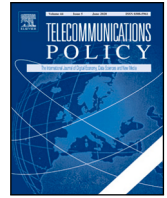




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Perspectives on political influences on changes in telecommunications and internet economy markets

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ABSTRACT

For the past thirty years, international consensus has supported telecommunications policies favoring the pursuit of economic efficiency and the distancing of governments from ownership and day-to-day industry governance. These principles serve to minimize the potential for conflicts of interest and corruption to influence industry outcomes. However, recently, a trend has emerged for governments to expand their sector influence more directly, via network ownership, extension of regulatory interests into all aspects of the digital economy, the politicization of matters such as payment for internet content and content censorship and at the extreme, prohibitions on the use of equipment and software originating from non-favored countries. This begs two questions. Is this populist politicization of telecommunications and internet economy matters a worldwide phenomenon, or is it confined to a handful of developed countries? And even though the rhetoric may flow at election-time, do these potentially-flawed populist policies flow through into problematic laws and actions, or are there other checks and balances that constrain these excesses and ensure that the long-standing economic and social objectives governing the industry for the past thirty years are preserved in national laws and regulations?

The international perspective appears to confirm both the persistence of regulation and its ability to expand into all areas of the digital economy, and a disconnection of regulation from the original intentions to promote more competitive markets. We review the current state of sectoral regulation and thinking, including a juxtaposition of the EU and US approaches, concluding with a proposed research agenda.

1. Introduction

For the past thirty years, an international policy consensus has held that the most efficient outcomes in telecommunications markets occur when governments divest themselves of infrastructure ownership (privatization) and separate out matters of day-to-day industry governance (i.e. regulation) from distributional and equity-based policies subsidizing the provision of services in areas

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where privately-owned network operators cannot make a fair economic return on their infrastructure investments (i.e. universal service) (Hausman & Taylor, 2012). These principles, articulated by both the Organization for Economic Co-operation and Development (OECD) and International Telecommunication Union (ITU¹), serve to minimize the potential for conflicts of interest and corruption to influence industry outcomes (Howell, Potgieter, & Sofo, 2018). They are well-illustrated in the European Union's Electronic Communications laws² and State Aid rules for the deployment of broadband networks.³

However, as governments have supreme law-making powers, inevitably politicians as agents of voter-principals may find it necessary from time to time to seek a mandate from voters for changes in both the regulatory regimes governing the industry and the policies by which subsidies and distributions are made (Howell, 2010). Furthermore, voter-principals with vested interests may pressure politician-agents to develop and implement policies for various partisan ends (Popiel, 2020) that are at conflict with the consensus objectives of maximizing sector efficiency in the long-term interest of consumers. When policies are formed and decided at the ballot box by comparatively poorly-informed voters and politicians, rather than better-informed regulators and policy experts, a risk exists that inappropriate laws, rules and policies will prevail, and the desired outcome (of economic efficiency in the sector) will be made harder to obtain.

A recent trend towards populist policies in national and local elections appears, in some countries, to be expanding from telecommunications to the information economy sector. Specific interventions range from government funding of broadband infrastructure (e.g. Australia – Howell and Potgieter (2020); the United States – Exmeyer and Hall (2023), direct interventions in spectrum rights allocation processes (e.g. Canada and New Zealand – (Howell & Tang, 2023)) and threats of network nationalization (e.g. in the December 2019 UK general election) through to direct intervention in the operation of internet platform and social media firms (e.g. Australia's requirement for Facebook and Google to reach agreements to pay media companies to compensate for lost advertising revenues used to fund public interest journalism (Howell & Tews, 2021); the 2024 European Union (EU) Commission whitepaper "How to master Europe's digital infrastructure needs?" which contemplates possible regulatory intervention into agreements between content providers and internet service providers for terminating traffic.

The interventions are also not confined to economic matters, as illustrated by the willingness of governments to become more actively involved in the moderation of internet content (e.g. the Christchurch Call, seeking to eliminate terrorist and violent extremist content online⁴) and "hate speech" more generally (Howell & Potgieter, 2023; Wolbers, 2023). It is probably not a surprise that the government of Russia filed in excess of 100,000 content takedown requests with Google in the period 2009 to 2021 (among which 45,399 for reasons of "national security") but it is perhaps arresting that Google has complied with consistently over 50% of court and executive requests (Park & Sang, 2023). In thinking about whether legislation regulating content is reasonable in a free society, Nunziato (2023) applies the "Putin test". This involves asking what an authoritarian leader (like Mr Putin) would do with the legislation. Nunziato (2023) concludes in this regard that the EU Digital Services Act (DSA), with its checks and balances and admirable transparency provisions, would be dangerous (and, indeed attractive) in any jurisdiction not blessed with the independent judiciary and other institutions present in most EU states. That is, it does not pass the "Putin test" and free speech (which is regarded as a fundamental right in many countries and key value) is being brought under the purview of regulation.

A concerning factor surrounding these political initiatives is that they are very rarely supported by reasoned economic, legal or social analysis of their likely benefits and detriments. Indeed, in many cases resort to political action has occurred possibly because it is feared that analysis of this type, if conducted by the relevant regulatory agencies, would not be supportive. This can be illustrated by many examples including the introduction of free roaming in the EU (Ibáñez Colomo, 2022). Is this populist politicization of telecommunications and internet economy matters a worldwide phenomenon, or is it confined to a handful of developed countries? And even though the rhetoric may flow at election-time, do the potentially-flawed populist policies flow through into problematic laws and actions, or are there other checks and balances that constrain these excesses and ensure that the long-standing economic and social objectives governing the industry for the past thirty years are preserved in national laws and regulations?⁵

2. Background

The paper considers the journey taken from where telecommunications markets were thirty years ago, to where they are today. The world of public sector telephone monopolies and the first mobile networks seems far away but that is where sector regulation started. To a large extent, current practices and ways of thinking are still informed by the early years of sectoral regulation while being faced with a multitude of new challenges and demands. The purpose of this section is to set the scene for the subsequent discussion.

¹ <http://www.ictregulationtoolkit.org/index>

² <https://ec.europa.eu/digital-single-market/en/telecoms>

³ [https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52009XC0930\(02\)](https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52009XC0930(02))

⁴ <https://www.christchurchcall.com/>

⁵ The authors, representing a wide cross-section of interests, residing in Europe, the Americas, Africa and the Asia-Pacific regions, had the opportunity to address these issues in a conference panel discussion, on which this paper is based.

2.1. Where we were

We set the scene for the discussion by identifying illustrative quotations that (we believe) illustrate the initial view of sectoral regulation. This is necessarily somewhat subjective and reflects our supposition about what the earlier thinking around the topic was. First, was the view expressed by Alfred Kahn, that technological change would make sectoral regulation – and government participation in its strategy and operation – redundant:

“The question is no longer whether to deregulate telecommunications—at least not whether to discontinue regulating it in the traditional manner and for the traditional reasons. The industry is obviously no longer a natural monopoly and wherever there is effective competition—typically and most powerfully, between competing platforms—land-line telephony, cable and wireless—regulation of the historical variety is both unnecessary and likely to be anticompetitive” (Kahn, 2007).

Indeed, great hopes were held that any regulations remaining or imposed would be simply transitory measures, as the sector moved towards reliance on competition law to govern sector interactions. In Germany, for example:

“Sector-specific telecommunications regulation was conceived as transitory from the outset. That holds true on both a German and a European level. For instance, the explanatory memorandum accompanying the Telecommunications Act (TKG) of 1996 states: ‘The need for particular regulation of the telecommunications sector is a product of history—the hundred-year-plus monopoly of the telecommunications administrations—which initially requires the creation and promotion of competition in this area *before the general provisions of antitrust supervision can take effect.*’ [emphasis added]. In the Act itself, this becomes clear in the duty to report, assumed by the regulatory authority and the Monopoly Commission . . . as to whether there is now ‘effective competition’ in the telecommunications markets or whether ‘sustainably competitive-oriented telecommunications markets exist in the Federal Republic of Germany.’” (Moschel, 2009).

Yet even then, the emergent reality was that some viewed the optimistic hopes for reduction in reliance on regulation and increased use of competition law to be misplaced:

“It is found that sector-specific regulation has already been in place for 15 years and there is no concrete indication that it will end soon. Competition law has intrinsic limitations, which, arguably, do not make it possible for authorities to resort only to that body of the law to ensure a smooth functioning of the electronic communications markets. The balance of power in the EU leads to sector-specific regulation being maintained in the years ahead as the ideal way for European institutions to intervene in electronic communications markets. The electronic communications market requires regulation going beyond competition law in order to ensure the realization of non-economic purposes. . .” (Berhin, Godart, Jolles, & Nihoul, 2005).

As early as 2005 therefore it was clear to some that the regulatory regime for telecommunications was not going to be transitory but rather that it might evolve to a general regulatory impulse to steer the rapidly evolving electronic communications industries.

2.2. Where we are now?

With the benefit of hindsight, it might now be questioned whether governments ever intended to step back from their former positions as stringent regulators or controllers of sector strategy and day-to-day operation of the telecommunications providers they once owned. We have again selected some quotations to illustrate the breadth of what we see current thinking around sectoral regulation to be. situation. In Spain for example:

“While scholars often rely on a binary distinction between privatized and state-owned firms, thereby implicitly accepting the assumption that privatization entails the surrender of all means of influence over strategic firms, the Spanish trajectory has shown how governments can still influence national champions’ managerial strategies by exercising regulatory power over their blockholders” (Bulfone, 2020).

Rather, the European direction, in mobile markets at least, has been a tendency towards micro-management rather than simply steering the sector to a competitive environment, albeit with social policy objectives (e.g. coverage or protection of minors) in mind:

“Most European regulators specified coverage requirements with an unprecedented level of detail, indicating clear geographical areas, transport routes and signal levels indoors, to be covered within a specific timeframe. . . . The question is whether licensees will be able to satisfy the coverage requirements they took on” (Kuś & Massaro, 2022).

“On 16 September, 2023, the Italian Government issued a decree (the “Decree”) to combat youth distress, educational poverty and juvenile crime. The government has included provisions for protecting minors using IT devices among the measures adopted. . . . The wording used in the Decree is not clear, and it is not specified whether the applications shall be pre-installed on the devices or if the Manufacturers need only to allow the availability of the applications”. (CMS Law, 2024).

Arguably, the current rush to re-regulate previously-liberated markets, and apply new regulations to evolving digital markets could be seen as a reflection of wider trends to reassert individual national sovereignty over local economic and social activity.

“The ambition to strengthen digital and technological sovereignty in all domains, even when this seems unrealistic (i.e., the case of Chips) or when there is nothing upon which to take back control (i.e., because Europe never had such control, as in the case of online platforms), appears as a new form of policy voluntarism with a *techno-Gaullism* bent” (Codagnone & Weigl, 2023).

What have been the effects of the apparent regulatory retreat from thirty years of global, competition-based sector policy consensus and what are the trends in regulation in the communications and digital sector? These are the questions addressed by this paper, with a focus on the European Union (EU) and the United States (US).

3. Key issues

3.1. Shifting scope

Focusing only on one aspect of telecom regulation – the networks – an interesting evolution has taken place. Both in fixed network deployment, in relation to fiber, and in mobile networks, a variety of new institutional models have emerged. Mobile telecommunications infrastructure illustrates this. It is no longer a collection of distinct networks entirely owned and operated by single licensed operators. During the period 2001–2015 a high number of voluntary network sharing deals emerged among many operators by which they would share either the passive part of the network (location, site, electricity supply and masts) or the active parts of the mobile infrastructure (antennas, radio access network). These agreements were – mostly – voluntary, i.e., without the intervention of the regulatory authority.

The evolution of institutional arrangements has seen the emergence of a new type of agent – tower companies owning base stations and renting the infrastructure to telecom operators that in turn provide the final services. These agents are wholesale-only so do not compete with telecom operators at the retail level, and indeed have enabled telecom operators to focus capital investment more on downstream customer-facing activities while upstream the tower companies can focus on core infrastructure (Koutroumpis & Masselos, 2024). Since 2018 an impressive number of buy outs have taken place by which the tower companies have been paying big amounts to buy a large number of base stations from the established operators, creating in this way a new model of maintaining and extending the basic infrastructure for mobile communications.

The emergence of these tower companies has radically changed the structure of the wholesale market for infrastructure: from one where three or four (depending on the country) vertically integrated operators would compete in network extension and in retail services face to face, to a new setting where one or two tower companies, together with a telecom operator vertically integrated, all offering wholesale services to any operator active in the retail market. Many operators that have not sold base stations to third parties are segmenting, in any case, the assets of the wholesale business from the other business lines (some form of de-integration). The importance of tower companies in the EU has grown a lot during the last 4 years and today in some markets, as in Italy or in Spain, tower companies are managing more than half of the total sites available (Wolf & Loewer, 2022, p11).

The emergence of network sharing voluntary agreements and of the tower companies shows how telecom operators and external parties have found new business models or ways of organizing the assets so that (deployment and maintenance) costs are minimized and new networks can be deployed. These transactions are monitored by the relevant competition policy authorities, but in the EU, where strict regulatory attention was paid in fixed line infrastructures to shared assets such as poles and ducts, ex ante regulation has had little to say about these new mobile market arrangements. Arguably one might conclude that the comparative absence of such detailed oversight in the mobile market has facilitated competition in such arrangements.

Furthermore, the ex ante regulation produced during recent years in the EU has changed its focus: it does not aim at telecom operators directly, it rather centers on other agents – those that provide services over the internet. These may be big players, such as the “gatekeeper” firms defined in the Digital Markets Act (DMA) due to their size and customer reach, or smaller artificial intelligence (AI) providers. They function in a context of significant network externalities, operate with cost synergies that induce size and market shares not seen before and, more importantly, may affect rights of the users in ways that some regulation has been deemed necessary.

Two EU examples probably clarify the change in focus, although it is also observed in other jurisdictions. The approved regulation on digital platforms in the EU⁶ (DMA and DSA) states its objectives as

“... to contribute to the proper functioning of the internal market by laying down harmonized rules ensuring for all businesses, contestable and fair markets in the digital sector across the Union where gatekeepers are present, to the benefit of business users and end users” (Article 1 of DMA).

Note how the objective of “promoting competition” is stated, as well as the objective of *fairness* in the transactions involving firms using these services and the gatekeepers themselves. The focus on fairness is new. In the regulation defined in the late 90 s to liberalize the telecom industry – this objective was never established as a priority. Instead attention was focused purely on market power and anti-competitive conduct.

⁶ Regulation (EU) 2022/2065 of the European Parliament and of the Council of 19 October 2022 on a Single Market For Digital Services and amending Directive 2000/31/EC (Digital Services Act), and Regulation (EU) 2022/1925 of the European Parliament and of the Council of 14 September 2022 on contestable and fair markets in the digital sector and amending Directives (EU) 2019/1937 and (EU) 2020/1828 (Digital Markets Act).

A further shift in regulatory focus has been engendered by the rapid emergence and adoption of AIs. The rapid rise of ChatGPT, which gained 100 million users within just two months of its public launch and thus set a new record for the fastest-growing digital service,⁷ obviously illustrates the regulatory dilemma in which policy makers and regulators increasingly find themselves. The growing speed gap between digital innovations and their use on the one hand, and the related legislation and regulation on the other, is making outdated policy approaches and the regulation based on them obsolete. Fenwick, Vermeulen, and Kaal (2017) point out that regulators increasingly face the choice between “reckless action” and “paralysis”. Taking the precautionary principle as default position, cautionary regulation then prevents new technologies from reaching markets in a timely and efficient way. Howell (2024a) uses survey data to illustrate how caution and reticence are associated with more western and democratic societies.

We have witnessed a race among major digital platforms to offer competing services to ChatGPT, and with the imminent integration of these chatbots into existing business suites (such as Microsoft Teams or similar services from Google), making them mass-market ready. Furthermore, consumers are now able to download pretrained models to run on their own computers without any supervision.

In the EU, AI is now regulated by the Artificial Intelligence Act⁸ which defines different levels of risk to fundamental rights of the citizens by services and use of specific individual data that may be offered by AI and settles some do’s and some donot’s for each AI service depending on its level of risk, which in a nutshell are:

1. Dissemination of illegal content
2. Negative impact on fundamental rights (e.g. data protection, non-discrimination, freedom of expression)
3. Negative impact on democratic processes
4. The protection of public health, minors

The main objective of this proposed regulation is to protect fundamental rights, and to manage the risks to end users and society from a new and evolving technology with uncertain outcomes rather than managing economic risks and consequences from ones whose physical and market dynamics are (arguably) already well understood. The management of risks to citizens’ rights in the AI Act is similar to the objective defined in the General Data Protection Regulation.⁹ These regulations aim at protecting citizens’ rights from developments that may hinder their rights and freedom. But they also have economic implications, both for the development of AI and new business that spring from the use of data as well as on the position of the EU as a block in the world stage of innovation and technological progress.

In the US, industry self-regulation of AI as articulated in the National Institute of Standards and Technology guidelines¹⁰ also reflects the shift to a risk management focus observed in the EU, albeit with a less-prescriptive approach to the types of applications deemed unacceptable. Whereas in the EU, regulators assume an active role in determining acceptable applications and prescribing the risk management actions to be taken, in the US greater reliance is placed on the firms themselves to assume responsibility for managing user safety.

3.2. Fading public interest

While the subject of regulatory interest may be changing, so too is the consistency in accountabilities between governments and regulatory agencies. When regulatory agencies are charged with pursuing agendas in the public interest, but are not directly accountable to the public, the risk exists that they may pursue agendas that are not in that interest. Furthermore, they may continue with their own agendas even when the public may prefer that they did not (McChesney & Shughart, 1995). Deffains and Perroud (2022) argue that regulatory agencies focus too much on competition (market structure) and too little on other issues.

Examples in other areas of the administrative state can easily be found. Consider the US FDA and the “Right to Try” legislation. This law, passed on May 22, 2018, allows patients with life-threatening conditions who have exhausted approved treatments and cannot join clinical trials to access investigational options. Despite its democratic approval, FDA managers opposed it, citing existing processes and a 99% application approval rate. Critics argued these processes were too slow due to the FDA’s control. The Act bypassed FDA approval but required treatments to pass Phase I safety testing (King, 2018). Similarly, the European Central Bank (ECB) imposed a framework on its 19 member banks to apply “sustainable and responsible investment principles” to support a low-carbon economy and EU climate goals.¹¹ Although central banks assumed a mandate for non-financial objectives, but their capacity to impact emissions reduction is questionable. Proposals to expand their tools face significant conceptual and practical challenges (Cullen, 2023).

It has commonly been supposed that specialist regulatory agencies are technical in nature, requiring specialist knowledge and tools, so therefore should not be subject to the whims of the public while pursuing public interest objectives (Busuioc & Rimkutė, 2020). Often, for this reason, they are located outside of direct political influence. But it is legitimate to ask whether they are in fact or nature “technical”. And on the other hand, it is not even clear that their activities actually improve the lives of ordinary people (Peterson, 1971) and the drift in focus and scope of these agencies is well documented (Busuioc & Rimkutė, 2020).

⁷ <https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/>

⁸ <https://www.europarl.europa.eu/news/en/press-room/20240308IPR19015/artificial-intelligence-act-meps-adopt-landmark-law>

⁹ General Data Protection Regulation EU 2016/679.

¹⁰ <https://nvlpubs.nist.gov/nistpubs/ai/nist.ai.100-1.pdf>

¹¹ https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210204_1/~a720bc4f03.en.html

Let us focus on market regulation agencies, such as the European Union members' National Regulatory Authorities (NRAs) and National Competition Authorities (NCAs). If they were technical, their decisions should rely on the best available academic developments in economics to enhance welfare. In practice, however, they do not appear to rely greatly on the latest academic developments in economics. And there are good reasons, because science puts bounds on what regulators and policy makers may do. One example of a politically motivated decision is around the entry of Free as a fourth mobile operator in France, where a dogma of "competitors are good" trumped all possible economic considerations (Deffains & Perroud, 2022). Indeed, the entry of Free into the market was disruptive and profited not only from synergies with its fixed-broadband operations but also, arguably, from beneficial conditions of entry such as the relatively low cost of its license, low termination charges and a liberal initial roaming agreement. In this sense it can be argued that the regulator was disruptive (Berne, Vialle, & Whalley, 2019).

Take, for example, the Digital Markets Act (DMA) in the EU. The European Commission assumes the role here of technical regulator with a supposedly technical solution to a policy problem. In the absence of principled academic knowledge to guide the process, "theories" and "laws" are made on the fly to enable the regulatory authority to meet its objective: providing *something* that purports to govern the relevant activity. Indeed, it has been argued by Herrera-González and Castejón-Martín (2009) that telecommunications regulation is inevitably growing, as predicted by the Mises theory¹² of price control, essentially because most interventions require subsequent fixes.

Consequently, the main three concepts in the instrumentation of the DMA are arbitrary in the sense of not being the result of scientific analysis.

- The List of Core Platform Services (Article 2(2)) is comprehensive, but some are unclear, arbitrary or open to many interpretations. For example, "virtual assistant" means a software that can process demands, tasks or questions, including those based on audio, visual, written input, gestures or motions, and that, based on those demands, tasks or questions, provides access to other services or controls connected physical devices". However, a "web browser", defined as "a software application that enables end users to access and interact with web content hosted on servers that are connected to networks such as the Internet, including standalone web browsers as well as web browsers integrated or embedded in software or similar" could be interpreted as a special case of a "virtual assistant".
- The thresholds to be met to be considered as a Gatekeeper (Article 3) are likewise on the one hand vague in definition (having "significant impact on the market", provides "a core platform service which is an important gateway for business users to reach end users" and "enjoys an entrenched and durable position" or it is "foreseeable that it will have one in the near future") but on the other both specific and arbitrary in the timings of when gatekeeper liability becomes effective (a firm meeting the definition must "notify the Commission thereof without delay and in any event within 2 months after those thresholds are met" and "The Commission shall designate as a gatekeeper, without undue delay and at the latest within 45 working days after receiving the complete information referred to in paragraph 3, an undertaking providing core platform services that meets all the thresholds in paragraph 2"). The DMA also includes quantitative criteria – in terms of market cap, number of ordinary ("individual end users" in the Act) and number of business users – for designation as presumptive gatekeeper which firms can rebut (Fletcher et al., 2024).
- Likewise, the obligations imposed on gatekeepers (Articles 5 and 6) are both tightly prescriptive and arbitrary. The DMA imposes conditions on six designated "gatekeeper" firms (Alphabet, Amazon, Apple, ByteDance, Meta, Microsoft) in view of a total of 22 "platform services" offered by these companies. There is little theoretical support behind most of the provisions. Mostly, they appear to arise from a desire to tightly constrain the activities of dominant firms, or to prevent firms from becoming dominant, with little consideration of whether dominance in and of itself imposes harm to consumers in respect of the activities defined and covered in the Act.

Most problematic is that the obligations imposed on gatekeepers are so many that enforcement will of necessity be selective if it is not to paralyse the market (Andriychuk, 2023). The vagueness may cause doubt in the minds of new entrant firms about whether they will become liable inadvertently, and then break the law by failing to provide the relevant information within arbitrary statutory time-frames. This is likely to reinforce the current market structure and reduce innovation in the EU (Teece & Kahwaty, 2023). There is wide scope for the regulators to exercise discretion between the margins, with little or no possibility for policy-makers to constrain their actions. Budzinski and Mendelsohn (2023) makes the acute observation that the DMA seeks to regulate the designated big technology firms as they exist currently while simultaneously wanting to effect systemic change in the digital market. Their conclusion is that a revised antitrust (competition law) approach is likely to be more fruitful than sectoral regulation. It has also been argued that the DMA might be illegal since, among other reasons, the required principle of proportionality (required by EU treaties) is not satisfied (Lamadrid de Pablo & Bayón Fernández, 2021).

The DMA is a novel regulatory instrument that straddles competition law and sector-specific regulation (Beems, 2023). It also incorporates some principles from EU competition case law. Antitrust policy in the EU does indeed appear to have a much stronger foundation for the model of economic competition. However, this leaves to one side the question of whether or not it is a sound model for interfering with markets *ex ante*. The economic competition model is not prescriptive in matters such as the number of firms required for a market to be effectively competitive. Rather, it calls for each situation to be examined in its own context, with an explicit well-defined consumer welfare test to assess the effects of behaviors and interventions. Yet in implementation, this

¹² Mises saw that price controls of whatever kind would destabilize the balance of supply and demand, causing unwanted and unforeseen shortages or surpluses which would necessitate further rationing or other price controls, in a never-ending spiral.

model has come to have unsubstantiated arbitrary elements introduced. For example, the focus in mobile telecommunications on the “magic number of firms” (Czapracka, 2021) has had the effect of imposing strictures on decision-making regardless of their economic consequences.

In sum, therefore, so long as regulatory and antitrust authorities make their policies and decisions without sound support from the body of academic knowledge, developed using the scientific principles, they are not fulfilling their obligations to act as technical authorities. If they draw their mandate from outside the scientific traditions, then they are responding to political considerations. But as they lack the accountabilities of political entities, then they can follow these objectives largely at will. They can pursue their ideologies and destroy welfare without external discipline. Wilson and Klovers (2020) remind us that the outcome of many decades of airline and railroad regulation in the US were sufficiently bad that bipartisan consensus eventually emerged to deregulate both industries with immensely positive consequences for consumers from the deregulation.

3.3. Misalignment with national interests

As telecoms have become critical to the day-to-day functioning of nearly everything, the need has arisen for regulators to somehow also support broad national interest. The regulators (NCAs and NRAs), by their current mandate, focus primarily on market conditions rather than the broader interests of structural, strategic competitiveness and digital sovereignty – in addition to promoting competition. Given that the promotion of competition (after roughly 30 years of policy, in most places) can be taken to be a maintenance job rather than a major reconstruction task, the question arises of whether regulators can (given their established expertise in the sector) contribute by playing a slightly different role in the sector. As one example, the security and reliability of submarine cable infrastructure, albeit critical, suffer from a “triple invisibility” due to being part of a largely ignored background infrastructure, being below the surface and being far out to sea (Bueger & Liebetrau, 2021). Island nations would presumably think differently about this vulnerability than continental countries but this principle is hardly reflected in thinking about regulation.

The reasons for the unsatisfactory situation around regulator mandates are threefold:

1. Regulators have no mandate to address the broader interests of the digital sector,
2. They have no mandate to use a broader set of tools than traditional telecom regulatory policy, and
3. Some have developed a certain blindness to the significant changes, exacerbated by the institutional fossilization of “regulatory governance”.

In Europe, for example, it can be argued that telecom regulators need to break out of their sectoral silos to become more effective in the ICT ecosystem. Looking at work by the Body of European Regulators for Electronic Communications (BEREC) in recent years, one can see a willingness to do so, yet the defining policy twins of this decade, sustainability and digitization, have not yet been fully embedded in BEREC’s strategic direction, let alone in implementation. To operationalize new regulatory policies, we propose a *smart combination*¹³ of regulation, innovation policy and industrial policy to do justice to the complexity of the individual matters and their interdependencies. This can also promote regulatory innovations such as anticipatory regulation or sand-boxing and flexible policy-making in the telecommunications and digital ecosystem.

It has been argued that in the EU only France and Germany (Bora & Schramm, 2024) are able to align EU-wide competition policy to some extent with their national interests. Indeed, national interest in regulation can be as simple as having different priorities and distinct starting positions without necessarily following widely divergent principles. Prior to deregulation it had simply been understood that national telecoms champions would align themselves with government priorities and indeed there was strong support (Edmonds, 1991) in the Reagan cabinet for dropping the divestiture case against AT&T, which really started the modern era of telecoms regulation, on the basis of national security interests.

4. Trends in specific geographies

In this section we describe the trends in regulation in three geographic areas: the US, the EU as well as Australia and New Zealand. The US and the EU are the two largest economies in the world¹⁴ (at market exchange rates) and heavily influence the discourse around institutions and regulation around the world. Australia and New Zealand, although in close cultural orbit, provide an interesting contrast with substantially more government investment in infrastructure.

4.1. United States (US)

While the US is frequently characterized as the bastion of free market liberalism, an extensive regulatory federal state dates from 1887 with the Interstate Commerce Act. Individual states and even the Constitution itself also contribute to regulating the post, commerce, and other domains. However important carve-outs for speech have proved an effective shield against certain digital sector regulation in the US, notably content moderation (Huddleston, 2020), privacy (Bambauer, 2014) and net neutrality (Campbell, 2015;

¹³ “Smart” refers to an agile form of organization where project teams come together to find an appropriate solution based on the complexity of the problem and whether the path to the solution is known. For more details see “Stacey Matrix” <https://www.praxisframework.org/en/library/stacey-matrix>.

¹⁴ <https://www.imf.org/external/datamapper/NGDPD@WEO/EU/CHN/USA?year=2024>

Yoo, 2021). A troubling pattern has emerged for regulation in the US, namely a growing disinterest in both economic principles and rule of law. This pattern is most easily seen in antitrust, but it is finding its way into *ex ante* regulation.

US law places federal antitrust in two institutions: The Department of Justice (DOJ) and the Federal Trade Commission (FTC). DOJ's antitrust division and the FTC are led by persons characterizing themselves as neo-Brandeisian (NB). This school of thought, on the surface, says it seeks a return to the anti-bigness foundation of US antitrust, which it attributes to Louis Brandeis (Khan, 2017; Muris, 2023). But a careful reading of the NBs' work reveals significant divides between them and Brandeis, as well as their single mindedness. One difference between Brandeis and the NBs is in their fundamental beliefs. Brandeis's suspicion of large enterprises was based on his belief that small businesses were inherently more efficient than large businesses because no one has the mental capacity to oversee a large enterprise, whether it be business or government. And although he believed that economies of scale might exist, he thought they were rare. So in his mind, large businesses wasted economic resources and became large primarily through nefarious means.¹⁵ Brandeis's views were economic in nature, albeit mistaken economics.

The NBs, too, are wary of large businesses. Lina Khan, the current FTC chairperson, explained in 2018 that NBs want to use government to limit the size and scope of individual businesses (Khan, 2016). NBs prefer "an economy populated by many small businesses" to one directed by consumer choice (Teachout & Khan, 2014). Unlike Brandeis, NBs want government to "re-engineer" and "reorganize" US industries, including "intentionally structuring corporations and markets" (Lynn, 2012, 2022). They also dismiss economic reasoning, seeing it as a political undertaking. Teachout and Khan (2014) state that the presence of particular businesses "at any given time is the product of political decisions—made and not made—about how" those businesses are allowed to operate, which Teachout and Khan describe as their being "allowed to use their power". And any economic argument to the contrary, or indeed any economic argument at all, is faulty because there are no economics apart from politics:

"The separation [between economics and politics] constitutes an unnecessary – and arguably ideological – division that has undermined the capacity of laws to explicitly regulate the economy and the political system respectively" (Teachout & Khan, 2014).

Important economic principles, such as antitrust being primarily to serve the interests of consumers, are "unequipped" to give conclusions that Khan seeks regarding economic power (Khan, 2017). The beliefs that law is about politics and that antitrust is about holding back political influence (Teachout & Khan, 2014) lead the NBs to be dismissive of the rule of law. Muris (2023) points out that Khan emphasizes court decisions of over 40 years ago, skipping over decades of legal precedence. Former FTC Commissioner Wilson (2023) explains how the FTC is violating rule of law and due process in adopting an "I know it when I see it" policy:

"In November 2022, the commission issued an antitrust enforcement policy statement asserting that the FTC could ignore decades of court rulings and condemn essentially any business conduct that... can be labeled with a nefarious adjective — 'coercive,' 'exploitative,' 'abusive,' 'restrictive.'... The new policy contains no descriptions or definitions of these terms, many of which also lack context in the law".

According to former White House antitrust advisor Timothy Wu – a prominent NB figure – NBs are willing to bypass Congress and stack the courts if necessary to get their way. He told Politico:

"I think it's very important not to just have it focused on, you know, did Congress pass new legislation... Congress at this point is possibly the least democratic branch of the United States government" (Sisco, 2023).

He told Axios that Khan's "doing the stuff that Congress should be doing: taking on privacy, noncompetes, and AI" (Gold, 2023). If courts push back, the NB response would be to seek new judges (Sisco, 2023). This disregard for America's legal foundations is contrary to the views of Brandeis. In a case regarding the Fourth and Fifth Amendments to the US Constitution, he wrote:

"Experience should teach us to be most on our guard to protect liberty when the Government's purposes are beneficent... The greatest dangers to liberty lurk in insidious encroachment of men of zeal, well meaning but without understanding".¹⁶

Brandeis is not alone in his concerns regarding designs of government officials, even if well-meaning. Smith (1759) referred to someone who seeks to design himself what businesses and governments should do as a "man of system", who is "very wise in his own conceit" and "enamoured with the supposed beauty of his own ideal plan of government". This type of person is seemingly ignorant of the fact that real people act on their own preferences and volitions. Sowell (1995) referred to such people as "the anointed" and explained that they see themselves as operating on a higher moral and intellectual plane than do others. Arguably, people like the NBs ultimately fail because human nature directs people to defend liberty, as Brandeis points out, and to behave as market-oriented economists describe, as Smith explained. The arc of history may be long or short, but it bends according to human nature.

¹⁵ See Brandeis testimony before Senate Committee on Interstate Commerce, Science and Transportation in 1911; and his article "Competition" in the January 1913 American Legal News, which was reprinted in Brandeis (1934).

¹⁶ *Olmstead v. U.S.*, 277 U.S. 438 (1928) (dissenting).

4.2. European Union (EU)

After 25 years of liberalization of the telecom industry in the European Union (EU) the main objective – to create competitive markets for services and networks in the benefit of the users, has been achieved. In this process initially a big number of activities were closely regulated and very often the price of a service, especially wholesale, was defined by the authority. As years passed by much of the regulation has been lifted and today's regulation applies only to a few wholesale services (plus roaming). Many innovations and new networks have been deployed and made available for users, new forms of pricing models and most of all, a new ecosystem of players that make use of the internet and create value added has emerged.

Bendiek and Stuerzer (2023) confirm that regulatory power in the EU is being used to further the agendas of both European integration and digital sovereignty. The EU's Digital Markets Act (DMA) clearly places the EU rather than member states at the center of regulation for the digital economy. Traditional telecommunications regulation, which used to be the fief of national regulatory authorities is increasingly being guided by EU antitrust control, standards and policies – starting with but not limited to the EU regulations on roaming within the EU states.

On the one hand, Europe has increasingly developed into a “regulatory superpower” by designing and implementing far-reaching regulations and stricter consumer protection, which have an extraterritorial effect due to the “Brussels Effect” (Bradford, 2020). On the other hand, will this be enough to enable Europe to successfully defend its prosperity and promote its innovative and economic power in the future? Very unlikely. The European Commission (EC) has developed a remarkable “digital activism” visible in producing 16 legislative initiatives in less than three years – including the Digital Services Act, the Digital Markets Act, the Data Act, Data Governance Act, the European Data Health Space, the Artificial Intelligence Act, and associated Liability Directives (Aueamnuay, Berjón, Galehr, Graf, & Heinemann, 2024). But will this plethora of regulations be enough for Europe to successfully defend its prosperity and promote its innovation and economic power in the future on this basis?

While regulating the major digital platforms and new fields such as Artificial Intelligence seems necessary, regulating others does not improve European competitiveness and innovation. In other words, having rules and a referee is not sufficient for a game to occur: it is the players on the field (i.e., the companies, innovators, investors, and research community), who must be further strengthened and better connected to better position Europe in the digital competition space. Government regulation alone, no matter how comprehensive and sophisticated, is, to put it bluntly, only half the story, and perhaps sometimes not even necessary if the players themselves can agree on terms for rivalrous interaction (i.e. industry self-regulation). Against this backdrop, it becomes clear why we need a new policy approach to promote strategic autonomy¹⁷ and digital sovereignty¹⁸ for Europe – especially at the member-state level. Another highly topical aspect of strategic autonomy efforts that should not be forgotten is Europe's broader geopolitical threat scenario, which expands the need for strategic action in network resilience, raw materials, energy supply, securing global supply chains, etc.

A recent research report¹⁹ funded by the Konrad Adenauer Foundation concludes that Europe has not yet fully recognized its digital dependency. The results of measuring digital dependency suggest a sober reassessment of “digital autonomy”. The University of Bonn's Digital Dependency Index (DDI)²⁰ measures the relation between domestic and foreign supply in hardware and software. It has implications for various actors shaping digital policy at the national and EU levels, the key message being that the degree of digital dependency among EU members is far more significant, more far-reaching, and more multi-layered than often assumed. We can draw the following lessons from the Adenauer Foundation report.

- European countries fall behind China, South Korea, and the U.S. on every dimension.
- European governments need to rethink their entire approach to digital technologies.
- European companies and governments should make greater efforts to reduce their growing dependence on foreign intellectual property in the ICT sector.
- [European countries] should learn lessons from other “technological middle powers”, particularly South Korea and Japan.

Telecom regulators in the EU tend to become less important in the ICT ecosystem as the companies subject to their regulation (the telecom companies) become less important in the global digital economy playing field. For some, this realization has also led them to look for new fields of activity increasingly. EU telecoms markets are increasingly being bypassed and left behind by initiatives originating with large international (predominantly US) digital platforms and cloud providers, and China's “techno state policy”.

4.3. Australia and New Zealand

Australia and New Zealand have been strongly influenced initially by the United States and European trajectories, but Australia and New Zealand have recently departed down a more Asian-inspired path, with significant government investment in fixed line networks, direct government involvement in sector operations and an increasing reliance on ownership characteristics to influence sector outcomes.

¹⁷ <https://encompass-europe.com/comment/strategic-autonomy-tech-alliances>

¹⁸ [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/651992/EPRS_BRI\(2020\)651992_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/651992/EPRS_BRI(2020)651992_EN.pdf)

¹⁹ <https://www.kas.de/documents/252038/16166715/Digital+Autonomy+-+Measuring+the+Global+Digital+Dependence+Structure.pdf/fb97d384-53fd-b747-908f-2c86e8d0674b?version=1.2&t=1651491803819>

²⁰ <https://digitaldependence.eu/en/>

New Zealand was in the world vanguard of sector corporatization, liberalization and privatization in the late 1980s and early 1990s. It stood alone in the world with its Telecommunications Act 1987, relying entirely on competition law (that is, no sector-specific ex ante regulatory body) to govern sector activity. However, this did not mean the sector was “unregulated” – a number of contractual undertakings between the corporatized and privatized former government-owned incumbent and the Crown (in the person of the Minister of Communications) had the effect of imposing retail price controls, preserving nationwide equalized tariffs and ensuring that calls placed within local exchange areas (which were quite large) were not metered. The approach was quite contentious, with several high-profile court cases regarding interconnection pricing and fair charging for dial-up calls to internet exchanges, but ultimately none of the actions of the incumbent were found by the courts to have breached competition laws. Empirical analysis also confirmed that the New Zealand market was not performing any worse than a number of comparators, taking into account factors of scale, demography and geography (Howell, 2007). Nonetheless, politicization of sector affairs led to a rapid retrenchment from the pure competition law position. A sector specific regulator was introduced in 2001 (albeit within the competition authority, in an attempt to preserve the sense of competition law prevailing). However, successive imposition of functional (2006) and structural (2008) separation meant that the country had gone from the OECD’s most liberally-regulated jurisdiction to one of the most strictly regulated in seven years. A defining characteristic of separation was an absence of any economic or regulatory impact analysis of the likely effects, and the Minister, rather than the regulator, assuming responsibility for overseeing the sector transition (Howell, 2010). This stood in strong contrast to the contemporary exemplars from the European Union and the United States, where the need for principled analysis prevailed. Arguably, politicians, having once micromanaged the government-owned firm, were reluctant to let control go to private sector interests. Political involvement continued in 2009, with the government undertaking to substantially subsidize a nationwide fiber-to-the-home network (Sadowski, Howell, & Nucciarelli, 2013). Australia, by contrast, was not so hasty. While creating a sector-specific regulator very much in the mold the European Union (with access regulation a feature) prior to selling down shares of the government-owned incumbent, the sale process itself was very slow. Whereas New Zealand privatized its operator in one transaction in 1991, Australia undertook a staged approach. Shares were sold in 1997 (33%), 1999 (16.6%) and 2006 (31%). But when the fully government-owned and funded National Broadband Network (NBN) was commenced in 2009, the government still held a meaningful stake. Continual tension between the government’s role in overseeing sector regulation on the one hand, and maximizing the value of the remaining shares (intended to fund other sector initiatives – such as the NBN) on the other, considerably compromised both the ability to effectively govern the sector and the willingness of the private sector to invest on the government’s terms. Eventually, the impasse was broken by the effective re-nationalization of fixed line operations via the wholly government-owned NBN (Howell & Potgieter, 2020).

The return of monopoly government fixed-line sector ownership in Australia has been mirrored by effective sector re-nationalization in New Zealand. Political decisions about sector regulation in 2012 led to a substantial exit of foreign capital from the largest fiber partner, with the effect that by 2014 the majority of shares came to be owned by government investment funds (albeit at arms-length from core government) (Howell & Sadowski, 2018). Mobile networks, meanwhile, in both countries have developed with minimal regulatory intervention, especially as data transmission has come to dominate over voice calling.

More recent moves in New Zealand have also seen a landmark decision being made to grant 20% of all future commercial spectrum rights in perpetuity to indigenous interests (25% of 5G spectrum has already been allocated to them). This allocation is arguably to address obligations arising from a Treaty signed by the Crown and indigenous representatives in 1840, and it also draws upon rights articulated in the United Nations Declaration of the Rights of Indigenous Peoples (Howell & Tang, 2023). It is quite possible, given recent trends, that Australia may also follow New Zealand’s lead. Moreover, the New Zealand allocations come also with the requirement that these indigenous interests participate in spectrum policy making in a role traditionally reserved for government parties only. This has the effect of blurring the long-standing acceptance that policy-making and sector operations be separated.

With regard to the regulation of digital markets, Australia has taken an aggressive and early adopter stance in some aspects of digital media. First was its requirement (subsequently adopted by Canada and explored in other jurisdictions) that a number of large digital platform operators reach voluntary agreements to compensate traditional media companies for content disseminated by the platforms, or face mandatory arbitration. The alleged purpose of this world-leading intervention was to replace the advertising revenues lost by the traditional media companies to online platforms, which were previously used to support public interest journalism - deemed essential to the operation of Australia’s democratic institutions. The novel approach of requiring a new entrant to compensate an incumbent for lost revenues when using its infrastructure (content) bears some similarities to access regulation except that in this case it is the dominant entrant firms who are required to compensate the legacy firms to prevent them failing, rather than to stimulate competitive interactions (Howell & Tews, 2021). Second, Australia has also been a leader in establishing an Online Safety Act overseen by an eSafety Commissioner to protect Australians from harmful online content (Howell, 2024b). However, neither intervention has been widely copied - arguably because it is not yet clear that either is workable in the long run. It may well be that for small distant countries lacking direct jurisdiction over large online platforms, adopting a conservative strategy and waiting to see how successful larger jurisdictions and even industry self-governance are in regulating digital platforms and AI technologies - essentially New Zealand’s position to date - may prove more successful in the long run.

5. Discussion

In this section, we discuss the fundamental differences between the EU and US approaches with reference to the specific issue of broadband cost recovery and propose a research agenda for future work in this area.

5.1. Contrasting the EU and US approaches

The US Constitution describes Congress' role to make certain regulations and conceptualizes "rights" to protect the individual from the power of the state, using the concept of "negative rights" - something that automatically exists unless and until someone negates them. By contrast, EU digital regulation is largely driven by the concept of positive rights, something that must be secured to ensure well-being (e.g. right to an education, the right to food, the right to medical care, the right to housing, or the right to a job.). This reasoning is used to justify regulation whether antitrust enforcement, net neutrality, the General Data Protection Regulation (GDPR), artificial intelligence, or fair share. Hence EU net neutrality regulation is hardly in opposition to "fair share"; rather it is a natural progression. The EU regulates one side of the internet market to ensure end-users rights, hence it must regulate the other side to ensure end-user rights.

While philosophy and reasoning differ, so do the proposed instruments. Take broadband cost recovery: the US proposes a regulatory intervention whereas the suggested step for EU is a market-based solution of "balanced negotiation" (GSMA Europe, 2023). For example, in the pragmatic approach in the US, assessing content providers for the Universal Service Fund (USF, a four-part federal government program that includes funding for telecommunications providers serving high-cost areas) could put fund on sustainable footing, generate enough revenue to fund the Affordable Connectivity Program (ACP, terminated at the end of May 2024 due to a lack of funding, the ACP subsidized broadband connectivity for qualifying households, including those on tribal lands) in perpetuity, and avoid any concern of unjust enrichment from negotiation. The bi-partisan Funding Affordable Internet with Reliable (FAIR) Contributions Act and related bills would implement the policy. This does not require a change to the Communications Act nor does it suggest that the Federal Communications Commission could regulate content providers for other purposes. It simply means that contributions can be collected from content providers.

Differences in tech policy between US and EU can be summarized with US philosophical emphasis on pragmatism versus the European narrative of individual rights, or in layman's terms "law in action vs. law on the books" (Winn, 2019). Alternatively, this may be viewed within the larger philosophical dichotomy of Anglo-American or "analytic" (Stroll, 2000) philosophy vs. "continental" philosophy. The EU narrative of individual rights draws on the Enlightenment (*Liberté, Égalité, & Fraternité*). While "Continental" is a catchall term for the various philosophical schools emerging on the European continent, it can be epitomized in Kant's emphasis on knowledge, experience, and reality bound and shaped through philosophical reflection rather than exclusively empirical inquiry (Solomon, 1988). Although a European rights tradition is likely a post-World War II development breaking with Europe's prior nationalistic history, arguably Roman law provided a foundation for a common European legal heritage and basis for the European narrative which legitimized European integration (Tuori, 2022).

Reforms to the USF to ensure the ACP would be an example of American pragmatism, using the tools at hand to get the job done, sensibly, realistically, and with expediency via legislation. However, an American style USF solution is not necessarily desirable in EU. Although founded to strengthen markets and economic development, the EU has increasingly focused on regulatory interventions to deliver fundamental rights. However, an American style USF solution would be difficult to implement in Europe as there is no pan-European assessment authority capable of collecting and redistributing funds across member states. Hence empowering individual EU actors, whether firms or states to engage with tech companies for cost recovery makes more sense. This has the effect of both strengthening the EU's own legitimacy and empowering the individual member states.

Likewise, EU efforts to regulate so-called Big Tech provides an important display of European autonomy and sovereignty (Broeders, Cristiano, & Kaminska, 2023), a form of technology leadership and legitimacy in a competitive multi-polar world (Sahin & Barker, 2021). It could even, uncharitably, be called a "containment policy" vis-à-vis the other two powers, the US and China (Sheng, 2022) since none of the Big Tech firms are European. The choice of policy instrument for cost recovery mirrors the unique political economy of each region: the US focuses on ensuring affordability for end users and the sustainability of its existing broadband subsidy efforts, favoring a pragmatic approach by utilizing proven, existing tools instead of creating new methodologies; the EU prioritizes fundamental rights and seeks to empower small European nations and firms to compete with powerful global players, a key theme in EU tech policy (Layton & Potgieter, 2023).

The opening for "fair share" emerged with European Commission jointly launching a consultation on the *future of electronics communications networks and their infrastructures*.²¹ and a proposal for the Gigabit Infrastructure Act.²² The European Parliament weighed in on this topic with a recommendation in its 2022 Competition report noting,

"... the economic sustainability of telecom networks is essential to achieving the 2030 Digital Compass connectivity targets and high performance connectivity for all citizens within the EU without jeopardising competition rules; urges the Commission to address and mitigate persistent asymmetries in bargaining power as set out by the European Declaration on Digital Rights and Principles for the Digital Decade; calls for the establishment of a policy framework where large traffic generators contribute fairly to the adequate funding of telecom networks without prejudice to net neutrality" (para 44).²³

²¹ "The Future of the Electronic Communications Sector and Its Infrastructure | Shaping Europe's Digital Future", EU, February 23, 2023, <https://digital-strategy.ec.europa.eu/en/consultations/future-electronic-communications-sector-and-its-infrastructure>.

²² "Gigabit Infrastructure Act Proposal and Impact Assessment | Shaping Europe's Digital Future", February 23, 2023, <https://digital-strategy.ec.europa.eu/en/library/gigabit-infrastructure-act-proposal-and-impact-assessment>.

²³ René Repasi, "REPORT on Competition Policy – Annual Report 2022 | A9-0183/2023 | European Parliament", May 8, 2023, https://www.europarl.europa.eu/doceo/document/A-9-2023-0183_EN.html.

European broadband cost recovery can be explored as a logical, sequential step in regulating the technology sector, following regulation of telecommunications.

The Charter of Fundamental Rights of the European Union (2000)²⁴ declares it is “conscious of its spiritual and moral heritage”, that the Union is “founded on the indivisible, universal values of human dignity, freedom, equality and solidarity”; that it places the “individual at the heart of its activities, by establishing the citizenship of the Union and by creating an area of freedom, security and justice”. It deems it “necessary to strengthen the protection of fundamental rights in the light of changes in society, social progress and scientific and technological developments by making those rights more visible in a Charter”. Importantly, it observes that “Enjoyment of these rights entails responsibilities and duties with regard to other persons, to the human community and to future generations. The Union therefore recognizes the rights, freedoms and principles set out hereafter”.

The EU has also developed principles that could in future shape the market. Chapter II of the EU Declaration of Digital Rights and Principles (2023)²⁵ on “Solidarity and Inclusion” describes the goal of “developing adequate frameworks so that all market actors benefiting from the digital transformation assume their social responsibilities and make a fair and proportionate contribution to the costs of public goods, services and infrastructures, for the benefit of all people living in the EU”. The notion of a “fair and proportionate contribution” underscores the consultation and builds on a foundation of inviolable fundamental rights for individuals. Similarly, there is a recognition that policy must be developed to ensure a “fair and proportionate contribution” to “services and infrastructures”. This presumes the obligations and responsibilities of electronic communications networks (ECNs) which are enumerated in EU law. Moreover, this consultation also suggests that large technology platforms, which the EC defines as “large traffic generators” (LTGs), might also have responsibilities in view of infrastructure and that the consultation will assist to define and codify these requirements.

As such, the consultation has very little to do with the economic impacts of the policy on the relevant parties. It follows in the vein of 2015/2120 which did not discuss the economic outcomes for regulated parties.²⁶ Rather, it was a statement of principle for end user rights. Importantly this consultation builds upon prior EU policy and does not negate or deviate from the stated goals. Similarly, this consultation on the future of the electronic communications sector and its infrastructure is primarily focused on the rights of individuals. It observes, “Reliable, fast and secure connectivity is a must for everybody and everywhere in the Union, including in rural and remote areas”. Hence the conclusion is that both ECNs and LTGs must contribute in a “fair and proportional” way. This introduces a principle-based approach to how the markets used by end-users function.

Regardless of one’s view of the EU’s fundamental approach to individual rights, it has succeeded in being adopted in the EU and around the world. The General Data Protection Regulation (GDPR), for example, has become the de facto global standard for data protection, being adopted by South Korea, Japan, Brazil, Turkey, Chile, South Africa, Argentina, and other countries. The EU’s approach for fundamental individual rights has been salient in law and practice. As [Majone \(2019\)](#) suggests, “Privatization and deregulation have created the conditions for the rise of the regulatory state to replace the dirigiste state of the past”. Because national monopolies in the EU have been privatized (with some exceptions such as Luxembourg and with several governments retaining ownership stakes in the incumbent), a vacuum remains today and hence the desire (at least by some) for the return of the nation state to play a role in the economy. While the role of regulation in the US is highly detailed and proscribed and delivered with bureaucratic specificity, the role of regulation Europe is amorphous, with law, policy, and regulatory intervention blending together.

The regulatory approach in the United States for broadband cost recovery is characterized by pragmatism and the use of established mechanisms. The US leverages the Universal Service Fund (USF), a long-standing tool managed by the Federal Communications Commission (FCC). This fund collects approximately \$10 billion annually from telecommunications companies to support broadband deployment in high-cost rural areas, schools, libraries, rural healthcare facilities, and broadband subsidies for low-income Americans. The USF’s legitimacy and effectiveness stem from decades of experience and recognition. The FCC’s role as an intermediary ensures that revenue collection, fund distribution, and policy adjustments are managed efficiently, avoiding direct negotiations between broadband and edge providers that could lead to suboptimal outcomes. This pragmatic approach focuses on using existing tools and institutions to achieve policy goals, rather than creating new methodologies .

The American approach also emphasizes affordability and sustainability of broadband services. The policy aims to ensure that broadband remains affordable for end users while maintaining the sustainability of broadband subsidy programs like the USF and the Affordable Connectivity Program (ACP). The focus is on pragmatic solutions that avoid uncertainty and expedite the deployment of broadband services. This involves assessing contributions from the largest edge providers based on advertising revenue, user numbers, and cloud computing throughput ([Layton & Potgieter, 2023](#)). The goal is to balance the needs of low-income Americans and ensure the sustainability of broadband services without introducing new complexities. This practical approach reflects the broader American regulatory philosophy of addressing issues with proven, effective tools.

EU policy in several areas is being shaped by the notion of “strategic autonomy” which increasingly forms part of a state-building narrative rather than a set of market-driven innovations ([Miró, 2023](#)). In the words of former European Commission President Ursula von der Leyen,

²⁴ “Charter of Fundamental Rights of the European Union” (EU, December 18, 2000), https://www.europarl.europa.eu/charter/pdf/text_en.pdf.

²⁵ “European Declaration on Digital Rights and Principles | Shaping Europe’s Digital Future”, EU, February 7, 2023, <https://digital-strategy.ec.europa.eu/en/library/european-declaration-digital-rights-and-principles>.

²⁶ “Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 Laying down Measures Concerning Open Internet Access and Amending Directive 2002/22/EC on Universal Service and Users’ Rights Relating to Electronic Communications Networks and Services and Regulation (EU) No 531/2012 on Roaming on Public Mobile Communications Networks within the Union (Text with EEA Relevance)”, 310 OJ L §(2015), <http://data.europa.eu/eli/reg/2015/2120/oj/eng>.

“we must have mastery and ownership of key technologies in Europe”

which constitutes an entirely political agenda. The presumed autarky is in opposition to two actors: the US (primarily and perennially) and China. [Barker \(2020\)](#) refers to this as “the logic of Brexit” and points out that in pursuing this expansive goal through a policy of techno-Gaullism, the EU runs the risk of neglecting its historic strengths in standard-setting and the application of information technology in precision engineering. The US is largely unconcerned about this imperative since its companies remain the virtually unchallenged leaders in consumer-facing technology and digital services.

5.2. Research agenda

The focus of regulatory interest appears to be moving away from its historic economic origins. To what it is moving is not so clear. On the one hand, this may be towards the safeguarding of legal or other rights (however these may be defined). Yet there is no clear set of yardsticks and benchmarks against which these can be measured or assessed. On the other hand, there are more clear signs that the regulatory prerogative requires no tests to be met before action is taken, because ultimately these powers lie with sovereign governments. Governments regulate as they do because they control both the rules and the rule-making. Maybe it was a false hope thirty years ago to presume that technical, rather than political, standards could prevail? It was perhaps also naive to believe that telecommunications, which had always been shaped by socio-political incentives and goals, would (after a brief period of reform called *deregulation*) transition to a purely market-driven economic sector. This leads us to two specific research questions.

- If telecommunications are not transitioning to a purely market-driven economic sector (as appears to be the case), how does one properly delineate the responsibilities of the regulator given that digital communication and products encompass such a large part of the modern economy?
- If effective regulation is aimed (alternatively) mainly at the safeguarding of legal or other rights, what could be appropriate yardsticks and benchmarks?

Looking to the future, the rapid emergence of AI applications is challenging both the industry and regulators and policy-makers in coming to agreement on how this new sector will be governed. New general purpose transformer tools such as GPT-4 and Llama-3 can, on the one hand, be considered to be infrastructures like telecommunications networks supporting internet services, rather than as simple applications such as web pages using the internet which, on the other hand, have not been subject to a great deal of government regulation at all. However, application development has been undertaken in an environment characterized by a lot of voluntary standard-setting and collaboration between the providers – a form of industry self-governance. Given the international nature of these applications, it was not necessarily possible for governments to take a lead in this area.

The early stages of AI development have similarly been characterized by a considerable amount of sharing between the main development companies and wider stake-holding groups, including universities and government agents, via collective voluntary organizations such as the AI Alliance and the Frontier Model Forum. Yet increasingly, national governments and the EU are being called upon to step in and regulate this new sector and have made tentative steps to do so. Given the highly variable experience of regulation observed in this discussion, it begs the question of whether what has been learned in the past is either relevant or suitable to be leveraged for regulating AIs. Nonetheless, the EU as the early leader, has adopted a very similar approach to regulating AIs as it has in the past for both the GDPR and Digital Markets – through an emphasis on individual interests and rights ([Lombardi, 2023](#)), a risk-based approach and extraterritorial application. Given that advanced large language models such as GPT-4 appeared rather abruptly and will have very interesting and wide-ranging effects on the content market, we suggest the following specific research question.

- Is there a principled way to regulate the action of software and quasi-autonomous software agents that is not purely reactive?

We suggest that a research agenda for the future should also include considering the directions taken in the regulation of AIs in different jurisdictions against the issues raised in this discussion. If the appetite for regulation has expanded, but it is not clear what is being regulated and how success is being measured, then it is not clear whether the regulations will harm or help consumers in the long run. These activities warrant ongoing observation and analysis from researchers. If politicization is irreversible, have the economic principles of sectoral regulation already been replaced by a different set of principles that can in fact be integrated into a larger regulator regime with suitable checks and balances e.g. a digital super-regulator?

6. Conclusion

The international perspective confirms both the persistence of regulation and its ability to expand from its initial telecommunications scope into all areas of the digital economy. However, a consensus appears to exist about the disconnection of regulation from the original intentions to promote more competitive markets in telecommunications and digital markets as a means towards the end of improved industry outputs and economic consumer welfare.

Whether in Europe, the United States or elsewhere, and regardless of the technologies concerned (fixed or mobile, internet platforms, AI), the focus of regulatory interest has shifted from its historic economic origins. Where to it is shifting is not so clear. It could be either or more than one among the protection of legal rights or fair treatment of the individual or perhaps social inclusion. The previously envisioned transition of telecommunications to a purely market-driven economy after a relatively short period of *deregulation* did not transpire in the last 30 years. [Horwitz \(1989\)](#) pointed out that the process in the US was similar for

several infrastructure industries, all of which had been regulated in the Depression/New Deal era. The nature of the price-and-entry regulation that prevailed necessarily created cartels (Horwitz, 1989) but helped to guarantee availability and affordability of services. In the rest of the world, state monopolies on telecommunications were more usual but had similar aims – guaranteeing availability and affordability.

In countries like New Zealand and Chile which then moved furthest in term of deregulation it turned out that in some areas, like interconnection, it was more efficient to simply have a regulator rather than to leave everything to the courts and to private negotiation (Economides, 1999; Spiller & Cardilli, 1997). However, the deregulation impetus was more significantly derailed from the original track,

- first by the rise of mobile telephony which introduced, especially in the developed countries which already had a high penetration of fixed lines, a new impetus to guarantee coverage and affordability,
- second by the rise of data which did not only do the same but also started to cut into revenues from services (calls and text messages) where networks had a termination monopoly as customers shifted to over-the-top (OTT) services for even basic communications, and
- third by the rise of a small number of content access providers that also deliver video streaming, other entertainment, conferencing and cloud services over the data networks and who have managed to monetize actual content, in contrast to the traditional telecommunications market which either charge by volume of traffic (or speed of connection) or cooperate with the content providers by bundling content products.

By this time there is a tangle of legacy regulation to manage and sectoral regulation has therefore singularly failed to wither away. Our research agenda is a roadmap for future research into the proper role of economic regulation and its relationship to political imperatives.

CRedit authorship contribution statement

Bronwyn Howell: Writing – review & editing, Writing – original draft, Project administration, Investigation, Formal analysis, Conceptualization. **Fernando Herrera González:** Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Conceptualization. **Georg Serentschy:** Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Conceptualization. **Mark Jamison:** Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Conceptualization. **Petrus Potgieter:** Writing – review & editing, Writing – original draft, Project administration, Investigation, Formal analysis, Conceptualization. **Roslyn Layton:** Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Conceptualization. **Íñigo Herguera García:** Writing – review & editing, Writing – original draft, Investigation, Formal analysis, Conceptualization.

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References

- Andriychuk, O. (2023). Do DMA obligations for gatekeepers create entitlements for business users? *Journal of Antitrust Enforcement*, 11(1), 123–132.
- Aueamnuay, C., Berjón, C., Galehr, S., Graf, L., & Heinemann, A. (2024). Digital regulation in the European Union. In *Zeitschrift für Europarecht*.
- Bambauer, J. (2014). Is data speech? *Stanford Law Review*, 5, 7–120.
- Barker, T. (2020). Europe can't win the tech war it just started'. *Foreign Policy*, 16.
- Beems, B. (2023). The DMA in the broader regulatory landscape of the EU: an institutional perspective. *European Competition Journal*, 19(1), 1–29.
- Bendiek, A., & Stuerzer, I. (2023). The Brussels effect, European regulatory power and political capital: Evidence for mutually reinforcing internal and external dimensions of the Brussels effect from the European digital policy debate. *Digital Society*, 2(1), 5.
- Berhin, D., Godart, F., Jolles, M., & Nihoul, P. (2005). Sector-specific regulation in European electronic communications—meant to disappear? *info*, 7(1), 4–19.
- Berne, M., Vialle, P., & Whalley, J. (2019). An analysis of the disruptive impact of the entry of Free Mobile into the French mobile telecommunications market. *Telecommunications Policy*, 43(3), 262–277.
- Bora, S. I., & Schramm, L. (2024). Intergovernmentalism in a supranational field: France, Germany, and EU competition policy reform. In *West European politics* (pp. 1–29).
- Bradford, A. (2020). *The Brussels effect: How the European union rules the world*. USA: Oxford University Press.
- Brandeis, L. D. (1934). In Osmond K. Fraenkel (Ed.), *The curse of bigness*. New York: Viking Press.
- Broeders, D., Cristiano, F., & Kaminska, M. (2023). In search of digital sovereignty and strategic autonomy: Normative power Europe to the test of its geopolitical ambitions. *JCMS: Journal of Common Market Studies*.
- Budzinski, O., & Mendelsohn, J. (2023). Regulating big tech: From competition policy to sector regulation? *ORDO*, 72(1), 215–255.
- Bueger, C., & Liebetrau, T. (2021). Protecting hidden infrastructure: The security politics of the global submarine data cable network. *Contemporary Security Policy*, 42(3), 391–413.
- Bulfone, F. (2020). New forms of industrial policy in the age of regulation: A comparison of electricity and telecommunications in Italy and Spain. *Governance*, 33(1), 93–108.
- Busuioc, M., & Rimkutė, D. (2020). Meeting expectations in the EU regulatory state? Regulatory communications amid conflicting institutional demands. *Journal of European Public Policy*, 27(4), 547–568.
- Campbell, F. B. (2015). The first amendment and the internet: The press clause protects the internet transmission of mass media content from common carrier regulation. *Nebraska Law Review*, 94(559).

- CMS Law (2024). New obligations for providers of electronic communication services and manufacturers of electronic communication devices. Retrieved November 11, 2024 from <https://cms.law/en/ita/publication/new-obligations-for-providers-of-electronic-communication-services-and-manufacturers-of-electronic-communication-devices>.
- Codagnone, C., & Weigl, L. (2023). Leading the charge on digital regulation: The more, the better, or policy bubble? *Digital Society*, 2(1), 4.
- Cullen, J. (2023). Central banks and climate change: Mission impossible? *Journal of Financial Regulation*, fjad003. <http://dx.doi.org/10.1093/jfr/fjad003>.
- Czapracka, K. (2021). 'No magic number' means 'no magic number': will the EU court turn the tide on four-to-three mobile mergers in Europe? *Competition Law Journal*, 20(2), 65–77.
- Deffains, B., & Perroud, T. (2022). Current issues on regulation: A view from France. *European Public Law*, 28(1).
- Economides, N. (1999). The Telecommunications Act of 1996 and its impact. *Japan and the World Economy*, 11(4), 455–483.
- Edmonds, M. (1991). Defence interests and United States policy for telecommunications. In *The promotion and regulation of industry in Japan* (pp. 207–232). London.
- Exmeyer, P. C., & Hall, J. L. (2023). High time for a higher-level look at high-technology: Plotting a course for managing government information in an age of governance. *Public Administration Review*, 83(2), 429–434.
- Fenwick, M., Vermeulen, E. P., & Kaal, W. (2017). Regulation tomorrow: Or, what happens when technology is faster than the law? *American University Business Law Review*, 6(3), 561–594.
- Fletcher, A., Crémer, J., Heidhues, P., Kimmelman, G., Monti, G., Podszun, R., et al. (2024). The effective use of economics in the EU Digital Markets Act. *Journal of Competition Law & Economics*, 20(1–2), 1–19.
- Gold, Ashley (2023). Assessing two years of Lina Khan at the FTC. Axios <https://www.axios.com/pro/tech-policy/2023/06/12/assessing-two-years-of-lina-khan-at-the-ftc>. (Accessed 9 June 2023).
- GSMA Europe (2023). Telecom sector joins forces in call for new policies to drive EU connectivity leadership. <https://www.gsma.com/gsmaeurope/news/telecom-sector-joins-forces-in-call-for-new-policies-to-drive-eu-connectivity-leadership/>. (Accessed 9 June 2023).
- Hausman, J. A., & Taylor, W. E. (2012). Telecommunications deregulation. *American Economic Review*, 102(3), 386–390.
- Herrera-González, F., & Castejón-Martín, L. (2009). The endless need for regulation in telecommunication: An explanation. *Telecommunications Policy*, 33(10–11), 664–675.
- Horwitz, R. B. (1989). *The irony of regulatory reform: The deregulation of American telecommunications*. USA: Oxford University Press.
- Howell, Bronwyn (2007). *Pendulous progress 20 years of NZ telcoms regulation: Competition & regulation times 371305*, New Zealand Institute for the Study of Competition and Regulation, URL <https://ideas.repec.org/p/vuw/vuwrcr/371305.html>.
- Howell, B. (2010). Politics and the pursuit of telecommunications sector efficiency in New Zealand. *Journal of Competition Law and Economics*, 6(2), 253–276.
- Howell, B. E. (2024a). Australia rules social media, O.K.? AEIdeas, American Enterprise Institute May 20 2024. <https://www.aei.org/technology-and-innovation/australia-rules-social-media-ok/>. (Accessed 27 July 2024).
- Howell, B. E. (2024b). Weird? Institutions and consumers' perceptions of artificial intelligence in 31 countries.
- Howell, B. E., & Potgieter, P. H. (2020). Politics, policy and fixed-line telecommunications provision: Insights from Australia. *Telecommunications Policy*, 44(7), Article 101999.
- Howell, B. E., & Potgieter, P. H. (2023). Shooting the messenger: an evaluation of New Zealand's safer online services and media platforms proposal. In *The 16th International Telecommunications Society Asia-Pacific Conference*.
- Howell, B. E., Potgieter, P. H., & Sofe, R. (2018). From design to action: Papua New Guinea's latest state-owned enterprise policy. *Asia Pacific Journal of Public Administration*, 40(4), 260–269.
- Howell, Bronwyn, & Sadowski, Bert (2018). Anatomy of a public-private partnership: hold-up and regulatory commitment in ultrafast broadband. *Telecommunications Policy*, 42(7), 552–565.
- Howell, B. E., & Tang, X. (2023). Using spectrum allocations to address indigenous rights claims: the case of New Zealand. *Telecommunications Policy*, 47(10), Article 102642.
- Howell, B. E., & Tews, S. (2021). Australia's standoff with big tech. AEIdeas, American Enterprise Institute March 23 2021. <https://www.aei.org/technology-and-innovation/australias-standoff-with-big-tech-highlights-from-my-conversation-with-bronwyn-howell/>. (Accessed 27 July 2024).
- Huddleston, J. (2020). The potential impact of proposed changes to Section 230 on speech and innovation. *George Mason Law Review*, 28(1221).
- Ibáñez Colomo, P. (2022). Future-proof regulation against the test of time: the evolution of European telecommunications regulation. *Oxford Journal of Legal Studies*, 42(4), 1170–1194.
- Kahn, A. E. (2007). Network neutrality. AEI-Brookings Joint Center Working Paper No. RP07-05. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=973513. (Accessed 23 June 2023).
- Khan, L. M. (2016). Amazon's antitrust paradox. *Yale Law Journal*, 126(710).
- Khan, L. M. (2017). The ideological roots of America's market power problem. *Yale Law Journal Forum*, 127(960).
- King, A. (2018). Criticism of 'right to try' law for experimental drugs after it passes in US. *Chemistry World*, June 18 2018. <https://www.chemistryworld.com/news/fears-that-us-right-to-try-law-could-put-patients-at-risk/3009118.article>. (Accessed 29 August 2023).
- Koutroumpis, P., & Masselos, K. (2024). Tower companies vs mergers in mobile networks. *IEEE Communications Magazine*, <https://ora.ox.ac.uk/objects/uuid:ad29c6ec-5b51-4e5d-9d4e-a814d2bb49b9>. (Accessed 7 July 2024).
- Kuś, A., & Massaro, M. (2022). Analysing the C-Band spectrum auctions for 5G in Europe: Achieving efficiency and fair decisions in radio spectrum management. *Telecommunications Policy*, 46(4), Article 102286.
- Lamadrid de Pablo, A., & Bayón Fernández, N. (2021). Why the proposed DMA might be illegal under article 114 TFEU, and how to fix it. *Journal of European Competition Law & Practice*, 12(7), 576–589.
- Layton, R., & Potgieter, P. (2023). The political economy of broadband cost recovery: South Korea, USA and EU. In *32nd European regional ITS conference, Madrid 2023: Realising the digital decade in the European union—easier said than done? (No. 277996)*. International Telecommunications Society (ITS), <https://ideas.repec.org/p/zbw/itse23/277996.html>. (Accessed 7 August 2024).
- Liberté, Egalité, & Fraternité The enlightenment and human rights, Liberty, equality, fraternity: Exploring the French revolution, <https://revolution.chnm.org/exhibits/show/liberty--equality--fraternity/enlightenment-and-human-rights>. (Accessed 6 September 2023).
- Lombardi, A. (2023). Disciplina della tutela dei dati personali e regolazione dell'intelligenza artificiale: rapporti, analogie e differenze tra GDPR e AI Act. *European Journal of Privacy Law & Technologies*, 2(2).
- Lynn, B. C. (2012). Built to break: The international system of bottlenecks in the new era of monopoly. *Challenge*, 55(2), 87–107.
- Lynn, B. C. (2022). Antimonopoly: A master narrative for democracy?. *Democracy*. <https://democracyjournal.org/magazine/66/antimonopoly-a-master-narrative-for-democracy/>. (Accessed 6 September 2023).
- Majone, G. (2019). The rise of the regulatory state in Europe. In *The state in Western Europe* (pp. 77–101). Routledge.
- McChesney, F., & Shughart, W. (1995). *The causes and consequences of antitrust: The public choice perspective*. Chicago University Press.
- Miró, J. (2023). Responding to the global disorder: the EU's quest for open strategic autonomy. *Global Society*, 37(3), 315–335.
- Moschel, W. (2009). The future regulatory framework for telecommunications: General competition law instead of sector-specific regulation—A German perspective. *European Business Organization Law Review (EBOR)*, 10(1), 149–163.

- Muris, T. J. (2023). *Neo-Brandeisian antitrust: Repeating history's mistakes*. American Enterprise Institute, <https://www.aei.org/research-products/report/neo-brandeisian-antitrust-repeating-historys-mistakes/>. (Accessed 6 September 2023).
- Nunziato, D. C. (2023). The digital services act and the Brussels effect on platform content moderation. *Chicago Journal of International Law*, 24(1), 115–128.
- Park, S., & Sang, Y. (2023). The changing role of nation states in online content governance: A case of Google's handling of government removal requests. *Policy & Internet*, 15(3), 351–369.
- Peterson, M. B. (1971). *The regulated consumer*. Ottawa, Illinois: Green Hill Publishers.
- Popiel, P. (2020). Let's talk about regulation: The influence of the revolving door and partisanship on FCC regulatory discourses. *Journal of Broadcasting & Electronic Media*, 64(2), 341–364.
- Sadowski, Bert, Howell, Bronwyn, & Nucciarelli, Alberto (2013). Structural separation and the role of public-private partnerships in New Zealand's UFB initiative. *Communications & Strategies*, 1(91), 57–80.
- Sahin, K., & Barker, T. (2021). Europe's capacity to act in the global tech race: Charting a path for Europe in times of major technological disruption. https://dgap.org/sites/default/files/article_pdfs/210422_report-2021-6-en-tech.pdf. (Accessed 6 September 2023).
- Sheng, L. (2022). Big tech containment policies of the European union. In *Big tech firms and international relations: The role of the nation-state in new forms of power* (pp. 71–92). Singapore: Springer Nature Singapore.
- Sisco, J. (2023). Biden's former antitrust guru issues a warning. Politico. <https://www.politico.com/news/2023/03/07/wu-doj-antitrust-ftc-00085760>. (Accessed 6 September 2023).
- Smith, A. (1759). In A. Millar, A. Kincaid, & J. Bell (Eds.), *The theory of moral sentiments*. Edinburgh London.
- Solomon, Robert C. (1988). *Continental philosophy since 1750: The rise and fall of the self*. New York: Oxford University Press.
- Sowell, T. (1995). *The vision of the anointed: Self-congratulation as a basis for social policy*. New York: Basic Books.
- Spiller, P. T., & Cardilli, C. G. (1997). The frontier of telecommunications deregulation: Small countries leading the pack. *Journal of Economic Perspectives*, 11(4), 127–138.
- Stroll, A. (2000). *Twentieth-century analytic philosophy*. Columbia University Press.
- Teachout, Z., & Khan, L. M. (2014). Market structure and political law: A taxonomy of power. *Duke Journal of Constitutional Law & Public Policy*, 9(37).
- Teece, D. J., & Kahwaty, H. J. (2023). Is the digital markets act the cure for Europe's platform ills? Evidence from the European commission's impact assessment. In *The economics and regulation of digital markets* (pp. 5–52). Emerald Publishing Limited.
- Tuori, K. (2022). The invention of the European legal tradition and the narrative of rights. *Journal of European Studies*, 52(3–4), 204–218.
- Wilson, C. (2023). Why I'm resigning as an FTC commissioner. *The Wall Street Journal*, <https://www.wsj.com/articles/why-im-resigning-from-the-ftc-commissioner-ftc-lina-khan-regulation-rule-violation-antitrust-339f115d>. (Accessed 6 September 2023).
- Wilson, C. S., & Klovers, K. (2020). The growing nostalgia for past regulatory misadventures and the risk of repeating these mistakes with Big Tech. *Journal of Antitrust Enforcement*, 8(1), 10–29.
- Winn, J. K. (2019). The governance turn in information privacy law. Available at SSRN 3418286. <https://ssrn.com/abstract=3418286>.
- Wolbers, R. (2023). The future of the Christchurch Call to Action: How to build multistakeholder initiatives to address content moderation challenges. In *Ian Axford fellowship (New Zealand) in public policy report*. <https://axfordfellowships.org.nz/wp-content/uploads/2023/08/2023-08-Rachel-Wolbers-Axford-Fellow-The-Future-of-the-Christchurch-Call-to-Action.pdf>. (Accessed 27 July 2024).
- Wolf, O., & Loewer, U. (2022). The economic contribution of the European tower sector. In *EY-parthenon and the European wireless infrastructure association*. <https://www.ey.com/content/dam/ey-unified-site/ey-com/en-gl/insights/strategy/documents/ey-parthenon-european-wireless-infrastructure-report-2022.pdf>.
- Yoo, C. S. (2021). The first amendment, common carriers, and public accommodations: net neutrality, digital platforms, and privacy. *Journal of Free Speech Law*, 1, 463.