Disruptive platforms and sector regulation

Conference report

Conference co-organized by the Club of Regulators and the OECD Network of Economic Regulators

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Introduction

Éric Brousseau | Scientific director of the Club of Regulators

The first platform to have a disruptive effect and thus triggered a need for sector regulation was Uber: fifteen years ago, it came onto the scene with an innovative mean for matching demand for rides with supply of the same. It opened the door to new entrants on the ride hailing market, namely car owners. New pricing principles were implemented to prevent congestion and dynamically adapt demand and supply. Uber's model also offered an innovative way of managing security and quality of service. Not only the taxi business model was disrupted, but the entry of platforms induced changes in the pre-existing regulatory framework.

As digital technologies developed, many investors, entrepreneurs, observers, and of course, regulators, policymakers, etc., began to explore how their respective sectors might gain from the platform model, the key characteristics of which are:

- the optimisation of underexploited assets and capabilities ;
- the use of algorithmized management capabilities — now boosted by artificial intelligence — to dynamically manage complex systems ;
- and the datafication and encryption of all monitoring activities, allowing a securitisation of those activities, and detailed analyses, resulting in data-driven enhancement of services and innovation.

The potential is tremendous in many industries, including those covered by regulation. However, this "uberisation", where it exists, is still in its infancy. The model described above is being implemented on differing terrains and in differing industries, each operating in accordance with its own economic logic. Consequently, regulators must take aim at different pieces of the puzzle: the organisation of competition, the management of essential facilities, general interest considerations, the types of risk triggered by those activities etc. In addition, the value chains and public intervention traditions vary from country to country.

In energy, the usefulness of platforms is magnified by the boom in distributed provision of services, often powered by digital technologies. The distribution of generated power has been spurred not only by the development of renewable energies, but also that of storage capabilities, smart meters, and personal assistants monitoring energy consumption.

In the telecom sector or e-communications sector, the evolution is triggered by the virtualization of e-communication networks, more and more frequently made up of generic computers that provide a vast array of communication management services, as well as value-added services that compute and manage the information processes (software-defined networks, the cloudification of information systems, and the development of edge computing).

There has been an increasing convergence between telecommunication operators or telecommunication service providers and digital computer service providers initially, and now between computing technologies and information service providers. These new service providers are able to provide information system participants with new functionalities. The digitisation of the telecommunication industry lowers the barriers to entry, and is at the same time setting off the development of a very large set of value-added services.

Whether considering transportation, energy of telecom, the challenge in those industries lies:

- in the capability of the incumbent to manage its revenue models, as the new entrants could skim off the best parts of the market;
- in the competitive use of essential facilities, the calibrating of those facilities, and more generally the issue of interoperability between all those services;
- and assorted issues regarding the security and the sovereignty of those essential infrastructures.

In the services industry, regulation has traditionally been based on the need to protect citizens and consumers and guarantee trust in collective essential resources such as currencies, financial intermediation, and democratic governance. Regulators are thus in charge of overseeing market players and preventing systemic risk, for which they often use tools (licenses to regulators, supervision of commercial practices, etc.) different from those applied to traditional utilities.

In the banking and finance landscape, fintech players, thought ten years ago to be on the way to replacing traditional operators have now become incorporated into or merged with incumbent operators.

In media and communication, the challenge lies in levelling the ground between the new and global platforms and national traditional media subject to specific regulations for professional, cultural, and political reasons.

In addition to these contrasting contexts, degrees of maturity, and levels of criticality in the issues faced, arises the question as to who will master the provision of those new services and the related technologies. In the financial sector, the incumbents have prevailed, ultimately folding the fintechs into their operations, while in the transportation industry, platforms might succeed in becoming integrators of service, triggering counter-offensive of incumbent. Can one thus expect a reinforcement of the market power of incumbents (or coalition) through the provision of those new services ? How can all the foreseeable business models be regulated, and will their coexistence create new types of risk?

Also, the question for regulators is the best way to manage the transition when there potentially exists a sustainable equilibrium in the organisation of the industry. How to manage adaptation of incumbent firms and the compensations of losers, or the support to new entrants, etc.?

And, of course, at what level should disruptive platforms be addressed: the national, sub-national or international?

Beyond these generic questions, what are the respective roles of sectoral regulators, the legislator, the executive powers, and the industry stakeholders in these transitions? And what lies ahead for the evolution of the regulators' mandate, capabilities, and tools?

Round Table 1: "Transportation and Mobility"

Regulating MaaS, Finnish Experiences

Laura Lassila | Senior Specialist, Data Business Unit, Finland Ministry of Transport and Communications

The following presentation deals with the drafting of legislation and policies for MaaS, rather than on regulation itself and the supervision of obligations which the latter entails.

An overview of accomplishments to date in Finland

The Finnish Act on Transport Services, on which preparations began in 2015, has now been in effect for five years, with the exception of a few obligations and articles added subsequently. Following a complete assessment of its impacts over this period, during which mobility patterns were also reshaped by COVID, the ATS is now being updated. This process factors in the updates to the relevant EU regulations, need to further boost availability of multimodal travel data and digital mobility services and the ongoing technology-driven changes in sector itself (e.g., AI, or the back-end systems that enable new modes of mobile ticket issuance, purchase, and validation).

With the third-party ticketing enabled from 2018 in Finland, two key obligations arose: that of opening up essential data, i.e. travel data; and that of enabling a single ticketing interface. However, while the latter technically enables third parties to sell single tickets, the Finnish model for third-party ticketing is based on user accounts, and thus subjects third-party access to user approval. Concurrently, as the third-party can have access to the acting-on-behalf interface, and since the national law subjects all services to the same obligations (from Uber to micromobility), MaaS services can, in effect, create packages or travel services. In doing so, they become obliged to grant access to acting-on-behalf interfaces.

The result is a landscape in which multiple MaaS platforms selling packages or combining tickets can offer each other's services.

Lessons learned

The Ministry of Transport and Communications has conducted an evaluation of the Transport Services Act, including external factors, given the substantial changes that have taken place in the sector since the law's entry into force.

- The creation of a new digitally-driven form of service made necessary a systemic change in the market between the operators as well as in consumer behaviour, whereby the latter was likely reshaped by COVID, during the pandemic, with the near-cessation of public transport use, and into the present, marked by the still-rising phenomenon of remote working.
- Despite the availability of more personalised options combining different mobility services, the use of private vehicles has remained at the same level.

- The opening of interfaces has improved data inoperability and, consequently, made it necessary for service providers to develop new means of cooperation – and thereby, lay the foundations for the MaaS ecosystem.
- However, development has not been as quick as anticipated at the time of the legislation's drafting. In particular, cooperation between public and private operators has not gelled as expected, perhaps due to lack of models and governance.

The Finnish Transport and Communications Agency, Traficom, publishes a situational picture updated at least once yearly.

- It shows, firstly, that the newly-opened access to ticketing interfaces is used by multiple types of services:

  - for local transport, long-distance transport, or combinations of the two,

  - mobility packages using the single ticketing interface in combination with the acting-on-behalf interface,

  - single ticketing interfaces offering new services (route searches, CO2 emissions comparison tools including soft mobility options).

- Contrary to expectations at the time of the law's drafting, few purely platform-based services have emerged. In contrast, traditional transport services have largely begun to offer MaaS services in their range.
- The number of connection and forwarding services has increased from 30 to 60 in the last three years.

Building the future of new mobility services

- Finland prepared its views for the EU's Multimodal Digital Mobility Services Initiative this year, attesting to the importance it places on this area. Insofar as mobility services are part and parcel of digital single markets, this transition is needed for the operating environment and legal framework as a whole to function. The key principles from the Finnish perspective are:
- the digital mobility service market should be the layer combining all the other layers,
- the regulation should not hinder options and possibilities, given the speed at which technology is developing,
- more data are needed in order to make the existing service options run more smoothly and easily,
- no difference should be made between public and private operators,
- interoperability and scalability are necessary, to build demand for these services as well as to enable the cross-border activity needed for adequate scale.

Which regulation for digital mobility services?

Luisa Perrotti | Head of International and European Affairs, Transport Regulation Authority (ART Italy)

This presentation is structured around three main themes: first, the issue is addressed as to which technology-based disruptions may be observed in the area of mobility services; secondly, the types of digital mobility platforms in operation are sketched out; finally, the question is asked as to which type of regulation of such platforms is required, if any.

Which disruption? Context, issues, stakes

Unlike in Finland, which presented a proactive domestic approach involving the regulation of digital mobility services, in Italy no such legislation or regulation has been adopted thus-far. The same applies to the EU as a whole, where the Multimodal Digital Mobility Service initiative (MDMS), undertaken by the Commission in 2021 in the framework of implementing actions of the 2020 *Sustainable and Intelligent Mobility Strategy*, has not led to the tabling of a legislative proposal as yet.

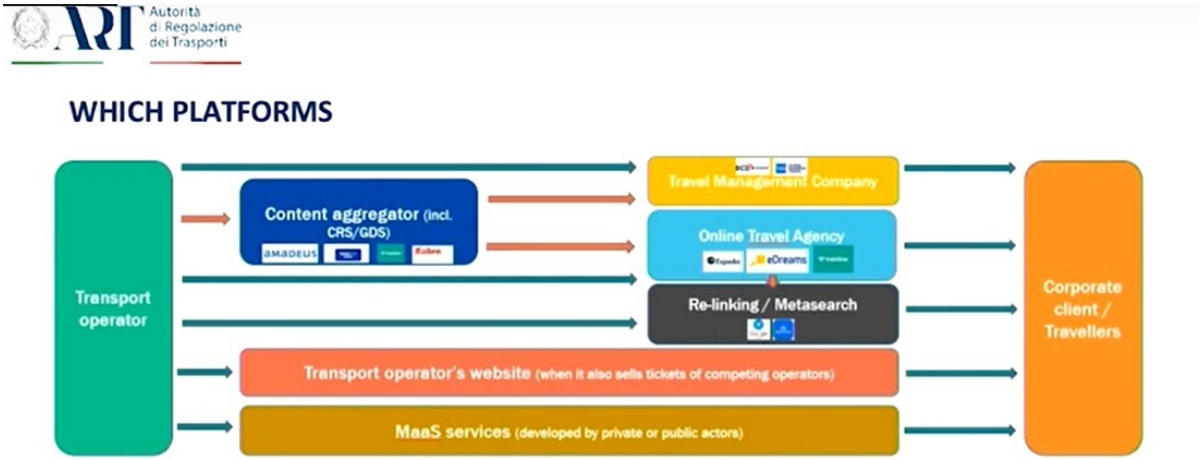
Arguably, transport industries have no interest in sharing with third-party platforms and players information and ticket-selling markets that they control through proprietary technology. They also want to protect non-digital sales channels. In addition to not being in the interest of consumers, this trend also affects the development of a technology-based market for integrated mobility services. Surely, the operation of platforms also raises a number of relevant regulatory issues which concern, among others: surge pricing, personal data protection, data sharing obligations, mode-specific ticket integration and tariff integration issues; compensation for the services rendered by the MDMS; revenue sharing, where applicable; transparency of procedures; cooperation with the relevant institutions and authorities, to mention only some.

It might be worth recalling that the EU MDMS initiative began with broad consultation of the stakeholders and the establishment of a dedicated Forum of all interested parties, both public and private, that addressed the three main challenges identified by the Commission in the development of the initiative: commercial, technical, and incentive-related. Ideally, the key elements of the legislation involved the obligation of relevant transport operators to enter into ticket-selling, re-linking and journey continuation agreements based on the FRAND (fair, reasonable and non-discriminatory) principle that already applies in the air sector.

In early 2023, the Commission published a report by the Forum and held a seminar online which exposed a great deal of “not-in-my-backyard” thinking across interested industries. Although it was clear that the road ahead would be arduous, it was expected that a legislative proposal would be presented until the announcement came, in early October 2023, that the Regulatory Scrutiny Board of the Commission had given a negative opinion on the draft legislation. To date, it is uncertain when a new proposal will be tabled, if at all. Though the Commission has proposed much needed new initiatives in the area of multimodal information for the benefit of passengers, no progress is in sight as regards the actual provision of integrated digital mobility services.

The MDMS initiative was initially intended with the aim of connecting local (mostly urban) transport with rail transport (including medium- and long-haul services). The technological and procedural pieces of the system could have leveraged on the experience of the air sector, where a dedicated model and code of conduct is in place (in fact, the Code of conduct required updating). However, both the rail and airline industry have resisted, though in different ways and for different reasons, legislation aimed at creating obligations and incentives to enter distribution agreements with third-party platforms. Some explicitly argued that such agreements would benefit only the platforms to the disadvantage of commercial operators. An investigation on the types of disruptions in the area of mobility may, therefore, start from the resistance of traditional transport industries to disruptions coming from providers of integrated digital services.

Which platforms?



Name	MDMS provided	Geographical Scale	Transport modes
Trainline	Information, booking, ticketing	International, National	rail, coach
AccessRail	Information, booking, ticketing	International, National	rail, air
Eurail	Information, ticketing	International, National	rail, ferries
Omio	Information, booking, ticketing	International, National	rail, air, public transport, ferries, rental car, car sharing
Rome2Rio	Information, booking	International, National	rail, air, public transport, ferries, rental car, car sharing
OV-chipkaart	Ticketing	National	rail, public transport
CityMapper	Information, booking, ticketing	Local	rail, public transport, bike, e-scooters, mopeds, carsharing
Moovit	MaaS	Local	rail, public transport
Whim	MaaS	Local	rail, public transport, taxis, bikes, e-scooters, rental car
Jelbi	Information, booking, payment	Local	rail, public transport, e-moped, e-scooter, bike, car, taxi and ridesh

Examples of MDMS (Source, EC Commission 2023)

Digital mobility platforms have been referred to as virtual infrastructures and mobility data as raw regulatory material. Clearly, the operation of platforms and, when it occurs, competition distorting behaviour affecting the relevant markets are of interest for transport regulators; this is even if they do not have direct competence concerning platforms.

Against this framework, and with no aim at providing a comprehensive picture but, rather, some examples, the slide above presents in a schematic form the operation of mobility platforms and a few features of digital providers, the types of services they offer, their geographical scale of operation and the transport modes involved.

Which regulation?

In the absence of ad hoc legislation, several major national transport companies have established their own technologies to provide information and sell tickets online. In various instances, their operation through platforms has been challenged before national competition authorities or the EU Commission's Competition DG upon allegations of market foreclosure and abuse of dominant position.

Depending on the case in hand, charges have included leveraging on exclusive service contracts to preserve a position in open access markets; application of restrictions to the sale of tickets by MDMS or other companies; lack of information about alternative options for follow-up regional to high-speed services and other pre-, on- and post-journey information; refusal of adequate compensation for tickets sold by the platforms, to mention the most recurrent ones.

Decisions have been adopted on a case-by-case basis, hence the question: as platforms continue to operate, is some kind of regulation needed? If so, what kind of regulation?

Back in 2015, the Italian regulator issued a recommendation on mobility platform that relied on reasonability and proportionality as key criteria. These remain valid today in contrast with potential over-regulation.

Manuel Cabugueira | Member of the Board, Administrator, ANACOM Portugal

How do you, as a regulator, relate with the Italian competition authority?

Luisa Perrotti

Based on the founding law and on ad hoc protocols between the two institutions, the transport regulator and the competition authority collaborate, particularly with reference to issues concerning the application of EU consumer law. On occasions, we have also issued joint recommendations.

The remits of the two institutions, however, differ. As a regulatory authority, and like other public utilities regulators in the energy and telecommunications sectors, ART adopts regulation ex ante that often replaces regulation in place before the establishment of the regulator; the competition authority, on the other hand, intervenes ex post, on a case-by-case basis.

Paving the way for intermodality: the French perspective

Fabien Couly | Director, Research, Digital Mobility Services, Transport Regulatory Authority (ART France)

The ART's current undertakings: Developing quality digital mobility services to facilitate intermodality and modal shifts within the current regulatory framework

In France, as in other parts of the world, digital technology is now the main means of accessing travel information and smart ticketing.

- In 2019-20, 90% of the mainline train tickets and two-thirds of those for regional trains were sold online.
- The picture is different on the coach market which is organised directly by only two platforms.
- Air transport, open to digital distribution since 2000, enjoys ever broader coverage by platforms.
- Car transport is supported by platforms such as MAPI, Waze, or Google Maps, though these have trouble accessing ticketing sites.

Overall, the development of platforms has not disrupted the economic models of existing transport operators (except for the coach market). As they are seen as a means of developing intermodality and the modal shift, regulation has been developed in Europe to foster the rise of Mobility as a Service, mixing information and ticketing, one of multiple ways of achieving less carbon-intensive mobility.

The ITS Directive (2010) and its delegated regulations, intended to develop all intelligent transport systems for cars and public transportation: two delegated regulations in 2013-2015 to open road data relating to cars, followed by the Multi-Modal Travel Information Services Delegated Regulation in 2017.

France supplemented this framework with the Mobility Act in 2019, with two articles in particular: one extending the scope of the delegated regulation to real-time data; and another inspired by the Finnish model, that opens local and regional smart ticketing to third parties, insofar as France, records 70 billion travels at the local level, compared to under 1 billion for long-distance transportation.

To ensure the efficiency of this act, France empowered the Transport Regulatory Authority to check and control the opening and use also of mobility data, such that it can identify and sanction breaches, as well as solve disputes between players and stakeholders. As such, these missions can support rail sector regulation., since any access to railway information implies access to data and smart ticketing.

Issues in regulation on rail and coach: competition on transport markets (rail and coach transport) through the opening of digital sales services from operators in a dominant position on the market

The scope of the existing regulation nonetheless remains incomplete and even imprecise.

The European authorities made it mandatory to enable access to data with standardized formats, when these are still incomplete: the NETeX standard, for instance, was not developed for new means of transport such as cycling, car sharing or bike sharing.

To make this standard available to data, many "profiles" – i.e., means of describing the standard for specific types of data – still need to be developed before the data are actually available. According to producers, it would take an estimated two years to develop the multiple services involved here. We furthermore lack the dynamic tariff data used on long-distance transportation, to which regulation does not yet provide access (but that will be in the revised regulation in 2024).

Meanwhile, for digital sales services, access to data and eticketing is open only at the local level, when stakeholders expect national and even European-level data. Until the legal framework becomes more precise, they claim that they do not have access to a viable and fair economic model. The difficulties encountered in enabling the multimodality or modal shift are the same obstructing the classic transport market.

In France, even though the rail market has been open to competition since 2019, only two new entrants have come for long-distance rail (Trenitalia and Renfe), and only one in regional train lines (Transdev). In the coach transport market, open to competition since 2015, the number of operators has dropped from five to two. In both cases, the incumbents are simply too strong, thanks to the quality of their platforms.

The same situation is found in Germany and Spain, where the incumbents enjoy a preponderant position on the distribution market. Their refusal to distribute to new entrants could be, in the end, a means of foreclosing the market downstream.

As to the PSO market, a double-lock situation could emerge:

- when competition was opened up on the local markets, local authorities took steps to distribute services by means of their own platforms and could thus prevent new entrants from accessing the local services, despite Article 28 of the Mobility Act;
- meanwhile, the incumbent can refuse journey continuation with other long-distance services.

To become a competitive arena, coach transport needs to be underpinned by platforms that cost hundreds of millions of euros in investments which can limit new entrants on this sector.

Advisable adjustments to the legal framework: how the legal framework could evolve to effectively deal with these two issues

In essence, then, the market is closed for the moment, and there is no legal framework for sectoral regulators to improve the access to the distribution market.

The burden thus lies with the competition authorities. In France, they issued their first ruling against SNCF and its subsidiary, SNCFConnect in 2014, modifying it in 2021. The decision established the obligation for the SNCF to give other travel agencies and distributors the same access which it has to SNCFConnect. However, this decision has not reshuffled the deck any more than the regulation on the transportation and distribution market in the French mobility act, has.

A modified legal framework could effectively deal with these two issues.

The draft European regulation on multi-modal digital mobility could form a useful counterpart to Regulation (EU) 2017/1926 to give the framework greater potency. Establishing a multimodal regulatory framework governing distribution could facilitate the sector's development and make it possible to offer more multimodal travel using FRAND principles, providing rules on journey continuation applicable to all modes, operators, and distributors.

A fair and regulated competitive framework for digital services could help foster an ecosystem that is sufficiently competitive to limit the lock-in effects stemming from the dominant position of a few sectoral players and promote intermodality and modal shift by offering more efficient travel solutions.

Failing this, only regulation of access to the digital platforms of historical operators in a dominant position (e.g., for other essential facilities held by incumbents) would enable new entrants to have fair access to downstream markets.

Secondly, European regulations on digital markets and services make it possible to regulate platforms' market power. For platform-based systems and gatekeepers, the regulator's action can be limited by its sectoral competence in transport. The ART will need to organise its regulatory actions for this type of platform, in line with the French regulator in charge of DMA.

Round Table 2: "Digital service providers: competition in regulated industries"

5G investment and innovation in Australia as shaped by the competitive dynamics in telecommunications markets

Tara Morice | Acting General Manager, Mobiles, Transmission and Consumer Branch, Australian Competition and Consumer Commission's (ACCC)

The development of 5G enterprise use in recent years

5G promises to bring about a step change in mobile technology, boasting fibre-like speeds, very low latency, and high data capacity capable of matching that of fixed lines for the first time. The ultra-low latency and high reliability of 5G creates many new opportunities for industry: thousands of interconnected devices and new applications are expected to come online in the next few years. However, due to the convergence between telco service providers and digital service providers, even driven by cloud computing and the virtualisation of telco services across the services stack, the underlying physical networks will remain of great importance.

The telco regulator must thus balance the need to encourage that investment into the networks with an eye on the revenues of the infrastructure networks, while ensuring that the innovative virtual network providers can enter.

The Australian market is served by three mobile networks, between which the key differentiator is their geographic coverage. Despite its very extensive land mass, Australia posts a very dense urban population, almost entirely concentrated along the east coast. Nonetheless, geographic coverage, particularly in regional areas, is crucial.

- The largest operator and formerly the Government-owned incumbent, Telstra, boasts the largest mobile network, both geographically (2.7 million km2) and demographically (99.6% of the population).
- The second-largest network, Optus, can lay claim to strong presence in the regions.
- TPG Telecom, meanwhile, operates above all in metropolitan areas.

The respective size of their network is reflected in their market share.

The mobile communication market in Australia is subject to very light regulation. Only one service is regulated from the economic standpoint: mobile voice termination. Mobile virtual network operator access is not mandated, though requests for such regulation have been coming in for years. Likewise, no coverage obligations are imposed when allocating spectrum.

Instead, the regulatory framework relies heavily on competition to deliver strong outcomes, as well as the investments and services needed by consumers and enterprises. In such a market environment, 5G was logically the object of fierce competition from its inception – and caused the downfall of a new entrant operator, unable to bear the risks which participation in the 5G spectrum auction held. A four-to-three merger followed, on the belief that the merged entity would be able to better roll out 5G and better compete with the incumbent.

In reality, the failed entry has had a material effect on the competitive dynamics in the mobile markets ever since. As of January 2023, 9,500 5G sites were in operation across the three mobile carriers. Telstra reports having reached 85% population coverage on 5G, and expects to reach 95% coverage by mid-2025. Approximately 27% of all mobile connections in Australia relied on 5G, availability of which is currently estimated at around 37%, with median download speed reaching 200 mbps. Take-up is increasing and 5G speed far exceeds that of 4G. With the use of millimetre wave, some operators are announcing speeds of up to four gigabits per second in the near future.

Nonetheless, the innovative services, as highly touted as they were, are not taking off, while 4G has been able to provide for most of the applications which people need while on the move. The growth in actual data usage has been well below that in data included on mobile service plans, suggesting that consumers are still predominantly undertaking bandwidth-intensive activities using a fixed-line network. Meanwhile, the development of consumer and business applications requiring significant bandwidth and low latency have been slow, or at least have been lagging behind the expansion of network capacity and capability – despite the breadth of the roll-out and extent of the investments that went into it.

The reason likely lies in the fact that Australia has a wholesale-only national broadband network, thus a fixed line network owned entirely by the Government, which network operators are now trying to bypass. Today, approximately 10% of home broadband connections are actually provided over mobile networks. As these are increasingly converged with the fixed networks, single core networks have formed.

When the second-largest operator experienced a 12-hour network outage across the nation two weeks ago, with significant ramifications, all of its fixed and mobile services went down. Concerned by this most recent occurrence and the lack of redundancy to which it attests, the Government has initiated a number of review processes.

The possibility of 5G network slicing stirred great excitement when first raised: an operator running a large network would be able to portion out part of its capacity for an industrial application, hospital, etc., configuring it to provide assured network performance to certain users in line with their usage needs. The capability was supposed to be a game changer for the enterprise market. It was also supposed to change the outlook for virtual network operators, which would be able to gain access to almost their own network.

In reality, the trial runs held by the national MNOs this year have shown that slicing requires standalone 5G technology, switched on only last year. In addition, on the downstream markets, it has become clear that enterprises want to keep significant control over their own investment. When offered a network slice, they perceive it as a requirement that they comply with the service provider's conditions. As a result, many companies are having private, bespoke wireless networks built for them, rather than taking advantage of what appeared the more efficient slicing-based solution.

The likely development of competition between traditional infrastructure-based providers and virtual network providers

Today, some 50 private wireless networks operate in Australia, and will be followed by many more. The implications for spectrum are considerable: whereas the Australian Communications and Media Authority used to be able to allocate a great deal of mid-band spectrum to the large networks, it now has to also license smaller parcels of spectrum in discrete geographic areas, a necessity that also eats away at the efficiency gains initially expected by the regulator.

The first four years of the Australian experience suggests that 5G has been more an evolution than a revolution, particularly as concerns the consumer mobile broadband experience. However, it is likely reaching a turning point where the arrival of 5G standalone will unlock its more revolutionary benefits. Industry demand for more innovative 5G solutions will be key to realising this potential. As is often the case in telco, supply is slightly ahead of demand.

Regulatory issues and interventions under consideration

Amidst these developments, the Australian Government is launching a handful of grant programmes, including the 5G Innovation Initiative, through which significant funding has been set aside for business testing and trials of 5G applications.

The legislative framework in this area was established thirty years ago. The Australian Competition and Consumer Commission is responsible for the economic regulation of telecommunications, but is also the regulator for anti-trust and competition matters, sharing the latter powers with Australian Consumer Law.

Thus far, it has refrained from excessive or early intervention, on the predicate that competition would provide all necessary benefits soon enough and in the belief that innovation should not be pushed down any particular path.

Being responsible for both the economic and competition-related pieces, the ACCC enjoys a dual perspective and the unique ability to choose between ex-ante or ex-post action, depending on which it deems will be more effective. For instance, last year, when the largest operator was accused of blocking access to a central 5G spectrum, it managed to secure undertakings from that operator to cease that conduct, and thus enabled the second telco operator to immediately roll out low-band spectrum. While it would like to see more innovation on the market, it continues to consider competition the best driver for that.

Manuel Cabugueira | Member of the Board, Administrator, ANACOM Portugal

How do the respective regulators of competition, consumer, and economic affairs square?

Tara Morice

Our situation is both rare and quite enjoyable. The Infrastructure Division serves as a specialised consultant to the ACCC, to which it belongs. I am an expert in telecommunications. Should the Antitrust Division be asked to address a merger, it turns to us for assistance on telecommunications mergers. The same is true of the Competition Division.

Regulation and supervision in the face of new competitors: the case of the financial sector

Julien Uri | Fintech-Innovation Unit, Prudential Control and Resolution Authority (ACPR France)

The financial sector has, like many other sectors of the economy, been greatly impacted by the digital transformation. It is distinct, however, in that it has long been a highly regulated sector and became even more so after the subprime crisis. Always an arena for competition, it has brought new questions and challenges to the fore in the last fifteen years.

The ACPR was created in 2010 through the merging of four existing authorities. It is the supervisory authority for banking and insurance companies, responsible for:

- safeguarding financial stability by granting licenses and authorizations, supervising the financial situation of supervised institutions, and contributing to the development of prudential rules, especially at the European level;
- ensuring consumer protection through scrutiny of business practices;
- serving the cross-functional mission of anti-money laundering and combatting the financing of terrorism (AML/CFT);
- developing crisis prevention and resolution arrangements.

It is neither a regulator nor a competition authority, but has engagement in both these fields.

The impact of the digital transformation

The recent transformation in the financial sector, which has heightened competition and caused traditional business models to be reshuffled, was driven by multiple factors:

- technological changes (e.g., the smartphone, digital security technologies, cloud computing, big data, AI/ML, blockchain);
- new consumer expectations (easy-to-access digital tools, a seamless customer journey, immediate assistance but autonomous manageability in the everyday);
- EU competition rules, especially those creating new statuses: payment institutions, electronic-money institutions, account information service providers (AISP), and more recently participatory finance service providers (PFSP) and crypto-asset service providers (CASP);
- Different types of new competitors (fintechs, bigtechs and crypto players).

This revolution is disrupting practices with new use cases.

- In payments, dramatically changed by the development of e-commerce, consumers can enjoy such services as "Buy Now Pay Later" (BNPL, i.e. fractioned payment), or personalised and sometimes fully-automated financial advice. These new use cases have translated into new business models for new competitors, but also in an inflection of the business model of incumbents. Competition is heavy in the most expensive (cross-border payment) and complex (person-to-person) segments, while the smartphone has become a new payment terminal driven by Big Tech players, all delivering services more efficiently, economically, and inclusively.

- In open banking, AISPs collect and use payment account data to offer financial (automated credit worthiness assessment, analysis of accounts) and trade services (e.g., automation in corporate accounting), and as such, can compete with crypto-assets.

These crypto-assetsoffer an example of a more radical revolution. Operating on completely alternative market infrastructures based on blockchains, they are the subject of a new type of financial service, provided on a decentralised basis ("decentralised finance" or DeFi).

Here too, incumbents have seen an inflection in their business models:

- an internal adaptation, in order to maintain their customer relationships and prevent these from being taken over by intermediaries;

- an adjustment of their competitive positioning;

- and the formation of partnerships with fintech, to integrate the latter's solutions into their own and develop platform strategies.

The transformation of the financial sector also generates risks. In the insurance business, for example, the concentration of new entrants in more profitable niche markets exposes incumbents to the risk of ending up with high-risk customers. One should also mention ML-TF risks: the fragmentation in the value chain, for example on payments, can make the monitoring of transactions more complex. But these new risks are mainly related to the crypto market, where assets can be held in non-hosted wallets or in wallets hosted by non-regulated entities, i.e. not necessarily subject to KYC rules. There also exists a substantial risk of fragmentation of market infrastructure, if every player endeavours to develop its own business channel, which in turn threatens financial stability as a whole.

Big Tech players have attracted a great deal of attention and indeed have high disruption capacity: they can capture ever more data and exploit vast pools of it; as tech providers, they are also most frequently unregulated, and can price services in a way that captures most of the margin while leaving compliance and the related costs to their so-called partners. However, they have also positioned themselves differently across the market, as a result of which their impact is diffuse: in Europe, they are not commonly found in direct competition with financial participants, and instead, are business introducers through their relationships with business consumers, or providers of critical technologies (with significant market concentration).

Regulation and supervision in the new landscape

These developments call into question the traditional operating modes of regulation and supervision. In some cases, they come up against its rigidities, while in others, they take advantage of its loopholes and limited scopes of action. How can financial regulation achieve certain permanent objectives in a new and moving context?

Financial regulation fundamentally works towards objectives different from those of competition – mainly financial stability and consumer protection – taking a risk-focused approach. As such, it may constitute a barrier to entry for new participants, but in the same time it may also encourage some players to remain outside the regulated field. This dual effect can lead to distortions in competition between regulated and unregulated entities that provide sometimes very similar services.

Insufficient competition can be an issue in the attainment of the two aforementioned objectives: from the perspective of consumers, but also that of financial firms, which tend not to adapt to technological changes when competition is not there to spur them on. In the financial sector, this makes them fragile and vulnerable to cyber- and other forms of attacks.

To address this, the ACPR created the FinTech Innovation Hub. It improves new entrants' access to the financial supervisor, as well as gives companies a point of contact to whom they can report difficulties. This can also help to identify regulatory barriers to market entry, which is another of the hub's missions.

At the European level, a voluntary policy was instituted to open up access, while setting the appropriate safeguards:

- by introducing proportionality in regulated activities (e.g. differentiated payment status);
- and opening access to data, first through the "open banking" policy, and now "open finance" (FIDA proposal). It should be noted that, following the mixed results achieved on the former, especially the technical struggles in data sharing with APIs, the proposed mechanism provides that "open finance" service providers must pay to access data, thus incentivising the data-owning incumbents to share that data.

In other cases, the regulatory response has been to take into account new situations such as technological innovation (e.g., remote identification); or to acknowledge the imbalance of power between financial players and technology providers (e.g. the EU's DORA Regulation on cybersecurity, where financial supervisors will start monitoring critical service providers, such as cloud providers).

The question as to how to best implement control over players that gain too much importance in the system is the subject of much debate in relation to AI, and effectively illustrates the need to adapt to maintain the same objectives. However, this identifying of barriers also requires more cooperation between authorities of different sectors, as well as between different countries.

Some barriers remain legitimate and are not intended to be removed, hence the importance of safeguards. When crypto-assets began to gain clout, debate arose as to whether they should be left to fend on their own, cut off from the world of traditional finance. However, financial regulators saw value in this new way of doing finance, for instance for cross-border payments, blockchain, etc., and thus provided for a landscape that enabled legitimate competition, subject to conditions (cf. the EU MiCA Regulation).

The ACPR's discussion paper on DeFi suggests that these provisions be extended to intermediaries found in this field, but also allows adjustments where legitimate. This flexibility is important in a field where protocols are often governed by online communities, without territorial affiliation, and where the architecture is based on smart contracts, i.e. software objects that do not always have an owner. By way of example, to address this daunting challenge, the ACPR has proposed a certification mechanism for smart contracts: the smart contract has to be safe, but needs no central player or party to be granted a status.

Manuel Cabugueira | Member of the Board, Administrator, ANACOM Portugal

Your presentation covered a vast range of topics, some of which are at odds with one another, for instance, smart contracts and consumer protection. How can regulators verify that the access granted by consumers to one provider do not end up all over the open banking world, given the increasing tendency towards interlinking and data sharing?

Julien URI

The Open Banking Policy was found to be too vague for consumers, who gave consent once, and even then, did not necessarily read all the details of their statement. FIDA, still in the drafting process, would include a dashboard enabling consumers to manage their consents more effectively. Discussions are also underway to determine the frequency at which consent must be renewed, not only for banking data but also for the GDPR.

The impossibility of regulation?

Manuel Cabugueira | Member of the Board, Administrator, ANACOM Portugal

Initial thoughts: the challenges

Most of the discussions in the OECD and Regulatory Policy Committee in particular focus not on how the digital markets should be regulated, but on how digital markets and digital approaches can help us be better regulators. My hero when it comes to economists is Ronald Coase. When accepting the Nobel Prize in 1991, he asserted: everything we have been doing in the last three centuries is proving Adam Smith right.

Indeed, as I have been able to ascertain time and time again, referring to his works and comparing them with my everyday practice, Adam Smith clearly spelled out our incapacity to regulate. He explained that the government has three duties: to defend the country, maintain peace and provide public goods, i.e., services which the market does not wish to provide. He advised against intervening with the markets and decisions people make on them, as such action requires a vast amount of knowledge which governments will never have.

I have been struggling with this demonstration of the impossibility of regulation since 1991 – and may finally have found the answer.

Traditionally, regulators have been tasked with economic matters and only at the end of the last century started to be seen as potentially able to address social problems. In the last two decades, matters became more difficult, as our scope in the minds of others began to include quality of life: fit for purpose, fit for future, resilient, human centric, green, taking into account all transitions (green, digital, energy), as well as the EU and its values, the UN's Sustainable Development Goals, and beyond.

Ours has become an impossible task – yet I believe that the digital approach and digital technologies will help us provide answers and enable the market to function in a more economical, sustainable and efficient way.

This requires, first, a change in our perspective and discourse about regulation. It means turning away from terms such as smart, responsive, problem solving, risk-based, principle-based and evidence-based regulation, and instead, using new technologies and referring to interactive, adaptive regulation that considers the balance between innovation and risk, collaborative, and data and knowledge-based regulation.

Four years before ChatGPT came on the scene, I was already involved in a project teaching robots to work the standard cost model and carry out impact assessment. I can thus assert that these robots do read the law, identify costs and calculate them – as well as take on board the corrections given to them by humans to improve with each new task.

Digital technology can help us not only in our actions but also in our thinking: it is important that we stop seeing economic regulation as a chain of different steps, but as a flow, taking a dynamic approach that gives us information about the markets and allows us to react and regulate the market immediately.

Data for operators and consumers

Portugal applied this principle during COVID, regulating public practice dynamically and immediately, based on real-time information: it sent mobile phone users red or green signals denoting that the beaches were respectively full or accessible for use.

ANACOM is currently involved in two projects based on this idea, relating to:

- **data use**. GeoANACOM.pt is a platform accessible by mobile phone or computer on which users – business, individual or administrative, each with their own level of access – can find out the service provision conditions (telecommunications, postal services, satellite coverage, etc.) for any location in Portugal, thus facilitating the market's workings and promoting competition.
- **innovation**. A recently ratified law in Portugal allows for the existence of sandboxes, the implementation of which it entrusts to a public institution. The result are "technological free zones", a mixture between sandboxes, innovation spaces, experimentation spaces, and living labs, where different sectors can operate and regulators can interact with operators.

Technological Free Zones in Portugal

While technically, these sandboxes are nothing new, the technological free zones are bringing together economic regulators – a huge step forward. We have the opportunity to look at the same issue in innovation and regulation and work to both promote innovation, and understand how we can intervene in the market.

I am not concerned about silos as such, understanding the reasons for which they came about, but do feel there should be coordination to enable joint undertakings between those in them. Data centres, for instance, combine issues in communication, digital, energy, etc., and must be addressed taking into account the perspectives of parties from all those fields.

It will be the OECD's challenge to move forward with methodologies that enable us to look concurrently towards innovation and develop regulatory experimentation analysis, coordinating our respective action to avoid duplication of questions, information retrieving, etc.

The Portuguese Navy's Operational Experimentation Centre in Tróia, for instance, is home to a space for experimentation with drones, mostly for defence and military purposes, but also hosts the telecommunications regulator, helping on the use of spectrum, and the regulator for security in airlines.

Similarly, in the air mobility space, solutions are being tested as much for medical emergencies as for energy and transport. Thus, a combination of regulators is helping innovation to develop while learning at the same time from their own experimentation in this environment.

Final thoughts: the answer

The “demotivator” site despair.com states: “if innovation does not make your job easier, it probably will end it.” I believe that artificial intelligence, data, and new technologies will indeed make our job easier, and it is our responsibility to study it, use it and make our intervention more efficient and more capable thanks to it.

It could well be that regulation is not the answer. From my perspective as an economist originally working at the Portuguese Competition Authority, I wonder whether the Digital Services Act and Digital Market Act actually exist in response to a need for regulation and security – or as a means of applying the competition law, deemed to have delivered disappointing results.

In my ten years at the competition authority working on payment platforms, out of six cases which I started, I was unable to finish even one. The European Commission managed to finalise two in only 12 years.

In Portugal, we have yet to decide which authority will accompany the implementation of the DSA and DMA. We look forward to the Artificial Intelligence Act, though discussion on it in Parliament has stopped due to disagreement on which kind of artificial intelligence models should be subject to regulation.

Discussion with the floor

Andy Burgess New Zealand Commerce Commission

Why is there seemingly less digital disruption in energy compared to other sectors: the greater customer inertia? the tighter regulation?

Éric Brousseau

One reason lies in our being in the midst of the green transition. There would be more regulatory models and business models, were there fully decentralized or distributed energy generation as well as energy storage capabilities. Tremendous investments would be needed before the models can change. Furthermore, smart grids remain but a concept.

Manuel Cabugueira

Let us reopen this discussion in 2027!

The energy sector has seen many disruptive innovations. In Portugal, the introduction of wind power energy was heavily supported by regulation. The first sandboxes were set up to discuss new transport options, directly related to energy issues. Energy is not only undergoing transition, but also part of the overall discussions on most of the transitions, being concurrently a prerequisite for innovation, part of the innovative solution, and a determinant of the type of regulation needed thereafter.

Energy is not lagging behind; it has been experiencing a deep-rooted digital transformation over the last twenty years, especially through smart grids. The market opening has brought about much greater integration, both vertically between generators, system operators, marketplace, and distribution networks, but also horizontally, between systems operators and between marketplaces.

The transformation has occurred in the upstream segments, leading to a much more efficient energy system, at least on electricity, than in the US or Asia. The problem of the downstream market, especially on the consumer market, lies in the fact that the energy sector relies on sophisticated infrastructures and products, some of which are not fit for purpose at present (e.g., electric vehicles).

In both the small and large business sectors, there are more and more initiatives based on digital innovations, especially on demand response, storage, local communities, and load management.

From the floor

In Portugal, the law requires that all consumers' households be covered by smart meters by the end of 2024. The country also boasts an innovative model thanks to which consumers can access any given point of charge in Portugal using a single card, charge their vehicles and pay the same price whatever their location in the country.

As to whether an excess of regulation could impede the digital transformation, I agree that the best way to lock further innovation is by tasking an administration to set the data model for the entire business.

A representative of the utility regulator in Denmark

We in Denmark have witnessed progress on technical issues, but do not see the disruption you are seeking, as the said progress remains within the energy companies. There are no independent third parties actually on the market. One important step would thus consist of opening up the data, in particular for third-party access.

Secondly, in order for households and small companies to contribute to flexibility markets, both on the heat and electricity markets, aggregates need to be installed at the household level. This is a physical barrier.

At the level of wholesale, we have in fact witnessed great progress: trading is now primarily based on algorithms, rather than conducted by physical persons, a significant step forward, albeit one that creates its own new legislative needs.

From the floor

Electric mobility also raises the question of network safety, as many electricity points are managed online. In the event of a cyberattack, free access to a specific point could be cut off. Moreover, users relinquish control over their data.

From the floor

In the Portuguese model, the consumer holds contracts with an energy retailer for the energy it consumes at each point of charge. The data remains between the consumer and that specific energy retailer and is not passed on to any third party.

Concluding comments

Martha Baxter | Acting Senior Policy Analyst, OECD

It is a pleasure for me to conclude this joint seminar. We heard two fascinating roundtable discussions, the first on transportation and mobility, and the second on competition in regulated industries.

The OECD Recommendation on Agile Regulatory Governance to Harness Innovation can provide a useful framing for many of the cases we heard this morning.

The Recommendation starts with the premise that innovation can lead to substantial welfare gains if well governed. We heard about the development of new products, services and business models that were hardly conceivable just a few years ago and can have huge impacts on markets and societies.

Governments have the task of promoting innovation, and maximising its benefits but also mitigating the risks that arise from it. This raises profound regulatory challenges. The Recommendation mentions four in particular.

- **Pacing**: technologies tend to develop more quickly than the regulation that governs them, a gap which governments struggle to close. The knowledge needed about the effects of emerging technologies on markets and society more broadly may be insufficient, though economic regulators are said to have their fingers on the pulse of the market and through their access to sector-based data. Data and digital tools are helping to bridge the knowledge gap.

- Designing regulatory frameworks that are **fit for purpose**. Frameworks need to respond to the entry of new technologies into various sectors. Traditional regulatory frameworks are often designed for a specific market. Emerging technologies can challenge regulators' mandates and remits by blurring the traditional definition of markets or market players, business models, or even the distinction between consumers and producers, for example, in the energy markets.

- **Regulatory enforcement**, when traditional enforcement may not be effective in the face of some emerging technologies.

- **The trans-boundary challenge**. Many digital technologies give businesses global reach, and thus enable companies to decide which may be the most advantageous place for their physical presence. However, they also foster the fragmentation of regulatory frameworks across jurisdictions, creating barriers to the spread of beneficial digital innovations.

If these are the challenges, what is the response? The key objective of the Recommendation is to help governments to rethink their approach to regulating to promote innovation. The Recommendation is structured along four main pillars, and the cases we heard provide examples of the actions that regulators and governments are already taking in this direction:

- **adapting regulatory management tools**, i.e., rethinking the regulatory policy cycle to move towards a more adaptive, interactive, iterative paradigm.
- **developing coordinated approaches within governments and across borders**. Seeing as emerging technologies cut across sectoral boundaries and national boundaries, policy challenges cannot be dealt with by individual regulators in isolation.
- **extending and expanding the regulatory toolbox to include agile approaches**. Part of this effort consists of developing upstream anticipatory engagement in the innovation process and securing early engagement with stakeholders to be able to work with the best evidence available. It also includes creating spaces for experimentation to foster policy learning and adaptation.
- **rethinking traditional enforcement strategies**. Governments are encouraged to develop new enforcement strategies to promote compliance and protect citizens by:

  - adopting approaches to regulatory delivery that are responsive, outcomes-based and proportionate to the risk;

  - and using digital tools and technologies to the regulators' advantage (to identify risks and issues, target interventions, adapt rules monitor the market more accurately, and improve supervision and inspection processes).

All the presentations emphasised that regulation should move from the static to the dynamic – no easy task. It is challenging to remove barriers to innovation without compromising regulatory principles such as predictability and stability. It is challenging to be agile while taking a holistic, government-coordinated approach. It also requires adequate capacity and skills within governments and regulators to be able to face the challenge.

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