actor expansion, and (3) actor diversity. Politicisation is measured for each privacy policy during the defined time-period (e.g., Do-Not-Track standard in 2011, 2012, and so forth).

Issue salience

The salience of an issue can be assessed through its media coverage. Indeed, media sources only try to publish news articles that their consumers care about reading to use their services. For each internet privacy policy, I measure Salience as a percentage of all the articles published and recorded by Factiva.

It should be noted that Factiva records a vast number of media sources. Many of them are not relevant for the salience of a regulatory issue (e.g., the Dufa-Index Handelsregister), potentially leading to an underestimated measure of salience. Alternatively, issue salience can be measured by counting the articles in different newspapers (e.g., Culpepper, 2010: 162) or by taking the percentage of all the articles published by a sample of newspapers (Pagliari, 2013: 126). Although these methods are a valid measure of attention, I adopt a slightly different approach as my purpose is to measure the worldwide media coverage of technical internet policies over a very long period of time. The raw number of articles does not give a meaningful number as more articles are published today than twenty years ago. Relying only on a few general newspapers limits the amount of data collected and the scope of the analysis.

Salience is highly skewed as some policies did not always receive media coverage. After cleaning data from irrelevant articles, I chose to remove duplicates to get a conservative measure of

salience.[24] Although duplicates can be an indicator of public attention, I argue that removing them is needed to ensure a valid and reliable measure of the second dimension of politicisation, i.e., actor expansion. Salience ranges from 0 to 0.26.

Actor expansion

Actor expansion refers to the extent to which debates include a growing number of actors. For each internet privacy policy, I extract the actors mentioned in the news articles collected and measure *Actor expansion* as the total number of actors.[25] Actor expansion ranges from 0 to 36. Such a measure is meaningful insofar as a limited number of actors does not suggest a high level of political conflict. However, a large number does not necessarily mean that the actors involved in debates represent diverse interests and opinions.

Actor diversity

The third dimension of politicisation is, therefore, actor diversity. Actor diversity describes the degree to which various types of actors are engaged in debates. Measuring actor diversity required several steps.

First, I hand-code the actors mentioned in the news articles by their primary industrial activity according to the Dow Jones Industry taxonomy (Table A6 in the Appendix C). This results in the identification of ten actor types: Technology (hardware and software applications); Communication (social media platforms, telecommunication services, media); Industry (production of electrical equipment, defence and aerospace); Finance (financial services activities, insurance, banking); Legal (legal service); Retail (retail trade, including e-retail); Health (human health activities); Entertainment (video and television programme production); Government (national and international governmental

[24] The identification of duplicates by Factiva is limited to English content loaded since June 2008. Therefore, I identified the duplicates for content loaded before 2008.

[25] Factiva automatically identifies the actors mentioned in articles.

organisations); and Civil society (representing advocacy groups, scientists affiliated with universities and other knowledge institutions). The regulatory agencies were also mentioned in news articles. However, I chose to exclude them in the measure of actor diversity as they are the venues which develop the internet privacy policies debated.

Second, I measure Actor diversity for each internet privacy policy using a Herfindahl-Hirschmann index (HHI), which is a well-established method for this purpose (Rasmussen and Carroll, 2014; Chalmers, 2015). It is measured as the sum of the squared proportions of actors belonging to each of the actor types considered and mentioned in the news articles collected. The index ranges from 0 to 1, initially with values closer to 0 indicating greater actor diversity. As greater diversity is an indicator of greater politicisation, I reverse the scale; hence values closed to 1 indicate greater diversity in my measure of actor diversity. The overall distribution of the actors is presented in Table 4.2.

It is worth emphasising that actor diversity does not necessarily imply different policy positions as diverse actors can hold similar preferences. Nevertheless, if more diverse interests are engaged in debates, it is more likely to see competing positions in debates. The notion of actor diversity thus captures the potential for contestation (Masini and Van Aelst, 2017). Furthermore, it points out that the issue is not only debated among a specialised community of actors with concentrated, vested interests.

Table 4.1. Distribution of actors for all internet privacy policies

Category	**Frequency**	**%**
Civil society	30	4.37
Communication	147	21.43
Entertainment	11	1.60
Financial	23	3.35
Health	2	0.29
Government	63	9.18
Industrial	14	2.04
Legal	12	1.75
Retail	21	3.06
Technology	360	52.48
Total	686	100.00

Politicisation index

I construct a Politicisation index by standardising and combining the three components into an additive index. An alternative approach would involve giving greater weight to issue salience (Grande and Hutter, 2014; Hutter et al., 2016). However, I suggest that politicisation is both a matter of salience and political mobilisation (i.e., expansion and diversity), and high politicisation can be associated with low salience (Rauh, 2019). I compute a Cronbach's Alpha for all three components to measure internal consistency. The alpha coefficient is 0.73, suggesting a relatively high internal consistency. Such an index seems to be, therefore, validated.

Concerns about reverse causation are warranted. It could be argued that politicisation contributes to the severity of an event, making it a 'focusing' event. However, if this would be the case, we would likely observe high *Policisation* before the event, which is not the case here. Further information on the values of the *Politicisation index* are provided in the Appendix C (Table A7).

Focusing events

Building on Marsh and Mikhaylov's analysis of the Irish election (2012), three variables are included in the analysis to test the impact of focusing events. The first variable, *Focusing event*, is a dichotomous variable that equals 0 in the years preceding a focusing event and 1 in the following years. The year in which a focusing event takes place also equals 1. To avoid overlaps, the period following the September 11th ends in 2007, and the period following the Edward Snowden revelations ends in 2017. The post-Facebook Cambridge Analytica scandal period ends in 2019, i.e., the last year in which data is collected. As the attention and participation raised by a focusing event are expected to lessen (Downs, 1972; Birkland, 1997), a second variable is included as a control variable. Indeed, Downs argues that an increase in attentiveness and participation tends to falter as "more and more people realise how difficult, and how costly to themselves, a solution to the problem would be" (1972: 40). Birkland also notes that the process through which individuals seek to apply new information and propose new ideas to handle a problem also decays over time (1997: 17-21). He argues that policy alternatives and preferences will become fewer, but this decline in interest and mobilisation can still be reversed if a new focusing event happens. The second variable, *After the event*, is a count of the number of years since a focusing event occurred. It equals 1 in the year of a focusing event, 2 in the year after the event, and so forth. It equals 0 in the five years preceding a focusing event. Finally, I include a variable, Time, to control for time trends. This variable equals 1 in the first year of the sample, 2 in the second, and so forth.

4.3.3 Alternative explanations and additional control variables

As it may be inaccurate to attribute a political outcome to any one cause, other variables are included in the analysis, thereby providing a sense of the relative explanatory power of focusing events regarding the politicisation of internet privacy regulation. Summary statistics of the variables are presented in Table 4.3.

One potential explanation for the politicisation of internet privacy regulation may lie in the increase of internet's users worldwide (Curran et al., 2012). Indeed, the more individuals using the internet, the more data protection and internet privacy rules should become a subject of intense public discussions. I thus include the percentage of the world population using the internet for each year between 1990 and 2019. Data for this variable is retrieved from the World Bank indicator.[26]

Another important trend that needs to be accounted for is the adoption of national and supranational data protection laws around the world. Legislative changes may indeed impact the incentives of certain actors to become active in debates over global and technical internet privacy rules, expanding the scope of conflict. I thus include a variable that is a count of countries adopting data privacy laws for each year between 1990 and 2019. Data for this variable is retrieved and compiled from the United Nations Conference on Trade and Development.[27]

At the policy level, politicisation may be affected by the type of policy established by the regulatory agencies, specifically the degree of policy complexity. Complexity refers to the degree to which an issue is difficult to understand and analyse (Klüver, 2011: 487). Less complex policies are more likely to be politicised as expertise is not required to discuss it, and thereby, more actors and diverse interests are able to enter public debates. I measure policy complexity relying on two indicators: the number of words and the Type Token Ratios (TTRs) for each internet privacy policy. Regarding the number of words, the assumption is that the fewer words, the less complex the policy is (Klüver, 2011: 494). The TTR also allows to determine the linguistic complexity of a text by assessing how rich a text is in terms of words used. Consequently, the higher the TTR, the higher the lexical complexity is. I calculate the TTRs for each of the policies selected.[28] In order to combine the number of words and the

[26] https://data.worldbank.org/indicator/IT.NET.USER.ZS

[27] https://unctad.org/en/Pages/DTL/STI_and_ICTs/ICT4D-Legislation/eCom-Data-Protection-Laws.aspx

[28] Data is missing for one of the IEEE's policies as its content was not publicly accessible.

TTRs in a single measure, I conduct a principal component factor analysis, and I use factor scores to assess *Policy complexity*. Results of the principal component analysis are found in the Appendix C (Table A8).

Furthermore, the institutional context within which policies are decided can also affect the visibility of those policies and the type of actors involved in debates. Therefore, I control for the agencies' year of creation.

Table 4.2. Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent variable					
Salience	202	.0123178	.0331863	0	.2577132
Actor expansion	202	3.487685	6.509977	0	36
Actor diversity	202	.1548228	.2447064	0	.7730612
Politicisation index	202	-9.74e-09	2.41713	-1.52978	11.31639
Independent variable					
Internet users	202	30.85714	18.14853	.049	56.988
Policy complexity	199	-.3353661	1.354566	-2.00087	3.13019
Privacy laws adoption	202	5.292079	6.2858	0	30

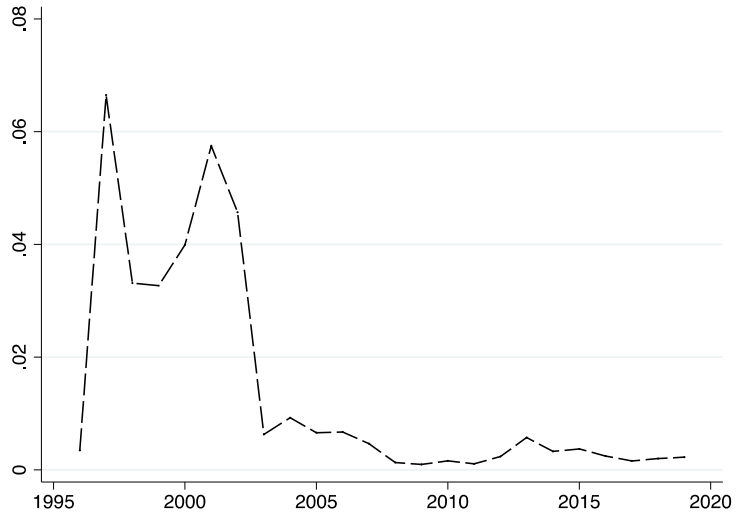
4.4 Empirical analysis

In this section, I first present descriptive results before testing the impact of focusing events on politicisation.

To begin with *Issue salience*, Figure 2 shows that the policies developed by ICANN, IETF, IEEE and W3C, do not, overall, make the news. Specifically, articles covering each of the privacy policies represent, on average, less than 0.08 % of all articles published worldwide. This seems to contradict the findings of recent studies on internet privacy regulation (Rossi, 2016; Kalayanpur and

Newman, 2019). However, these recent studies examine the salience of privacy issues related to consumer concerns in general and legislations like the GDRP. The internet privacy policies examined here being relatively technical, it may be that they can rarely lend themselves to common public interest, making it hard for them to attract media attention (Beyers and Kerremans, 2007). Still, 'surge moments' can be identified in 2001, and slightly in 2013. It should be noted that the policies' salience is higher when it is primarily observed among specialised media sources, in particular in 2013. This is found in the Appendix C (Figure A1). Figure 4.2 also shows a surge in 1997, but this could be explained by the fact that very little media sources are recorded by Factiva from 1990 to 1999, making the percentage of articles covering internet policies during this time-period relatively higher.

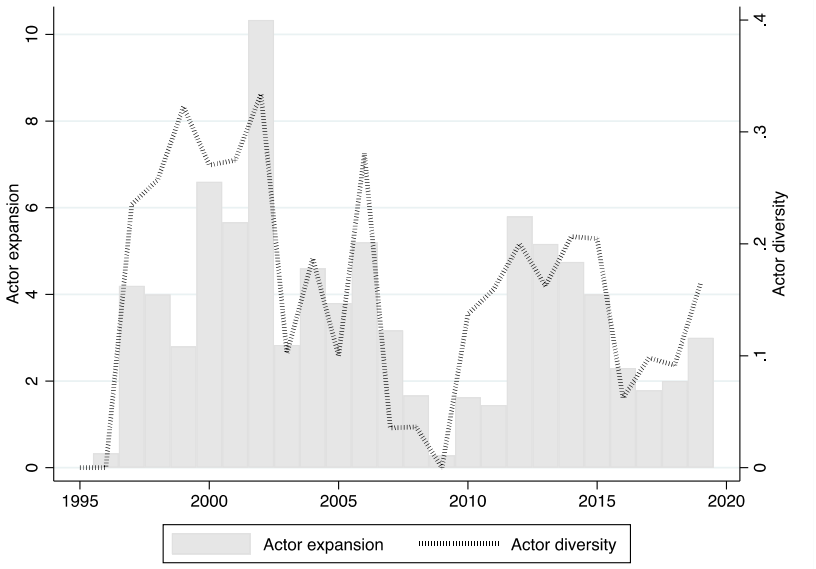
Figure 4.2. Salience (mean)



Regarding the configuration of actors, data confirm that technology companies, in particular Microsoft and Cisco Systems, tend to dominate debates largely. This is no surprise given the central role played by technology companies in implementing the privacy rules in computer settings and programs.

When technology companies are joined by companies operating in communication services, like Alphabet (i.e., the parent company of Google), they represent together between 75% and 95% of the actors involved in debates. However, this dominance tends to decrease as the range of actors engaged and the interests represented in debates increase during the last decade, as shown in Figure 4.3. Specifically, state actors (the EU in particular) seem to engage increasingly in debates over the internet privacy rules established by technical bodies. Additionally, new actors appear to express their views, such as civil society organisations (e.g., Privacy International, Consumer Watchdog), and compagnies which do not directly operate in the design and installation of computer hardware components (e.g., Ebay, Amazon, Atari). If the data protection and internet privacy rules developed by the regulatory agencies were nothing but technical, they should only engage actors who implement these rules in computer systems. In other words, this finding suggests that the global internet privacy rules are not only in the interest of technology actors. Instead, they have far-reaching implications for a broad range of actors as well as economic sectors, leading thereby to potential intra-business conflicts.

Figure 4.3. Actor expansion and actor diversity (mean) per year



Consistent with these findings, distinctive 'politicising moments' can be identified in Figure 4.4 There is a lack of a benchmark establishing where the threshold of 'highly politicised' stands, but a series of events seems to reveal a pattern in the politicisation of internet privacy regulation.

Figure 4.4. Politicisation index (mean) by year

I then test the effect of focusing events on politicisation. The Appendix C contains additional robustness analyses in which, for instance, I use a different measure of politicisation (Table A9), different post-event periods (Table A10), as well as additional control variables (Table A11). It should be kept in mind that *Issue salience*, *Actor expansion* and *Actor diversity* can be mutually reinforced. As *Issue salience* increases, the number and diversity of actors in conflict increase as well. At the same time, the increase in the range of actors can also increase the visibility of the issue at stake. However, this chapter aimed at testing the direct effect of focusing events on politicisation.

Table 4.4 presents the results of the multilevel analysis. The rationale for using multilevel modelling is to consider the hierarchical structure of the data, i.e., politicisation (level 1) is nested within policies (level 2). Ignoring the clustering of the data may indeed result in deflated standard errors. I thus use a mixed model with random intercepts at the policy level. Because policies are nested within agencies (level 3), I could add a higher level, but this appeared to be insignificant. I test the effect of focusing events on *Politicisation* (model 1) and its components, i.e., *Issue salience* (model 2), A*ctor expansion* (model 3) and *Actor diversity* (model 4). Because the dependent variables are continuous in models 1, 2 and 4, I estimate models using multilevel linear regression. Data for *Issue salience* is log-transformed to normalise the distribution. In model 3, I estimate a model using multilevel negative binomial regression since *Actor expansion* is a count variable.

The results indicate that the presence of a *Focusing event* has a statistically significant and positive effect on the *Politicisation inde*x with a p-value of <0.01. More precisely, they suggest that when a focusing event occurs, the mean of the *Politicisation index* is increased by 1.3. The regression results furthermore indicate that the presence of a *Focusing event* significantly increases each component of politicisation. The effect is particularly large on *Actor expansion*. However, the Akaike information criterion (AIC) and the Bayesian information criterion (BIC), which assess the relative fit of the models, indicate a better fit with model 2 (i.e., *Issue salience*) and even more so with model 4 (i.e., *Actor diversity*). Models with smaller AIC and BIC should be preferred over models with larger AIC and BIC (Gelman and Hill, 2006). After the event also shows a statistically significant effect on the *Politicisation index* with a p-value of <0.05. The effect is negative, indicating that the more years that pass since a focusing event, the less politicised the privacy rules become, as expected. However, this variable does not reach statistical significance in models 2-4. The additional control variables do not show a statistically significant effect on politicisation, except for *Time* and *Internet users* in model 2. It is rather surprising that the impact of *Privacy laws* adoption is not statistically significant (and negative on *Actor expansion* and *Actor diversity*). One would expect many countries' adoption of privacy

laws as well as the enactment of key regulations like the GDPR to bring data protection and internet privacy issues into the public eye, expanding the scope of conflict beyond the legislative arena. As it may take some time for privacy laws to affect politicisation in technical venues, an additional model with lagged values is provided in the Appendix C (see Table A12). However, the variable still does not reach statistical significance. This result suggests that technical and specialised policy venues tend to remain relatively isolated from the legislative arena, which may limit democratic participation and deliberation.

Table 4.3. Impact of focusing events on politicisation

	(1)	(2)	(3)	(4)
	Index	Salience	Actor expansion	Actor diversity
Focusing event	1.340**	0.737*	0.756*	0.0973*
	(2.92)	(2.29)	(2.40)	(1.99)
After the event	-0.252*	-0.0962	-0.0964	-0.0220
	(-2.00)	(-1.09)	(-1.06)	(-1.64)
Time	-0.217	-0.400***	-0.0717	-0.00147
	(-1.76)	(-4.65)	(-0.62)	(-0.11)
Internet users	0.0516	0.104**	0.0171	-0.000644
	(1.04)	(2.90)	(0.37)	(-0.12)
Privacy laws adoption	-0.00117	0.0151	-0.0141	-0.00197
	(-0.05)	(0.66)	(-0.77)	(-0.75)
Policy complexity	0.175	0.0301	0.119	0.0155
	(0.82)	(0.21)	(0.51)	(0.66)
Agency year	0.0513	0.0306	0.0353	0.00690
	(1.22)	(1.15)	(0.76)	(1.49)
AIC	863.7671	371.5801	773.6744	-26.47041
BIC	896.7002	398.9421	806.6074	6.462635
N	199	144	199	199

*Note: t statistic in parentheses; * p<0.05, ** p<0.01, ***p<0.001*

Focusing events, however, seem to contribute to politicisation. Evidence from the news articles collected can shed some further light on the impact of focusing events on the scope of conflict within

ICANN, IETF, IEEE and W3C. Security and privacy increasingly appeared as "major issues" in the aftermath of the September 11th terrorist attacks (Tedeschi, 2002) and Edward Snowden revelations (Cookson, 2013; Tummarello, 2013). Specifically, the debates were structured around the question of the level of privacy required in the face of security issues, with state actors primarily arguing that internet privacy can and should be limited for security reasons. In this context and to prevent state interferences the development of internet privacy standards was particularly welcome by civil society and companies operating in various sectors (Musthaler, 2001). But the revelations in 2013 that intelligence agencies (particularly the US National Security Agency and the UK Government Communications Headquarters) had compromised protocol security to access personal information added new lines of conflict. Technology and communication companies strongly increased their support to privacy standards that limit government interferences (Cookson, 2013). Civil society organisations increasingly engaged in debates over internet privacy regulation and appeared to stand with technology and communication companies against governments "snooping programmes" (Cookson, 2013, para. 1). Claiming that "the hacking programs being undertaken by GCHQ are the modern equivalent of the government entering your house" (Claburn, 2014, para. 3), they promoted the development of internet standards that make communications more secure (Appelbaum et al., 2014). But the role of technology and communication companies in enabling state surveillance through their data collection practices was also largely denunciated by the public (Lee, 2013; Schwartz, 2013). This critical stance can also be observed after 2018 and the revelations that personal information was illegally used for political purposes. This focusing event primarily increased consumers' concerns over the "convenience" (Joseph, 2019, para. 17) of the services offered by communication platforms like Facebook, which "comes at a cost" (Joseph, 2019, para. 18). This led privacy advocates, state actors and companies operating in various sectors to promote a more robust regulatory approach over data protection and internet privacy.

I now turn to the analysis of each event's impact on politicisation. Because the nature of the events varies (in particular the September 11th terrorist attacks compared to the Edward Snowden and

Facebook Cambridge Analytica scandals) and because the events can entail variation in the substance of debates over privacy regulation, testing the impact of each event may reveal interesting findings. Again, I perform an additional multilevel regression analysis with the *Politicisation index* as the dependent variable. Different from the previous model, each focusing event is included as an independent variable. Similar to the previous model, each event is operationalised as a dichotomous variable that equals 0 in the years preceding a focusing event and 1 in the following years. The same control variables are also included in the analysis. The regression results presented in Table 4.5 provide support regarding the impact of the September 11th terrorist attack and the Edward Snowden revelations specifically. They suggest that each of these events has a significant effect on the *Politicisation index,* with a p-value of <0.05 for the former and <0.01 for the latter. The significance of the Edward Snowden revelations for the politicisation of internet privacy regulation within technical settings is consistent with existing research that highlights the event's political implications (Kalyanpur and Newman, 2019; Culpepper and Thelen, 2019; Christou et al., 2020). The Facebook-Cambridge Analytica scandal, however, does not reach statistical significance. One potential explanation for this result might be that fewer data is available to assess the effect of this recent event on the politicisation of data protection and internet privacy rules at the global level.

Table 4.4. Impact of each focusing event on politicisation

	Politicisation index
September 11th terrorist attacks	1.588*
	(2.37)
Edward Snowden revelations	1.580**
	(3.19)
Facebook-Cambridge Analytica scandal	0.376
	(0.53)
After the event	-0.253
	(-1.90)
Time	-0.370*
	(-2.50)
Internet users	0.128
	(1.94)
Privacy laws adoption	-0.0121
	(-0.46)
Policy complexity	0.148
	(0.67)
Agency year	0.0503
	(1.15)
AIC	864.1333
BIC	903.653
N	199

*Note: t statistic in parentheses; * p<0.05, ** p<0.0, ***p<0.001*

Taken together, the descriptive and regression results suggest that, although the privacy policies established by seemingly technical bodies, remain, on average, an area of "quiet politics" (Culpepper, 2010), focusing events contribute to expanding the scope of conflict, including actors beyond the internet expert community.

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Conclusion

This chapter has examined the effect of focusing events on the politicisation of internet privacy regulation. It has used a systematic analysis of news media coverage worldwide over a 20-year period, resulting in an ordinal dataset of 2,100 news articles. Before discussing the implications of the findings, I first underline two limitations. First, and perhaps most important, the present chapter examines the media coverage of an issue on a global scale, but the degree of salience and actor participation might then vary within national contexts due to structural factors or national political actors. Second, politicisation is examined using media coverage analysis, but political conflict can also occur under the radar of media coverage (Zürn, 2016: 168).

This chapter has, nevertheless, important implications for research on politicisation. It extends the predominantly European governance-centred literature on politicisation and provides empirical evidence supporting the impact of focusing events on politicisation in technical arenas of global rule-making. A central finding presented in this analysis is that focusing events extend the range of actors engaged in debates over seemingly technical policies. Building on this finding, future empirical research could examine how the process of politicisation affects the policies produced as well as the agencies that produce them. As EU studies have shown, politicisation is the necessary but not sufficient condition for political structuring, understood as the establishment of a permanent structure of political opposition between different actors (Hutter et al., 2016: 43). A complete picture of politicisation in technical arenas would also consider the role of government representatives and their positions in public debates. Building on my data set, this could be assessed using a systematic analysis of the news articles' content.

Finally, the chapter has important implications for research on global internet privacy regulation. Specifically, it points out the degree of attention accorded to global internet privacy rules determined by internet regulatory agencies as well as the configuration of actors engaged in such an issue, allowing to get a sense of the policy environment in which internet actors operate and interact, as

well the constraints shaping global internet privacy regulation. To an important extent, ICANN, IETF, IEEE and W3C work beyond the purview of democratic accountability, delegating decision-making powers to unelected regulators. They develop internet privacy rules which are not self-evident, despite their so-called a-political nature. Internet privacy regulation may reflect battles for the preeminence of one solution over another rather than consensus over the best solution to a problem understood in a technical sense. It serves multiple functions -from the protection of human rights and national security to the development of markets - and focusing events such as the global surveillances revelations made by Edward Snowden in 2013 expose political and economic tensions, leading to intense discussions and controversies.

The act of voicing a policy position in public debates is more than just a component of politicisation. It can also be one strategy of organised interests seeking to influence policy processes and outcomes (Kollman, 1998; Beyers, 2004; Thrall, 2006; Dür and Mateo, 2013, 2016; De Ville and Gheyle, 2019). Little is known, however, on how interest groups lobby on the data protection and internet privacy rules determined by the leading internet regulatory agencies. Are the actors mobilising in the public arena and voicing an opinion also participating in inside channels of policy-making? Is this strategy only used a substitute to influence global internet privacy regulation? To what extent is the use of complementary lobbying strategies restricted to groups with superior economic resources? These questions are systematically examined in the following chapter.

CHAPTER 5. Lobbying on global internet privacy regulation: sitting in or speaking out?

Understanding advocacy behaviour on global internet privacy policies is important not least because of an increasing shift in policy-making powers to global institutions. It is also critical for assessing the quality of democratic representation. This chapter examines global advocacy efforts regarding internet privacy regulation and proposes a novel argument linking the degree of policy complexity and the amount of groups' resources to lobbying strategies. Specifically, it argues that interest groups invest in both inside ('sitting in') and outside ('speaking up') lobbying strategies when the policy at stake is complex and they have more resources. The empirical results demonstrate that the degree of policy complexity significantly moderates the linkage between inside and outside lobbying strategies, particularly for well-resourced interest groups.

5.1 Introduction

Interest groups rely on a variety of strategies to express their views and influence policy outcomes. 'Inside' lobbying typically includes direct participation in decision-making processes, whereas 'outside' lobbying refers to strategies of influence via a larger audience or the public. There is no paucity of research on the issue of lobbying strategies (e.g., Broscheid and Coen, 2003; Beyers, 2004, 2008; Binderkrantz, 2005, 2008; Kriesi et al. 2007; Marshall, 2010; Chalmers, 2013; Junk, 2015; Weiler and Brändli, 2015; Dellmuth and Tallberg, 2017; Trapp and Laursen, 2017; De Bruycker and Beyers, 2019).

Scholars have variously assessed the extent to which interest groups use inside and outside strategies (e.g., Kollman, 1998; Binderkrantz, 2005; Dür and Mateo, 2013, 2016; Hanegraaff et al., 2016), when and why they do so (e.g., Gais and Walker, 1991; Kollman, 1998), as well as the effectiveness of each strategy (e.g., Chalmers, 2013; Baumgartner et al., 2009; Rasmussen et al., 2018; De Bruycker and Beyers, 2019).

At the same time, global advocacy efforts have received limited attention and scrutiny. The few studies that analyse global advocacy behaviour tend to focus on 'diffuse' interests like non-governmental organisations (NGOs), and they mostly explain the use of outside lobbying as a way to purse organisational maintenance goals (Hanegraaff et al., 2015, 2016; Dellmuth and Talberg, 2017; Tallberg et al., 2018). While groups are certainly interested in reaching out to their members and/or donors, the use of outside strategies for global influence should not be overlooked, especially for more 'concentrated' interests like business. Yet we still know little about how different strategies interact in this setting. Are inside and outside lobbying strategies complementing or substituting each other? When and why do groups combine different strategies? To what extent is the combination of different lobbying strategies restricted to groups with superior economic resources? These are important questions not least because lobbying strategies speak to the broader issues of the policy-making processes' bias towards powerful interests. If different lobbying strategies provide groups with different opportunities to be heard, then increased use and combination of various strategies by concentrated interests may distort the system of representation significantly (Lowery and Gray, 2004; Dür and Mateo, 2013; Binderkrantz et al., 2015; Hanegraaff and Berkhout, 2019). This issue is even more important as policy-making powers are increasingly shifting to global institutions (Mattli and Woods, 2009; Tallberg et al., 2018).

This chapter empirically examines the linkage between inside and outside lobbying strategies at the global level. My starting point is the idea that interest groups prioritise one type of lobbying strategy, resulting in a substitution effect between the use of inside and outside lobbying. This substitution effect, I argue, is moderated by the degree of policy complexity. Put simply, interest groups engage in both

inside and outside lobbying strategies when the policy at stake is complex. While decision-makers are generalists, interest groups are relative experts on the policy issues that are most important to them. Engaging in different strategies, albeit to varying degrees, can help them appear as such. I add that the effect of policy complexity on lobbying strategies is mediated by the amount of groups' resources. Policy complexity is generally associated with the use of inside lobbying as it makes expert knowledge more easily transmissible (Mahoney, 2008; Klüver et al., 2015; Junk, 2016). In contrast, the novel theoretical framework laid out in this chapter links both inside and outside lobbying to the logic of expertise.

The rapid and widespread proliferation of information and communications technologies has placed the protection of personal data and online privacy at the top of global political agendas (Bennett and Raab, 2020). As pointed out in Chapter 2, the myriad of internet privacy rules that exist at the global level have mostly been issued by leading internet regulatory agencies, namely: ICANN, W3C, IETF, and IEEE. The rules set by these agencies operating are indispensable for the internet to perform. They allow multiple systems and electronic devices to operate together, preventing an individual or an organisation from being locked into a single dominant (especially commercial) entity. In addition, they allow or restrict the design of systems and computer programs required for protecting personal data and internet privacy. Despite their seemingly technical nature, these rules are far from being apolitical. They can be subject to intense political conflict, as shown in Chapter 4, as well as intense lobbying given their distributional consequences. Corporate interests, for instance, have much to lose if compliance with the new internet policies requires making considerable changes to existing business practices.

Using web-scraping tools and novel natural language processing (NLP) techniques, I collect unique data on global data protection and internet privacy regulation, I measure inside lobbying using data retrieved from 26 working groups belonging to ICANN, IETF, IEEE and W3C, and outside lobbying using data retrieved from 800 news articles published worldwide. This results in a unique dataset spanning the lobbying efforts of interest groups lobbying on data protection and internet privacy regulations at the global level.

The empirical results show a substitution effect between inside and outside lobbying that is significantly weakened by the degree of policy complexity, lending support to my argument. The results also indicate that the effect of policy complexity is more pronounced for groups that possess more material resources and can thereby afford to engage in different strategies. Interest groups' lobbying efforts, resources and constraints are thus specified in this chapter. Importantly, the present analysis advances existing work on interest group behaviour by proposing a novel argument in which lobbying strategies and policy complexity work hand-in-hand. Moreover, it contributes to the literature examining the factors influencing the quality of interest representation (Kang and Powell, 2019; Rasmussen et al., 2018; Rasmussen and Reher, 2019). The findings notably suggest that the system of interest representation is biased when the policy is complex, as the same well-resourced groups engage in policy-making through various channels. The remaining sections of the chapter proceed as follows. I begin with an introduction of previous research and present my theoretical framework (Section 5.2). I then describe the methodological approach I use (Section 5.3), before presenting the findings of the empirical analysis (Section 5.4). I conclude with remarks about the findings' implications and some avenues for future research.

5.2 Explaining lobbying strategies

5.2.1 Determinants of inside and outside lobbying strategies

The lobbying strategies used by interest groups have been a subject of continuous interest in American and European politics (e.g., Hansen, 1991; Kollman, 1998; Beyers, 2002, 2004; Eising, 2007; Dür and Mateo, 2013, 2016). Scholars typically conceptualise lobbying goals in terms of an organisation's maintenance or survival (e.g., Cooley and Ron, 2002; Lowery, 2007; Dellmuth and Tallberg, 2017) and in terms of influence (e.g., Bouwen, 2002; Beyers, 2002, 2004; Binderkrantz, 2008; Tresch and Fischer,

2015). Survival goals encompass aspects like obtaining fundings and increasing or maintaining membership, whereas influence refers to the ability to shape political decisions (e.g., McFarland, 1987; Michalowitz, 2007; Baumgartner et al., 2009). While the literature on lobbying strategies largely focuses on associations, many of the theories developed can be applied to the case of firms, given the shared objective of influence (Coen, 1998), which is the focus of the present study. In this study, I adopt a behavioural definition of an interest group (Baroni et al., 2014; Crepaz et al., 2022), defining it as *any* organisation that acts and tries to influence the formulation and implementation of public policy (Grant, 1989; Baumgartner et al., 2009; Wonka et al., 2010). It can thus be a firm or be composed of firms, has professionals as members, or works on behalf of a potentially large number of individuals who can only expect diffuse benefits from the group's actions.

To influence policy-making processes, interest groups can use inside strategies, which involve sending emails, setting up meetings, participating in expert committees, and/or outside strategies, which involves contacting journalists, issuing press releases, establishing public campaigns, and organising protest demonstrations. Inside strategies do not receive much public attention and are rarely visible to the public or a larger audience. In contrast, outside strategies aim at making policy positions publicly visible, potentially drawing a broader range of stakeholders into debates and generating pressure on policy-makers. Inside strategies are frequently assumed to be superior for generating policy influence, but the literature has not agreed on the inferiority of outside lobbying (Hanegraaff et al., 2016: 570). Recent empirical work has demonstrated that the effect of inside or outside lobbying is instead conditional on the extent to which additional lobbying strategies are adopted (De Bruycker and Beyers, 2019).

Although focused on national or European levels, the literature provides valuable insights on the determinants of lobbying strategies. Scholars frequently rely on the interest group's permanent characteristics to explain the use of different lobbying strategies (Gais and Walker, 1991; Binderkrantz, 2008; Dür and Mateo, 2013; Weiler and Brändli, 2015). It is suggested that groups representing the

'public' or diffuse interests (e.g., NGOs, citizens groups) predominantly use outside strategies to signal their advocacy efforts to their members (McFarland, 1984; Binderkrantz, 2008; Dellmuth and Tallberg, 2017). Furthermore, diffuse interests are presumed to possess political information, which refers to knowledge about their members 'encompassing interests' (Bouwen, 2002) and, thereby, the degree of support of the policy positions defended. Such information can be easily conveyed via outside channels. In contrast, concentrated interests like business associations are said to possess expert and technical information that may be easily transmitted to policy-makers via inside channels (Dür and Mateo, 2013). There is, however, little evidence to support that concentrated and diffuse groups possess different types of information. In fact, empirical work finds that different interest groups supply relatively similar forms of information to policy-makers (Yackee and Yackee, 2006; Chalmers, 2013; De Bruycker, 2016).

Institutional demands may explain why different groups tend to supply the same type of information (Beyers, 2004; Eising, 2007; Chalmers, 2013; De Bruycker, 2016), thereby affecting the use of different lobbying strategies. According to Beyers (2004), interest groups use inside strategies when lobbying institutions that seek to gain expert and technical information, and outside strategies when lobbying institutions that are sensitive to political information. In the case of the EU for instance, inside strategies are thus used to lobby the European Commission, whereas outside strategies are used to lobby the European Parliament. In the same vein, Eising (2007) suggests that inside lobbying matches the need of the EU institutions, particularly the EU Commission, for timely and policy relevant information. Institutional factors can also refer to electoral settings and system types, i.e., pluralist or corporatist. Scholars notably suggest that institutional opportunity structures like open consultation processes foster inside lobbying efforts (Mahoney, 2008; Woll, 2012; Weiler and Brändli, 2015). Empirical evidence, however, does not support the argument that such institutional settings determine the use of different lobbying strategies, at least at the EU level (Dür and Mateo, 2016).

Other contextual factors that may explain lobbying strategies relate to the policy issues characteristics (Beyers, 2008; Mahoney, 2008; Klüver, 2013; Klüver et al., 2015; Dür and Mateo, 2016;

Junk, 2016; Wonka et al., 2018). In particular, the attention accorded to a given policy issue (i.e., its salience), as well as the degree and type of conflict are seen as important factors that strongly affect lobbying behaviour (Mahoney, 2008; Klüver, 2013; Junk, 2016). For instance, Junk (2016) suggests that, when policy issues are highly contentious, NGOs engage more in outside lobbying and less in inside lobbying because they expect lower policy success. Therefore, they prefer not to waste their economic resources. When policy issues are complex, on the other hand, inside lobbying is prioritised. While providing rich insights on when and why groups use different strategies, existing theories do not systematically examine how the intensity of inside lobbying relates to outside lobbying efforts, as well as the conditions under which this can vary. The next section builds on previous research on how issue-context factors determine lobbying behaviour and proposes a new argument combining policy complexity and group resources to explain the relationship different lobbying strategies at the global level.

5.2.2 Policy complexity, groups resources and the linkage between lobbying strategies

A central aim of this analysis is to advance a theoretical framework that sheds light on the linkage between inside and outside strategies by interest groups lobbying on global policy issues. I start from the idea that interest groups allocate their lobbying efforts strategically (Coen, 1997; Coen and Richardson, 2009; Kriesi et al., 2007; Nicoll Victor, 2007; Hanegraaff et al., 2016; Dellmuth and Tallberg, 2017). As both inside and outside lobbying are relatively costly (in terms of time, staff or budget required) and groups have scarce resources, they cannot systematically engage in multiple strategies, especially at the global level (Tallberg et al., 2018: 218). Therefore, increased efforts in one strategy are likely to result in decreased efforts in the other. In other words, the relationship between inside and outside lobbying is negative and there is a *substitution effect*. This does not mean that the two strategies are mutually exclusive. It rather implies that groups tend to concentrate their efforts on a given strategy (e.g., Mahoney, 2008; Chalmers, 2013; Dür and Mateo, 2013, 2016).

However, the relationship between inside and outside lobbying is not that straightforward. My central argument is that it can be mediated by the degree of complexity of the policy at stake. As discussed in Chapter 1, policy complexity is widely acknowledged to be an important factor in policy-making, shaping lobbying success, interest group activities and mobilisation biases (Rasmussen and Carroll, 2014; Klüver, 2013; Klüver et al., 2015; Pagliari and Young, 2016; Røed and Wøien Hansen, 2018). Broadly speaking, complexity refers to the degree to which an issue is relatively difficult to understand (Klüver, 2011). A policy issue or area can notably be characterised as complex by virtue of its degree of *technicality*. Technical policy usually involves specialised practices that require expert knowledge and skills (Littoz-Monnet, 2017: 2).

Many interest groups scholars suggest that, when the policies discussed are relatively complex, lobbyists choose to use inside strategies as they are seen as more efficient for communicating expert and technical information (Bouwen, 2002; Eising, 2007; Dür and Mateo, 2013, 2016; De Bruycker, 2015). It is often in closed settings like expert committees that the technical details of a policy proposal can be scrutinised and discussed in detail (Beyers, 2004). Furthermore, outside lobbying strategies increase public awareness, potentially widening the scope of political conflict (Beyer, 2004; Dür and Mateo, 2016). One would thus expect interest groups to rely on inside strategies only when lobbying on complex policies at the global level.

However, outside lobbying strategies are far from being irrelevant when the policies at stake are complex. A recent body of research suggests that, rather than exerting pressure on decision-makers, outside strategies can serve 'inside goals' (Hall and Reynold, 2012: 889) or help to manage inside lobbying efforts (Traupp and Laursen, 2017). Specifically, interest groups may use outside strategies, in particular media-related activities, to signal their interest and, importantly, expertise on a given policy issue (Aizenberg and Müller, 2021). This argument builds on Beyers' concept of *information politics* (2004: 214). In contrast to *protest politics,* which draws public attention and expands the scope of conflict, information politics is the public presentation of information to a particular elite, e.g., key

decision-makers. The implication is that, by being present in the news covering a complex policy issue, interest groups establish themselves as experts and trustworthy interlocutors of insider channels of participation. This is not to say that inside lobbying is not as important as the existing literature suggests. Rather, I propose that, while groups continue to use inside strategies to transmit valuable information, they might also engage in (expertise-based) outside lobbying strategies when lobbying on complex policy issues at the global level. This means that policy complexity acts as a moderating factor. More specifically, it means that the *substitution effect* (or negative relationship) between inside and outside lobbying *diminishes* when policies are more complex, since interest groups seek media visibility while simultaneously maintaining their inside lobbying efforts. This theory is thus consistent with the existing literature and the widely held idea that inside lobbying is associated with the provision of expertise. Indeed, the importance of inside lobbying still holds. This explains why outside lobbying is not employed to the same extent as inside lobbying. However, I introduce the idea that outside lobbying can also play a role in providing policy-relevant information. Admittedly, this perspective does not consider *protest politics*. Nevertheless, while protest politics does occur, it remains relatively limited (Beyers, 2004). Furthermore, it can be argued that expertise can be used for pressure politics as well. Taken together, these points lead to my first and central hypothesis:

> *Hypothesis 1: The substitution effect between inside and outside lobbying is moderated by the degree of policy complexity.*

At the same time, how policy complexity affects the linkage between inside and outside lobbying may be moderated by groups' material resources as well. Specifically, the substitution effect between inside and outside lobbying might be reduced when the policy is complex, and groups have superior resources. Indeed, the greater the group's resources, the more the group is capable of diversifying its lobbying strategies (Thrall, 2006; Mahoney, 2007; McKay, 2012; Dür and Mateo, 2016; van der Graaf

et al., 2016). Policy complexity is known to generate substantial information asymmetries between different interest groups, increasing the mobilisation costs for those groups lacking time and technical expertise (Broscheid and Coen, 2007; Rasmussen and Carroll, 2014; Pagliari and Young, 2016). The implication is that when the policies discussed are relatively complex, groups with inferior resources cannot afford to engage in both strategies. The costs associated with inside lobbying, in particular, might outweigh the potential policy benefits. Direct participation notably requires articulating detailed position papers, preparing and traveling to meetings, and staying up to date on policy developments. This explains why outside lobbying is sometimes considered as a 'weapon of the weak' (van der Graaf et al., 2016), i.e., groups that lack the expertise and material resources that allow them to engage directly in policy-making processes (Gais and Walker, 1991; Kollman, 1998). Some outside strategies also require substantial amounts of material resources (e.g., organising public events), but others (e.g., issuing press releases) are relatively inexpensive when compared to inside strategies (Dür and Mateo, 2013). These points lead to the second hypothesis:

> *Hypothesis 2: The substitution effect between inside and outside lobbying is moderated by the degree of policy complexity and the amount of groups' resources.*

5.3 Research design

This analysis examines how the linkage between inside and outside lobbying is mediated by policy complexity and interest groups resources. In this section, I provide details concerning data collection and operationalisation.

5.3.1 Data selection and collection

Policy context significantly affects interest groups' alignment patterns, lobbying success, as well as lobbying strategies (Klüver et al., 2015; Aktican and Chalmers, 2018). In this chapter, I hold the policy context constant by focusing the analysis on global internet privacy regulation.

Specifically, I focus on 29 policies addressing data protection and internet privacy issues, which have been issued by ICANN, IETF, W3C, and IEEE. A list of the policies selected is found in Chapter Appendix D (Table A1). Although these policies are produced in non-legislative venues and do not generally attract much public attention, they still involve concerns touching on issues of human rights and business practices. They might thus spark the interest of various interest groups.

Most existing studies measuring the use of inside and outside lobbying strategies by interest groups rely on survey data (e.g., Caldeira et al., 2000; Nicoll Victor, 2007; Chalmers, 2013; Dür and Mateo, 2013; Weiler and Brändli, 2015; Hanegraaff et al., 2016; Dellmuth and Tallberg, 2017). Instead, I rely on quantitative data retrieved from news media coverage, as well as from participation in the internet regulatory agencies' working groups. By doing so, I seek to identify the intensity of lobbying efforts, without underestimating or overestimating the different strategies employed, i.e., a problem that can arise with self-reported data (Beyers et al., 2014a). Groups might indeed have an incentive to minimise their lobbying activities in order to deter counter-lobbying (Binderkrantz and Pedersen, 2019). They might also have an incentive to exaggerate their efforts in order to demonstrate their active participation. Furthermore, surveys often fail to capture the policy context in which interest groups operate (Beyers et al., 2014b; Marchetti, 2015).

However, using data from news media coverage and working groups' membership is not without limitations. It notably implies that some interest groups may be excluded from the analysis if they use alternative channels to lobby on the policies selected for this study. Furthermore, interest groups might join working groups to provide expert advice, scientific assessments and technical information, without the objective of influencing policymaking. However, the provision of expertise is not apolitical, and

concentrated interests may serve 'pre-cooked' proposals, as suggested in Chapter 3. News media coverage might also be tied to other dynamics than outside lobbying, but relying on this proxy allows us to capture groups' actions to voice positions, as discussed in the next section.

5.3.2 Data operationalisation

Inside lobbying

Each privacy policy selected for this study was developed by an internet agency's working group. The internet agencies' working groups are generally formed to develop rules and guidelines aimed at ensuring the openness, interconnectivity, and security of the internet. As inside lobbying is commonly conceptualised as a form of direct engagement in policy-making processes (e.g., Dür and Mateo, 2013; Weiler and Brändli, 2015; De Bruycker and Beyers, 2019), looking at interest participation in the working groups can help to capture inside lobbying efforts. By holding a working group's seat, an interest group can try to shape the content of the rules. No invitation or approval is needed to participate in the working groups, leaving the decision of whether to contribute or not in the hands of each interest group. Membership fees can be required to participate in working groups, but the costs vary depending on the type and size of the interest group, and there is no fee for non-profit public-interest groups. As with any lobbying strategy, participation in the working group requires the allocation of resources like time. Therefore, holding one or more seats in the working group indicates lobbying efforts.

For each privacy policy, I measure *Inside lobbying* using the number of seats that individual interest groups have in the corresponding working group. As 3 of the 29 policies selected were issued by the same working group, I use data comprised of 26 working groups. Data for this measure of *Inside lobbying* is retrieved from each internet agency's website (details can be found in Table A2 of the Appendix). Extracting information from the agencies' working groups is far from an easy task. Whereas such information is publicly available for W3C, ICANN, and IEEE, IETF does not have a formal membership, making it difficult to examine who participates in its working groups. IETF working

groups' mailing archives are, however, available. As most of the IETF work takes place on mailing lists, assessing participation through mailing archives is particularly relevant and makes it comparable to other agencies[29]. Extracting IET's participants requires retrieving the content of more than 121,000 email messages to obtain the participants' email addresses and, thereby, their professional affiliations. To do so, I use state-of-the art web scraping techniques (Munzert, 2015). As individuals and groups can join and leave the working group anytime, I decided to keep only interest groups that have sent more than 10 emails. It should also be noted that when private email addresses like Gmail are used, participants are considered as individuals and not representatives of the group for which they work, and therefore, they are excluded from the analysis (i.e., 447 seats are excluded from the analysis). Seats held by representatives of regulatory agencies (e.g., public officials from ICANN) and governmental organisations are also excluded from the analysis (i.e., 50 seats excluded). As a result, 922 working group seats are examined in this study. Table 1 provides a breakdown of the sample by internet regulatory agencies.

Table 5.1. Distribution of working groups seats

Internet regulatory agency	Number of working groups	Number of seats
ICANN	4	111
IEEE	2	44
IETF	12	524
W3C	8	243

[29] https://www.ietf.org/how/lists/

Outside lobbying

Outside lobbying involves communicating political messages and positions through the public media to engage a broader audience.

To measure *Outside lobbying*, I use the number of times an interest group appears in the news articles covering each of the internet privacy policies selected for this study. Such a measure of *Outside lobbying* involves matching interest groups participating in the agencies' working groups and mentioned in news articles by name, as well as carefully searching for different versions of the name as well as organisational abbreviations. Interest groups that were not represented in the working groups but were mentioned in the news articles are also included in the analysis, thus avoiding a focus on the outside strategies of the groups already involved. Relying on the reported actions and opinions in the news certainly simplifies a set of diverse outside strategies and can be biased towards well-resourced groups. Indeed, scholars studying the public visibility of organised interest have found that media coverage tends to be biased toward groups possessing greater resources (Thrall, 2006; Andrews and Caren, 2010; Binderkrantz et al., 2017, 2020). Nevertheless, this measure allows us to quantify the group's attempts to voice policy positions on policy issues (Junk, 2016). By distributing press releases, holding press conferences, or contacting journalists, interest groups seek media attention and corresponding attention from a particular audience. Moreover, while the presence of interest groups in the news may suggest that they managed to draw attention of those who control the media agenda, this visibility alone does not guarantee interest groups' success in establishing and maintaining contacts with key decision-makers. It thus distinct from political access (e.g., Beyers, 2002; Bouwen, 2004; Eising, 2007). And although certain groups may receive media coverage without actively engaging in any substantial actions, it can be argued that they would not engage with journalists if they had no intention of engaging in outside lobbying.

I collected news articles from Factiva, an international database that collects contents from various sources of information, including major national newspapers like The Wall Street Journal

(United States), The Financial Times (United Kingdom), Chosun Ilbo (South Korea), as well as more technical and specialised newspapers, such as Journal of Engineering. Details on the use of Factiva are provided in the Appendix D (Table A3). As data is skewed, *Outside lobbying* is log-transformed to normalise distribution.

Interest group material resources

Material resources are critical for engaging in policy-making processes, whether it is for preparing and actively engaging in working group meetings or voicing positions through press releases and interviews. I take the staff size of the interest organisation to express *Resources*. The number of employees is indeed a commonly used indicator of the financial resources of an interest group (Mahoney, 2007; Klüver, 2012; Chalmers, 2014; De Bruycker and Beyers, 2019). Rather than relying on groups' self-perceptions of their resources, which is typical of survey data, I retrieve this information from each interest group's website. As data is skewed, it is log-transformed to normalise distribution.

Policy complexity

To measure the complexity of a document, scholars often rely on the number of words used (Junk, 2016), the Flesch reading ease (FRE) level (Røed and Wøien Hansen, 2018) or Type Token Ratios (TTR) (Aizenberg and Müller, 2021). While the FRE measures how difficult it is to read a given document based on average sentence length and average word length, the TTR measures the complexity of a text by assessing how rich a text is in terms of words used. These measures thus seem to capture 'lexical' complexity in terms of 'read-ability' and 'language diversity'[30]. Instead, I measure the 'technical' complexity of the policy documents by dividing the total number of words by the number of words

[30] In Chapters 3–4, the use of the TTR was justified by the objective of capturing the complexity of the language used.

having fewer than two synonyms. This approach has been developed by Osnabrügge and Vannoni (2022). The reasoning behind this measure is that the more words with few synonyms there are in the policy document, the more technical the language is (given technical terms generally have very few synonyms). Before measuring technical complexity, I manually removed contact details, dates, references, and appendices from each policy document. Using Python's Natural Language Toolkit (NLTK), I also removed numbers, symbols and stop words (i.e., commonly used words such as 'the', 'and'). I then use the function Synset (From WordNet)[31] to obtain, for each policy document, the list of words with less than two synonyms (i.e., a few synsets). Examples of technical words include 'encryption', 'authenticated', 'hostname', 'concatenate'. A Pearson's product-moment correlation was run to assess the relationship between the measure of complexity based on the TTR and the measure of complexity based on the share of words with few synonyms. The result indicates that there is a moderate negative correlation between the two measures (see Figure A1 in the Appendix D). This suggests that more technically complex policies are less 'lexically' complex, albeit the relationship between the two measures remains modest. *Policy complexity* ranges from 0 to 1, with higher values indicating higher degrees of policy (technical) complexity. Examples of highly complex policies and lowly complex policies are provided in the Appendix D (Table A4).

Concerns about reverse causation are warranted. It could be argued that the degree of policy complexity is driven by the type and range of interest groups participating in the policy-making process. To prevent this, I collect the first draft published, and not the final (and approved) policy.

Control variables

I include interest group type as a control variable in the analysis.

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[31] WordNet is an English lexical database that is part of the NLTK corpus. WordNet categorises words into synonyms (referred to as 'synsets').

Consistent with existing studies (Hanegraaff et al., 2016; van der Graaf et al., 2016; Chalmers et al., 2020), I classify interest groups into the following categories: companies, business associations, non-governmental organisations, and research organisations (including think tanks, research institutes and universities). I manually coded the groups using information from their websites. Although research organisations do not claim to have particular political affiliations, many of them serve as government or corporate sponsored think tanks, which means that they are keen to provide information in support of their sponsors (Hanegraaff et al., 2016).

I also controlled for the salience of the internet privacy policies. To control for salience, I used the number of news articles published (Pagliari, 2013; Kastner, 2017). Interest groups often use outside strategies when lobbying on policies which are prominent in public debates (Dür and Matteo, 2014; Junk, 2016; Hanegraaff et al., 2016; Dellmuth and Tallberg, 2017), potentially driving the linkage between inside and outside lobbying. Table 5.2 and Table 5.3 provide an overview of the variables included in the analysis and some summary statistics.

Table 5.2. Summary statistics

Variables	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Inside lobbying	1,103	1.698096	2.544427	0	32
Outside lobbying	1,103	.4067029	1.564182	0	30
Policy complexity	1,103	.4299738	.0678328	.29275	.603568
Group resources	1,103	45070.6	205400.5	1	5900000
Policy salience	1,103	52.35289	84.74223	1	316

Table 5.3. Interest group types

	Unique Groups		Total Groups	
Type	Freq	%	Freq	%
Business associations	34	5.69	41	3.72
Compagnies	451	75.42	862	78.15
NGOs	33	5.52	59	5.35
Research organisations	80	13.38	141	12.78
Total	598	100.00	1,103	100.00

Notes: Table 3 displays the distribution of interest group types. The first column shows the distribution of unique interest groups, whereas the second column reports the distribution of all groups lobbying on the policies selected for this analysis.

5.4 Empirical analysis

The aim of the empirical analysis is to investigate the association between inside and outside lobbying. I thus examine how, for each internet privacy policy, the number of seats that individual interest groups hold in the working group, i.e., *Inside lobbying*, is related to the use of media-related activities, i.e., *Outside lobbying*. It is thus important to note that the focus of this analysis is not primarily centred on examining how given independent variables affect a given dependent variable. Rather, the emphasis is on exploring the overall relationship between these variables. Because of its common association with policy complexity, I choose to use *Inside lobbying* as my main outcome variable. Nonetheless, the outcome variable could alternatively be *Outside lobbying*. Results of robustness tests, including the analysis with *Outside lobbying* as the outcome variable, are presented in the Appendix D and are consistent with the main findings (Tables A5-A9). The logistic regression anlyses (see Tables A10 and A11) provide additional evidence that policy complexity contributes to the use of different lobbying strategies by interest groups. Descriptive statistics on the strategies used by different groups when

lobbying on global data protection and internet privacy rules are also found in the Appendix D (Figure A2). Interest groups with superior resources notably include large technology firms like Microsoft, Google and Ericsson, while groups with inferior resources include NGOs like Electronic Frontier Foundation as well as small technology firms.

Table 5.4 presents the results of regression analyses. As the dependent variable, *Inside lobbying*, is a count variable which is over-dispersed (the variance of the dependent variable is about six times greater than the mean), I have opted for negative binomial negative regression analysis (Hilbe, 2011). The analyses include fixed effects to control for variations among the four internet regulatory agencies. In model 1, I examine the effects of *Outside lobbying*, *Policy Complexity* and *Resources*, without any interaction terms. In model 2, I introduce the interaction term *Outside lobbying x Policy complexity* in the regression analysis.

Table 5.4. Lobbying Strategies and Policy Complexity

Variables	(1)	(2)
	Dependent variable: *Inside lobbying*	
Outside lobbying (logged)	-2.709***	-3.653***
	(0.247)	(0.438)
Policy complexity	-0.0579	0.0228
	(0.269)	(0.0614)
Resources (logged)	0.0370***	0.0362***
	(0.00847)	(0.00847)
Interaction		
Outside lobbying x Policy complexity		1.802**
		(0.518)
Control	0.0385**	0.0409**
Salience (logged)	(0.0189)	(0.0191)
Group type (ref: business association)		
NGOs	-0.311	-0.327
	(0.217)	(0.217)
Companies	-0.128	-0.148
	(0.172)	(0.172)
Research	0.625***	0.614***
	(0.181)	(0.181)
Constant	0.869***	0.859***
	(0.269)	(0.200)
AIC	3405.212	3393.005
BIC	3445.259	3438.057
Observations	1,103	1,103
Number of agencies	4	4

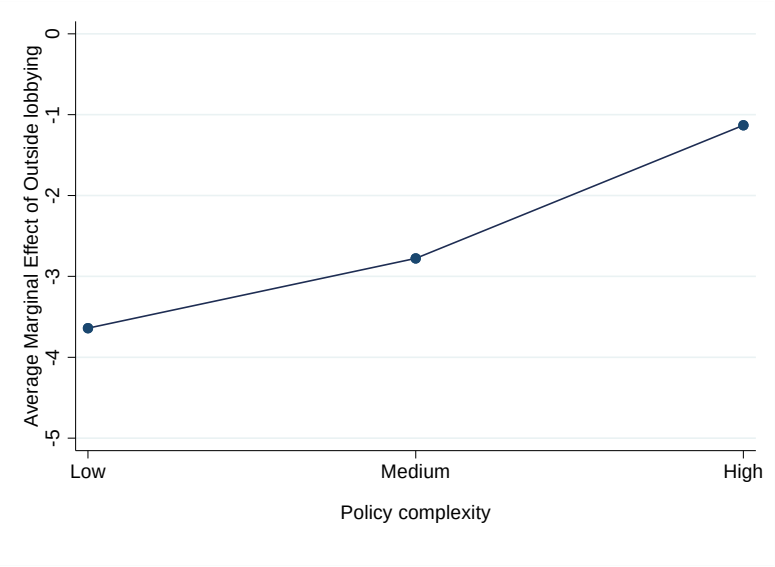
*Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.*

Before looking at my two hypotheses more closely, a few observations can be made. First, the regression analysis suggests that *Inside lobbying* is negatively related to *Outside lobbying* in both model, showing a substitution effect (i.e., with a p value of <0.01). Clearly, the more an interest group speaks

up and voices a position on a given policy, the fewer seats it has on the working group dealing with that policy. This does not contradict previous findings on the mix of inside and outside lobbying strategies by interest groups (Binderkrantz, 2005, 2008; Chalmers, 2013; Dür and Mateo, 2016). Rather, it adds that when both strategies are used, more efforts are still allocated to one specific strategy. The fact that different strategies are part of an interest group's toolkit does not preclude the group from devoting greater efforts to one strategy over the other when lobbying when lobbying at the global level. Second, the variable *Resources* is also statistically significant and positive. This suggests that groups with more staff invest more in *Inside lobbying* than groups with fewer resources, a finding which is consistent with existing literature on lobbying (e.g., Dür and Mateo, 2013; Dellmuth and Tallberg, 2017). Regarding *Organisation type*, the results indicate that research organisations significantly engage in more *Inside lobbying* than the reference category (i.e., business association). However, the results show no other significant variations across different types of interest groups.

Turning now to the analysis of hypothesis 1 in model 2, the results provide evidence for my argument. The regression analysis indicates that the interaction between *Policy complexity* and *Outside lobbying* is statistically significant, with a p-value of <0.05. The interaction is also positive, but regression results alone are not sufficient for interpreting an interaction effect. Figure 1 helps us interpret these results by plotting the marginal effects of *Outside lobbying* at three different levels of *Policy complexity*, namely: low, medium and high (technical) complexity. The average marginal effect captures how much a one-unit change in the intensity of *Outside lobbying* influences, on average, the predicted intensity of *Inside lobbying.*

Figure 5.1. Policy Complexity and Lobbying Strategies



Note: Average Marginal Effects of Outside lobbying on Inside lobbying with 95% confidence intervals based on Model 2

Figure 5.1 shows that *Policy complexity* moderates the relationship between *Inside* and *Outside lobbying*. Indeed, *Outside lobbying* remains negatively associated with *Inside lobbying*, but as *Policy complexity* moves from low to high, the negative effect of *Outside lobbying* on *Inside lobbying* decreases. Specifically, the average marginal effect of *Outside lobbying* is -3.5 when *Policy complexity* is low, and -1 when *Policy complexity* is high. The findings thus suggest that greater policy complexity weakens the substitution effect between lobbying strategies at the global level.

Next, I test the conditional effect of group resources on the link between lobbying strategies (i.e., hypothesis 2). To do so, I perform binomial regression analysis while sampling the dataset. Alternatively, I could include three interaction terms in the regression analysis, but the results would be more difficult to interpret (Jaccard et al., 2003). The regression analysis including the three interaction terms is provided in the Appendix D (Table A9). Table 5.5 present results of two models. Again, I use

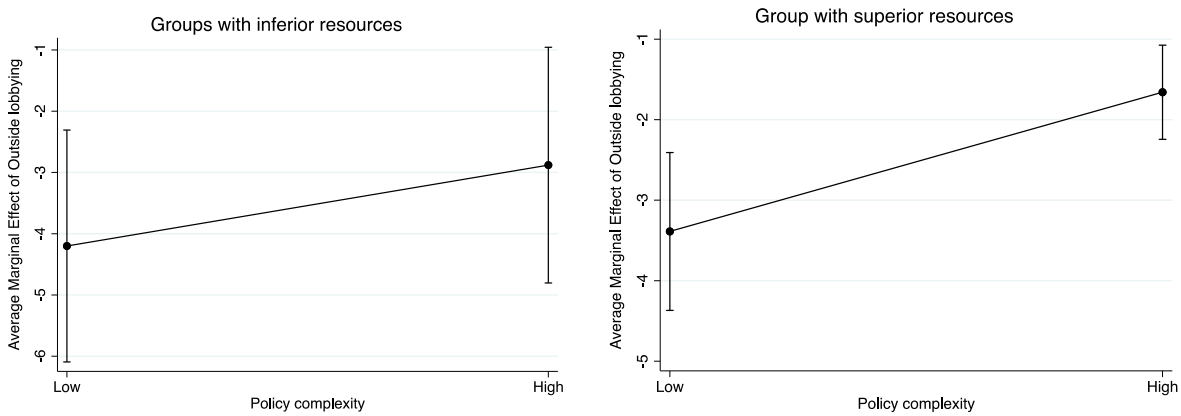
Inside lobbying as my dependent variable and include fixed effects at the level of the agency. In model 3, the effect of *Outside lobbying* and *Policy complexity* is tested for interest groups with fewer resources only (i.e., groups whose resources are inferior to the mean). In model 4, the effect of *Outside lobbying* and *Policy complexity* is tested on *Inside lobbying* for interest groups with greater resources only (i.e., groups those resources are superior to the mean). The results indicate that, for groups with more resources, a combination of *Policy complexity* and *Outside lobbying* has a significant effect on *Inside lobbying* with a p-value of <0.01, whereas it fails to reach statistical significance for those with fewer resources. Figure 5.2 illustrates this by plotting the marginal effects of *Outside lobbying* at two different levels of *Policy complexity* (i.e., low technical complexity and high technical complexity). It shows that *Policy complexity* has a stronger impact on the reduction of substitution effect between lobbying strategies when interest groups have superior resources.

Table 5.5. Lobbying Strategies, Policy Complexity and the Conditional Effect of Resources

Variables	(3) Groups with inferior resources	(4) Groups with superior resources
	Dependent variable: *Inside lobbying*	
Outside lobbying (logged)	-4.264***	-3.388***
	(0.968)	(0.500)
Policy complexity	0.117	-0.0288
	(0.0866)	(0.0894)
Interaction		
Outside lobbying x Policy complexity	1.370	1.729***
	(1.377)	(0.577)
Control		
Salience (logged)	0.0182	0.0460*
	(0.0279)	(0.0272)
Group type (ref: business association)		
NGOs	-0.220	-1.707***
	(0.210)	(0.625)
Companies	-0.0606	-1.457***
	(0.164)	(0.489)
Research	0.664***	-0.827*
	(0.186)	(0.494)
Constant	3.702***	1.814***
	(0.693)	(0.496)
Observations	542	561
Number of agencies	4	4

*Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

Figure 5.2. Policy Complexity, Group Resources, and Lobbying Strategies



Note: Average Marginal Effects of Outside lobbying on Inside lobbying with 95% confidence intervals based on Model 3 and Model 4.

In sum, the regression results suggest that the linkage between different lobbying strategies is significantly affected by the degree of *Policy complexity* at the global level. The analysis also shows that the effect of *Policy complexity* on lobbying strategies is mediated by the amount of an interest organisation's resources. Interest groups with greater staff can afford to 'speak out' and 'sit in' when policies are (technically) complex, and they appear to do so with the goal of establishing themselves as experts and credible interlocutors in global policy-making processes. Although the interest groups engaged in internet privacy regulation are predominantly corporate interests, the analysis suggests that the use of different lobbying strategies is more closely tied to the complexity of the policies at stake and the resources of the group, rather than their group type. This contributes to the generalizability of the findings beyond corporate interest groups.

Engaging in complementary strategies is certainly costly, but interest groups may benefit from it by increasing their chances of having their preferences reflected in the policies adopted (Baumgartner and Leech, 1998; Beyers, 2004; Kriesi et al., 2007). Interest groups with fewer economic resources, on

the other hand, are more constrained and cannot draw on a large of different strategies to convey their policy preferences and/or the required information.

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Conclusion

This chapter has examined global advocacy efforts and proposed a novel argument in which the degree of policy complexity and the amount of group resources moderate the linkage between inside and outside lobbying. The findings provide some evidence that the relationship between inside and outside strategies is a rather sophisticated one. While there is a substitution effect between inside and outside lobbying strategies, policy complexity greatly contributes to decreasing this effect. Higher levels of policy complexity thus help to balance inside and outside lobbying strategies. As such, outside lobbying entails more than pressuring policy-makers. It may be used in combination to inside strategies to signal specialised knowledge and interest, making it a relevant lobbying strategy at the national, supranational and global levels. The impact of policy complexity on the relationship between inside and outside lobbying is particularly strong for interest groups possessing superior economic resources. In contrast, groups with inferior resources cannot afford to engage in various strategies when lobbying on (technically) complex policies. Importantly, this chapter sheds light on how interest groups, their lobbying strategies, and the level of policy complexity can be linked together to explain global internet privacy regulation.

The analysis is based on internet privacy regulation, which constitutes a least-likely case. Here outside lobbying might not as widespread as in legislative venues, like the EU (Chalmers, 2013; Dür and Mateo, 2016). Moreover, the policies examined display little variations in terms of technical complexity. Therefore, in a context where the use of outside lobbying is more prevalent, and significant

variations in policy complexity exist, we should expect to observe the mechanisms outlined in this chapter operating even more prominently.

One important limitation of this chapter is the measure of outside lobbying based on appearance in the news, which might be biased towards groups with greater resources and simplifies a great deal of outside strategies. A complete picture would need to include more comprehensive data on the outside strategies used by interest groups, such as the publication of social media posts (although the literature suggests that social media does not perfectly align with the concept of outside lobbying; see for instance Trapp and Laursen, 2017). It would also include examining the content of the articles published in order to shed light on how interest groups signal their expertise in the news. As research suggests, organised interests are able to use different narratives to define a given policy issue and provide relevant information (West and Loomis, 1998; Baumgartner at al., 2009). Furthermore, it needs to be acknowledged that the representativeness of the sample of interest groups used in this analysis is limited given the prominence of corporate interests. Future research should look into a broader interest population, although the current sample might reflect an indication of bias. Scholars indeed suggest that supranational levels of governance exhibit a stronger mobilisation bias towads corporate interests as compared to national levels (Baumgartner et al. , 2009; Hanegraaff, 2015). Despite these limitations, the findings presented here, drawing on vast and novel data, provide valuable insight into the inside and outside efforts of interest groups lobbying global regulatory venues.

Of course, the issue of lobbying strategies is underpinned by broader questions of interest group influence. These, however, are not explored in the present analysis. Ultimately, empirical research could examine how the use of inside or outside strategies affects interest groups' influence over global data protection and internet privacy rules. Answering this critical question could build on the data set constructed for the present chapter. Internet privacy and data protection are big business, but they also have important implications for societal trust in using online platforms and for digital rights more broadly.

CHAPTER 6. Discussion and concluding remarks

This thesis started with the objective to address a gap in the literature on global internet privacy regulation. It has attempted to do so by investigated three distinct but interconnected questions, each of which using separate theoretical frameworks, methods and analyses. This concluding chapter is structured as followed. I start by summarising the findings of the three substantive chapters, i.e., Chapters 3-5. I then outline the theoretical and empirical contributions. I bring the thesis to a close by discussing the limitations of my analyses and suggesting avenues for future research.

6.1. Summary of the key findings

The thesis seeks account for the politics of internet privacy regulation at the global level by examining internet regulatory agencies' autonomy, politicisation, and lobbying behaviour.

Using a mixed-methods research design, Chapter 3 sheds some light on the determinants of agencies' informal autonomy from corporate interests. The analysis reveals that formal arrangements of autonomy only play a minor role in determining informal autonomy. This is not to say that that formal arrangements are not relevant, but that they only tell us part of the story. Instead, informal autonomy is largely determined by the level of media attention accorded to the agency (which increases informal autonomy), the agency's age (which weakens informal autonomy), and the degree of policy complexity (where more complex policies weaken informal autonomy). As the decisions made by the internet regulatory agencies are not merely technical, different interest might mobilise in public debates, expanding the scope of political conflict.

Chapter 4 examines the impact of focusing events on the politicisation of internet privacy regulation. Using a systematic media coverage analysis, it provides empirical evidence that focusing

events like the Edward Snowden revelations in 2013 significantly contribute to the politicisation of data protection and internet privacy rules determined by ICANN, IETF, IEEE and W3C. The effect is particularly strong on the diversity and number of actors involved in public debates. The participation of a wide range of interests in the media and corresponding public debates is an important component of any politicisation process. It can also reflect organised interests' use of outside lobbying strategies to affect policy-making outcomes.

Using an extensive and novel dataset spanning the lobbying efforts of interest groups lobbying on global internet privacy rules, Chapter 5 suggests that the relationship between inside and outside lobbying strategies is significantly moderated by the degree of policy complexity. While the link between inside and outside lobbying is defined by a substitution effect, policy complexity significantly weakens this effect. Put simply, interest groups engage in both inside and outside lobbying strategies when the policy at stake is complex. The analysis also suggests that the impact of policy complexity is particularly pronounced for interest groups possessing superior economic resources. In contrast, groups with inferior resources cannot afford to engage in various strategies when lobbying on (technically) complex policies.

6.2 Theoretical and empirical contributions

The thesis investigates the politics of global internet privacy regulation using an innovative theoretical framework bringing together insights from an emerging literature on global regulatory politics with insights from the literature on the politics of interest representation. While focused on internet privacy, this dissertation speaks to broader concerns of public policy and regulation. In what follows, I first outline these broader contributions before delving into the thesis' specific contributions to the literature on internet privacy.

Examining regulatory agencies' autonomy, Chapter 3 contributes to literature on regulation and the insultation of policy-making from politics and the electoral process (e.g., Abbott and Snidal, 2001; Djelic and Den Hond, 2014; Koop and Hanretty, 2018; González and Verhoest, 2020; Christou et al., 2020). As the analysis suggests, the insulation from politics does not simply result in 'footloose' agencies (Maggetti, 2007). Instead, various mechanisms relating to policy complexity, media attention, and path-dependencies need to be accounted for. The tension between policy effectiveness and democratic legitimacy is a key feature of non-legislative and technical modes of decision-making that are gaining prominence at the global level (Cashore et al., 2021). In order to confer legitimacy to the rules they produced, global governance institutions often rely on the participation of various actors and organised interests in decision-making processes, as it is the case with internet regulatory agencies. Transparency and public participation indeed confer democratic legitimacy in ways that experts cannot systematically do (Sylvain, 2010: 263).

Chapter 4 contributes to the EU-centered literature on politicisation (e.g., De Wilde and Zürn, 2012; Statham and Trenz, 2013, 2015; Leupold, 2015; Hutter et al., 2016; De Wilde et al., 2016) by deepening our understanding of the extent to which focusing events such as political scandals determine politicisation. Importantly, it does so by focusing on policies and seemingly technical venues less covered by existing research, and where politicisation is least likely to occur due to the absence of voters. Focusing events, according to the theory presented, broaden the range of private and public actors in debates by raising public attention and revealing (potential) policy failures. This does not necessarily lead to policy change, but it allows various interests to express different positions and challenge the existing status quo. Politicisation and its driving forces are an important object of research as the concept of politicisation suggests that debates involving a growing range of actors take place, which is a key ingredient of democratic politics. As for Chapter 3, Chapter 4 addresses the wider question of the legitimacy of global policy-making processes and the regulatory agencies.

Chapter 5 advances existing work on interest group behaviour by proposing a novel argument in which advocacy strategies, policy complexity and interest groups' resources work hand-in-hand. The framework laid out suggests that groups with superior resources invest in both inside and outside strategies when the policy at stake is complex in order to appear as credible experts. While policy complexity is generally associated with the use of inside lobbying as it makes expert knowledge more easily transmissible, this novel argument links inside *and* outside lobbying to the logic of expertise.

In addition to these broader contributions, the present thesis makes important contributions to the literature on internet privacy regulation at the global level. Chapter 3 notably uncovers variations in internet regulatory agencies' autonomy, while showing the limited effect of the multistakeholder structure on the agencies' informal autonomy from corporate interests. Chapter 4 finds that privacy-related events positively affect the politicisation of global data protection and internet privacy rules. Despite the high profile of the Edward Snowden's surveillance revelations in 2013 or the Facebook-Cambridge Analytica scandal in 2018, little attention has been paid to this issue. Research convincingly demonstrated how the Snowden revelations affected the European privacy framework (Rossi, 2016), raising the salience of privacy issues and thereby "creating the space for civil society groups to exert new political influence and favour consumer protection" (Kalyanpur and Newman, 2019: 463). However, the effect of such focusing events on the politicisation of internet privacy rules determined by seemingly technical agencies has remained unexplored so far. Chapter 4 engages in such empirical work, capturing the salience of internet privacy rules determined by ICANN, IETF, IEEE and W3C, as well as the range of actors involved in public debates. Finally, Chapter 5 reveals which interest groups are trying to influence global internet privacy regulation, and how they are doing so. Corporate interests with significant material resources appear to combine participation in working groups and media-related activities to shape global internet privacy rules. In contrast, interest groups with fewer resources are faced with greater trade-offs and are constrained to focus their resources on one lobbying strategy.

Together, the findings indicate that global internet privacy regulation is largely determined by the interactions between actors like interest groups trying to exert influence and internet regulators embedded in particular institutional arrangements, as well as constraints such as the degree of policy complexity or politicisation.

Internet privacy is primarily regulated by non-legislative bodies, which implies that it often lacks the direct oversight of democratic processes. Moreover, relatively complex issues effectively insulate regulation from public scrutiny, reducing democratic accountability as well. This can benefit corporate interests, allowing them to wield power over the internet privacy regulatory landscape. The thesis' findings suggest that corporate interests benefit from specific conditions allowing them to exert a form of power over internet privacy regulation. However, this does not mean corporate interests systematically determine global data protection and internet privacy rules. One of the thesis' contributions is to paint a more nuanced picture of corporate power (Vogel, 1987; Davis, 2015; Woll, 2019). This is further discussed in the next section. Although the present research does not tackle the concept of corporate power directly, the topics addressed as well as the findings revealed are inextricably linked to it.

6.3 A story of corporate power?

Power is both one of the most critical and one of the most contested concepts in the field of political science (Dür, 2008a). Many political scientists define it as the capacity to determine policy processes and outcomes (e.g., Barnett and Duvall, 2004; Bernhagen and Bräuninger, 2005; Pagliari and Young, 2016; Woll, 2016, 2019), but there is no consensus on how power can be observed or measured. Some scholars suggest that power is a causal and intentional process (e.g., Dahl, 1957), while other argue that power is a property that systematically translates into specific policy outcomes (e.g., Singer and Small, 1966). Furthermore, various dimensions of corporate power have been identified by scholars,

specifically: structural, ideational, instrumental, infrastructural and platform (Bachrach and Baratz, 1962; Lukes, 1974; Bernhagen and Bräuninger, 2005; Fuchs, 2005, 2007, 2013; Bell, 2012; Bell and Hindmoor, 2017; Culpepper and Reinke, 2014; Emmenegger, 2015; Woll, 2016, 2019; Rahman, 2018; Culpepper and Thelen, 2019; Rahman and Thelen, 2019). The conceptualisation of power through various dimensions is particularly valuable as it allows us to capture different aspects of power at work. In what follows, I point out how the three separate analyses of this thesis have implications for these important dimensions of corporate power. While I acknowledge the importance of the ideadional approach[32], the thesis' implications are more pertinent for the other dimensions, namely structural, instrumental and infrastructural.

Broadly considered, the structural dimension of power refers to the privileged and central position of business groups in the society and market economy (Lindblom, 1977; Dahl and Lindblom, 1992). Scholars suggest that states are predisposed to adopt policies that favour firms' investment, without the need for the firms to be politically active and advocate for it, as they strongly rely on firms' investment for their economies. In other words, the structural dependence of the state on capital leads to the development of policy outcomes that are systematically biased in favour of business interests. As such, the structural environment make alternatives more or less acceptable before the bargaining process starts (Fuchs, 2005: 776). The structural dimension of power is heavily linked to the institutional environment in which it is deployed (Hacker and Pierson, 2002). In other words, it operates through existing institutional arrangements. While the present research does not examine the market power of large companies like Google or Microsoft (e.g., in terms of firm size or market share), Chapter 3

[32] The ideational dimension of power (also referred to as discursive) is also a well-established concept in the literature. This approach recognises "that ideas, language and discourse provide crucial building blocks for establishing meaning and understanding and thus for purposeful action in politics and institutional life" (bell and Hindmoor, 2017: 105).

highlights the importance of the institutional settings, i.e., the 'rules of the game' at play, regarding global internet privacy regulation.

Probably more relevant here is the notion of infrastructural power, which can be defined as the control over goods and services that "comprise a backbone for much of modern social and economic activity" (Rahman, 2018: 1658). Lile for structural power, the concept of infrastructural power suggests that corporate interests benefit from a privileged position. However, this privileged position is not due to states' dependence on investment. Instead, corporate interests benefit from a privileged position because they own the infrastructure that is required for economies to function (Rahman, 2018; Braun, 2020; Valdez, 2023). Scholars developed the notion of infrastructural power to address the gaps identified with the notion of structural power. The structural power approach was indeed criticised for not capturing accurately the reality of today's economy and the key position occupied by corporate interests (Rahman, 2018; Braun, 2020). In the same vein, Culpepper and Thelen (2019) have developed the notion of "platform power" to capture what they describe as a new form of concentrated private power. Their central argument is that firms with platform power benefit from a deference from policy-makers, but this deference does not come from the threat of disinvestment. Instead, companies with platform power benefit from the tacit allegiance of consumers which depend on these compagnies for particular goods and services. In other words, large technology companies' power is mediated by consumers' dependence on the convenience of the services provided by these companies.

Much more could be said about the different dimensions of corporate power, but there is one point that deserves special consideration. What the different notions of platform power, infrastructural power, and structural power highlight is the central position occupied by corporate interests in the economic system of 21st century capitalism. As a result of this position, corporate interests are able to play a crucial role in policy-making processes. This is particularly evident in the settings of the internet regulatory agencies. Large firms like Google, Facebook or Amazon own and control the internet architecture, and thereby the terms of access to the internet upon which many actors depend. This

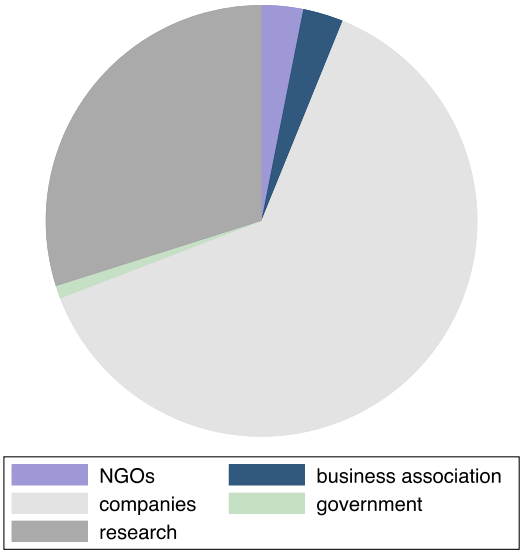
primarily explains why internet regulatory agencies' formal autonomy does not directly translate into informal autonomy. It also explains why self-reinforcing mechanisms and routinised procedures are important for agencies' practices. What is more, corporate interests possess the necessary expertise to operate the internet, making policy complexity a crucial determinant of internet regulatory agency's autonomy from corporate interests.

At the same time, the provision of expertise is part of corporate interests' strategy to influence policy outcomes, i.e., to lobby. The issue of lobbying strategies directly address the instrumental dimension of corporate power. The instrumental dimension of corporate power refers to the strategies used to determine policy processes and outcomes directly, like lobbying activities or political campaigns donation (Fuchs, 2005, 2007; Culpepper and Reinke, 2014; Woll, 2019). Examining lobbying strategies, Chapter 5 sheds light on this dimension of corporate power. Indeed, the analysis suggests that interest groups with greater staff and budget can afford to use different lobbying strategies when policies are technically complex. Corporate interests often have greater resources in terms of staff and budget than, for instance, civil society organisations. Groups appear to engage in inside and outside lobbying in order to establish themselves as experts and credible interlocutors in policy-making processes. This is one of the thesis' strongest findings. As the existing literature points out, the political success of private interests is widely considered to depend on their capacity to provide timely and policy relevant information (Austen-Smith, 1993; Hall and Deardorff, 2006; Coen, 2009; Chalmers, 2013; Bernhagen et al., 2015; Coen et al., 2021). Furthermore, the advantage of using expertise is reinforced in the context of "quiet politics" (Culpepper, 2010), in which voters and the general public do not care about the policy issues at stake, resulting in little reward for politicians to act. According to Culpepper (2010), when policy issues do not attract attention and are not publicly salient, corporate interests are able shape policy outcomes because of their possession of expertise and privileged access to key decision-makers.

Importantly, the lack of public attention may limit the plurality of interest groups mobilised, and, in particular, the number of competing interests mobilised (Chalmers, 2015; Pagliari and Young,

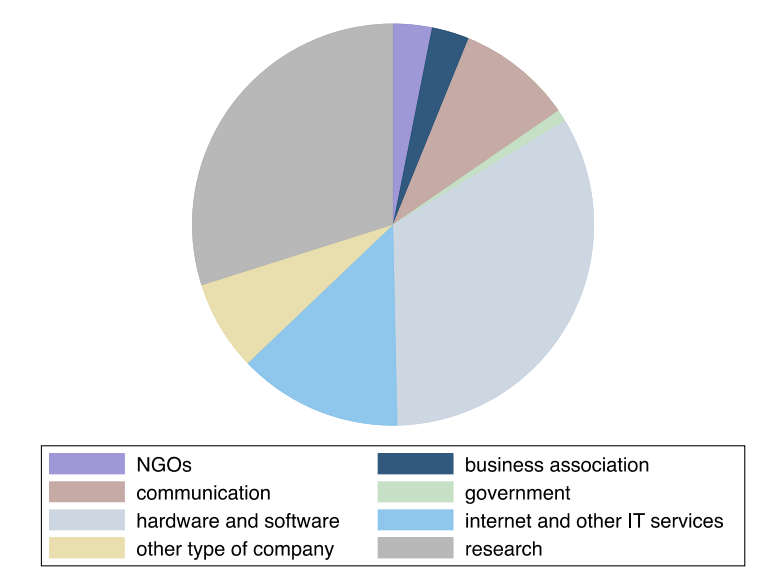
2016). This means that corporate interests might find themselves largely uncontested. Complementary to the instrumental dimensions of power, the diversity of voices in policy-making processes is suggested to matter in shaping policy outcomes (Halpin and Grant, 2012; Pagliari and Young, 2014, 2016). According to the political economy literature, the absence of interest group plurality is indeed conducive to the development of regulatory policy outcomes that benefit 'the narrow few' (Mattli and Woods, 2009; Pagliari and Young, 2016). As Chapters 3 and 4 indicate, the plurality of interests engaged in global internet privacy regulation remains limited. This can also be illustrated using the quantitative data collected for Chapter 5. In this chapter, I indeed measured inside lobbying based on the number of seats that interest groups hold in the internet agencies' working groups. This measure of inside lobbying thus allows us to explore the population of interests involved in the working groups responsible for determining global data protection and internet privacy rules. The distribution of working groups' seats by group's types and by group's sector of activity are respectively displayed in Figure 6.1 and Figure 6.2 below. Seats held by government and international organisation representatives are also included.

Figure 6.1. Distribution of working group seats by interest group type



Notes: Distribution of seats (i.e., 955 in total) in the working groups examined in Chapter 5.

Figure 6.2. Distribution of working group seats by interest group sector of economic activity



Notes: Distribution of seats (i.e., 955 in total) in the working groups examined in Chapter 5. The category 'communication' refers to companies operating in communication and telecommunications (e.g., Ericsson); 'hardware and software' refers to companies producing computer, electronic and optical products (e.g., Cisco); 'internet and others IT services' refers to companies that use the internet for their services but do not directly provide internet-related good or services (e.g., Amazon).

Clearly, corporate interests are overrepresented in the working groups determining data protection and internet privacy rules at the global level. Specifically, companies operating in the design and installation of computer hardware components (i.e., equipment and peripherals) as well as software applications (i.e., programs used on a computer) tend to dominate across the internet agencies' working groups at the expense of broader, citizen interests. Admittedly, this can be explained by the fact that

these compagnies are responsible for the technical operation of the internet (i.e., their infrastructural position). Nevertheless, the regulation of the internet, especially regarding internet privacy, has an intrinsic public policy dimension. Internet regulation has a potentially large impact on key issues like human rights and business practices and is likely to garner considerable interest group attention. It is important to emphasise that overrepresentation does not necessarily mean influence over policy outcomes (Baumgartner et al., 2009; Chalmers, 2015). Some voices might, in fact, weight more in the policy process because of the lobbying strategies employed and despite having fewer seats.

This leads to my final remark. Corporate power, according to several scholars, is not systematic (Trumbull, 2012; Young, 2012; Dür et al., 2015; Eliasson and Garcia-Duran Huet, 2018). The present thesis aligns with this strand of research by suggesting that there are some limits to it. As indicated in Chapter 4 in particular, focusing events such as the Edward Snowden revelations in 2013 can increase the range and plurality of actors involved in (at least) public debates. Such focusing events can thereby widen the scope of intra-business conflict. This has the potential to undermine corporate power (Falkner, 2007; Carpenter and Moss, 2013). Indeed, power can be limited by the inclusion of new players, which is likely to affect the existing power balance (Schattschneider, 1960; Michalowitz, 2007; Hanegraaff and Berkhout, 2019). If a broad range of actors is engaged in debates over a given issue and express diverging opinions, regulators are confronted with "countervailing forces that seek to push the policy output in opposing directions" (Klüver, 2011: 489). It can be noted that an increase in the scope of political conflict does not affect all types of interest groups in the same way. Dür et al., (2015) provide empirical evidence that, compared to corporate interests, NGOs are more likely to be successful in achieving their preferences when there is a relatively high level of conflict. Another limitation suggested by the thesis relates to the characteristics of the regulatory outputs produced by the internet regulatory agencies. Corporate interests (and their relevant expertise) are particularly needed in processes over complex policies. But interest groups with inferior resources can get involved in processes over more general and less complex policies. As a result, lower policy complexity keeps corporate interests from

systematically dominating rule-setting processes. Importantly, participation in decision-making appears to be driven by interest group resources rather than type. As such, business interests with limited resources can be excluded from processes, whereas civil society organisations with superior staff and budget may be able to participate, limiting the risk of corporate interests' undue influence.

In sum, the dissertation suggests a story of (limited) corporate power, but this question would need to be tackled more directly to provide a comprehensive picture. What the present research empirically reveals, however, are important aspects of the making of global internet privacy regulation, in terms of internet regulatory agencies' (informal) practices and interaction with corporate interests, scope of debates and conflict over global internet privacy rules, as well as interest groups' strategies to influence those rules.

6.4 Limitations and avenues for future research

Before discussing avenues for future research, I first underline two important limitations. These limitations should be regarded as the main limitations of this thesis as a whole. Additional limitations that are unique to the three analyses of Chapters 3-5 are addressed in the corresponding chapters.

First, the present thesis examines the politics of internet privacy regulation at the global level, and as a result, puts the role of national politics to the side. For instance, national economic systems and political characteristics might result in varying levels degrees of politicisation. Scholars have shown how national institutions, defined as the rules and incentives under which actors can express their policy preferences (like consultation procedures), may broaden or narrow the scope of political conflict (De Wilde and Zürn, 2012; Rauh, 2019). Leupold (2016) also found that the divergences in EU politicisation among countries relate to the divergences in economic structures (e.g., coordinated market economies vs state-influenced). The importance of countries' national characteristics notably explains why most of the EU literature has observed cross-national differences in politicisation (e.g., De Wilde et al., 2016).

Similarly, there might be differences in terms of lobbying behaviour. The internet regulatory agencies examined in this thesis are global venues, which means that they involve organised interests from all over the globe. Yet scholars of interest representation tend to agree that lobbying styles in the United States and Europe differ largely (Mahoney and Baumgartner, 2008; Woll, 2012; Hanegraaff et al., 2016). As Hanegraaff et al. summarises, "US lobbyists are accustomed to a direct and confrontational style based on threats and pressure, often coupled with legal strategies, whereas European lobbyists usually pursue subtle, and more consensus-oriented tactics based on constructive and informed participation" (2016: 462). The fact that lobbying behaviour differs across countries or continents does not mean that policy complexity becomes irrelevant for inside and outside lobbying, as theorised in Chapter 5. It does, however, imply that the extent to which various strategies are combined by interest groups may vary depending on their country of origin. More generally, the internet regulatory agencies examined in the thesis are still dominated by American and European actors, despite their global nature and the increased participation of actors from elsewhere. The global aspect of the thesis should, therefore, be approached with caution.

Second, the thesis does not address the issue of corporate influence, understood in terms of preference attainment (Dür, 2008b; Vannoni, 2017). In other words, it does not examine whether corporate interests' preferences regarding internet privacy systematically get translated into actual policy outcomes. The chapters' findings, however, offer a hint about this question. In particular, the findings seem to indicate that superior resources of corporate interests, like greater finance or staff and policy-relevant information, are sufficient but not necessary conditions for influencing global data protection and internet privacy rules. Instead, how resources get translated into policy outcomes might depend largely on other factors like politicisation (i.e., the scope of conflict over data protection and privacy rules) and institutional opportunity (i.e., the amount of access to decision-making processes). Further analysis would be needed to put this argument to the test. Such an analysis of corporate influence could be done building on the present dissertation. In particular, the dataset constructed for Chapter 5 and the

analysis of lobbying strategies could be used to determine the population of organised interests involved in global internet privacy regulation. The dataset indeed spans the lobbying efforts of all groups mobilised at the global level, not just corporate interests. It furthermore includes information of the intensity of inside and outside lobbying efforts, allowing for a systematic examination of each strategy's effect on policy influence. Additionally, the dataset created for Chapter 3 would allow future researchers to measure institutional opportunities and the extent to which interests can access decision-making processes, using, for instance, the internet agencies' formal autonomy index.

Another avenue for research would be to examine interest alignment within the internet regulatory agencies. The question of how interest groups align on different sides of a lobbying battle is an important focus of interest groups research, and knowledge on corporate interests' positions on internet privacy remains rather limited. While, for instance, some firms might be in favour of voluntary agreements, others might prefer legal rights to data sharing. Newman (2010) suggests that firms with considerable information assets view data as a private good and thereby support policies that constrain information collection and access, while firms with few information assets call for policies promoting a liberal data environment. Illustrative of this argument is Apple's claim that the US government should follow the EU's lead in the regulation of data privacy and approve legislation similar to the GDPR (Stacey, 2019). The policy stances of corporate interests, however, might be explained by other variables, especially as companies like big tech benefit from a relationship with consumers that is based on trust and convenience (Culpepper and Thelen, 2019). Furthermore, debates within the internet regulatory agencies are about creating tools and rules that permit or limit data collection and data sharing in practice, which might lead to different alignments. The question of interest alignment is an important issue as corporate interests do not systematically have uniform policy positions, and divisions, as previously discussed, might reduce their preeminence in policy processes (Schattschneider, 1960; Michalowitz, 2007; Young, 2012; Pagliari and Young, 2016; Hanegraaff and Berkhout, 2019). Not only large technology companies lobby on internet privacy policies but also manufacturing and service

companies from a variety of economic sectors. The identification of factors that explain alignment patterns at the level of the individual interest group, as well as their examination in relation to specific internet privacy rules, might contribute to the existing literature on interest regulation significantly.

Finally, and closely related to the previous points future research could examine if corporate interests eventually benefit from lobbying on global data protection rules within the internet regulatory agencies. Corporate interests can lobby for limiting costly regulatory rules or to gain an advantage over competitors, and this can, in turn, boost their profit. Empirical evidence indeed finds a positive effect of a firm's lobbying on the firm's financial performance, especially in the US context (e.g., Stigler, 1971; Peltzman, 1976; Cao et al., 2018) as well as the EU (Chalmers and Macedo, 2021). But this issue has not been studied, to date, in the context of global and seemingly technical venues.

AI regulation in future research

Of course, the development of the internet not only presents challenges related to data protection and internet privacy. Important regulatory challenges are notably emerging due to the advancement of artificial intelligence (AI), which is an *internet technology*. This is not addressed in the present thesis, although it would certainly deserve further examination.

AI is an umbrella term for the science of making machines smart (Simon, 2019). It notably refers to multiple technologies including machine learning, deep learning, computer vision, natural language processing, and machine reasoning. Like the internet, AI is expected to change existing business models significantly, while also creating new ones. Large companies like Amazon, Facebook, Google, IBM, Microsoft, Alibaba, and Baidu are already intensively investing in it (Lauterbach and Bonim, 2016). However, it is not only large technologies companies that are expected to do so. The McKinsey Global Institute suggests that 70 per cent of companies might adopt at least one type of AI technology, like machine learning or computer vision, by 2030 (McKinsey Global Institute, 2018).

Moreover, AI has the potential to transform the public service and the way government interfaces with citizens (Margetts, 2022; Laux et al., 2023).

AI represents a new regulatory challenge due to its transnational character and the ethical issues it raises (for example regarding bias in algorithms). Moreover, AI is often described as a 'black box' which lacks 'explain-ability' (Cath, 2018: 4). In this regard, Vincent Cerf (founder of the Internet Society which serves as the IETF's institutional home) believes that the primary concern is with autonomous software rather than AI in general.[33]

However, AI not only represents new challenges; it also exacerbates existing ones, including data protection and internet privacy issues. This is largely due to the fact that machine learning algorithms, which AI relies on, "are predicated upon the possibility of extracting information from data" (Gellert, 2022: 157). AI technologies primarily seek to detect patterns in large sets of data and make predictions based on those patterns. For this reason, companies that already have a considerable amount of data assets, and have good date capability, generally have an edge in using and developing AI (Hall and Pesenti, 2017: 30). The development of AI is, therefore, intrinsically linked to internet privacy and data protection issues. The decision of the Italian government to suspend ChatGPT over privacy concerns is another good illustration of this (Goujard, 2023). To complicate matters, data protection regulations, as they are currently designed, are seen as inadequate when it comes to AI (Gürses & van Hoboken 2017; Gellert, 2022). As discussed in Chapter 2, data can be defined as the syntactic dimension of information, i.e., the sign that represent an objective reality. In other words, data communicates information. However, as Geller writes: "in the context of AI, data are abstractions of real-world entities not because they are signs that represent such entity, but because they are an ensemble of features or

[33] The Web Conference, *AI and the future of the Web and the Internet*, April 26th 2018

attributes, which, put together, will allow for a representation of such entity" (2022: 165-166). This means that, rather than *communicating* information, data is the information *created* through a number of features or attributes. Because current internet privacy frameworks rely heavily on principles like purpose limitation, storage limitation, consent (as discussed in Chapter 2), they might be ineffective when it comes to AI. Further research is therefore needed, with a particular emphasis on the conceptual changes at stake. More generally, understanding AI regulation will require examining who the regulators are, what is being regulated, and how regulation is carried out.

Closing remarks

The evolving nature of information and communication technology certainly offers a lot of interesting avenues for future research. As new legislations addressing privacy issues continue to be drafted and issued, this will undoubtedly pique the interest of numerous scholars. Last year Brussels introduced the Digital Services Act and Digital Markets Act, while the UK parliament is currently debating the online safety bill. But internet privacy is an issue of global concern. As the pace of globalisation is rapidly accelerating, it is critical to investigate the making of global policies. Several policy areas such as trade, finance, the environment, and human rights have seen elements of their regulatory processes shift to the global level (Mattli and Woods, 2009; Tallberg, Bäckstrand, and Scholte, 2018). Global regulation differs from national regulation in the type of rules produced. Global regulation is mostly about voluntary rules, whereas national regulation is mostly about enforceable rules. It also differs in terms of the actors or interests involved, and how they participate in the policy-making process. But, first and foremost, global regulation differs from national regulation in terms of venues in which policy is made. As such, understanding global regulatory politics requires moving beyond the realm of states and intergovernmental organisations (Rudder, 2008; Cerny, 2010; Ronit, 2019), and looking into non-legislative and seemingly technical venues.

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Appendix A

Table A1. Internet regulatory agencies' characteristics

Agency (acronym)	Year	Function	Agency type	Number of members	Headquarter	Formal government representation	Working practices	Documents publicly available
3rd Generation Partnership Project (3GPP)	1998	Development of specifications for mobile telecommunications	Partnership between formally recognised Standard Developing Organisations (membership-based)	700	France	No	Online and in-person meetings	Partially
Ecma International	1994	Development of specifications in particular regarding telecommunication systems and programming languages	Informal organisation (membership-based)	78	Switzerland	No	Online and in-person meetings	No
European Telecommunications Standards Institute (ETSI)	1998	Development of specifications in particular regarding telecommunication systems and programming languages (e.g., Ecmascript)	Formally recognised Standard Developing Organisation (membership-based)	870	France	No	In-person meetings	No
Institute for Electronics and Electrical Engineers (IEEE)	1963	Development of specifications for wired and wireless internet access (e.g., WiFi)	Informal organisation (membership-based)	7000	United States	No	Online and in-person meetings	No
Internet Corporation for Assigned Names and Numbers (ICANN)	1998	Coordination of the domain name system (i.e., the database in which internet domain names are translated into internet addresses)	Formally recognised organisation (open participation but professional requirements can be determined)	2284	United States	Yes	Online meetings	Yes

Internet Engineering Task Force (IETF)	1986	Development of the communications protocols and other software determining how the internet operates	Informal organisation (open participation)	1700	United States	No	Online and in-person meetings, mailing lists	Yes
Open Gride Forum (OGF)	2006	Development of specifications for distributed computing (grid computing and cloud computing)	Informal organisation (membership-based)	19	United States	No	In-person meetings	No
Open Mobile Alliance (OMA)	2002	Development of specifications for mobile telecommunications	Informal organisation (membership-based)	31	United States	No	In-person meetings	No
Organization for the Advancement of Structured Information Standards (OASIS)	1993	Development of specifications for the Web	Informal organisation (membership-based)	5000	United States	No	In-person meetings and mailing lists	Yes
Regional Internet Registry for the European region (RIPE)	1992	Management of the allocation and registration of internet number resources (e.g., Internet Protocol address)	Informal organisation (open participation)	1190	Netherlands	No	Online and in-person meetings and mailing lists	Yes
Telecommunication Standardisation Sector of the International Telecommunication Union (ITU)	1992	Development of specifications in particular regarding wireless networking	Formally recognised Standard Developing organisation (membership-based)	463	Switzerland	Yes	Online and in-person meetings, mailing lists	No
World Wide Web Consortium (W3C)	1994	Development of specifications for the Web	Informal organisation (membership-based)	437	United States, France, Japan, China	No	In-person meetings	Partially

Notes: There does not exist a 'one-size-fits-all' formula for the internet regulatory agencies which can be categorised according to very different criteria. Here I attempt to classify them according to two main criteria: (1) whether they are formally recognised by states, and (2) whether membership is required to participate in decision-making processes. It should also be noted that the 8th column gives information on working practices before the Covid-19 pandemic (which contributed to increasing the number of online meetings).

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QUIC: A UDP-Based Multiplexed and Secure Transport
draft-hamilton-quic-transport-protocol-01

Abstract

QUIC is a multiplexed and secure transport protocol that runs on top of UDP. QUIC builds on past transport experience, and implements mechanisms that make it useful as a modern general-purpose transport protocol. Using UDP as the basis of QUIC is intended to address compatibility issues with legacy clients and middleboxes. QUIC authenticates all of its headers, preventing third parties from from changing them. QUIC encrypts most of its headers, thereby limiting protocol evolution to QUIC endpoints only. Therefore, middleboxes, in large part, are not required to be updated as new protocol versions are deployed. This document describes the core QUIC protocol, including the conceptual design, wire format, and mechanisms of the QUIC protocol for connection establishment, stream multiplexing, stream and connection-level flow control, and data reliability. Accompanying documents describe QUIC's loss recovery and congestion control, and the use of TLS 1.3 for key negotiation.

Table of Contents

1. Introduction

QUIC is a multiplexed and secure transport protocol that runs on top of UDP. QUIC builds on past transport experience and implements mechanisms that make it useful as a modern general-purpose transport protocol. Using UDP as the substrate, QUIC seeks to be compatible with legacy clients and middleboxes. QUIC authenticates all of its headers, preventing middleboxes and other third parties from changing them, and encrypts most of its headers, limiting protocol evolution largely to QUIC endpoints only.

This document describes the core QUIC protocol, including the conceptual design, wire format, and mechanisms of the QUIC protocol for connection establishment, stream multiplexing, stream and connection-level flow control, and data reliability. Accompanying documents describe QUIC's loss detection and congestion control [draft-iyengar-quic-loss-detection], and the use of TLS 1.3 for key negotiation [draft-thomson-quic-tls].

2. Conventions and Definitions

Definitions of terms that are used in this document:

- Client: The endpoint initiating a QUIC connection.
- Server: The endpoint accepting incoming QUIC connections.
- Endpoint: The client or server end of a connection.
- Stream: A logical, bi-directional channel of ordered bytes within a QUIC connection.
- Connection: A conversation between two QUIC endpoints with a single encryption context that multiplexes streams within it.
- Connection ID: The identifier for a QUIC connection.
- QUIC packet: A well-formed UDP payload that can be parsed by a QUIC receiver. QUIC packet size in this document refers to the UDP payload size.

3. A QUIC Overview

This section briefly describes QUIC's key mechanisms and benefits.

Key strengths of QUIC include:

- Low-latency Version Negotiation
- Low-latency connection establishment
- Multiplexing without head-of-line blocking
- Authenticated and encrypted header and payload
- Rich signaling for congestion control and loss recovery
- Stream and connection flow control
- Connection Migration and Resilience to NAT rebinding

Notes: Only first introductory pages are included. Source: https://datatracker.ietf.org/doc/html/draft-hamilton-quic-transport-protocol

Appendix B

Table A1. Agencies' websites

Agency	**URL**	**Date last accessed**
3rd Generation Partnership Project (3GPP)	https://www.3gpp.org	2 September 2021
Ecma International	https://www.ecma-international.org	28 August 2021
European Telecommunications Standards Institute (ETSI)	https://www.etsi.org/standards/standards-making	31 August 2021
Institute for Electronics and Electrical Engineers (IEEE)	https://standards.ieee.org/develop/	25 August 2021
Internet Corporation for Assigned Names and Numbers (ICANN)	https://www.icann.org	25 August 2021
Internet Engineering Task Force (IETF)	https://www.ietf.org/standards/	25 August 2021
Open Gride Forum (OGF)	https://www.ogf.org/ogf/doku.php/about	2 September 2021
Open Mobile Alliance (OMA)	https://technical.openmobilealliance.org	28 August 2021
Organization for the Advancement of Structured Information Standards (OASIS)	https://www.oasis-open.org/org/	2 September 2021
Regional Internet Registry for the European region (RIPE)	https://www.ripe.net	10 September 2021
Telecommunication Standardisation Sector of the International Telecommunication Union (ITU)	https://www.itu.int/en/ITU-T/Pages/default.aspx	31 August 2021
World Wide Web Consortium (W3C)	https://www.w3.org/Consortium/	25 August 2021

Note: Table A1 lists the URL of each agency and the corresponding date of my last access.

Table A2. Examples of organisations included in the Searle Database

Acronym	Full name
3GPP	Third Generation Partnership Project
Accellera	Accellera Systems Initiative
CEN	European Committee for Standardization
FIPA	Foundation for Intelligent Physical Agents
IBTA	InifiniBand Trade Association
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
ISO	International Organisation for Standardisation
OASIS	Organization for the Advancement of Structured Information standards
OGC	Open Geospatial Consortium
Sata-IO	Serial ATA International Organisation
TEI C	Text Encoding Initiative Consortium
TIA	Telecommunications Industry Association
VESA	Video Electronics Standards Association
W3C	World Wide Web Consortium

Note: The Searle Center Database on Technology Standards and Standard Setting Organizations combines comprehensive information on technology standards, SSO membership, and SSO characteristics in a format designed for economic research.

Table A3. Interviews

No	Time and date
1	10 August 2021, 10 am
2	17 August 2021, 8 am
3	1 September 2021, 1:30 pm
4	2 September 2021, 2:30 pm
5	2 September 2021, 6 pm
6	3 September 2021, 9 am
7	8 September 2021, 1 pm
8	9 September 2021, 10 am
9	10 September 2021, 4 pm
10	10 September 2021, 7 pm
11	8 October 2021, 3:30 pm

The interviews lasted between 45 minutes and 80 minutes. The interview guide included the following questions:

- Can you tell me about your role in the organisation?
- Can you describe a typical working group meeting? What kinds of knowledge are required to participate?
- Which categories of stakeholders are (particularly) important for the organisation?
- Could you tell me about the role that corporate interests play in the organisation? To what extent are they considered as (particularly) important for the organisation? Has this changed over time?
- Overall, would you say that the organisation is more insulated from certain interests than others?
- Has anything changed in terms of how the organisation operates day-to-day?
- Overall, do you think the attention accorded by the media has an impact on the organisation - in terms of day-to-day decision-making processes? How?

Table A4. Formal-institutional autonomy index

Variable	Value
C1 – Agency Board	
V1 – Members of the board (formal) autonomy	1 = yes, formal requirement 0 = no formal requirement
V2– Members of the board formal requirement qualification	1 = yes, formal requirement 0 = no formal requirement
C2 –Relationship with stakeholders	
V3 – Membership	1 = no membership required 0.5 = membership but open meetings 0 = membership required
V4 – Membership fees	1 = no fee 0.5 = adjusted fees (to the type of interest) 0 = fees
V5 – Agency external consultation	1 = yes, before and after proposal drafted 0.5 = yes, but only before or after proposal drafted 0 = no
V6 – Balance of interests' formal requirement	1 = Yes, for Board and Working Groups 0.5 = Yes, but only for Board or Working Groups
C3 – Regulation on decision-making	
V7 – Number of Representatives	1 = only one member representative 0.5 = several member representatives allowed but only one is allowed to vote 1 = only one member representative 0 = no quorum
V8 – Quorum for meeting	1 = all participants 0.75 = more than 70% of the participants 0.5 = between 50% and 70% of the participants 0.25 = between 20% and 50% of the participants 0.15 = flexible (i.e., the chair decides if a quorum is needed) 0 = no quorum
V9– Quorum for approval	1 = all participants 0.75 = more than 70% of the participants 0.5 = between 50% and 70% of the participants 0.25 = between 20% and 50% of the participants 0.15 = flexible (the chair decides if a quorum is needed 0 = no quorum
V10 – Voting rule	1 = consensus 0.5 = vote 0 = weighted vote
V11 – Resource dependency	1 = Agency levies fees for its services and finances itself with these 0.5 = mixed resources 0 = membership fees only

Table A4 lists the variables comprised in the *Formal autonomy index*.

The first component (i.e., C1) indicates whether there are formal qualification and autonomy requirements.

The second component (i.e., C2) captures the relationship with the different stakeholders involved. It includes the following variables: membership requirement, membership fees, setting up of public consultations. Membership fees indicate whether actors with less financial resources can get involved in the decision-making process. The rationale regarding consultation procedures is that the more opportunities are set up to receive policy inputs from various stakeholders, the more autonomous from concentrated interests the regulatory agencies formally are. This component also comprises variables indicating whether a balance of interests is required for the board and/or working groups.

The third and final component (i.e., C3) captures the agency's internal organisation by focusing on the rules for debating and approving policies. This component comprises a variable indicating whether several member representatives are allowed to participate and vote. It also specifies the voting rules (e.g., consensus, weighted vote), quorum requirements for meeting and approving a policy. As quorum requirements constraint the number of participants necessary to discuss and approve a policy, they guarantee that the policy is debated by a large number of participants - and not just among a narrow, vested group of actors, as well as its financial resource dependency.

The opportunity to make an appeal (i.e., if all participants are allowed to make an appeal, or if this opportunity is only reserved to specific members) could have been included as well, but the included of this variable resulted in a significant decrease of the Cronbach's Alpha coefficient. Variables on the degree of transparency are not included either. Indeed, I argue that agencies can be transparent without being autonomous insofar as the notion of transparency rather relates to accountability (Maggetti et al., 2015) and good governance (Edwards and Waverman, 2006).

Table A5. Examples of media sources

Media source	**Country**
Agence France Presse	France
Berlingske	Denmark
Canberra Times	Australia
Communications Daily	United States
Computerwelt Online	Germany
Computer Technology Review	United States
Deutsche Welle	Germany
Die Welt	Germany
El Mundo	Spain
El Pais	Spain
Europolitics	Belgium
Financial Times	United Kingdom
Folha de São Paul	Brazil
Hong Kong Economic Times	Hong Kong
Il Sole	Italy
India Today	India
Journal of Engineering	United States
Khaleej Times	United Arab Emirates
La Repubblica	Italy
Le Temps	Switzerland
Les Echos	France
Nikkan Kogyo Shimbun	Japan
Politiken	Denmark
Rossiyskaya Gazeta	Russia
Spiegel Online	Germany
South China Morning Post	Hong Kong
Telecommunications Weekly	United States
The Canadian Press	Canada
The Economist	United Kingdom
The Irish Times	Ireland
The New-York Times	United States
The Times	United Kingdom
Wall Street & Technology	United States
Washington Post	United States
ZDNet Korea	Korea

Note: Table A4 provides examples of media sources recorded by Factiva.

Table A6. Summary statistics

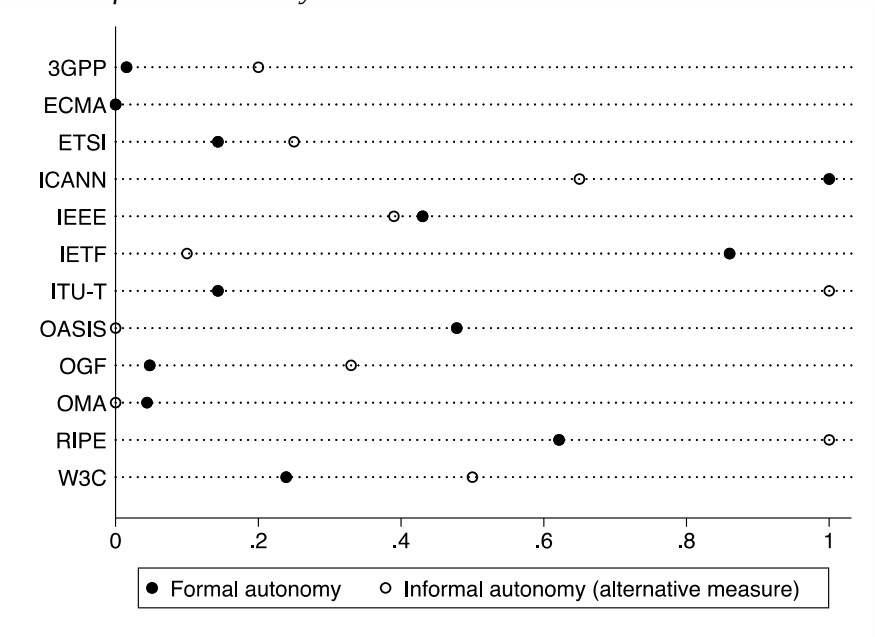
Variable	Obs	Mean	Standard deviation	Min	Max
Formal autonomy	12	0.3973485	0.1763374	0.2045455	0.6818182
Policy complexity	12	0.4898527	0.1278262	0.3118054	0.6858975
Media attention	12	3251.917	5595.812	39	17460
Agency age	12	28	10.77877	15	58
Informal autonomy	12	0.5512037	0.5327863	0	1.65

Table A7. Alternative measure of *Informal autonomy* (principal component analysis)

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	1.34064	. .68127	0.6703	0.6703
Comp2	.659365	.	0.3297	1.0000

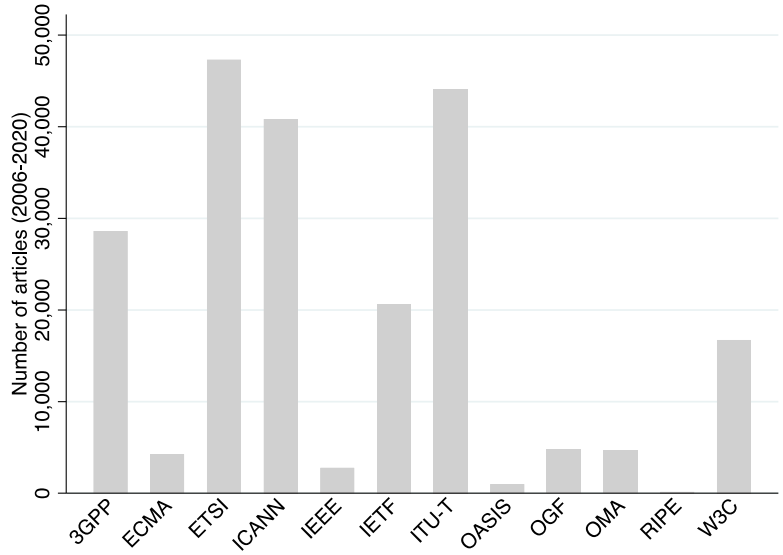
Notes: As an alternative measure of Informal autonomy, I perform a principal component analysis and I use factors scores to measure informal autonomy. This measure goes from -0.66 to 2.94, with higher scores indicating higher degrees of informal autonomy from corporate interests.

Figure A1. Agencies' *Formal autonomy* and *Informal autonomy* based on an alternative measure of *Informal autonomy*



Note: The variables are recoded to lie between 0 and 1 by dividing the minimal value by the maximal.

Figure A2. Media attention



Notes: Figure A1 displays the amount of media attention (in terms of number of news articles published) for each internet regulatory agency.

Table A8. Data calibration (FsQCA analysis)

Variable	Obs	Mean	Standad deviation	Min	Max
Formal autonomy (fuzzy)	12	0.4039683	0.3694689	0	1
Policy complexity (fuzzy)	12	0.475945	0.3416971	0	1
Media attention (fuzzy)	12	0.1844278	0.3212107	0	1
Agency age (fuzzy)	12	0.3023256	0.250669	0	1
Informal autonomy (fuzzy)	12	0.3340629	0.3229008	0	1

Note: In order to perform FsQCA, the variables were transformed into fuzzy sets with their values ranging from 0 to 1.

Table A9. Sufficiency and Necessity Matrix

	Informal autonomy	Formal autonomy	Policy complexity	Media attention	Age
Informal autonomy	1	0.678	0.469	0.53	0.485
Formal autonomy	0.56	1	0.474	0.293	0.518
Policy Complexity	0.329	0.403	1	0.136	0.471
Media attention	0.96	0.641	0.35	1	0.466
Age	0.536	0.692	0.742	0.284	1

Table A10. Configurations' sufficiency

Set	YConsist	Set Value	F	P	NumBestFit
fcma	0.519	0.8	6.06	0.032	2
fcmA	0.752	0.8	0.12	0.734	0
fcMa	0.961	0.8	11.26	0.006	1
fcMA	0.942	0.8	4.61	0.055	0
fCma	0.352	0.8	13.09	0.004	4
fCmA	0.664	0.8	0.67	0.43	0
fCMa	0.934	0.8	3.33	0.095	0
fCMA	0.938	0.8	4.14	0.067	0
Fcma	0.622	0.8	0.84	0.379	2
FcmA	0.528	0.8	2.07	0.178	0
FcMa	0.927	0.8	3.35	0.094	1
FcMA	0.851	0.8	0.24	0.633	0
FCma	0.42	0.8	2.94	0.115	1
FCmA	0.531	0.8	4.06	0.069	1
FCMa	0.901	0.8	0.97	0.346	0
FCMA	0.911	0.8	1.42	0.259	0

Notes: Capital letters signify "high" and lowercase letters signify "low". F refers to Formal autonomy, C to Policy Complexity, M to Media attention and A to Age.
FsQCA utilises Boolean minimisation that can handle partial or incomplete set membership (fuzzy sets).

Table A11. Fuzzy set Quantitative Comparative Analysis

Outcome: Informal autonomy

Solutions	Raw Coverage	Unique Coverage	Solution Consistency
High Formal autonomy*Low Policy complexity*Low Media attention*High Age	0.188	0.059	0.98
Low Formal autonomy*Low Media attention*Low Age	0.666	0.537	0.945
Total Coverage = 0.725			
Solution Consistency = 0.945			

Notes: The analysis was performed in Stata using Fuzzy program (Longest and Vaisey, 2008). The outcome variable is low Informal autonomy as configurations have consistency scores that are greater with the negation (Longest and Vaisey, 2008)

Appendix C

Table A1. Details on the focusing events

Focusing event	**Year**	**Subject**	**Policy problem**	**Example of policy solution proposed**
September 11th terrorist attacks	2001	Terrorists hijacked and crashed two commercial aircraft into the Towers of the World Trade Center complex in New York City. A third plane crashed into the Pentagon in Arlington, Virginia	National security	Greater access to personal information
Edward Snowden revelations	2013	Documents revealed that intelligence services gained illegally access to personal information	Personal data illegal use; surveillance	Stronger privacy protections (e.g., encryption)
Facebook Cambridge Analytica scandal	2018	Documents revealed that personal data belonging to millions of Facebook users was illegally collected by consulting firm Cambridge Analytica	Personal data illegal use; surveillance	Stronger privacy protections (e.g., explicit consent)

Table A2. Media coverage of each focusing event

	September 11th terrorist attacks	**Edward Snowden revelations**	**Facebook-Cambridge Analytica scandal**
Number of articles	76314	39194	37446
By country :			
United States	36393	28651	15061
Canada	6030	827	1516
United Kingdom	5096	3436	9110
Germany	1141	7456	637
Russia	1664	3869	1372
Australia	3342	394	1256
China	2211	2142	845
Brazil	247	2528	198

Note: Table A2 presents media coverage in terms of number of articles published during the year of the focusing event.

Table A3. List of internet privacy policies examined in Chapter 4

Policy	**Agency**	**Year**
Privacy Enhanced Mail (PEM)	IETF	1993
Open Pretty Good Privacy	IETF	1998
The Transport Layer Security (TLS) Protocol	IETF	1999
Layer 2 Tunneling Protocol (L2TP)	IETF	1999
Privacy Mechanism for the Session Initiation Protocol	IETF	2002
The Platform for Privacy Preferences (P3P)	W3C	2002
Cryptographic Protection of Data on Block-Oriented Storage Devices	IEEE	2007
Mobile IPv6 Location Privacy Solutions	IETF	2010
Do not Track Standard (DNT)	W3C	2012
Quick UDP Internet Connection (QUIC)	IETF	2012
Privacy Considerations for Internet Protocols	IETF	2013
Pervasive Monitoring Is an Attack' informational note	IETF	2014
Token Binding Protocol	IETF	2015
Privacy and proxy services accreditation	ICANN	2015
Data Privacy process	IEEE	2016
Data on the Web best practice	W3C	2017
DNS Query Name Minimisation to Improve Privacy	IETF	2018
The Messaging Layer Security (MLS) Protocol	IETF	2018
Decentralized Identifiers	W3C	2019
Specification registration data policy	ICANN	2019

Table A4. Examples of media sources recorded by Factiva

Media source	**Country**
Agence France Presse	France
Berlingske	Denmark
Canberra Times	Australia
Communications Daily	United States
Computerwelt Online	Germany
Computer Technology Review	United States
Deutsche Welle	Germany
Die Welt	Germany
El Mundo	Spain
El Pais	Spain
Europolitics	Belgium
Financial Times	United Kingdom
Folha de São Paul	Brazil
Hong Kong Economic Times	Hong Kong
Il Sole	Italy
India Today	India
Khaleej Times	United Arab Emirates
La Repubblica	Italy
Le Temps	Switzerland
Les Echos	France
Nikkan Kogyo Shimbun	Japan
Politiken	Denmark
Rossiyskaya Gazeta	Russia
Spiegel Online	Germany
South China Morning Post	Hong Kong
Telecommunications Weekly	United States
The Canadian Press	Canada
The Economist	United Kingdom
The Irish Times	Ireland
The New-York Times	United States
The Times	United Kingdom
Wall Street & Technology	United States
Washington Post	United States
ZDNet Korea	Korea

Table A5. Details on the use of Factiva

Search terms used for collecting news articles	I collected news articles after entering the following search terms in the Factiva free text box: full ("full name" OR acronym of the policy) AND ("full name" OR acronym of the agency directly responsible for the policy). The connector 'or' enables to identify news articles containing one or more of the words entered. Both the name of the policy and the agency were necessary to collect relevant news articles Example: ("Platform for Privacy Preferences" or P3P) and ("World Wide Web Consortium" or W3C).
Measure of salience	To obtain the total number of articles published by all media sources for each year between 1990 and 2019, I entered each year as the search-term on the Factiva free text box. Issue salience is then measured as the percentage of all the articles published between 1990 and 2019.

Table A6. Dow Jones Industry Taxonomy

	Dow Jones Industry Taxonomy
1	Agriculture
2	Automotive
3	Business/ Consumer services
4	Financial services
5	Consumer goods
6	Food/Beverages
7	Health care
8	Industrial Goods
9	Leisure/Arts/Hospitality
10	Materials/Resources
11	Media/Entertainment
12	Real estate/Construction
13	Retail/Wholesale
14	Technology
15	Telecommunications Services
16	Transportation/Logistics
17	Utilities

Notes: The taxonomy currently consists of over 1000+ industry terms grouped around a structured hierarchy of industry groups. The structure is based on extensive research among Dow Jones Factiva's global business information user base.

Table A7. Details on the values of politicisation (mean)

	Pre-event (2000)	September 11th terrorist attacks (2001-2002)	Pre-event (2012)	Edward Snowden revalations (2013-2014)	Pre-event (2017)	Facebook-Cambridge Analytica scandal (2018-2019)
Politicisation index	1.817494	2.5282	0.27	0.1401	-0.799	-0.5471
Issue salience	0.04	0.051	0.0023	0.0045	0.0024	0.003
Actor expansion	6.6	8	5.8	4.98	1.79	2.5
Actor diversity	0.27033	0.216	0.20	0.18	0.0981	0.54

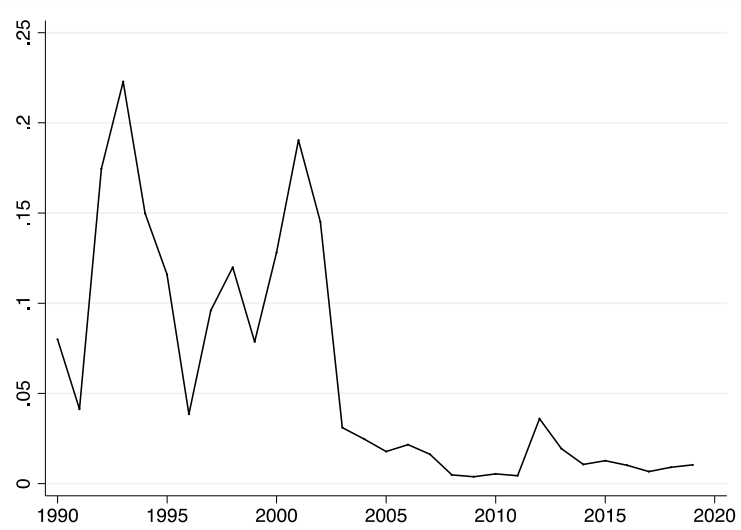
Note: The politicisation values are lower before an focusing event occurs, apart from the Edward Snowden revelations. This might be explained by the data collected. The Do-Not-Track standard was produced in 2012 and attracted some attention as well as contestation (see Christou et al., 2021). Values remain lower in 2011 (respectively: -0.612, 0.001, 1.44, 0.159).

Table A8. Principal-component factor analysis (number of words and TTR)

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	1.53764	1.07527	0.7688	0.7688
Comp2	.462365	.	0.2312	1.0000

Note: The TTR was obtained by dividing the total number of different words in a text by the total number of words.

Figure A1. Alternative measure of salience (mean)



Notes: Salience is measured here as a percentage of all the articles published by the media sources that happen to cover the policies selected for this study. Specifically, 495 media sources have covered at least one of the internet privacy policies selected between 1990 and 2019. Therefore, I express salience as the percentage of all articles published by these 495 media sources. Admittedly, this measure of issue salience is not without biases as it mainly relies on specialised media sources. However, this provides information on the salience of internet privacy regulation among a specialised community of actors (i.e., the epistemic community of internet governance).

Table A9. Robustness check (multilevel analysis using a different measure of politicisation)

	Different politicisation index
Focusing event	0.430***
	(3.67)
After the event	-0.0937**
	(-2.91)
Time	-0.00146
	(-0.05)
Internet users	-0.00931
	(-0.76)
Privacy laws adoption	0.00402
	(0.64)
Policy complexity	0.0477
	(1.27)
	0.00718
Agency year	(1.01)
	0.430***
AIC	306.9625
BIC	339.8956
N	199

*Notes: t-statistic in parentheses; * p<0.05, ** p<0.01, ***p<0.001;*
In their measure of politicisation, Hutter and Grande (2014) and Hutter et al. (2016) give a greater weight to issue salience. Salience is indeed multiplied by the addition of actor expansion and polarisation. Using diversity instead of polarisation, I thus multiplied issue salience by the addition of actor expansion and actor diversity, as expressed in Chapter 4

Table A10. Robustness check (multilevel analysis using different time-periods)

	Model 1	Model 2	Model 3
	Dependent variable: Politicisation index		
Focusing event	1.454**	1.340**	1.046**
	(2.80)	(3.13)	(2.70)
After the event	-0.311	-0.291**	-0.291***
	(-1.76)	(-2.82)	(-3.63)
Time	-0.235*	-0.179	-0.128
	(-2.09)	(-1.46)	(-1.05)
Internet users	0.0584	0.0358	0.0197
	(1.29)	(0.72)	(0.41)
Privacy laws	0.00378	0.00322	-0.00402
	(0.14)	(0.13)	(-0.15)
Policy complexity	0.179	0.169	0.168
	(0.84)	(0.79)	(0.79)
Agency year	0.0517	0.0499	0.0475
	(1.23)	(1.18)	(1.13)
AIC	863.729	862.0002	859.0603
BIC	896.662	894.9333	891.9933
N	1999	1999	1999

*Notes: t statistic in parentheses; * p<0.05, ** p<0.01, ***p<0.001.*

Different post-event periods are used to test the robustness of the main findings. In Model 1, the post-September 11th period ends in 2005 (instead of 2007), while it ends in 2008 in Model 2. In both models, the same post-events periods are used for the Edwards Snowden revelations and the Facebook-Cambridge Analytica scandal (i.e., 2016 and 2019 respectively). In Model 3, the post-September 11th period ends in 2009, while the period following the Edward Snowden revelations period ends in 2015 (instead of 2016).

The results are consistent with the main findings.

Table A11. Multilevel analysis including more control variables (related to the internet agencies)

	Politicisation index
Focusing event	1.328**
	(-2.9)
After the event	-0.253*
	(-2.01)
Time	-0.209
	(-1.70)
Internet users	0.0484
	-0.98
Privacy laws adoption (lagged)	-0.00202
	(-0.08)
Policy Complexity	0.0891
	-0.44
Agency year	-0.00559
	(-0.08)
Agency number of members	-0.000507
	(-1.36)
Agency number of public meetings	-0.664*
	(-2.31)
AIC	862.0774
BIC	901.597
N	198

*Notes: t statistic in parentheses; * p<0.05, ** p<0.01, ***p<0.001*
The results are consistent with the main findings.

Table A12. Multilevel analysis with lagged *Privacy laws adoption*

	Lagged by one year	Lagged by two year	Lagged by three years	Lagged by five year
	Dependent variable: Politicisation index			
Focusing event	1.251***	1.188**	1.193**	1.297***
	(3.47)	(3.25)	(3.23)	(3.46)
After the event	-0.245*	-0.221*	-0.225*	-0.256*
	(-2.46)	(-2.19)	(-2.19)	(-2.45)
Time	-0.143	-0.174	-0.162	-0.103
	(-1.38)	(-1.57)	(-1.38)	(-0.81)
Internet users	0.0254	0.0397	0.0357	0.0110
	(0.61)	(0.90)	(0.76)	(0.22)
Privacy laws adoption (lagged)	0.0131	-0.000612	-0.00370	0.00872
	(0.68)	(-0.03)	(-0.19)	(0.43)
Policy complexity	0.151	0.155	0.157	0.155
	(0.92)	(0.95)	(0.95)	(0.94)
Agency year	0.0343	0.0339	0.0339	0.0347
	(1.06)	(1.05)	(1.05)	(1.06)
AIC	761.0851	758.3162	755.4734	748.696
BIC	793.9678	791.1482	788.2546	781.3746
N	198	197	196	194

*Notes: t statistic in parentheses; * p<0.05, ** p<0.01, ***p<0.001.*
The results are consistent with the main findings.

Appendix D

Table A1. List of internet privacy policies examined in Chapter 5

Policy	Agency
Cryptographic Protection of Data on Block- Oriented Storage Devices	IEEE
Device API Privacy Requirements	W3C
Automatic Certificate Management Environment	IETF
Authentication: an API for accessing Public Key Credentials	W3C
Decentralized identifiers	W3C
Do-Not-Track standard	W3C
DNS Query Name Minimisation to Improve Privacy	IETF
Geolocation Policy: A Document Format for Expressing Privacy Preferences for Location Information	IETF
Protection of IGO and INGO Identifiers in All gTLDs	ICANN
An Architecture for Location and Location Privacy in Internet Applications	IETF
Logging Recommendations for Internet-Facing Servers	IETF
The Messaging Layer Security (MLS) Protocol	IETF
IP Address Location Privacy and Mobile IPv6	IETF
A Solution Framework for Private Media in Privacy Enhanced RTP Conferencing	IETF
The Permissions API	W3C
Privacy & Proxy Services Accreditation	ICANN
Privacy Considerations for Internet Protocols	IETF
Privacy best practices for web applications	W3C
QUIC: A UDP-Based Multiplexed and Secure Transport	IETF
Temporary Specification for gTLD Registration Data	ICANN
A Privacy Mechanism for the Session Initiation Protocol (SIP)	IETF
SMTP MTA Strict Transport Security	IETF
The TLS Protocol	IETF
The Token Binding Protocol	IETF
Verifiable Claims Data Model and Representations	W3C
Thick Whois	ICANN
Wide-Block Encryption	IEEE
Web of Things (WoT) Security and Privacy Guidelines	W3C
XML Encryption Requirements	W3C

Table A2. Working groups websites and links

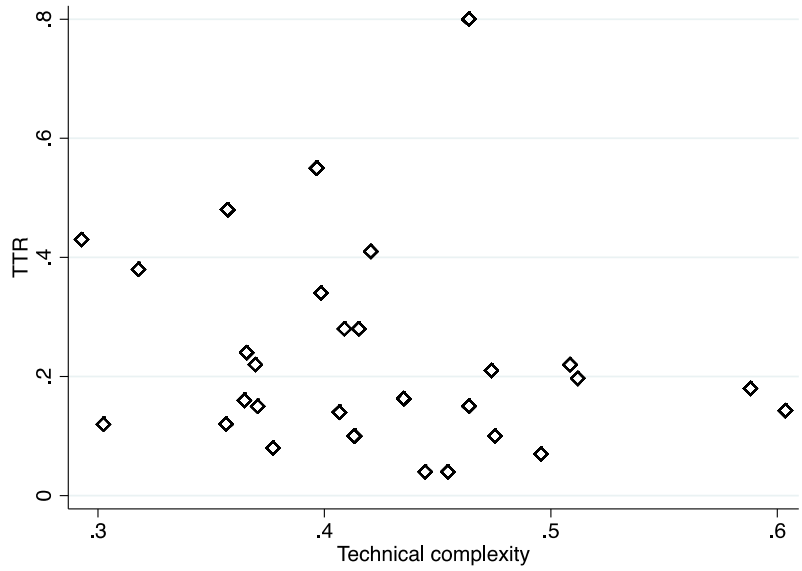
Agency	WG	URL	Date of access
IETF	Domain Name System Operations	https://mailarchive.ietf.org/arch/browse/dnsop/	09/04/2022
	Geographic Location/Privacy messages)	https://mailarchive.ietf.org/arch/browse/geopriv/	09/04/2022
	Privacy Enhanced RTP Conferencing	https://mailarchive.ietf.org/arch/browse/perc/	10/04/2022
	Token Binding	https://mailarchive.ietf.org/arch/browse/unbearable/	10/04/2022
	QUIC	https://mailarchive.ietf.org/arch/browse/quic/	11/04/2022
	Using TLS in Applications	https://mailarchive.ietf.org/arch/browse/uta/	11/04/2022
	Automated Certificate Management Environment	https://mailarchive.ietf.org/arch/browse/acme/	13/04/2022
	Mobility for IP6	https://mailarchive.ietf.org/arch/browse/mip6/	13/04/2022
	Session Initiation Protocol	https://mailarchive.ietf.org/arch/browse/sipcore/	14/04/2022
	Messaging Layer Security	https://mailarchive.ietf.org/arch/browse/mls/	14/04/2022
	Transport Layer Security	https://mailarchive.ietf.org/arch/browse/tls/	14/04/2022
	Internet Area	https://mailarchive.ietf.org/arch/browse/int-area/	15/04/2022
W3C	Decentralized Identifier	https://www.w3.org/groups/wg/did/participants?sortaff=1	04/04/2022
	Devices and Sensors	https://www.w3.org/groups/wg/das/participants	04/04/2022
	Verifiable Credentials	https://www.w3.org/groups/wg/vc/participants	04/04/2022
	Web Application Security	https://www.w3.org/groups/wg/webappsec/participants	04/04/2022
	Web Authentication	https://www.w3.org/groups/wg/webauthn/participants	04/04/2022
	Web of Things	https://www.w3.org/groups/wg/wot/participants	04/04/2022
	XML Security	https://www.w3.org/groups/wg/xmlsec/former-participants	04/04/2022
	Tracking Protection	https://www.w3.org/groups/wg/tracking/former-participants	05/04/2022
ICANN	Privacy & proxy Services Accreditation	https://community.icann.org/pages/viewpage.action?pageId=43985052	06/04/2022
	IGO-INGO Protections PDP	https://community.icann.org/display/GWGTCT/As+of+2017+for+the+reconvened+PDP+-+Members+IGO-+INGO+Protections+Policy+Development+Process+%28PDP%29+WG	06/04/2022
	Temporary Specification for gTLD registration Data	https://community.icann.org/pages/viewpage.action?pageId=88574688	06/04/2022
	Thick Whois	https://community.icann.org/pages/viewpage.action?pageId=37193919	06/04/2022
IEEE	Cybersecurity & Privacy Standards Committee – Security and storage (participants also mentioned on policy documents)	https://www.computer.org/volunteering/boards-and-committees/standards-activities/committees/cybersecurity-privacy	10/04/2022

Note: *Table A2 lists the URL of each internet agency's working group and the corresponding date of my last access.*

Table A3. Summary: Factiva database search keywords

Internet privacy policies: full article must include the name or acronym of the agency, and the name or acronym of the policy	("Word Wide Web Consortium" **or** W3C) **and** ("Do-not-track standard" **or** DNT)
Time-period	Starts when the first draft of the policy proposal is published and ends when the policy is adopted
Duplicates	excluded

Figure A1. Correlation between two different measures of *Policy complexity*



Note: Scatter plot showing the measure of policy (technical) complexity used in Chapter 5 and the measure of policy complexity using a Type-Token Ration. The figure shows a moderate negative correlation between the two measures.

Table A4. Examples of lowly complex and highly complex privacy policies

	Low complexity	High complexity
Policy	Privacy Considerations for Internet Protocols; Privacy best practices for web applications	Decentralized identifiers; XML Encryption Requirements
Sentence example	"Furthermore, privacy as a legal concept is understood differently in different jurisdictions. The guidance provided in this document is generic and can be used to inform the design of any protocol to be used anywhere in the world, without reference to specific legalframeworks."; "The end user should have enough information about a service and how it will user their personal information to make an informed decision on whether to share information with that service"	"This design eliminates dependence on centralized registries for identifiers as well as centralized certificate authorities for key management — the standard pattern in hierarchical PKI (public key infrastructure)"; "If the application scenario requires all of the information to be encrypted, the whole document is encrypted as an octet sequence. This applies to arbitrary data including XML documents."

Figure A2. The combination of Inside and Outside lobbying by interest group type

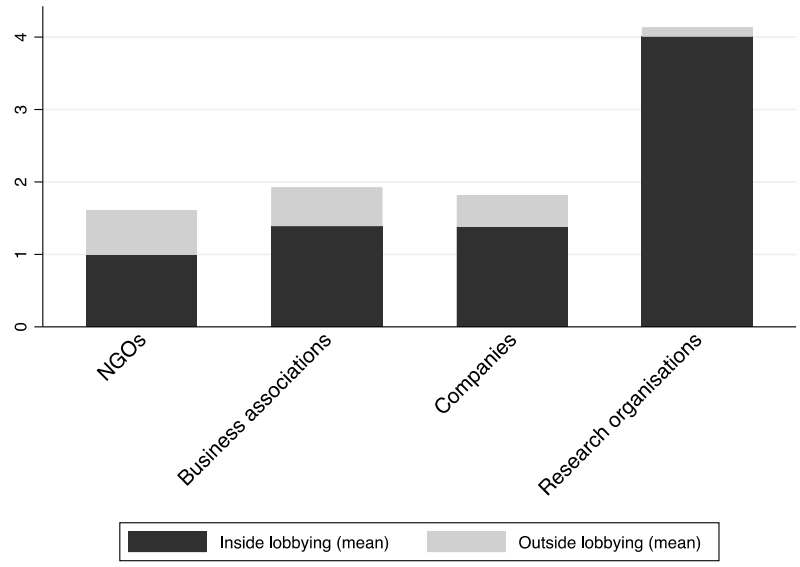


Table A5. Binomial negative regression with incident rate ratios

Variables	IRR	IRR
	Dependent variable: *Inside lobbying*	
Outside lobbying (logged)	0.0666***	0.0259***
	(0.0165)	(0.0113)
Policy complexity	0.944	1.023
	(0.405)	(0.0629)
Resources (logged)	1.038***	1.037***
	(0.00879)	(0.00879)
Interaction		
Outside lobbying x Policy complexity		6.063***
		(3.139)
Control		
Salience	1.039**	1.042**
	(0.0196)	(0.0199)
Group type (ref: business association)		
NGOs	0.732	0.721
	(0.159)	(0.156)
Companies	0.880	0.863
	(0.151)	(0.148)
Research	1.868***	1.848***
	(0.338)	(0.334)
Constant	2.385***	2.362***
	(0.641)	(0.473)
AIC	3405.212	3393.005
BIC	3445.259	3438.057
Observations	1,103	1,103

*Notes: Exponentiated coefficients; standard errors in parentheses;*** p<0.01, ** p<0.05, * p<0.1*
With exponentiated regression coefficients, which are presented in Table 2, a positive effect is indicated by values greater than 1 and a negative effect is indicated by values less than 1.

Table A6. Linear regression with multiple fixed effects

Variables	Dependent variable: *Inside lobbying*
Outside lobbying (logged)	-0.595***
	(0.0246)
Policy complexity	0.214
	(0.295)
Resources (logged)	0.0178***
	(0.00275)
Control	
Salience (logged)	-0.00693
	(0.0155)
Group type (ref: business association)	
NGOs	-0.0788
	(0.0791)
Companies	0.00187
	(0.0508)
Research	0.450
	(0.227)
Constant	0.645**
	(0.204)
R-squared	0.341
Observations	1,103

*Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*
The results confirm the negative relationship between Inside and Outside lobbying (i.e., there is a substitution effect)

Table A7. Binomial negative regression without agencies' fixed effects

Variables	(1)	(2)
	Dependent variable: *Inside lobbying*	
Outside lobbying (logged)	-1.472***	-1.602***
	(0.139)	(0.191)
Policy complexity	0.224	0.0812
	(0.462)	(0.0643)
Resources (logged)	0.0654***	0.0650***
	(0.00888)	(0.00884)
Interaction		
Outside lobbying x Policy complexity		0.308
		(0.265)
Control		
Salience (logged)	0.0157	0.0123
Group type (ref: business association)	(0.0198)	(0.0200)
NGOs	-0.427*	-0.453**
	(0.226)	(0.227)
Companies	-0.247	-0.277
	(0.172)	(0.173)
Research	0.639***	0.603***
	(0.182)	(0.183)
Constant	0.116	0.213
	(0.265)	(0.182)
AIC	3523.019	3521.295
BIC	3568.071	3571.353
Observations	1,103	1,103

*Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

Results suggest that there might be variations across agencies that need to be controlled for.

Table A8. Binomial negative regression using *Outside lobbying* as the dependent variable

Variables	(1)	(2)
	Dependent variable: *Outside lobbying*	
Inside lobbying (logged)	-4.190***	-4.394***
	(0.302)	(0.446)
Policy complexity	-0.0681	0.0144
	(1.213)	(0.170)
Resources (logged)	0.0845***	0.0841***
	(0.0248)	(0.0250)
		0.343
		(0.562)
Control		
Salience (logged)	0.159***	0.160***
	(0.0590)	(0.0581)
Group type (ref: business association)		
NGOs	0.0869	0.0830
	(0.361)	(0.362)
Companies	-0.219	-0.218
	(0.297)	(0.297)
Research	-0.222	-0.228
	(0.450)	(0.450)
Constant	-0.785	-0.817*
	(0.678)	(0.423)
AIC	1014.164	1015.665
BIC	1054.21	1060.717
Observations	1,103	1,103
Number of agencies	4	4

*Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.*
The results suggest that Outside lobbying (i.e., number of mentions) combined with Policy complexity explains more variations in Inside lobbying (i.e., number of seats) than Inside lobbying combined with Policy complexity explain variations in Outside lobbying. Therefore, there are more unobserved factors that explain variations in Outside lobbying.

Table A9. Binomial regression analysis testing the three-way interaction effect

Variable	Inside lobbying
Outside lobbying (logged)	-4.319***
	(0.931)
Policy complexity	0.0261
	(0.0888)
Resources (logged)	0.223**
	(0.0874)
Interaction	
Outside lobbying x Policy complexity	1.450
	(1.336)
Outside lobbying x Resources	0.884
	(1.051)
Resources x Policy complexity	-0.0299
	(0.116)
Outside lobbying x Resources x Policy complexity	0.353
	(1.452)
Control	
Salience (logged)	0.0410**
	(0.0191)
Group type (ref: business association)	
NGOs	-0.317
	(0.218)
Companies	-0.152
	(0.174)
Research	0.582***
	(0.185)
Constant	0.991***
	(0.201)
AIC	3396.203
BIC	3456.273
Observations	1,103
Number of agencies	4

*Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1*

Table A10. Results from logistic regression (Policy complexity)

	Different lobbying strategies
Policy complexity	7.488*
	(4.462)
Resources (logged)	0.366***
	(0.111)
Control	
Salience	0.617***
	(0.215)
Group type (ref: business association)	
NGOs	-0.0785
	(4,985)
Companies	14.53
	(4,227)
Research	-0.334
	(4,385)
AIC	134.2662
BIC	163.2579
Observations	927

*Notes: Standard errors in parentheses;*** p<0.01, ** p<0.05, * p<0.1.*
*The dependent variable 'Lobbying strategies' relies on the choice of interest groups to either use one lobbying strategy (inside **or** outside), or both strategies. It is a binary variable that equals '1' when a group uses two different lobbying strategies, and '0' when it only uses one strategy.*

Table A11. Results from logistic regression (Policy complexity and Group resources)

	(1) Groups with inferior resources	(2) Groups with superior resources
	Dependent variable: Different lobbying strategies	
Policy complexity	-12.54	11.32**
	(12.82)	(5.029)
Control		
Salience	-0.0125	0.775***
	(0.403)	(0.272)
Group type (ref: business association)		
NGOs	-0.277	-0.184
	(5,146)	(66,150)
Companies	15.70	15.90
	(3,833)	(65,672)
Research	0.0444	-0.908
	(6,018)	(65,711)
AIC	28.76874	114.6447
BIC	49.13397	135.6472
Observations	434	493

The dependent variable 'Lobbying strategies' relies on the choice of interest groups to either use one lobbying strategy (inside ***or*** *outside), or both strategies. It is a binary variable that equals '1' when a group uses two different lobbying strategies, and '0' when it only uses one strategy. In model 1, the effect of Policy complexity is tested for interest groups with fewer resources only (i.e., groups whose resources are inferior to the mean). In model 2, the effect of Policy complexity is tested for interest groups with greater resources only (i.e., groups those resources are superior to the mean).*