Chapter 2
Regulating Telecommunications in Europe: Present and Future

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Introduction

This chapter describes and assesses the new regime for regulating electronic communications services, which came into force in Europe in July 2003. The first two sections describe, respectively, the previous regime (the 1998 package) and the new regime. The third section discusses experience of the new system up to the end of 2007,[1] whereas the fourth evaluates its operation and the plans, already in place, to reform it.

Lessons of the 1998 Package

It is useful briefly to describe the 1998 legislative package which liberalized telecommunications markets throughout the European Union. For the 10 years or more before that, a series of green papers, directives, recommendations, and other interventions has imposed obligations on member states with respect to equipment markets, regulatory structures, value-added services, and regulation of infrastructure and service competition where it existed. But in 1998, the obligation was imposed on governments to liberalize entry into their telecommunications markets (except for those few countries for which extensions were granted).

The 1998 framework was inevitably fragmentary, as it developed over time. It also embodied rough-hewn remedies, designed to "take on" the incumbents. Overall it represented a crude but potentially effective toolkit. Liberalization and harmonization directives first had to be transposed into national legislation to take effect in the

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W.H. Lehr and L.M. Pupillo (eds.), *Internet Policy and Economics*,
DOI 10.1007/978-1-4419-0038-8_2,

member states. The transposition process took nearly 2 years, but the Commission was able to report in October 1999 that it was largely complete. But the directives gave member states considerable latitude in implementation. For example, the Licensing Directive permitted ample variation in the requirements imposed on new entrants, and despite a requirement in the Interconnection Directive that interconnection charges be cost-based, interconnection charges within the EU varied significantly.

Achieving the goals of liberalizing the industry against the (initial) wishes of most incumbent operators and of many member states required substantial regulatory intervention from the Commission. Moreover, the regulatory framework had to be flexible enough to cover member states proceeding at quite different rates. In the early stages of liberalization – the transition to competition – it was necessary to constrain the former monopolists considerably.

For behavioral regulation, three instruments are required in the early stages of liberalization:

- *Control of retail prices*. This is necessary only when the historical operator exercises market power at the retail level and where in the absence of retail price controls, customers will be significantly disadvantaged.
- *Universal service obligation (USO)*. Governments have typically imposed a USO requiring the historical telecommunications monopolist to provide service to all parts of the country at a uniform price, despite the presence of significant cost differences. Firms entering the market without such an obligation have a strong incentive to focus on low-cost, "profitable" customers, putting the USO operator at a disadvantage, or the incumbent uses this as an argument against entry. There are, however, other ways to fulfill a USO, such as tendering for its provision.
- *Control of access prices*. In order to keep all subscribers connected with each other in the presence of competing network, operators require access to one another's networks to complete their customers' calls. This requires a system of interoperator wholesale or network access prices. Especially in the early stages of competition, entrants will require significant access to the dominant incumbent's network, and this relationship will almost inevitably necessitate regulatory intervention. As infrastructure is duplicated (at different rates in different parts of the network), the need for direct price regulation of certain network facilities diminishes. Interconnection was central to the development of competition within the EU, and the Commission has been heavily involved.

The 1997 Interconnection Directive required that charges for interconnection follow the principles of transparency and cost orientation. The first principle implied the publication of a reference interconnection offer. As a corollary, operators with significant market power (SMP) – defined as a 25% market share of a prespecified national market – were required to keep separate accounts for their wholesale or network activity and for other activities, including retailing. Cost orientation turned out to be an excessively vague phrase, permitting excessive interconnection charges. Until adequate cost data were available, the Commission published recommended "best current practice" interconnection charges, based on the average of the member states with the lowest charges. Charges dropped quickly in some countries, but not in all.

This falling trajectory, relative to cost, of access prices in Europe seems to have sustained a "service bias" in European telecommunications regulation. The regime sought to open up all avenues of competition but in practice was more preoccupied with opening existing infrastructures than with encouraging the construction of new ones. Entry of resellers has been vigorous and retail prices dropped fast. This does not seem to have provided medium-term incentives for an extensive deployment of alternative infrastructures. This situation was, of course, aggravated by the collapse in telecoms share prices after early 2001, which eliminated or weakened many alternative carriers. As a result, the new regime came into operation against the background of faltering competition in important parts of the fixed telecommunications market place. Nonetheless, the historic monopolists' market shares in fixed voice calls continued to decline, as shown in Table 2.1.

In relation to fixed broadband, penetration rates varied considerably, averaging 13.0 per 100 population for the EU15 in October 2005, and 11.5% for all 25 member states. Some member states were double that rate. In some countries, fixed broadband was available on both cable and telecommunications DSL infrastructures. On average, incumbent fixed telecommunications operators in 2005 controlled 50% of broadband lines. In Italy, it was 70%; in the UK, it was under 30%.

Competition in mobile markets was (and remains) more equal and more vibrant. As second and successive operators came into the market, prices fell and demand grew, assisted by innovative tariffs involving handset subsidies and prepay. The spread of mobile phones is shown in Table 2.2

Table 2.1 Incumbents' share (%) of fixed call markets in the European Union

	December 2003	December 2004	December 2005
Local calls	75.8	73.2	71.8
Long distance	70.6	69.2	67.0
International	62.9	58.7	56.7

Source: *European Electronic Communications Regulation and Markets 2006* (12th Implementation Report) Staff Working Document Vol 1 [SEC(2007) 403]

Table 2.2 Penetration rate (%) of mobile telephony in EU member states

2004	84.6
2005	95.0
2006	103.2

Source: *European Electronic Communications Regulation and Markets 2006* (12th Implementation Report) Staff Working Document Vol 1 [SEC(2007) 403]

The sector was lightly regulated. The absence of regulation, on balance, was highly beneficial, although the mobile industry's later development may have been affected by high licence fees paid by operators for 3G licences. The new regulatory regime thus came into effect against a background of significant successes in mobile but much more limited competition in fixed services.

The New Regime in Outline

After a tortuous and prolonged legislative process, the new European regulatory framework came into effect in July 2003. It is based on five Directives and on an array of other documentation. At one level, the new regime is a major step down the transition path between monopoly and normal competition, governed exclusively by generic competition law. Its provisions are applied across the range of "electronic communications services," ignoring preconvergence distinctions. It represents an ingenious attempt to corral the National Regulatory Agencies (NRAs) down the path of normalization – allowing them, however, to proceed at their own speed (but within the uniform framework necessary for the internal market). Since the end state is one governed by competition law, the regime moves away from the rather arbitrary and piecemeal approach of the current regulatory package toward something consistent with that law. However, competition law is to be applied (in certain markets) not in a responsive ex post fashion, but in a preemptive ex ante form. But ex ante regulation should only be applied when the so-called "three-criteria test" is fulfilled – the criteria being the presence of barriers to entry, the development of competition, and the absence of a tendency to effective competition.

The new regime therefore relies on a special implementation of the standard competition triple of: *market definition*, identifying *dominance*, and formulating *remedies*.[2] According to the underlying logic, a list of markets where ex ante regulation is permissible is first established, the markets being defined according to normal competition law principles. These markets are analyzed with the aim of identifying dominance (on a forward-looking basis). Where no dominance is found, no remedy can be applied. Where dominance is found, the choice of an appropriate remedy can be made from a specified list. The effect of this is to create a series of market by market "sunset clauses" as the scope of effective competition expands.

Market Definition

In 2003, the Commission issued a recommendation on relevant markets, defined broadly in the manner of competition policy. This identified 18 markets as candidates for ex ante regulation, by virtue of their satisfaction of three-criterion test. The 18 include 6 fixed retail markets, the main fixed voice wholesale markets, such as call origination and termination and interexchange transport, unbundled local loops, and wholesale broadband access (a product on the basis of which a competitor can combine some of its network assets with backhaul and local access provided by the incumbent to offer broadband service). The list also includes three mobile markets – call termination on individual networks, wholesale international roaming (a product which supports the use by mobile subscribers of their handsets when abroad), and the wholesaling of outgoing mobile services, called mobile access and call origination; this captures the product provided by a mobile operator to a mobile virtual network operator (MVNO) bases on its network. NRAs can also add or subtract markets, using specified (and quite complex) procedures.

NRAs, as well as the Commission and European Court of Justice, have undertaken many market definition exercises already, often using the now conventional competition policy approach. This often involves applying, at a conceptual level, the so-called hypothetical monopolist test, under which the analysts seek to identify the smallest set of goods or services with the characteristic that, if a monopolist gained control over them, it would be profitable to raise prices by 5–10% over a period, normally taken to be about a year. The monopolist's ability to force through a price increase obviously depends upon the extent to which consumers can switch away from the good or service in question (demand substitution) and the extent to which firms can quickly adapt their existing productive capacity to enhance supply (supply substitution). A consequence of the reliance of the proposed new regime on ex ante or preemptive regulation is that it is necessary to adopt a forward-looking perspective.

Dominance

The Commission proposed and the legislators accepted the classical "dominance", defined as the ability of a firm to behave to an appreciable effect independently of its customers and competitors, as a threshold for ex ante intervention, though dominance is known as SMP. The dominance can be exercised by a single firm, or collectively, or leveraged into a vertically related market.

Although single-firm dominance has come to be well understood, joint dominance (or tacit collusion) has been one of the more elusive concepts in European competition law. However, what is more noteworthy is the relative lack of candidates for joint dominance in fixed telecommunications markets. This arises because fixed market in Europe is typically effectively competitive or – more frequently – dominated (singly) by the historic monopolist. Joint dominance, however, has been attributed to mobile markets in some countries, where a small number of operators provide services behind effective barriers to entry created by spectrum assignment procedures.

The communications industry, like many industries, consists of a series of activities that can be performed either individually or by vertically integrated firms. There are well-established benign motives for firms to become vertically integrated. In particular, doing so may reduce costs, by eliminating the costs of transactions between two separate firms. It has also been argued that vertical integration by itself does not add additional market power. Thus, if a firm held a monopoly of an activity or process at any stage in an industry, it would be able to extract maximum profit from that monopoly, and would have no desire to engage in other activities, unless it was extremely efficient in performing them.

This simplified approach has now given way to more complex modeling of situations in which a vertically integrated firm may find it advantageous to distort competition downstream as a means of bolstering its upstream market power.[3] This is achieved by a variety of means involving the interaction of particular features of each market. For example, in one market (say, for delivery platforms), there may be consumer switching costs because consumers need to make significant investments in equipment. The second market may exhibit service differentiation. In such circumstances, making the service exclusive to the delivery platform may strengthen consumer lock-in and give the firm an ability to distort competition. To take another example, a dominant firm in the provision of network services for broadband may seek to use that market power to extend its dominance into the retail broadband market, for example, by obstructing competitor's in their efforts to use unbundled local loops rented from the incumbent to provide service to their own retail customers.

Remedies

Under the Directives, NRAs have the power to impose obligations on firms found to enjoy SMP in a relevant market. The NRAs act within a framework of duties set out in Article 8 of the Framework Directive. The measures they take shall be proportionate to the policy objectives identified. This can be construed as meaning that the intervention is appropriate, no more than is necessary, and, by implication, satisfies a cost-benefit test, in the sense that the expected benefits from the intervention exceed the expected costs. Article 8 additionally specifies policy objectives, which determine the weights appropriate for use in the cost-benefit analysis. For example, Article 8(2) requires NRAs to promote competition for electronic communications networks and services by maximizing users' choice and value for money, eliminating distortions or restrictions to competition and encouraging efficient investment and infrastructure. Article 7(4) requires NRAs to promote the interest of EU citizens by, inter alia, providing consumers with protection in their dealings with suppliers and requiring transparency of tariffs and conditions for use publicly available electronic communications services. NRAs must also contribute to the development of the internal market by avoiding different approaches to regulation within the EU. These provisions provide an important context in which NRAs must hone their interventions.

While the circumstances in which intervention is required are set out in the Framework Directive, discussion of the nature of the regulatory response is principally confined to the Access Directive.[4] Articles 8–13 outline the NRA's options. Thus, Article 8 (Imposition, Amendment, or Withdrawal of Obligations) reads as follows:

> 1: Where an operator is designated as having significant market power on a specific market …, national regulatory authorities shall impose one or more of the obligations set out in Articles 9–13 of this Directive as appropriate….
>
> 4: Obligations imposed in accordance with this Article shall be based on the nature of the problem identified, and shall be proportionate and justified in the light of the objectives laid down in Article 8 of the [Framework Directive]….

The key remedies which then follow are now briefly described.[5]

Article 10 of the Access Directive

> *Obligation of non-discrimination. This requires the operator to provide equivalent conditions in equivalent circumstances to other undertakings providing similar services, and to provide services for its own services, or those of its subsidiaries or partners.*

This is primarily relevant to cases of an SMP operator which is vertically integrated into a competitive market, and the obligation is said to be needed to prevent exclusionary behavior by the firm with SMP, through the foreclosure of competition in the upstream and downstream market.

Article 11 of the Access Directive

> *Obligation of accounting separation. An NRA may require a vertically integrated company to make its wholesale prices and its internal transfer prices transparent, especially where the companies which it supplies and itself compete in the same downstream market.*

This represents a considerable ratcheting up of the regulatory burden on the firm with SMP. NRAs should ask themselves whether the additional burden is justified. The principal justification would be a situation in which a component of a vertically integrated incumbent was a persistent bottleneck (see Article 13 below).

Article 12 of the Access Directive

> *Obligation to meet reasonable requests for access to, and use of specific network facilities. An NRA may impose obligations on operators to grant access to specific facilities o r services, including in situations when the denial of access would hinder the emergence of a competitive retail market, or would not be in the end-user's interests.*

This represents an obligation to be implemented in circumstances similar to, but significantly broader than, those in which the essential facilities doctrine is applied under competition law. The extension to the test lies in the replacement of the precondition under competition law for mandatory access, that the asset is essential and cannot be replicated, by a much broader condition that NRAs can mandate access in circumstances where its denial "would hinder the emergence of a sustainable competitive market at the retail level, or would not be in the end-user's interest."

The obligation is silent about the pricing of such access, except to the extent that it prohibits "unreasonable terms and conditions" having a similar effect on denials of access. The range of pricing principles may therefore depart from simple cost-based prices to include other approaches such as retail minus pricing.[6]

Article 13 of the Access Directive

> *Price control and cost accounting obligations. This deals with situations where a potential lack of competition means that the operator concerned might be capable of sustaining prices*

at an excessive level, or applying a price squeeze, to the detriment of end users. National regulators should take into account the investment made by the operator and the risks involved.

It is generally accepted that the finding that a facility is essential implies the application of some appropriate pricing rule. The nature of that pricing rule is, however, by no means clear. In this context, Article 13 can be conceived as imposing the obligation of cost-oriented prices, the operator assuming the burden of proving that "the charges are derived from costs including a reasonable rate of return on investment…."

The circumstances identified as appropriate for the application of this rule are "situations where a market analysis indicates that a potential lack of effective competition means that the operator concerned might be capable of sustaining prices at an excessively high level, or applying a price squeeze to the detriment of end users."

Cost-oriented pricing for interconnection or access to customers should only be considered when dealing with an operator with SMP which is both persistent and incapable of being dealt with by other remedies, including particularly structural remedies. A classic case for its application might therefore be access to the local loop, either for call termination or for the purposes of leasing unbundled loops – provided that one operator enjoys monopoly or position of superdominance in the relevant geographical area. Even here the impact on incentives for infrastructure investment by competitors must be taken into account. Setting prices which are low in relation to forward-looking costs, or even creating an expectation that this will happen, can deal a fatal blow to infrastructure competition.

Article 17 of the Universal Service and Users' Rights Directive

Retail Price Regulation. Where on NRA determines that a retail markets is not effectively competitive and that carrier preselection will not suffice to solve the problem, it shall ensure that undertakings with significant market power in that market orient their tariffs towards costs, avoiding excessive pricing, predatory pricing, undue preference to specific users or unreasonable bundling of services. This may be done by appropriate retail price cap measures. Where there is retail tariff regulation, appropriate cost accounting systems must be implemented. Retail tariff control may not be applied in geographical or user markets where the NRA is satisfied that there is effective competition.

The implicit assumption of many regulators of and commentators on the communications industry is that if wholesale markets can be regulated to avoid the harmful effects of SMP, then regulation of retail markets can be confined to solving residual consumer protection problems, rather than problems relating to the abuse of market power. The underlying hypothesis is that entry into retailing activities will be sufficiently free from barriers to permit deregulation.

This proposition has not yet been properly tested, as many NRAs have been reluctant to accept the fundamental implication of the policy, which is that cost-based wholesale prices and competition in the retail market will bring retail prices into line with costs, thereby eliminating distributionally important pricing distortions associated with regulator-driven cross-subsidies (or departures from cost-orientation), involving different services or different customer groups. But the decision noted below to remove five of the six retail markets currently subject to ex ante regulation from the revised Recommendation issued in 2007 will make it much harder to impose retail price remedies.

Experience

As 25 member states have to notify 18 markets, a simple way of measuring success is to count the markets where the Commission has adjudicated on submissions by member states. On August 1, 2006, nearly 300 submissions had gone through that stage, and about 150 were still awaiting submission or approval. Of the latter group, the majority came from so-called accession states which only joined the EU in 2004. However, the numbers completed do allow a judgment of how the process is working. The assessment below is divided *process* and outcome components, the latter divided between *market analysis* and *remedies*.

Process

The first point to make is that the regime imposes very heavy burdens on NRAs. In the UK, which has virtually completed the process, an Ofcom official estimated that the reviews took about 60 person years of work. NRAs in smaller countries, which have the advantages of precedents, can reduce this considerably, but even in some of these, the volume of analysis undertaken and length of individual notifications have been enormous. It can be argued that some notifications have often contained unnecessarily exhaustive proofs of the obvious (e.g., that an incumbent supplying 95% of fixed lines is dominant in that market), but the existence of a national appeal mechanism, which has been widely used in several countries, encourages NRAs to undertake thorough analyses.

The European Commission's so-called Article 7 Task Force which receives the notifications (comprising officials from the Commission's Competition and Information Society Directorates) also has a heavy workload.[7] The Commission has one month to accept a notification, with comments, or retain it for a further two months' study internally and by other NRAs through the Communications Council. So far, only a handful of notifications have gone to the second stage, and the Commission has vetoed only a very few market analyses, where typically the NRA has departed from Commission-approved practice in some respect. A small number of notifications were withdrawn when rejection seemed imminent.

Many NRAs have prenotification meetings with the Commission at which work in progress is discussed. These are unquestionably helpful and (combined with previous Commission comment) have almost certainly reduced the number of notifications going to the second stage. NRAs reasonably infer that if an argument or piece of analysis submitted by another NRA has "got through," the same approach will work for it if the circumstances are sufficiently similar.

Although the Commission's legal basis for approving an NRA's choice of remedies is much weaker than its basis for approving market definitions and analyses, its responses to notifications have also included comments on proposed remedies.

Market Analysis

Despite the lengthy period taken over the analysis, the "surprise" value of many of the notifications is very low. Broadly, everyone knew that competition was slow to develop in fixed market, which tends to be dominated by the historic monopolist. This applies particularly to the smaller member states. The exceptions are international and, possibly, national retail calls (especially by business customers, where the data permit such a distinction) and wholesale transit or conveyance on "busy" routes. The high level of monopolization also applies to certain leased lines, the supply of which is tied to the generally monopolized public switched telephone network.

An area of emerging interest, especially in relation to fixed markets, is whether competitive conditions in a member state are sufficiently uniform to justify a geographic market definition which covers the whole country, or whether separate regions should be distinguished, served by differing numbers of operators. For example, transit might be competitive on thick (intercity) routes but not on other routes. Equally, in several member states, a cable network is in place in part of the territory, providing fixed voice and broadband services which compete with those of the historic telecommunications monopolist. NRAs have been reluctant to make such distinctions, but they may be necessary in the future if deregulation is to proceed.

Some comments on other markets are given below:

Fixed and mobile termination: in the Recommendation on relevant markets, these are defined as single-operator markets, carrying the implication that each operator is a 100% monopolist. This reflects the regime in Europe for both fixed and mobile calls, under which the calling partner pays the full cost of the call – the so-called calling party pays principle. This gives an operator the power to charge other operators, and, indirectly, their subscribers, a high price for the termination of calls on its network, as that is the only means by which a caller can contact the individuals they want to speak. NRAs have so far accepted this approach, and it has led to the extension of the cost-based regulation currently found on fixed networks to termination on mobile networks too. While cost models are being developed, several NRAs have proposed a "glide path" according to which termination charges gradually reduce over a few years to a cost-based level. There is some question as to whether mobile networks of different sizes should have the same termination changes. In some cases, smaller and more vulnerable networks are allowed in the interim to set higher charges. The Commission has been concerned about the wide spread of, especially, mobile termination rates, and seeks in 2008 to introduce greater standardization.

Mobile access and call origination: the Recommendation on relevant markets does not include retail markets for outgoing mobile services within the list of markets subject to ex ante regulation. However, it does include the underlying wholesale market, through which MVNOs or resellers of wholesale airtime sales would buy inputs from a mobile operator. Mobile operators do, however, supply themselves with such services, and this has formed a basis for discussion of whether there is single dominance on that market, as may apply if there is one mobile operator with a very high market share, or joint dominance exercised by two or more operators with similar market shares. Given the structure of mobile telephony in the EU, it is not wholly surprising that findings of joint dominance are made. This happened in Ireland, but the decision was later withdrawn for procedural reasons. It also happened in Spain, where it is subject to appeal.

Wholesale international roaming: these are national markets which permit a mobile subscriber to make calls in a visited country, but they have an international dimension: regulation in Greece will, by definition, benefit visitors from other countries, not Greeks. As a result, the European Regulators Group put measures in place encouraging NRAs to cooperate with one another or conducting their market analyses. But the continuing high level of international roaming charges, and the slow rate of progress in bringing them down, goaded the Commission to seek more direct means of price control by proposing a separate Regulation which came into effect in 2007, directly controlling the retail and wholesale prices of international roaming.

Wholesale broadband access ("bitstream") and unbundled loops: these two markets are central to the competitive supply of DSL-based broadband services. While markets for local loops are likely to exhibit dominance, there is room for more debate about whether single (or possibly joint) dominance can be found in the market for bitstream in member states where there are developed cable networks and more than one operator which has installed broadband equipment in local exchanges. Difficult problems of definition and analysis also arise where a dominant firm also installs a new fiber access network. Should this be included in the previously copper-based market, and should competitors have access to it?

Remedies

Here NRAs choose from, and in some cases add to, those listed above in the Access Directive, and in the case of retail markets, the price control regime specified in the Universal Service Directive. The European Regulators Group published an advisory paper on remedies in 2004 which is discussed below.

It is difficult to summarize what remedies have been imposed because each NRA tends to chose different variants. For example, under transparency, SMP operators may have to prenotify price changes, but the period of notice will vary. Equally, a retail price control might be designed, in a market from which competition is largely absent, to derive prices down to costs; but where competition is developing, it might simply act as a safety net, maintaining real or nominal prices at the current level, thereby preventing consumers from being seriously injured if competitors disappear.

It is apparent from a brief review of notified remedies, however, that NRAs almost invariably apply them in multiple combinations, and that in key wholesale markets, they often include the most draconian – cost-oriented pricings. This is often accompanied by the imposition of separate accounting, to facilitate cost allocation and deter discriminatory practices.

Evaluation and Proposed Reforms

The framework described here has many admirable qualities. It is founded in competition analysis and competition law. It takes account of the convergence of telecommunications, cable, and wireless platforms and requires regulation which is technologically neutral. It defaults to competition law, in the sense that a finding of SMP is necessary to trigger ex ante intervention. In both these respects, it is superior to the provisions of the US Telecommunications Act of 1996, which failed to adopt a consistent approach toward markets. But notwithstanding these advantages, the European regime has a number of flaws.

First, it imposes constant and costly analysis and reanalysis on regulators and firms. Market reviews and supposed to be undertaken 2–3 years, although the first review, which began in July 2003, is not yet compete. This constant repetition will impose direct costs on NRAs and firms, but it also introduces considerable uncertainty. For example, if a regulator finds, in the course of a market review, that an access provider no longer has SMP, it will no longer be able to mandate access; this possibility creates difficulties for an access-seeker trying to devise a long-term strategy.

Second, as noted above, there is the question of whether the hoped-for deregulation has materialized. As noted above, findings of the "no SMP" are very rare, perhaps reflecting regulators' excessive willingness to maintain their activity. As a result, remedies are required. But what should they be?

Ideally, remedies should promote a long-term deregulatory strategy. They should recognize that the relation between market power and regulation in a reciprocal one: while regulatory remedies are (and should be) tailored to the degree of power exhibited in any market over the relevant future period, so too the regulatory interventions chosen influence the development of the market. For example, a policy of mandating access to the incumbents' assets at low prices is bound to deter investment in competing infrastructure.

The challenge NRAs face in connection with choice of remedies is how best to use the flexibility available under the regime to design more focused remedies. In my view, this is best achieved by adopting a zero-based approach, that is, conjecturing how the market would operate without regulation. (This must in any case be done at the market analysis stage, where dominance is being tested for in a world without regulation.) Remedies to deal with problems can then be progressively added, and an estimate made of the incremental effect of each.

The alternative is to start not from zero regulation, but from the status quo, and evaluate the effect of perturbations from that point. The danger here is that this approach may be too conservative, in the sense that an NRA, not starting with a clean slate, might end up making no major change. An analysis of remedies adopted by NRAs to date suggests that this is occurring.

Thus, it would be preferable if NRAs adopted a more strategic approach to regulation, based upon incentives for new entrants progressively to make investments in infrastructure. This approach was set out by Mario Monti (then the European Commissioner responsible for competition) in a speech in December 2003.

> Competition would never be able to develop, in the short term, if entrants were not able to gain access to the incumbent operator's network to start offering services.
>
> In order to reconcile access-based and facilities-based competition it is necessary to take account of the time dimension. NRAs should provide incentives for competitors to seek access from the incumbent in the shorter term and to rely increasingly on building their own infrastructure in the longer term.

If this so-called "ladder of investment" approach were adopted, it would imply that NRAs would focus their wholesale regulation on a small number of access points, and then withdraw them as entrants progressively built infrastructure investment, either by withdrawing the access obligation or by raising the price of access to assets which competitors could realistically replicate themselves. This approach would allow NRAs to adopt a more strategic (and ultimately a more authentically deregulatory) approach to the choice of remedies.[8]

Despite its short existence, even now a consultation has begun on possible successors to the European Framework. The first element is the drafting of a revised Recommendation on relevant markets, came into effect in 2007. The second is a review of the regulatory framework as a whole; this will require legislation and is intended to take effect in 2010.

The revised Recommendation[9] reduced from 18 to 7, the number of markets automatically considered for ex ante regulation by national regulators. Five of the six retail markets were omitted, leaving only the fixed line rental. Transit, or interexchange conveyance, went, as did "mobile access and call origination," which was the basis for the regulatory remedy of mandating access to mobile operators' networks by MVNOs. This clearly represented a major step in the direction of deregulation.

In November 2007, the Commission published its own proposals to reform the regime as a whole.[10] In relation to the 2003 legislation, they embody modest changes and carryforward the underlying logic of the initial design. Many of the proposals are devoted to introducing more flexibility and the use of market methods in spectrum management – wireless technologies being seen as key to the future.

In other respects, there are two changes of interest:

- the Commission wants to assume more power over the selection of remedies; this will involve collaboration with the European Regulators' Group and the creation of a new European Telecom Market Authority with, initially at least, limited powers;
- the Commission proposes a new wholesale remedy under which a dominant firm might be required, in a limited set of circumstances, to reorganize its business processes in a way which more clearly separates its monopoly from its competitive

activities. This is known as functional or operational separation, and has been widely discussed in Europe and elsewhere since the UK incumbent, BT, separated its activities in this was in 2005.[11]

In summary, the European regulatory framework introduced in 2003 has passed its first tests, in the sense that its basic structure seems likely to go forward in the medium term, and it does appear to have delivered some a degree of enhanced competition and deregulation. It will face a series of challenges in the immediate future concerning the construction of next generation access networks, which are beginning to take root in Europe as elsewhere. The key question will be whether the access regime described above will deliver sufficient incentives for firms to make the very substantial investments in taking fiber either to the home or to the street cabinet – investments which are required to deliver genuinely high-speed broadband and to match developments in the USA, Japan, and other leading countries. This will require considerable skill on the part of the commission and national regulators in calibrating the interventions chosen. In other words, even though the framework is there, European regulators will have to show that they can operate it successfully.

Notes

1. For such analysis, see P. Buiges and P. Rey (eds) *The Economics of Antitrust and Regulation in Telecommunications: Perspective for the New European Regulatory Framework*, Edward Elgar (2003) and J. Scott Marcus. July 2002, *The potential relevance to the United States of the European Union's newly adopted regulatory framework for communications*, OPP Working Paper No. 36, FCC.
2. The first two of these processes are elaborated in, respectively, a Commission Recommendation (first edition 2003, second edition 2007) and Guidelines. A paper on remedies was published in 2004 (and revised in 2006) by the European Regulators Group, a grouping of NRAs, supported by the Commission.
3. For a review of these issues and some practical conclusions, see Ofcom's *Telecoms Strategy* Review. 2005 and M. Cave, P. Crocioni, and L. Correa. 2006. "Regulating non-price discrimination," *Competition and Regulation in Network Industries*, pp. 391–415.
4. Article 17 of the Universal Service Directive also considers retail price control – see below.
5. We omit Article 9 of the Access Directive, which mandates transparency or disclosure of information.
6. Under retail minus pricing, an access product is priced on the basis of subtracting from the retail price of the final service charged by the access provider the cost of the inputs now contributed by the access seeker.
7. Their very detailed account of the market reviews is given in *Communication on Market Reviews Under the EU Regulatory Framework, Staff Working Document* [COM (2007)401 final].
8. See also M. Cave. 2006. Encouraging infrastructure competition via the ladder of investment, *Telecommunications Policy* 223–232.
9. See European Commission, *Explanatory Note Accompanying Commission Recommendation on Relevant Product and Service Markets (Second edition)*, SEC(2007) 1483 final.
10. European Commission, *Proposal for a Directive*, COM(2007) 697 final.
11. See M. Cave. 2006. Six degrees of separation, Communications *and Strategies*, 64: 89–104.

http://www.springer.com/978-1-4419-0037-1

Internet Policy and Economics
Challenges and Perspectives
Lehr, W.H.; Pupillo, L. (Eds.)
2009, VI, 228 p., Softcover
ISBN: 978-1-4419-0037-1