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Disruptive business models and regulation

Conference report

Annual conference of the Club of Regulators

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Disruptive Business Models and Regulation

Club of Regulators' Annual conference,
3 November 2016

Digital transformation, energy transition and liberalization of network industries have been fostering innovation and entry in many markets. Disruptive business models based on new technologies, renewed marketing methods and innovative monetization models are impacting competitors and industries. New entrants and new business models are particularly tricky in the case of regulated industries. On the one hand, they might be vectors of change, both because they enrich the portfolio of services available to the users, and because they increase the competitive pressure on incumbent firms. On the other hand, they can hinder the capability of funding infrastructures and other public goods, providing services of general interest and managing public policies.

Such tradeoffs are difficult to manage. First, these disruptive business models question in some cases the rationales for regulation and show that its principles, scope and tools should probably evolve. Second, at this stage it is still difficult for the regulatory authorities to estimate the costs and the benefits of these innovative processes and at which time and pace (if ever) regulation should intervene.

1st roundtable:
Managing Entry and Competition in Regulated Industries

A Perspective from the Telecoms Industry

Richard Feasey
Frontiers Economics

Disruption in the telecoms industry will unfold like a two-act play: the first centred around the emergence of IT technologies, with the rise of the Internet and digitisation; in the second, the very way in which networks run will be reshaped.

The Rise of the Internet Protocol

The key consequence of the technological innovation has been a de-layering or de-integration of value chains. Whereas the provision of services, operation of network and relationship with the customer were previously all internalised in a single firm, the value chains are now split apart and opportunities to join the fray exist in different areas, often with very low barriers to entry. WhatsApp is a prime example of this new paradigm. There are also benefits for the underlying network infrastructure providers, as infrastructures can now be much more flexible and cost-efficient.

This co-existence of benefits and disruption explains the ambiguous relationship which traditional players often have with new technologies. Telecoms, specifically, went through an existential crisis, particularly in Europe. Prior to the Internet era, they were certain they were involved in service provision; the IP has forced them to re-evaluate their business and understand that they sell access, while their services are in essence free.

At the same time, while pricing and business models have had to be re-oriented, the challenges and fundamental tasks involved in operating in business are exactly the same. Telecoms remain a "boring" industry, it could be asserted, for indeed, it is the new evolutions along the digital value chain that drive the demand for change, connectivity and infrastructure connections. Telecoms should thus become wealthier, if anything, proving the new services and entrants to essentially be complementary.

Implications for Regulators

For regulators, the challenges come in several forms.

The first lies in the reactions of the existing firms. The first variety is an attempt through corporate activity to knit the value chain back together and re-integrate. This path has been more commonly chosen in the US (e.g., AT&T's acquisition of Time-Warner, Verizon's attempted take-over of Yahoo!) than in Europe. Regulators need to be mindful of this and scrutinize it carefully.

The second has been a tendency toward horizontal integration: network operators, especially in Europe, have been calling for competition to be curbed in their part of the market to enjoy better bargaining chips in other parts of the value chain. Most regulators have shown scepticism toward this, and rightfully so.

Thirdly, we have seen the "level playing-field" argument come into use. As a result, those legacy players that enjoy benefits in a given part of the chain are no longer subject to so many requirements and obligations (e.g., last-resort provision of services).

How should regulators deal with the new entrants, which are free of these bonds and, furthermore, often very unusual?

- Many have no controlling shareholders, most do not pay dividends or make profits, and often, they can be found proclaiming unique purposes ("solving universal connectivity").
- These are firms that "think globally", operate under charismatic leadership and feel detached from the social and local. Indeed, they see technology as transcending all.
- Nation-States, with very few exceptions,, are already proving not to have enough bargaining power against major global firms.
- Last but certainly not least, these firms are competing on a "winner takes all" basis: their ability to take over all markets is critical to their success and, on that road, compliance with all regulations is cumbersome.

We can thus expect high levels of friction between regulators and these firms.

Act II, or "The Transition to IT in Networks", is just stating, with 5G and the separation of intelligence (software management, packet routing) from underlying physical assets (steel towers, electricity, etc.), and is largely driven by existing digital players. Only control of the infrastructure can be made global, potentially with the help of open-source software.

Managing entry and competition in regulated industries

Eric Debroeck
Senior Vice-President of Regulatory Affairs | Orange

(The views hereafter are those of the speaker alone, and not those of Orange)

A Historical Perspective on Telecommunications Markets

At its start, telecommunications were a monopolistic industry of sorts, getting a taste of competition only when long-distance communication came about. It is important to understand that the latter became economically possible due to innovation – the introduction of fibre in the networks – and not to any form of regulatory change. This change in paradigm, with the distinctions between local and long distance, as well as between consumer and business, reshaped reality. Regulation only followed, trying as best it could to keep up.

The mobile industry started out with symmetrical licenses granted to businesses without obligations on their relationships; it was only later that rules governing interaction and interconnection between the mobile and fixed networks came into play. These were first in favour of the mobile industry, then gradually came to benefit fixed customers (unlimited fixed to mobile plans, etc.).

Narrowband Internet developed independently of any regulation; the latter came in to respond to specific schemes and rates, again adapting to the new market conditions created by the Internet-initiated wave.

It was followed by the broadband wave, which entailed cable modernisation and copper-wire technology (ADSL, xDSL). In response, regulators decided there should be broadband access remedies, and unbundling of the copper loop. In some European countries, notably France, regulators used the pricing parameters to favour those willing to invest in unbundling in exchange for better access, hence resulting in market concentration. In the end, we have seen no large sustainable entry in the market de facto.

Throughout these transformations, regulation only followed technical innovation. Markets and technologies rewarded investors versus re-sellers, and with very few exceptions, more than ten years down the line, the survivors are those with local access networks.

Towards competition through investment

Today, most operators, many regulators as well as academics have acquired the conviction that standard access regulations conflict with the overwhelming need for investment in "very high connectivity" networks. We cannot continue to share existing infrastructures. The current existing framework in fact deters investment in new infrastructures. If an operator wants to deploy an FTTH network as we are doing in France and Spain, it is very difficult or even impossible to develop a business plan and present it to shareholders, while specifying that it will be totally regulated, unbundled and cost-regulated. Investment in new infrastructure is always motivated by gaining a competitive edge.

Concurrently, the convergence between fixed and mobile technologies, another far-reaching development in the European arena and elsewhere across the world, could result in the emergence of duopolies. In Belgium, for instance, it has been very difficult for pure mobile operators to gain access under traditional regulation to the fixed network to compete effectively on the convergent market. Pure MNOs in Europe may thus be driven out of the market if the business is not sustained by a regulatory provisions securing their ability to be involved into very high broadband infrastructure development.

We have urged the European Commission to establish a new regulatory framework conducive to investment in very high connectivity networks.

- We are looking for a risk-sharing mechanism. When and where there are less than three infrastructures competing on a market, they should be subject to some form of sharing obligation. They must be designed by local area, not necessarily along national borders, with one level of access for each, and be symmetric. The right to share infrastructure should come with the requirement to share risks.
- It is critical that the new regulation put forward by the European Commission be aimed at supporting new investments in very high broadband activity and give stimulus to sharing and cooperating schemes with reasonable risk-sharing mechanisms which could, if played efficiently, give impetus toward a goal which we all share.

Managing Entry and Competition in Regulated Industries: A comparison of 3 sectors (energy, telecoms, post)

Dr Annegret Groebel
Head of Department International Relations | Postal Regulation

I would like to offer the perspective of a multi-sector regulator, comparing energy, telecoms, and the post: in all these sectors, disruptive factors and developments exist, but have very different roots and ramifications.

Guiding Regulatory Principles

In all three aforementioned sectors, the aim is to develop pro-competitive regulation, not engaging in old-school micro-management, but putting a market on track to initiate a competitive process. Decision-making on investments, business models and technological choices must be left to market players and operators. In this regard, the regulator must be neutral to business models, not only those existing, but also new ones, so as to deal with market entry and disruptive evolutions in an unbiased, open manner.

At the same time, after initiating the process toward economic equilibrium, the regulator must accept the market outcomes, rather than interfere to gear the situation in line with its preferences or expectations. Market dynamics are not always predictable, and even the best of intentions can fall flat. This principle of acceptance, once a predictable framework has been established, is particularly important in the disruptive environment.

The solidity of the framework will inspire confidence of the investors, while the regulator's measured actions will inspire credibility and encourage all players to act in an economically rational way.

Changes in Regulated Markets

Since Europe liberalised these three markets in the late 1990s, each a relatively stable and isolated silo, they have experienced different speeds of development.

- The easiest to open up to effective competition was the telecommunications sector, shaped by fast technological progress and a rapidly-growing market, complemented by an appropriate access and price regulation.
- The situation was different in the postal markets: the focus was placed on business customers, seen as most likely to generate quick profits in a sector where economies of scale are of utmost importance; the letter delivery market (in particular for residential customers), considered as stagnant at best seemed to offer limited growth potential and thus did not attract new entrants.
- The energy market was also very slow on the uptake except where business customers were considered; the latter were offered very preferential tariffs and agreements – also due to their buying power. Two additional barriers came from the vertical operation of operators and fear in the customer base that switching would cause disruption of service.

How Regulators Can Drive Disruptive Elements in Different Sectors

In energy, the disruption came not from technological change, but policy-driven change: the policy goal to promote the integration of renewables, with Germany's Energiewende, sped up the change in both grid and market requirements. More flexibility now needs to be built into the market from all sides, to ensure that the change in the energy mix can also be reflected in the markets. One aspect helping this is the new IC technology which makes markets smarter, and the regulator's efforts to integrate renewables, a more volatile technology that requires more response from the market.

In telecommunications, in contrast, changes are mainly driven by technology. IP has allowed "over-the-top" players to come on the scene, driving demand and enabling new business models. The role of the regulator here is not to ensure that there are enough new entrants, but that the playing field is the same for traditional telecommunications companies and new kids on the block, knowing that this will work to the ultimate benefit of the consumer. Digitisation, stemming from new technologies, plays a major part by driving change in the whole economy, and creating greater productivity to the benefit of all.

In the postal sector, change has been quite dramatic and disruptive, and has come from a different driver still: electronic substitution as a form of cross-sector competition. New players such as Amazon and e-retailers are changing the value proposition, bringing in more logistical components, which new regulations will also need to reflect. The development of e-commerce is bringing a great deal of growth to the postal sector as a whole, as online purchases ultimately do have to be delivered. This oddly came as a surprise to most people, who assumed the sector to be in irreversible decline. The regulator will need to modernise and probably rethink concepts such as universal service in this light.

Conclusions

It has become clear that all three sectors are far more dynamic and cross-sectoral than previously thought.

While we can be pleased that the market liberalisation and economic regulation have been successful, these were only necessary conditions. With market dynamics shifting in all sectors, more fluid boundaries and greater convergence between business models converging, regulators can now consider more flexible approaches while sticking to the fundamental principles of pro-competitive regulation.

The main task remains the same. The regulator must adapt to market dynamics and ensure that its work fosters competition and avails benefits to consumers.

How to make regulation in a changing world

Alberto Biancardi
Commissioner | Italian Regulatory Authority for Electricity Gas and Water

Disruption on the energy market comes is coming from technologies, in a period of tremendous change. This has clear implications for regulations as well as for any operator interested in working in electricity and gas.

The third European Energy Package, adopted in 2009, was designed to regulate infrastructures in a way that would leave little room for competition and even then, ensure that the latter would be neutral. The result was the unbundling of regulated activities and market trends, tariffs on user access and rules on quality for users. The activity of regulators was constrained by social and political issues.

With the digital revolution and new consumer interest in protecting the environment, the boundaries between regulation and competition have shifted. Faced with this dual change, regulators are striving to respond as best possible. In Italy, the traditional aim consisted of preventing grid congestion by minimising inter-temporal costs. Today, several lines of action beyond prevention of bottlenecking have come to the fore, including demand-side management enabled by ITC-technologies, storage, or self-production. The smart grid is no longer a “grid”, and contains multiple components at which regulators can take aim.

As transaction costs become lower, it is entirely possible that regulations will no longer be necessary. Self-regulation is another possible path, asking the market which is the best choice, given a defined target. The universal availability of information makes this possible. Already, the traditional dividing lines between the planning and action phases are no longer valid; those between regulated firms and the market have similarly faded.

Disruptive business models and regulation

Cristina Cifuentes
Commissioner | Australian Competition and Consumer Commission

A Global Undertaking

Although we are on the other side of the world, the challenges and problems which we face in Australia are just the same as those of Europe.

Disruption and "fit for purpose" regulation

First of all, our regulations do follow innovation as well; in our case, regulators have also been asked to make rules that are "fit for purpose", based on the needs of OTT players and consumers. In the context of energy services, rising prices have indeed spurred consumers to seek out cheaper solutions. Government reforms in policy and new technology have been answering the demand for new products and services, by facilitating uptake of solar panels, wind farms, smart meters, electric batteries, etc. While their benefits are clear, the regulatory route is not.

Is regulation passé in this brave new world?

Regulators have always had to deal with change. The novelty today is the pace of new developments and resulting need to continually re-examine the nature of regulations. The Australian regulator operates on the premise that it is always preferable to have well-functioning efficient markets where strong and effective competition means there will be little need for regulation. Regulation is still necessary to:

- addressing a monopoly or abuse of market power
- correcting information asymmetry or
- addressing inefficient allocation of resources / equity issues

Whilst the new technologies have the potential to increase competition, they may also in some cases create new sources of market power. New business models may be disruptive but their ability to compete may be undermined by a structure dominated by players who have significant market power in the underlying service.

And the nature of the new technologies and business models means that consumers are faced with additional complexity and may not have the information or tools they need to make effective choices. Consumers may be driving the change but that doesn't mean they necessarily make informed or right decisions. According to survey findings by energy consumer associations in Australia, consumers are more comfortable in their relationship with water suppliers, telcos and even banks, than with their energy suppliers. An enormous problem clearly exists, even as an abundance of new options offer themselves up (pay per use networks, electricity flowing in both directions, better demand management with new data).

Lessons from Case Studies

Case study 1: Solar power retail authorisation

One area of particular concern has been solar power purchasing agreement (SPPAs). Solar power has grown dramatically and Australia has one of highest penetration rates in world. However there is a potential for consumer confusion and regulatory gaps with these new business models. Is this an energy plan, a financial lease arrangement, a contract for the supply of goods? What are the obligations to the customer and do these obligations lie with the authorised retailer who provides the bulk of the energy used or the solar retailer who provides the panels and feed in service?

It also raises questions of regulating new entrants and level playing field principles. Existing retailers argue that they are operating at a disadvantage, as solar power retailers are not subject to the same level of obligations as they are.

The issue then is whether the solar energy service provider should be required to meet and operate to the same standards as the authorised retailer and be subject to the same consumer protection obligations even if they are not providing any inward flowing energy? Or should they be exempt altogether?

The driving principles for deciding this are:

- firstly, whether a particular product or service constitutes the sale of energy, battery storage, for example, does not;
- and if it does, whether the scale and scope of the energy sale warrants a retailer authorisation (as it has with some embedded network operators)
- if not, an exemption from retail regulation may be appropriate subject to certain conditions aimed at ensuring consumer protection

Case study 2: contestable services

Should regulated monopoly service providers be able to compete in the provision of contestable goods and services which are unrelated to their monopoly service provision? In particular should distribution businesses be allowed to own and/or operate storage facilities and, if so, to what extent? One of the main claims from the network businesses is that there is a strong argument for allowing them to compete in the provision of contestable services because it allows them to leverage on factors such as economies of scale. Alternatively, networks may be so small that they simply can't sustain effective competition, such as a micro grid which has little or no interconnection capacity with the wider network.

Again, it is our view that the fundamental principles of structural separation are still appropriate and the arguments for allowing vertical integration in order to better exploit the benefits of technological change haven't been persuasive.

We accept that there is some validity in these arguments and have taken an approach which is directed at promoting competition where there are realistic prospects of competition developing and recognising that there may be circumstances where allowing some of the businesses to provide contestable services is appropriate

Ring Fencing and Beyond

When Australia restructured its electricity market 20 years ago, it separated natural monopolies from competitive parts of the industry by ring-fencing. This prevented regulated service providers from gaining an unfair advantage over new entrants. These principles are being extended and applied to emerging contestable services such as metering, small customer connections, load control and batteries and storage.

The objectives of the Guideline are to promote the LTIC by providing for the accounting and functional separation of the provision of direct control services by DNSPs from other services provided by them, or by their related bodies corporate. It includes obligations on DNSPs targeted at:

1. Cross-subsidisation, with provisions that aim to prevent a DNSP:
   - providing non-network services that could be cross-subsidised by its network services; or
   - inefficiently inflating its prices for direct control services and regulated transmission services, and
2. Discrimination, with provisions that aim to:
   - prevent a DNSP providing an inappropriate competitive advantage to its own service providers or related bodies corporate which provide competitive or contestable energy-related services; and
   - ensure a DNSP treats and protects information it acquires appropriately.

1st roundtable: Debate

Do you feel there is tension between regulators facilitating competition, disruption and innovation and the continued provision of infrastructure?

Annegret Groebel - I do not feel there is tension or antagonism. Competition alone or excess of competition is said to discourage investment. Operators thus continuously ask for de-regulation or regulatory holidays. Various studies on next-generation access networks show that where competition is most vibrant we also find the highest investment. The relationship is the opposite: one supports the other.

Richard Feasey - In most infrastructure industries, competition, whether disruptive or otherwise, erodes and eliminates subsidies over time. A non-subsidised market may prove incapable of offering what it did in the past. As it is inconceivable that the private sector will deploy these networks on a remotely universal basis, raising the serious debate as to who will provide for this aim.

Alberto Biancardi - The problem lies in understanding the demand side of the market, with the aim of making the environment more neutral. In the Italian electricity market, the difference between the price paid for self-production and for the energy withdrawn from the grid – around 50% - makes more difficult to regulate the market. As a matter of fact, the possibility to pay only the costs of the self-produced electricity – and not tax and the other cost components, i.e. for renewables incentives – tends to overstate the demand for self-production itself.

Eric Debroeck - There is quite definitely tension between the two objectives. There should be some form of reward mechanism for those that make the much-needed investments in infrastructure. Subsidies should not go to the builder, but to the consumer.

I hear observations about blurring boundaries and falling transaction costs, yet also a move toward winner-take-all markets. How can these be balanced?

Annegret Groebel - Market entry and even cross-market entry continue. Overall, concentration is not increasing. Some are an answer from traditional players to new entrants. It is difficult to predict which will prevail: elements of cross-market entry may be stronger, such that overall competitive intensity remains; the process could also result in mergers and concentrations. The two might co-exist in a counter-balancing dynamic.

Richard Feasey - We could see winner-take-all prevail in the telecommunications networks; there is a great deal of evidence to show that an area built by one will not be entered by another. Regulators might do well to create a competitive, possibly bidding-based process, so that building also happens in areas currently with much less coverage.The latest European proposals for telecommunications reform, in a sector where required cooperation between players has prevented that dynamic from developing. That system might be effectively applied to other sectors. Interoperability dilutes incentive to wage very hard-nailed competition.

2nd roundtable:
Dealing with the De-Integration of Established Value Chains

A Revolution is coming to finance: What about Regulations?

Huy Nguyen Trieu
CEO | The Disruptive Group

A Revolution is Coming to Finance

Just the way mobile phones have changed the way we live our lives in just ten years' time, finance will experience the same, swept up in a whirlwind of transformation. Having been CEO of a company that could have been LinkedIn, had it not come on the scene five years too early, I know just how swiftly change is happening.

Five years ago, the main financial applications downloaded were those of banks; today, the leading application is Credit Karma, a site that tells users their creditworthiness and replicates loans for them online, and now serves more users than HSBC and other long-standing giants. JP Morgan is no longer one of the three largest money market funds today, overtaken by Alibaba, which took only nine months to rocket from zero to over 100 billion dollars under management. In each of the countless and striking examples of this, very small start-ups or large e-commerce companies are triggering dramatic change.

Two Trends Shaping the Finance Sector

The finance sector is being reshaped by players who have resolved that:

- *"I'll do the same, but better"*

These players are unbundling finance, working against the high acquisition costs and low margins traditional to their sector, and challenging business models. Finance could thus go from being a place of customer inertia to one that offers customers all the same services, but "cheaper, better and faster".

- *"I'll do something totally new – preferably, much more difficult and much rarer"*

In finance, the real disruptions today are: the blockchain, which will make it possible to send a financial asset from Paris to Australia at the same cost and speed as an e-mail without a trusted third party, once the complex implementation challenges are overcome; peer to peer lending, based on a very interesting business model standpoint, that understands and embraces risk; crowdfunding, which enable consumers to invest in companies with a large group of people sharing the same vision.

Regulations for New Finance?

Which kinds of entities are to be regulated? How can regulators operate without killing off players that have no resources? Should proportionality be part of the regulatory

rationale, in an industry that will soon extend from the blockchain to Alibaba and on to traditional finance, with its hedge funds, pension funds, and asset management companies?

The most significant challenge and opportunity for large organisations is technology. Most core banking systems were created twenty to forty years ago. In that same period of time, the power of Deep Blue, the chess programme that beat world champion Garry Kasparov went from a system allegedly costing 100 million dollars to something that can be found in any smartphone. Driven by the same super-scalable technology, the finance industry will look entirely different in just ten years' time. Regulation and the regulator have a very important role to play in this.

Platform Shift: How New Business Models Are Changing the Shape of Industry

Marshall Van Alstyne
Professor | Boston University, Department of Management Information Systems

Business today may be fundamentally changing, but in a way analogous to the Industrial Revolution over one century ago.

Uber (founded in 2009) and AirBnB (founded in 2008) are now vying with or have exceeded their respective industry stalwarts BMW and Marriott. Facebook is worth twice as much as Disney, when the former's content is created by everyday individuals, and the latter must call on professional writers for its production. Not only is change extremely rapid, but also new parameters must be considered when looking at platform businesses relative to traditional businesses.

In the transformation we see today, companies derive their strength from value-creating activities outside the firm, from network effects or demand-side economies of scale. Thus growth comes when a company is able to push its demand curve outward, which is distinct from when it successfully pushes its production curve down. Every function of a traditional organisation, from R&D to strategy, finance, marketing, etc., must take on an external counterpart.

The more fragmented a given marketplace, the more difficult it becomes to achieve a network effect. This creates a challenging situation for regulators whose markets are often segmented or sub-scale. Platforms themselves are well-suited to regulating market failures that occur on them. They are motivated to boost transactions volume and they also enjoy better information because they have observed transactions. Looking after the health of its own microeconomy encourages the platform to self-regulate. This is illustrated by AirBnB's move to offer consumer protection, similar to that provided by eBay, correcting what was its own market failure. In contrast, when the failure occurs off platform, states need to regulate platforms.

Dealing with de-integration of established value chains

Etienne Pfister
Chief Economist | French Competition Authority

The Case of Online Platforms

It is interesting that, spontaneously, all event speakers today chose to discuss platforms upon reading the title of this event. Platforms are disruptive because, due to their near-zero marginal costs, they can conquer a market very fast. Therefore, under certain circumstances, actions may need to be taken quickly if a platform develops through uncompetitive means. There is a clear demand for platforms to be regulated. Three types of players can be involved: end-customers, competitors to platforms (travel agencies vs booking, traditional retailers vs Amazon marketplace, and suppliers to platforms e.g. hotels, flat-owners, car-drivers), and suppliers.

Customers are pleased with the development of platforms, which offer them both improved service and more freedom of choice. Suppliers can also be happy to overcome any size issues thanks to the low-cost, easy-to-access and readily formatted exposure offered by platforms. Traditional players are the only ones dissatisfied, facing new competition.

Yet platforms are not necessarily such an outstanding value proposition. If the competition between them is too low, their fees can be high for suppliers. They can also be passed on onto the end-consumer.

Regulation is then called upon so that value can be better shared via the platforms. Greater competition can be also awarding the appropriate reasonable margins to all players.

The Case for (De)regulation

As an example, the French Competition Authority has been very involved in the de-regulation of the taxi market. We believe that:

- regulation should not be ramped up only in response to new competition; in some cases, involuntarily poor drafting needs to be improved, always with the aim of creating a level playing field;
- platforms can also make regulation less necessary, as they include mechanism that foster greater trust while also guaranteeing an established price.

Toward a regulatory framework for digital platforms?

Joëlle Toledano
Professor | CentralSupélec & Former Member of the Board | Arcep

The New Parameters Ushered in by the Digital Single Market

The rules are evolving on the Digital Single Market and platforms are affected by most of these changes, from data protection to the new e-commerce package, the proposal on audio-media services, electro-communication code, copyright, labour law issues, the French proposal for a "digital Republic", etc. Discussion is raging.

In a world of winner takes all, public policy may not have all the tools needed to deal with the problems it faces. Competition law is frequently the centre of debate; even though rules and controls are being considered, the main threat is market power and the ability to control the dynamic of competition.

A trade off must be made between: the dominant position of platforms, needed in order to optimise relationship between different sides of markets (cross-subsidiarisation, entry, competition to prevent abuse); and the negative impacts of dominant positions (captive audiences and market foreclosure).

Possible Regulatory Responses

Competition authorities face the limits of traditional economic analysis instruments when dealing with the specific issue of two-sided market. This is exemplified by the ongoing discussions between Google and the European Commission, in which the former shows all the challenges of the digital business model, including privacy, taxation, copyright and presumption of anti-competitive behaviour. Meanwhile, in addition to a lack of methodology and empirical analysis to validate their models, regulators fail to understand the nature of these markets and are struggling to define such concepts as dominant position or predatory pricing. They want to maintain the same framework, building from the consensus position that competition law should not be changed in response to specific concerns with the use of digital platforms. Concepts and standards of proof have to be unchanged.

Voluntary commitments can address some of the issues (flexibility, disputes). Even though provisional measures are attractive with their extraordinary structuring impacts, the authorities struggle with asymmetry of information and technological understanding. The two-sided market has been used to justify practices considered uncompetitive, such as zero pricing. Now, as difficulties arise in on-going cases, precedents will become questionable and case law will weaken. Commitment procedures, meanwhile, will lose their effectiveness if the threats they counter are seen as not credible enough, hence the Commission's failure against Google since 2000.

The classical tools of competition law that were the backbone for electronic communications cannot be the same for digital platforms. Competition authorities should have to manage cost-benefit analysis of each alternative market structure,

in a context where alternative scenarios are speculative. New investigations should be initiated to establish new links and relationships across two-sided markets. Each platform and new business model transforms competition and markets. There is no generic tool, and the time for a regulatory framework with precise rules is yet to come.

Reducing information asymmetry and developing the ability to act rapidly on a political basis will prove essential. A computer indeed lies in the middle of most economic transactions, enabling thousands of experiments on society at any given time; in a day and age when a consumer's every move on a computer can be made part of an experiment, lowering information asymmetry must be one of our major concerns.

Suggested Remedies

- Developing the ability to assess the impact and dynamic of platforms and their algorithms (through transaction recording on a wide scale and analytical capabilities, or a specialised European body able to federate initiatives, including those of various stakeholders;
- Launching European investigation on the basis of complaints filed, whistle-blower reports or user records,
- Fighting abuse and maintaining openness, taking into consideration the numerous dimensions of potential impact of platforms, collective security, cultural pluralism, democracy, social protection, solidarity, etc.

2nd roundtable: Debate

To what extent is it important to have regulation proportional to the type of entrant (exemptions, practical steps)?

Huy Nguyen Trieu - From the financial standpoint, the role of regulator is to prevent systemic risk. A bank with 1 trillion euros in assets and another with 10 million are very different institutions indeed. In the UK, different regulations apply to "challenger banks" and larger banks, e.g., in the approval process. This may explain why there exist 30 challenger banks in the UK and two very small ones in Europe. The "sandbox" concept, already applied in the UK, and to an extent in France, offers a protected environment to start-ups working with regulators: the latter are closer to innovation, while the former work directly with regulation and protected from the impacts of incorrect regulatory choices.

Marshall Van Alstyne - Regulators should generally seek to correct various forms of market failure – bad transactions that do occur or good transactions that fail to occur. The scope of intervention should be proportional to the scope of market failure. Proportionality is a very useful concept. I favour a system premised on the principle of "allow then rein in", rather than "forbid and enjoin" from the start. The sandboxes just mentioned are fantastic arenas for experimentation, helping to correct for innovation failure and also helping to minimize damage from experiments. Facebook uses Australia as a sandbox, if I am not mistaken.

Etienne Pfister - Competition law does provide for a great deal of proportionality. Oppositely, regulation protects large operators as much as a small operators. If regulation reduces competition, large undertakings may then be isolated from competition thanks to a regulation that is not justified in their specific case.

According to the widely-shared consensus amongst regulatory professional players, using the tools of competition law to address the challenges of platform markets is the most sensible path. In Europe, however, there is a real danger that overwhelming populist demands for action make it impossible for regulatory authorities to operate effectively. The Commission's record on Google has been damaging and corrosive in popular perception. What is your view?

Etienne Pfister - Yes, there is a demand, albeit sometimes totally unfounded, for regulation. The primary activity of platforms is to allocate resources. There is a perception that some platforms do nothing than to advertise operators on their websites, yet charges high commissions to their suppliers. Yet, in reality, these same platforms do take risks and finds new ways to advertise.

Marshall Van Alstyne - This is a complex issue. On one hand, the vast array of free consumer services both makes it possible to cross-link them to provide benefits small firms can't provide and also ensures that consumers complain when regulation diminishes their benefits. On the other hand, small firms often cannot compete and firms such as Google

do not provide adequate channels for small firms to vote on changes to algorithms that affect them. So regulators should promote the benefits of free and cross-linked products yet intervene in cases where market failures really have occurred. In the face of so many different constituencies, suppliers and buyers, it is important to keep an ear out for those who are not so vocal. Some new entrants can find their niches, high end or low end, on top of the platform or outside it, but not everyone can. Misuse of monopoly power, exclusionary practices or privatising public resource are instances of market failure and do require regulatory action.

Huy Nguyen Trieu - One hundred years ago, entrepreneurs could do amazing things, but had little impact on society overall. Today, the opposite is true: Mark Zuckerberg alone can be said to have tremendous impact on the direction of society. A Silicon Valley entrepreneur thus needs to drive company growth and culture taking the entire picture – including investors, consumers, taxes, jobs, individual replacement, ethics, etc. – into account. A company with 1.7 billion users has influence on public decision-making and thought leadership, on anything from equal opportunity to artificial intelligence. The regulator or public policy maker should strive to become a driving force in this.

Joëlle Toledano - I disagree. The public demands so much of entrepreneurs because it has been given the impression that Silicon Valley wants to change the world, hence part of the demand for regulation.

3rd roundtable:
National Regulation vs Transnational Players and Markets

Regulatory implications of the digital transformation

Isaline Merle d'Aubigne
Research analyst | Bpifrance Le Lab

BPI France is a French state-owned bank dedicated to: providing financing and support to SMEs; mid- and large-cap investment; and fund of funds investments. It came about from the melding of four public entities in 2013. BPIFrance Le Lab, within that, is a think tank that produces reports on digital transformation, and provides CEOs with strategic analysis.

Early next year, we will publish a study on the digital transformation of culture and creative industries. This report is divided into four parts: a definition of "creative and cultural industries"; an assessment of their contribution to the economy in terms of GDP and employment; analysis of the global digital transformation of the sectors, main industry and cultural and creative industries; and a description of change in the regulatory environment and needs for protection.

Regulatory Implications of the Digital Transformation for the Cultural Industries

The changes resulting from the application of digital technology extend to all aspects of human society. Companies are directly impacted, with enhanced processes, automatization, new products, sector transformation and changes in competitive rules, but overall, digital is changing the way people think, act and consume creative goods.

Images, sounds and information are converted into data that are so easily spread that they are very difficult to protect. There is a clear migration of value, all over the value chain. Incumbent companies will need to adapt their business models to cope with this, "thinking differently" and doing indeed everything differently, whether selling, distributing or communicating.

Three triggers will influence regulators:

- The arrival of new digital platforms in the cultural industries (music and Spotify, Netflix, news aggregators and distributors, books). They are successful because they are customer-focused and serve with a personalised touch, using data gathered.
- Changes in customer behaviour, with a shift to on-demand consumption by hyper-connected consumers, aiming to control everything, seeing only what they like, and creating and sharing content, sometimes in the hope that fame is just around the corner.
- The advent of Consumer 2.0, no longer passive, and wants to be part of the production process, shaping series or games, for instance, as they progress. How can regulators address regulate collective creation in a way that effectively redistributes value?

Boundaries around sectors are no longer airtight, with mobile phones now serving as much as radios and streaming platforms as access points to label catalogues. Regulators need to find a way to harmonise in line with consumer behaviours, instead of fighting the direction of evolution.

The transnational and digital transitions: redefining the audio-visual landscape?

Nicolas Curien
Member of the Board | CSA

Territoriality *versus* single European market

As an audiovisual regulator, I can attest to a definite tension in the media sector between, on the one hand, the single market principle which tries to encourage the widest possible circulation of audiovisual and cinematographic works and, on the other hand, the remaining strong currents of cultural identity as well as the discrepancies across regulatory and taxation national systems, in Europe.

Today, rights holders are very keen on territoriality of their rights. They want to sell works separately in each country where they are seen. In a fully-fluid European single market, territoriality should not completely disappear but be considerably reduced. It is the path forward that needs to be clarified. A rights holder earning money in the present system is reluctant to sell transnational rights, for fear of ending up with fewer buyers, and lower profits. It is only presumably next year that, further to a proposed European ruling, there will be a portability of rights: a subscriber to Netflix in France will be able to enjoy access to the French catalogue of Netflix in another European country while on holiday or travel.

The disparities between European Member States give incentives to extra-European players to settle in the European countries, in which the taxing rules on taxing and media regulations are lighter, the so-called regulatory shopping. This clearly creates competitive distortions. In France, for instance, with its "cultural exception", national VoD services are subject to rules which do not apply to foreign players such as Netflix

This issue is all the more critical as one increasingly important category of players is structurally trans-national: digital players, platforms, and social networks. They benefit from the "origin country principle" as it is set in the AMS directive (Audiovisual Media Services), whereby players established in one country may distribute content in other countries under the taxing and regulatory rules which prevail where they are established. This opens the door to possibly significant instances of abuse, as regulators are much more lenient in some European countries than in others.

Thus, regulators – and the audiovisual economy as a whole – must deal with the aim of increased circulation of works, in consistency with the single market philosophy, while accounting for the public interest values that have led some countries to apply stronger rules, bringing about today's split structure.

Regulation facing the two challenges of internationalization and digitalization

The audiovisual market is being transformed by two complementary and parallel processes: the blurring of national geographic frontiers on the one-hand, and the emergence of new digital players coexisting with pre-digital players, on the other. The result is a complete change, not only in the foundations of regulation, but also the

structure, organisation and dynamics of the audiovisual sector as a whole.

Present regulation is today based on the ability to distinguish between publisher, producer and distributor. However, in the digital economy, a player can be both a distributor (access provider) and a publisher, for instance. Even the very definition of each link on the value chain is somehow blurred. The categories need to be re-examined in their legal definitions before one could determine the right way to regulate within large policy objectives.

The French system places obligations on traditional providers to promote and to finance French and European culture. The largest local players must invest a given percentage of their turnover in the production of works. Such a system is unlikely to persist, say ten years from now. A taxation system is more likely to prevail then, with the GAFA financing creation indirectly through taxes, rather than directly, through regulated quotas of expenditure.

This change towards a transnational and digital world is compelling us all in the economy, of course not only in the audiovisual sector. In this moving context regulators have to reconsider the ways and places in which funds can be collected and effectively directed within the value chain. More and more value is collected downstream in that chain, and it is important to find proper “pumps” to finance costs upstream.

Of course, in the audiovisual sector as in other sectors, the regulator is far from being omnipotent. It just features as one important node in a meshed network of economic and social players who contribute altogether to impulse the dynamics of the sector. Consequently, besides enforcing prescriptive rules, the regulator’s role consists more and more in anticipating change, bringing visibility, giving incentives and providing guidelines.

Understanding Platforms: Highlights and Lowlights

Henri Isaac
Vice-President Digital Transformation | Université Paris-Dauphine

The role of national regulators today is being redefined in the face of trans-national players and markets. According to Facebook's latest figures, it has 1.8 billion users at the world-wide level and will be used here as a case in point.

Size has traditionally been the first issue for anti-trust regulators, as it closely inter-relates with key watch-points, such as market power, risk of monopoly, etc. Today's platforms, though, arise with the aim of operating at world-wide level, and want to leverage network effects offered by a world in which 40% of the total population is connected, with computer in pocket. The media have tried to emphasise the "dark side" of this reality, not saying nearly enough about the very real positive side: new world-wide interaction, the end of the language barrier thanks to micro-translation, and an extension of discussion between people and markets. "Markets are conversation".

Size is also a factor on the demand side, with cash-in systems and cloud operators gaining influence and the ability to shape the products they sustain, provided they operate at the closest possible level to the consumer. The more global services the more the platforms must be present close to the consumer – it is a question not of regulation but service quality.

As boundaries shift, the second challenge for regulators emerges: identity. Is Facebook a social network or a TV network? Which business model does it embody the most?

I am in favour of very trans-national regulation. Google and the "right to be forgotten", requires a larger system of regulation, as does the issue of data privacy. The Safe Harbour did not protect Europeans from exploitation of data at the US level, and the new European Directive is known not to be effective at all. In an environment where platforms are acting like States, supranational, even continental level regulation would be more than welcome.

The case of international mobile roaming

Verena Weber
Policy Analyst | Digital Economy Policy Division – OECD

Issues Highlighted by International Mobile Roaming

International mobile roaming occurs when a customer from one operator obtains a service from another operator in another country, using the same device, thanks to trans-national agreements between mobile network operators. When the OECD started to deal with this topic in 2009, it was clear that the market was failing to meet many of the objectives policy makers have in this area. The Organisation then embarked on a series of reports that continued to 2012. While it identified some positive developments, prices remained very high, mainly due to uncompetitive markets at the wholesale level and, in turn, high prices at the retail level. Consequences were "bill shocks" for some users and more generally substantial welfare losses across the OECD. Many people simply switched off their mobile phones while travelling.

In 2012, the OECD adopted a Council Recommendation on International Mobile Roaming, which included measures to ensure effective competition, raising consumer awareness and consumer protection, by calling for transparency, facilitating trans-national networks, and recommending measures in the area of price regulation in the case other measures proved to be ineffective.

Work undertaken in 2015 showed a significant decline in prices across a growing number of OECD countries due to three main factors: Technological developments, operator responses to increasing demand from businesses and consumers for international mobile roaming associated with smartphones, and regulation. In November 2015, the European Parliament and Council, for example, reached agreement on the 'Telecoms Single Market' (Regulation EU 2015/2120), which set out a timetable for further reductions in intra-EU retail roaming caps in April 2016. Australia and Singapore updated and signed a free trade agreement in October 2016. A key element of this agreement deals with international mobile roaming between the two countries. Notably the agreement provides that either country, if it sees fit, may regulate wholesale rates and make these rates available to mobile operators from the other country. Finally, other countries such as Canada have introduced automatic caps to avoid bill shocks.

3rd roundtable: Debate

As each transnational player operates under regulator of country of origin, is there a network of regulators within the European Union to harmonise?

Nicolas Curien - While not as advanced as in telecommunications, a group of European audiovisual regulators, the ERGA, is working to bring the situation forward. The Directive on Audiovisual Media Services is just now being revised. One main challenge lies in guaranteeing recognition for new digital players and the exposition of European works on platforms.

The need for traditional regulator intervention is facing as a result of global competition and the power it has to self-balance. Perhaps it would be important to clarify the lines between policy needs, citizen preferences and fiscal policy. Another aspect is regulation justified by individual liberties. Can you comment on this?

Henri Isaac - There is a famous book known as “Code is Law”. Platforms enforce their rules in code, whether in response to market power, anti-trust, or political economy issues, at the global level. Even supra-national and European regulators continue to struggle when it comes to these challenges. I agree that it is somewhat utopian to imagine civil rights being addressed at the world-wide level. We will perhaps one day live in a world where citizens can take action globally. That will require a high level of education and citizens empowered enough to lay claim to their rights in a way that the platforms listen to them.

Verena Weber - Competition has played an important role in reducing roaming charges in a growing number of OECD countries. However, when markets have shown uncompetitive characteristics, we have seen that regulation can substitute.

4th roundtable: Disruptive regulation, national experiments and transnational co-operations

Circular Economy: A natural path to Growth

Sébastien Léger
Partner | McKinsey & Company

Etching out the Prospects: A Consultant's View

The circular economy aims to continue economic growth while preserving natural capital and using fewer limited resources. It is more than optimising a stock of finished resources (steel, coal, fossil fuels); it means ensuring that all our actions are conducted in a manner that fosters the preservation of nature.

Levers can be grouped into three main categories:

- Smart consumption, through the sharing economy, or by repairing or giving away spare parts;
- Manufacturing goods in a sustainable manner (digitisation, efficiency, renewables, eco-design);
- Using waste as a resource: reuse, recycling, energy incineration).

There is great potential in all of these avenues. The key will lie in speeding up our progress, as many initiatives are already ongoing

Our five guiding principles to drive the acceleration of the development of the circular economy are: achieve through innovation, use a comprehensive approach at system-level (including work on demand side); account for differences across industry sectors; find a way to measure progress; ensure the process is not limited to developed countries.

Our eight proposals are summed up as follows:

1. Promote circular economy on an international level
2. Develop harmonized measurement tools at EU level and set medium-term goals
3. Adapt a regulatory framework to support the transition
4. Set a price for externalities
5. Increase funding opportunities for circular economy projects
6. Build an integrated plan for France
7. Promote innovation and the development of a circular supply
8. Stimulate demand for circular products and services

Impacts of digital transformation on markets and regulation in the land transport sector

Anne Yvrande-Billon
Vice President | Arafer

Rail: A Sector in Motion?

The rail sector may not, given the recent integration of infrastructure and services, be the best example of disruptive business model. Digitisation and new technologies have nonetheless affected both demand, service provision and thus regulation in the passenger land transport sector.

Indeed, the digital transformation has impacts that benefit consumers in the land transport sector: new usages of existing modes (car sharing, newly-liberalised coach market); new entrants and thus increased supply of services; new tools to compare transport modes and prices and improve users' mobility (comparators; route planners; interoperable ticketing systems). It also brings about competition in liberalised markets, while putting greater pressure on monopolies.

For regulation, this also entails challenges: Will it be necessary to redefine relevant markets? How to prevent cream-skimming and protect public services in a context of intermodal competition? How to take into account and prevent the risks associated with the horizontal diversification of operators holding a dominant position on one or several markets?

In addition, with digital transformation, intangible assets may be looked at as essential facilities and thus lead to exclusionary conducts. Just after the liberalisation of the airline sector in the US, incumbents' control over computerised reservation systems was used to foreclose downstream players.

However the good news is that digital transformation can also be seen as an opportunity for regulators, as it also means increased capacities to collect and process data. If it comes with the legal powers to collect data and sanction non-cooperative behaviours and with the financial and human resources needed to become a "data cruncher", digitisation in the transport sector will allow regulators, especially multimodal ones, to conduct a data-driven regulation.

New ways to incentivize investments in a competitive market

Pierre-Jean Benghozi
Member of the Board | Arcep

A Changing Environment and New Ties to Be Woven

Today's environment is one with a transformed model, a booming but complex digital ecosystem, and unprecedented expansion of information technology supporting new activities and markets. It is a world of heightened mobile activity, changed by smartphones, the IoT, new practices, uses and of course obligations for the regulator, not only for the fixed model, as in the past, but now indeed for mobile.

The mobile business model creates a new layer of disruptive changes, with the uberisation of society and new pure players challenging everything. New competition between telecommunications and players located in very different positions of the globe is changing the game. Political developments, too, are creating disruption, as illustrated by the European Commission's last communiqué on the gigabyte society. The changing forms of governance from the international to the national call for new skills and resources, providing incentives to devise new principles, a new outlook and new skills for the regulatory body.

In this world, the efficient traditional toolbox must be traded in for something more agile, and no single authority will be in a position to address problems in their entirety.

Regulators' responsibilities include laying the foundation for future infrastructures, but also acting as judges (determining punishment), referees (between economic players) and experts (understanding the perspectives). They will need to use tools that are not coercive, but help shape common knowledge and a view on the system. The challenge will lie not so much in refining regulatory objectives as in considering actual practices, concretely dealing with multiple players, setting and driving resources and processes, and organising regulatory bodies, all with the aim of guaranteeing quality, reliability, affordability and accessibility, even as they may be contradictory.

The previous regulation cycle managed to develop infrastructure. The new task will consist of encouraging innovation and investments for the new economy, using competition not as an end but a necessary part of the dynamic. This will sustain operators and help them monetise their networks, on the basis of data-driven regulation. Means and resources will need to be re-oriented and a hierarchy of aims established, within the regulatory scope, as well as looking ahead to a return of power to the market.

International regulatory cooperation: the role of international organisations

Marianna Karttunen
Policy Analyst | Regulatory Policy Division - OECD

Regulatory Cooperation: Realities and Outlook

The OECD has been working on regulatory quality for over 20 years. Building on this experience, it concluded in 2012 the Recommendation of the OECD Council or Regulatory Policy and Governance.

Principle 12 refers to the importance of cooperation of domestic regulators across borders. It acknowledges that international cooperation is important for actual quality of domestic regulations not only because it makes it possible to take into account cross-border effects of regulation, but also because it encourages peer learning and addresses the challenges that now transcend borders. Regulatory cooperation furthermore allows to mitigate barriers to trade created by diverging regulatory requirements.

To support countries in their implementation of Principle 12, the OECD looked at different means of international regulatory co-operation. It identified 11 different approaches, from the "soft" and informal (information sharing and dialogue, good regulatory practices) to "harder" types such as negotiation of binding agreements and harmonisation through supra-national institutions.

Among these 11 approaches, the OECD has looked more in-depth into the role played by international organisations in fostering international regulatory co-operation. A survey was conducted with 50 different organisations, representing very different functioning modes (UN system IGOs, European-level organisations, private standard-setters, technical standards, between regulators). It showed that all international organisations develop some kind of rules, allowing for exchange of information. Overall, they are generally more active in the upstream phase of the policy cycle, helping and contributing to shaping similar policy objectives among all of their members, but are less active in the downstream phase and particularly on enforcement an implementation of standards, which pertain much more to domestic authorities.

Also, international organisations increasingly pursue quality of their instruments, in line with domestic good regulatory practices. They are increasingly transparent about their decision-making, consult more with stakeholders, and in some cases offer the opportunity for the general public to comment on proposed action. Some organisations undertake efforts to conduct ex ante impact assessments and ex post evaluation of implementation and impact, though organisations still have limited resources and information to do so systematically.

Finally, the international organisations work in institutionally crowded areas, and coordination of approaches among them remains still mostly based on soft mechanisms. Indeed, there is frequent exchange of information, participation in respective meetings and organisation of joint meetings between organisations, these

organisations less commonly undertake formal cooperation. Further efforts between organisations to collaborate would help focus on their areas of specialty, avoid duplication and offer more clarity for domestic regulators on the applicable standards.

International organisations serve as important multi-lateral platforms for regulatory co-operation. They have the institutional framework or continuous dialogue the technical expertise for new challenges to collect data and information necessary for new policy areas and emerging issues. However, their disciplines of regulatory quality and stakeholder qualification are still emerging and remain limited. They will need to be improved and coordinated further with their constituencies to improve their effectiveness as platforms for regulatory cooperation and maximise their benefits for domestic regulators in this regard.

4th roundtable: Debate

To what extent is pooled data collection or exchange of data cross border developed?

Anne Yvrande-Billon - Aside from a common database on highway sectors with the Italian regulator, and an effort by a group of European rail regulators to run market monitoring, there are few initiatives of this kind.

Pierre-Jean Benghozi - Regulation by data is a key dimension of our strategic review… but we operate in very technical sector with many distinctive features (the importance of data quality, the role of population density, historical networks). This puts significant limitations on benchmarking. The Commission is obliged to give broad guidelines when it wants to have more voluntary objectives.

Is there a direct connexion between the extent to which measures are enforceable by law and actual uptake?

Marianna Karttunen - Although evidence on the general implementation of international instruments remains limited, their "soft law" nature does not necessarily imply less implementation. For instance, demand-driven technical standards remain voluntary in nature, but appear to be implemented because of their relevance. In addition, topics with high political momentum tend to lead to active engagement at the domestic level, regardless of the legal nature of the international commitments.

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