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INNOVATION LETTER

THE INTERPLAY BETWEEN TELECOMMUNICATIONS OPERATORS AND DIGITAL PLATFORMS IN AN EVOLVING DIGITAL ECOSYSTEM

Abstract

Digital ecosystem comprises a composite array of complementary and substitutability relationships among its different actors, eg, telcos and very large digital platforms. Traditionally those actors have been regulated in different and separate fashion, and the evolution of their interactions disregarded. This asymmetric and uncoordinated regulation of different actors of the digital ecosystem has led to (unintentionally) generate market distortions or enhance situations of power unbalance. A new regulatory approach should focus on existing interdependences and trade-offs, in order to build a level regulatory playing field.

JEL CLASSIFICATION: K23, L51, L96, D25

SUMMARY

1 Digital transformation and asymmetric regulation

The digital ecosystem is nowadays a networked multi-layered structure, whose fundamental backbone is composed of very high capacity fixed and mobile communications physical infrastructures. Over this backbone, services, contents, applications, and their providers permeate the digital ecosystem with immaterial pervasive networks made of economic, social, and operational interactions (human and non-human). Within this ecosystem, digital platforms are crucial actors and from the perspective of telecom industry, they are also called Over-The-Top providers (OTTs), because they provide services to users via the public internet and telecoms infrastructures, but "over the top" of the traditional telecoms market value-chain.

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Digital platforms have a broad scope of activities, eg, online advertising, marketplace services, internet search engines, social media, creative contents aggregations and distribution, video-sharing, communications services, products price comparison, application distribution, payment system services, collaborative activities, and so on. These digital services are often complementary yet sometimes substitutes to those provided by 'traditional' communication companies, telecom and broadcasting providers. This disruptive industrial and competitive transformations in the communications market have taken place in a context of extreme regulatory asymmetries.

These asymmetries started to be very partially and slowly addressed with a partial adaptation of the European Electronic Communications Code (EECC) and of the Audiovisual Media Service Directive (AVMSD).

In particular, in 2010, the first AVMSD[1] extended the scope of "Television without frontier" directive by including video-on-demand (non-linear) services with an editorial nature. However, only a few rules were extended symmetrically, while most involved a lighter touch, due to the higher degree of consumer control for on-demand services. The 2018 revision[2] further adapted the AVMSD to digital transformation, imposing a greater number of symmetric rules for on-demand services. Moreover, it also required video sharing platforms (previously completely excluded from the discipline) to adopt a few of the social regulation measures for the protection of minors, control of hate speech and compliance with the qualitative rules on advertising.

On the electronic communications side, the EU Electronic Communications Code (EECC)[3] introduced very few regulatory measures regarding platforms for the first time, categorizing communication services provided by digital platforms as electronic communication services (ECS), and, in particular, as Number-independent interpersonal communication services (NI-ICS). NI-ICS are subject to a light-touch regulation, e.g., OTTs are explicitly exempted from the general authorization regime and interoperability obligation is possible (yet never imposed) for NI-ICS under very specific and restrictive circumstances.

Nevertheless, very large online platforms (VLOPs) have been subject to very light touch (self-) regulation, which allowed few platforms to reach an unprecedented scale and scope of activities (enveloping users), becoming gatekeepers end-users and business users and acquiring an entrenched market and bargaining power.

[1] Directive 2010/13/EU of the European Parliament and of the Council of 10 March 2010 on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (Audiovisual Media Services Directive) [2010] OJ L 95/1.

[2] Directive (EU) 2018/1808 of the European Parliament and of the Council of 14 November 2018 amending Directive 2010/13/EU on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (Audiovisual Media Services Directive) in view of changing market realities [2018] OJ L303/69.

[3] Directive (EU) 2018/1972 of the European Parliament and of the Council of 11 December 2018 establishing the European Electronic Communications Code (Recast) [2018] OJ L321/36.

Indeed, despite the recent adjustments of the regulation digital services and "traditional" communication services are based on an unlevel playing field: the electronic communications pro-competitive regulation has created highly competitive telecoms markets, also by blocking consolidation through a strict enforcement of merger regulation, whereas no obstacles (if not a slow and problematic application of competition law)[4] have impeded market monopolisation, consolidation, and envelopment strategies by VLOPs/Gatekeepers.

In this context, when VLOPs/Gatekeepers, on one side, and traditional communications and audio-visual media players, on the other side, provide substitute services and products, these regulatory and market asymmetries resulted in a clear direct competitive advantage for the digital players. This is the case, for example, of the tremendous increase in competition faced by broadcaster for advertising (by ads-based platforms) and audience markets (by online streamers and video-sharing platforms) as well as that suffered by telecom operators for their messaging services and voice calls (by online messaging and vocal calls platforms).

The recent approval of Digital Markets Act (DMA) and Digital Service Act (DSA)[5] has introduced a more stringent set of rules for very large online platforms (as defined by DSA) and gatekeepers (as defined by the DMA), yet these rules do not aim to create a pro-competitive pressure similar to what telecom operators are subject to, and do not discipline at all the various relationship between them.

2 Complementarity relationships and asymmetric regulation in the extended value chain

Further to the increasing substitutability, VLOPs/Gatekeepers have a fundamental complementary relationship with Telcos, as Telcos enable the distribution of their content and services to end-users, by deploying high-speed telecommunications infrastructures and providing internet access services.

The asymmetric regulatory approach between VLOPs/Gatekeepers and Telcos has had a profound impact also in their relationship as complements. Indeed, the complementarity relationship has been profoundly shaped by the Open Internet Regulation (OIR),[6] dividing the connectivity and digital ecosystem into Content and Application Providers (CAPs) and

[4] Which was finally considered not sufficient to address the contestability and fairness problems in digital markets, so to require an ex-ante regulatory framework (DMA).
[5] Respectively, 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) [2022] OJ L265/1, 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) [2022] OJ L277/1.
[6] 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 [2015] OJ L310/1.

Internet Service Providers (ISPs) and affirming a "net neutrality" concept. In short, the Net Neutrality regulation's objective is to reduce the material possibility of ISPs to exert market power trough non-price discrimination practices and therefore granting internet users rights to access and distribute contents through the internet.

Indeed, a "net neutrality" regime is conceived for a market context where (i) content distribution over internet is decentralised and based on a very high number of providers, none of which having an entrenched market power and/or (ii) ISPs can be (competitive) bottlenecks for CAPs to access end-users, which could be particularly problematic when there are vertically integrated actors, both as ISP and CAP.

As a matter of fact, nowadays digital markets and services are very concentrated and few CAPs (VLOPs/Gatekeepers) have significative and entrenched market power, supply "must-have" content/application. In such a situation, notwithstanding the 'termination bottleneck', ISPs cannot exert market power even in absence of non-discrimination rules. Indeed, due to the intense competition between ISPs for end-users, any lack of agreement with VLOPs/Gatekeepers, implying that ISPs cannot cater must-have content/applications to their subscribers, would be 'sanctioned' by end-users switching to another provider.

Moreover, in the EU most of ISPs are not vertically integrated as CAP. Indeed, no EU operators have developed a strong vertical integration between internet access and audio-visual content as in the US-Comcast merged with NBC-Universal in 2011 and with Sky in 2018, while AT&T merged with Time Warner in 2018. Moreover, in the US broadband and Internet access markets are very concentrated end-to-end, whereas most EU end-users can choose, due to the pro-competitive regulatory framework, from several internet access providers.

Therefore, in the EU, Net Neutrality's rules substantially address only discrimination issues between CAPs having different market and bargaining power, granting that none of them could induce ISPs to provide a more favourable treatment.

EU net neutrality rules therefore address possible discrimination issues between CAPs, limiting the influence of VLOPs/gatekeepers, by placing obligation (and opportunity cost) on ISP, thus again resulting in a very asymmetric and unbalanced set of rules.

As complementary products, VLOPs/gatekeeper's must-have contents can drive ISP connectivity demand. However, in this asymmetric regulatory setting, Telcos can neither (easily) increase end-users' price, because the electronic communications pro-competitive regulatory regime, nor monetize otherwise any increase in traffic demand vis à vis, VLOPs/gatekeeper's, because of Telco's negotiation and bargaining power being limited by the net neutrality rules.

3 Telcos' market financial crises and market failures (externalities)

This situation reflects very well the situation of economic and financial crisis in which EU telcos operate as they are subject to highly competitive pressure, public policy

objectives to build and deploy ubiquitous very high-capacity networks (fiber and 5G connectivity),[7] in order to provide users with innovative and higher quality services and contents, which imply an increase in network traffic that telcos are unable to monetise.

Opportunity costs derive from the impossibility (created by regulation) for ISPs to monetise an increase in traffic and demand, because of both the pro-competitive regulation, on one side, and above all the Net Neutrality regulation, eg, prohibition of zero rating,[8] on the other side.

These opportunity costs were blatantly evident in the market dynamics across the last decade, where a steep increase in data traffic resulted in revenue and price decrease for Telcos. Instead, VLOPs/Gatekeepers have been having high returns from traffic increase, and for this have no incentives to discipline and optimize their traffic, on the network perspective (ie, considering the costs that traffic generates), thus imposing economic negative externalities on ISPs.

Therefore, telcos highlighted the need for some mechanism to provide incentives for CAPs to efficiently dimension the data transmitted (internalise the negative externalities) and compensate the regulatory opportunity costs imposed on ISPs.[9]

Moreover, Telcos as well as The EU Commission stressed that "there is a correlation between the increased deployment of fixed and mobile broadband and economic development".[10] This implies that there is a great magnitude of positive externalities across the digital ecosystem. Under an economic perspective, this also represents the justification for direct public funding spending to augment private companies' investment capacity.[11]

Indeed, as positive externalities are pivotal and crucial in the economics of network deployment, it is important to assess the magnitude of those externalities and how they are distributed within the digital ecosystem. In other words, what subjects and companies

[7] European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Connectivity for a Competitive Digital Single Market-Towards a European Gigabit Society (Burssels, COM(2016) 587 final), European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. 2030 Digital Compass: the European way for the Digital Decade (Burssels, COM(2021) 118 final).

[8] Zero-rating is a commercial practice whereby an ISP does not subtract data usage associated with specific content or a class of content from a customer's data allowance. This means that the customer can access the zero-rated content without it counting towards their general data allowance. Initially this practice has been considered compatible, on a case-by-case basis, with net neutrality regulation (2020 BEREC net neutrality guidelines). Afterwards, in September 2021, the Court of Justice of the European Union (CJEU) issued three rulings that found certain zero-rating offers to be in breach of the requirement of equal treatment of traffic in Article 3(3) of the net neutrality rules. BEREC subsequently revised its Guidelines in June 2022 to reflect these rulings.

[9] Of course, those costs depend on the quantity of data that CAPS distribute through the Telcos network that also depends on their productive data-efficiency (ie, how much data is necessary to deliver a specific content). The more efficient are CAPs the lower the capacity needed to deliver the same amount of traffic and, therefore, the less significant the network investments needed to maintain quality. Likewise, the greater the capacity of the network resulting from network investments, the less efficient CAPs need to be in order to deliver the same quality.

[10] European Commission, 'How to master Europe's digital infrastructure needs?' (2024, White Paper, COM(2024) 81 final).

[11] As a matter of fact, in absence of positive externalities, an uncomplete deployment of new networks is the result of a well-functioning market which allocates resources where the companies' investment can be remunerated, and therefore it is a not a market failure.

are enjoying those externalities and whether and how those are otherwise contributing to those social benefits.

Under an efficiency point of view, those positive externalities could be tackled either (i) à la Coase, ie, reducing transaction costs and letting the parties within the ecosystem to bargain on rights' transactions or (ii) à la Pigou providing subsidies aimed at internalising those externalities and re-align social and private benefits.

Net neutrality rules create ineliminable transaction costs by qualifying as illicit certain transaction between telcos and CAPs, thus making it impossible to use a coesian solution. Therefore, de *iure condito*, subsidised are the only solution to address this issue. However, if those positive externalities are not evenly distributed across society but there are some players who enjoy a big portion of it, it would be fairer to have some mechanism channelling contributions from those parties and not necessarily entirely from public money.

In this contribution scheme should be also considered the complementarity features of digital services with the provision of electronic communication networks. Indeed, that's true that a complementarity between access and content weakens a "free riding" argument linked to positive externalities. However, access and content are not perfect complements. Namely, access and content are not consumed in "fixed proportions": consumers demand access for reasons other than consuming VLOPs/gatekeepers' content, and they may demand and consume more or less content without adjusting their demand for access. Moreover, it is not (anymore) relevant the access to the internet in itself yet rather the quality of access, and the overall demand for content increases in the quality of the network. Whereas the overall demand for access (and even its price) is not mainly driven by the quality. Access quality in turn depends on the network investments made by TELCOs, primarily, and CAPs, to a lesser extent. In other words, investment in network quality allow higher revenue for CAPS, yet not necessarily additional revenue for network operators.

So, this is not a pure free riding story yet one about an incomplete market, due to regulation, within which the externality created by network investment should be internalised. Therefore, a regulatory approach aimed at efficiently incentivising the ubiquitous deployment of networks should first define a "relevant ecosystem", where the markets and players who rely on the telecommunications high-speed networks and exploit the positive externalities are mandated to compulsory contribute to an investment fund.

This regulatory setting is, more or less, what current universal service obligations and universal service funds aim to do in the electronic communications framework, yet those rules only cover a universal provision of very basic service provision and impose contribution obligations only to telcos operators.

Therefore, the regulatory approach, on one side, should adapt to an advanced concept of universal service, focusing also on the upstream market (network deployment) and not

only on the downstream service provision, and, on the other side, should consider all the actors within digital ecosystem, especially very large online platforms/gatekeepers.

Finally, de *iure condendo*, the net neutrality regime should be softened and adapted to the current market situation, still granting end-users rights to receive and distribute all type of contents, yet giving ISPs more flexibility to differentiate their retail offers therefore getting back some countervailing bargaining power vis à vis very large online platforms/gatekeepers.