Twenty years of liberalization of network industries in the European Union

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Publication date:
2006

Document Version
Publisher's PDF, also known as Version of record

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Lecture

Delivered on the official acceptance of the office of professor of competition law and economics at Tilburg University on November 3, 2006

by

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Mijnheer de Rector Magnificus,
Dames en heren,

Over the last twenty years, governments in many parts of the world have engaged in the liberalization of network industries (telecommunications, postal services, energy, and transport).[1] This liberalization process, which was first observed in the United States in the late 1970s and in the United Kingdom in the early 1980s, became a central preoccupation of the European Commission at the end of the 1980s. Since then, the European Commission has initiated liberalization reforms in a range of sectors with some success. Some sectors, such as telecommunications and air transport, are now fully liberalized and are becoming increasingly competitive. Others sectors, such as energy (gas and electricity), postal services, and rail transport, are not yet fully liberalized, but the market opening dynamic is now well under way. The liberalization process has not been without difficulties, however, and many challenges still lie ahead. Against this background, the objective of this paper, prepared in support of my inaugural lecture as Professor of Competition Law and Economics at the Faculty of Law of Tilburg University and a senior member of TILEC, is to give a brief overview of the liberalization process and the results it has achieved, as well as to address some of the main challenges that still lie ahead.

This paper is organized as follows. Part I explains why for almost a century firms involved in network industries generally took the form of State monopolies, as well as why this model of organization became subject to question in the late 1970s and was thus progressively replaced by a model based on market opening and competition. Part II explains that to be successfully completed the liberalization

1 See, for instance, D. Newbery, *Privatization, Restructuring, and Regulation of Network Utilities*, MIT Press, 2000. D. Geradin, *The Liberalization of State Monopolies in the European Union and Beyond*, Kluwer Law International, 2000.

process should rely on three pillars: the removal of exclusive rights, the adoption of a regulatory framework and the setting-up of independent regulatory authorities. Part III analyses the current state of liberalization in the different network industries. Part IV explores three significant changes in the organization of network industries and on market structures: the vertical unbundling between infrastructure and services, the breaking down of the barriers between network industries, and the progressive withdrawal of the State in such industries. Part V reviews the various bottlenecks, which still prevent competition to take place on some markets. Part VI discusses the issue of whether one should be able to do away with sector-specific regulation at one stage. Finally, Part VII contains a short conclusion and some proposals for moving ahead.

I. The transition from public monopolies to competitive markets

For almost a century, network industries were organized as State monopolies. There were several reasons for this.

First, there was a belief that such industries were natural monopolies, i.e. that there was only space for one undertaking in the market.[2] This view was based on the observation that sectors, such as telecommunications and energy, were subject to large economies of scale and that network infrastructures were very hard or even perhaps impossible to duplicate. Exclusive rights thus legally translated the perceived economic model governing network industries.

Second, exclusive rights were often granted in return for the monopolist to provide universal service, also often referred to as "public services" or "services of general economic interest".[3] There was thus a kind of "regulatory contract" between governments and large utilities.

2 W. Sharkey, *The Theory of Natural Monopoly*, Cambridge University Press, 1982.

3 On the concept of services of general economic interest in EC law, see the Communications of the Commission on services of general interest, COM(1996) 443 and COM(2000) 580, O.J. 1996, C 281 and O.J. 2001, O.J. C 17.

The latter would provide their services throughout the territory (including in loss-making areas), to all customers (including unprofitable ones), with a given level of quality and without discontinuity, thereby ensuring social and geographic cohesion. The provision of universal service would certainly have a cost, but the monopoly granted to these firms would allow them to cross-subsidize profitable services with loss-making ones and still make a profit.

Third, because of the importance of these industries from several viewpoints governments believed it was important to consolidate various actors in one firm, which they would control. Network industries were (and in many ways still are) of central importance at several different levels: (i) strategic (need to control basic infrastructures in case of war or major crisis); (ii) economic (these industries employ millions of workers and represent a significant part of the GDP); and (iii) political (State monopolies were often part of the administration or had closed links with public authorities).

In the late 1970s, however, the basic tenets of the monopoly model started to be challenged by economists, lawyers, policy-makers, industrialists and consumer organizations.

First, economists started to argue that, while some market segments in network industries (e.g., the local loop in telecommunications and electricity transport network) certainly have natural monopoly features, others are contestable.[4] For instance, while the local loop (the "last mile" of copper wires) could hardly be duplicated by new telecommunications entrants and would thus, at least for some years, remain monopolized by the incumbent, a number of other market segments, such as the provision of services were potentially competitive. Such segments should thus be freed of exclusive rights to allow competition to take place.

Similarly, the provision of universal service did not necessarily require

4 W. Baumol, J. Panzar, and R. Willig., (1982), *Contestable Markets and the Theory of Industry Structure*, New York, Harcourt Brace Jovanovich, 1982.

the maintenance of public monopolies cross-subsidizing unprofitable market segments with profitable ones. Cross-subsidization is an imprecise funding mechanism, which also distorts competition. Other methods of financing, such as targeted subsidies from general taxation or the creation of compensation funds could instead be used to contribute to the (often exaggerated) costs of providing universal service.[5]

Second, industry organizations in sectors subject to fierce international competition, such as the production of steel or the manufacturing of automotive vehicles, argued that they were largely penalized by the high costs of essential production inputs (electricity, gas, transport, etc.), which were provided by public monopolies. If these sectors were to remain competitive in the face of the globalization of the economy, network industries had to be liberalized to allow the advantages of competition to materialize, i.e. lower prices and better quality of service.

Third, consumer organizations also started to complain about the poor performance of public monopolies. Consumer prices tended to be high and the quality of service poor. The absence of competition, and thus of alternatives for consumers, gave public monopolies few incentives to adopt consumer-friendly policies and provide innovative products and services. Together with industry organizations, they claimed that competition was the best way to induce better prices, improve quality of service, and stimulate innovation.

Fourth, early experiences of liberalization in the United States and the United Kingdom convinced European authorities that the liberalization model was workable and could provide positive economic results. A new model, based on the opening of network industries to competition, combined with regulation through independent agencies, offered an interesting alternative to the much criticized and loss-making monopolies created at the turn of the 20th century.

5 Regarding the methods which can be used to fund universal postal service, see the WIK Consult to the European Commission, Main Developments in the Postal Sector (2004-2006), at p. 78.

Finally, the European Commission realized that public monopolies, which were based on the granting of exclusive rights to national undertakings, were fundamentally at odds with its internal market policy. National monopolies prevented other Member States' operators from competing and thereby impeded the free movement of goods and services. In other words, the granting of exclusive rights had the effect of partitioning the common market in contradiction with the basic principles of the EC Treaty.[6]

In the mid-1980s, the European Commission took a number of policy initiatives, such as the publication of Green Papers, leading to the adoption of proposals for directives liberalizing the various network industries.[7] While in the area of telecommunications, the Commission managed to achieve quick results through its reliance on directives based on Article 86(3) of the EC Treaty, which provides the Commission with the power to adopt directives by itself, in other sectors[8], the Commission relied on the lengthy legislative process comprised in Article 95 EC (co-decision between the Council and the European Parliament).[9] Directives in the energy and postal services sectors were thus the result of compromises between Member States and EU institutions, which were often short of the market opening ambitions of the Commission. Liberalization directives were indeed often met with scepticism on the part of certain Member States, such as France or Belgium, which were keen to protect their public monopo-

6 See § 5 of the preamble of Directive 90/388 of 28 June 1990 on Competition in the Markets for Telecommunications Services, O.J. 1990, L 192/10: "The granting of special or exclusive rights to one or more undertakings to operate the network derives from the discretionary power of the State. The granting by a Member State of such rights inevitably restricts the provision of such services by other undertakings to or from other Member States."

7 See, e.g., Towards a Dynamic European Economy. Green Paper on the Development of the Common Market for Telecommunications Services and Equipment. Appendices. COM (87) 290, 30 June 1987; Green Paper on the development of the single market for postal services (communication from the Commission) COM(91) 476, June 1991

8 See J.L. Buendia Sierra, *Exclusive Rights and State Monopolies under EC Law: Article 86 (former Article 90) of the EC Treaty*, Oxford University Press, 2000.

9 C. Barnard, *The Substantive Law of the EU*, Oxford University Press, Oxford, 2004, pp. 493 to 535

lies. Other Member States, such as the Netherlands or the United Kingdom, were by contrast in favor of rapid market opening. There was a tension between Member States over the necessity and the speed of the liberalization of network industries.

II. The three pillars of the liberalization process

The liberalization of network industries in the EU has relied on three pillars.

First, liberalization directives had to remove the exclusive rights, which were granted to certain companies. Removing such rights did not necessarily involve major legal complications, but, for reasons discussed above, often involved complex political compromises. One of the distinctive features of the liberalization process in the EU was that market opening was progressive. For instance, in the telecommunications sector, some services were open to competition before others[10] and in the energy sector some clients were free to select the supplier of their choice before others.[11] A reason for such a staged approach was to provide incumbents (i.e. the existing monopolists) with time to reorganize themselves and get ready for competition. Such an approach was also useful to reach consensus between Member States, which, as noted above, did not necessarily agree on the need for liberalization and the pace at which it should be pursued.

Second, liberalization directives had to establish a regulatory framework. This framework contained not only substantive obligations, but also provided that Member States had to create independent regulatory authorities. The substantive obligations generally sought to

10 Compare Directive 90/388, supra note 6 with Directive 96/19 amending Directive 90/388/EEC with regard to the implementation of full competition in telecommunications markets, OJ L 74/13.

11 Compare Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market in electricity, O.J. 1997, L 27/20 with Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC, O.J. 2003, L 176 /37.

maintain or expand universal service. Universal service is generally considered of central importance to the EU model and its survival had thus to be guaranteed in the new economic context created by liberalization.[12] Such obligations were also designed to facilitate the creation of competition on the liberalized markets. It is not because exclusive rights are removed by legislation that such markets will necessarily become competitive. Incumbents typically retain important advantages, such as the control of essential infrastructures (networks), well-established brand names, superior technical expertise, large cash reserves, and special connections with their national government.[13] Liberalization directives thus typically contain rules that ensure third-party access to the network, accounting separation and cost-allocation rules (to prevent cross-subsidization between competitive and non-competitive market segments)[14], as well as rules designed to reduce switching costs (for instance number portability in telecommunications). Liberalization directives thus provide for pro-competition rules

12 See Article 16 of the EC Treaty: "Without prejudice to Articles 73, 86 and 87, and given the place occupied by services of general economic interest in the shared values of the Union as well as their role in promoting social and territorial cohesion, the Community and the Member States, each within their respective powers and within the scope of application of this Treaty, shall take care that such services operate on the basis of principles and conditions which enable them to fulfill their missions."

13 See D. Geradin, "The Opening of State Monopolies to Competition: Main Issues of the Liberalization Process", in D. Geradin, Ed., *The Liberalization of State Monopolies in the* European *Union and Beyond*, Kluwer Law International, 2000, at p. 181.

14 There is a rich economic literature on cross-subsidisation. See, e.g., G. Falhauber, "Cross-Subsidization: Pricing in Public Enterprises", (1975) 65 *American Economic Review*, p. 966; E. Bailey and A. Friedlaender, "Market Structure and Multiproduct Industries", (1992) XX *Journal of Economic Literature*, p. 1024; T. Brennan, "Cross-Subsidization and Cost Misallocation by Regulated Monopolists", (1990) 2 *Journal of Regulatory Economics*, p. 37; D. Heald, "Public Policy Towards Cross Subsidy", (1997) 68 *Annals of Public and Cooperative Economics*, p. 591. For good discussions of the responses offered by EC law, see L. Hancher and J.L. Buendia Sierra, "Cross-subsidisation and EC Law", 35 (1998) *Common Market Law Review*, at p. 901 and G. Abbamonte, "Cross-Subsidisation and Community Competition Rules: Efficient Pricing Versus Equity", (1998) 23 *European Law Review*, at p. 414.

designed to create a level-playing field between incumbents and new entrants.
As mentioned, besides such substantive rules, these directives typically contained provisions mandating Member States to create independent regulatory authorities.[15] Under the monopoly regime, the regulatory framework was generally limited to price control and quality of service regulation, which were often carried out by a ministerial department (for instance, the ministry of energy or telecommunications). But in a liberalized market, regulation is typically more important (because, as we have seen above, one needs to create a level playing field between incumbents and new entrants) and to avoid conflict of interests should be carried out by an independent entity. These agencies have to be independent not only from the operators[16], but also from the government as the latter typically maintains some participation or economic interest in the incumbent.[17] A specific feature of the EU model is that regulation is carried out at the Member State level. Federal agencies, such as the FCC or the FERC in the United States, do not have an equivalent in the EU.[18] At the time of liberalization, a limited number of independent authorities already existed in the Member States, for instance agencies in charge of

15 See Damien Geradin, "Institutional Aspects of EU Regulatory Reforms in the Telecommunications Sector: An Analysis of the Role of National Regulatory Authorities", (2000) 1 *Journal of Network Industries*, 5; See, for instance, Phedon Nicolaides, Arjan Geveke and Anne-Mieke den Teuling, *Improving Policy Implementation in an Enlarged European Union – The Case of* National Regulatory *Authorities*, (2003) European Institute of Public Administration.

16 See ECJ, 13 December 1991, *RTT vs. GB-Inno-BM*, C-18/88, ECR 1991, p.I-5491 at §28: "Articles 3(f), 90 and 86 of the EC Treaty preclude a Member State from granting to the undertaking which operates the public telecommunications network the power to lay down standards for telephone equipment and to check that economic operators meet those standards when it is itself competing with those operators on the market for that equipment".

17 Article 22 of Directive 97/67: "Each Member State shall designate one or more national regulatory authorities for the postal sector that are legally separate from and operationally independent of the postal operators. Member States shall inform the Commission which national regulatory authorities they have designated to carry out the tasks arising from this Directive."

18 See D. Geradin, The Development of European Regulatory Agencies: What the EU Should Learn from the American Experience, 11 (2005) Columbia Journal of European Law 1.

controlling financial markets, but most Member States did not have agencies controlling network industries.[19] Liberalization thus led to the creation of numerous new agencies in all Member States of the EU.

Third, liberalization requires the application of competition rules, which are to be used in support to the market opening process. Several categories of competition rules are important. Article 82 of the EC Treaty and equivalent national competition rules are often used to prevent incumbents from abusing their market power. Indeed, incumbents, which even after market opening typically remain dominant (at least for several years), often resort to a variety of measures to prevent new entry.[20] Such measures include refusal to access essential network infrastructures, anti-competitive cross-subsidization between competitive and non-competitive services, etc. Although ex ante regulation will often eliminate or at least reduce the risk of abusive behavior, ex post application of competition may be needed to redress such behavior when regulation has not proved sufficient.[21]
As competition progressively takes place on liberalized markets, Article 81 of the EC Treaty is also called to play an important role. Indeed, after a few years of tough competitive battles between incumbents and new entrants, these firms may decide to reduce the degree of competition through restrictive agreements, such as price-fixing or customer-sharing. Such initiatives must be fought as they eliminate the benefits of liberalization. The provisions of the EC Treaty prohibiting State aids (Article 87 et seq) also contribute to maintaining a level playing field in liberalized industries. Indeed, Member States might be tempted to protect their incumbent against competition from new entrants by artificially increasing its competitiveness through various State aid measures. Finally, the EC Merger Control Regulation applies to all transactions meeting its thresholds. The liberalization process

19 See T. Prosser, *Law and the Regulator*, (1997) Clarendon Press Oxford, at p. 1 and the Public Report of the French Council of State, *Les autorités administratives indépendantes*, (2001) Etudes et Documents du Conseil d'Etat, n°52 at pp.281-284.

20 See Geradin, supra note 1.

21 See D. Geradin and M. Kerf, *Controlling Market Power in Telecommunications*, Oxford University Press, 2003.

has indeed triggered many mergers (though, as indicated below, fewer than one may have expected in some sectors), which need to be analyzed to ensure that they will not impede competition in the market.[22]

These three pillars are equally important. Removing exclusive rights without adopting a proper regulatory framework will not be sufficient as such a framework is necessary to control the incumbent's market power and facilitate entry. The New Zealand experience, where the government had initially decided to liberalize the telecommunications market without adopting a proper regulatory framework only to realize later than liberalization was a failure and adopt such a framework, amply illustrates this point.[23] Similarly, competition rules are needed even in the presence of ex ante regulation as such regulation will typically contain gaps and will not be sufficient to prevent certain anti-competitive behaviors, such as for instance cartels or certain forms of State aid.

III. The state of play

Twenty years after the first liberalization initiatives were taken by the European Commission, liberalization has made significant progress. The telecommunications (a term now replaced in the regulatory framework by the wider concept of "electronic communications")[24] and the air transport sectors are fully liberalized and, with some exceptions, competitive.[25] Price reductions and the development of new products and services have been spectacular and have transformed the outlook of these industries. Few would contest today that the liberalization of such sectors has generated substantial consumer benefits in terms of lower prices and wider access to services, although in some cases competition has created quality of service issues.[26] It has also allowed numerous companies, most often with innovative business models (e.g. the low-cost airlines), to enter the telecommunications and air transport markets.

Liberalization is also well under way in the other network industries. In the energy sector the electricity and natural gas markets will be entirely liberalized by 2007, thereby allowing all customers, including residential ones, to choose the supplier of their choice.[27] Since 1 January 2006, the reserved area in postal services has been limited to 50 grams.[28] Although it has not been formalized yet, 2009 is often

22 See, for an illustration in the energy sector, M. Piergiovanni, "EC Merger Control Regulation and the Energy Sector: an Analysis of the European Commission's Decisional Practice on Remedies", (2003) 4 *Journal of Network Industries*, p.227 at p.228.

23 D. Geradin and M. Kerf, supra 21.

24 See, in particular, Directive 96/19 of 13 March 1996 amending Directive 90/388 with regard to the implementation of full competition in telecommunications markets, (1996) O.J. L 74/13.

25 Council Regulation 2408/92 on access for Community Air Carriers to intra-Community air routes, (1992) O.J. L240/8

26 For instance, the benefits of liberalization in the field of electronic communications has been clearly illustrated by Commission Viviane Reding's recent speech "The Review 2006 of EU Telecom rules: Strengthening Competition and Completing the Internal Market", Annual Meeting of BITKOM, Brussels, 27 June 2006, SPEECH/06/422 ("Between 1996 and 2002, EU telecommunications services grew much cheaper. On average, for the same telecoms services, consumers spent about 30% less of their income in 2002 than they did 1996. Competition among telecoms operators has in particular drastically cut the cost of making phone calls over the past 20 years. Since 2000 the EU weighted average charge of a 3 minute call has fallen by 65% and the cost of a 10 minute call by 74%. At the same time, the EU telecom rules have led to impressive investments in the electronic communications services both by the telecom incumbents and increasingly by new market entrants. Europe's market for electronic communication services amounted to some 273 Billion Euro in 2005. Aggregate investment, measured in terms of capital expenditure, rose to more than 45 billion Euro in 2005, 6% more than in 2004. 2005 was thus the third consecutive of increased year-over-year investment levels. On average, around half of the turnover generated in the electronic communications markets in Europe comes today from new market entrants.")

27 See Directive 54/2003 of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 92/96, OJ L 176 of 15 July 2003, pp.37-56; and Directive 2003/55 of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in natural gas and repealing Directive 98/30, OJ L 176 of 15 July 2003, pp.57-78.

28 See Directive 2002/39 of 10 June 2002 amending Directive 97/67 with regard to the further opening to competition of Community postal services, (2002) O.J. L 176 /21.

mentioned as the likely date for full liberalization of the postal sector.[29]
As far as rail is concerned, the second legislative package adopted in 2004 provided for the opening of the market for international freight transport to the entire European rail network as of 1 January 2006 and the opening of the market for national freight transport as of 1 January 2007.[30] In the third legislative package, the Commission also proposed that international passenger services be opened to competition in 2010.[31]

Two important remarks should be made here.

First, while liberalization has been largely driven by European directives, the degree of market opening tends to vary, sometimes significantly, between Member States. First, unless they provide for full market opening, EC liberalization directives will only set up minimum opening thresholds, which can be exceeded by governments. This explains why some Member States have gone faster than others in opening their market to competition.[32] Second, even in the case of full liberalization, some Member States have dragged their feet in implementing liberalization directives.[33] This has created a degree of asymmetry between Member States as, in practice, firms in some

29 See WIK, supra note 5, at p. 29.

30 See Directive 2001/12 of the European Parliament and of the Council of 26 February 2001 amending Council Directive 91/440 on the development of the Community's railways, (2001) O.J. L 75/1

31 Proposal for a Directive of the European Parliament and of the Council, amending Council Directive 91/440/EEC on the development of the Community's railways, COM (2004)139 final of 3 March 2004.

32 Several Member States, such as Estonia, Finland, Sweden, and the United Kingdom have, for instance, fully liberalized their postal market although EC law still allows Member States to maintain a reserved area. See Elizabeth Eaves, Opening the Mail, *Wall Street Journal*, 22 March 2006.

33 For instance, on 21 April 2004, after nine months of delay and two warnings, the Commission decided to take six Member States - Belgium, Germany, Greece, France, Luxembourg and the Netherlands - to the European Court of Justice for failing to implement fully new rules on electronics communications. See IP/04/510.

Member States managed to escape for several years the obligations imposed by EC law.

Second, it is interesting to note that while liberalization has been particularly fast in some sectors, notably air transport and telecommunications, it has been much slower in others. This is due to several factors. First, in the mid-1980s, there was a general belief that liberalization of the air transport and telecommunications sectors were really needed to stimulate the development of the internal market (this is particularly true for the air transport sector) and the competitiveness of the industry (this is particularly true for the telecommunications sector, in respect of which Europe was lagging behind the United States). In contrast, the benefits of liberalization of sectors such as energy, postal services and rail were disputed. Energy is a highly strategic sector and several Member States, such as France, were thus reluctant to the market opening process and devoted significant efforts to delay it. While perhaps less strategic, postal services and rail are equally difficult sectors because of the anticipated social costs in terms of employment losses, which full liberalization is anticipated to bring about.

IV. Radical changes in the organization of network industries brought by liberalization

As we have seen above, liberalization has significantly modified the regulatory framework applicable to network industries. Although liberalization is often assimilated to a deregulatory process, it in fact generates more rules.[34] Liberalization is thus a regulatory intensive process, which has enhanced the importance of law and lawyers in network industries.[35]

34 See S. Vogel, *Freer Markets, More Rules: Regulatory Reform in Advanced Industrial Countries*, Cornell Studies in Political Economy, 1996.

35 We will, however, see below that the arrival of competition on liberalized markets reduces the need for regulatory control and may trigger a roll-back of regulation. But it will generally take many years to get there and even in competitive markets regulation is likely to retain an important role.

Liberalization has also introduced many significant changes in the organization of network industries, which today operate quite differently than a decade ago, as well as on market structures. The discussion that follows focuses on three such changes: the vertical unbundling between infrastructure and services, the breaking down of barriers between network industries, and the progressive withdrawal of the State in such industries.

A. Vertical unbundling

One of the central legal and economic issues in network industries relates to the traditional vertical integration of such industries. Historically, network industries were vertically-integrated in the sense that both networks and services were owned and operated by the incumbent. Liberalization, however, put this model in question. In a market where services are typically competitive while the network retains monopolistic features, vertical integration creates a danger that the incumbent uses its control of the network to discriminate between its downstream activities and those of its competitors.[36] This discrimination can take several forms, such as refusing to provide downstream competitors with access to the network, degrading of the quality of the access services provided to downstream competitors, charging higher access charges to downstream competitors, etc.

Unbundling the network thus seems a natural solution to this risk of discrimination. There are a variety of unbundling approaches possible depending on the degree of separation between network and services operations.[37] The approaches range from a relatively limited degree of separation, such as accounting separation or the separation of network and services in different legal entities, to a full economic separation whereby the integrated firm divests its network operations. While full unbundling of the network is the preferable solution from a competition standpoint as it eliminates incentives to discriminate, it may also have a cost in terms of loss of economies of scale or scope.

36 See Geradin and Kerf, supra note 21, at 57-58.

37 In the energy field, unbundling essentially means the separation between production and transmission.

It may also create organizational difficulties as network and services between which there is a natural interface will be run by different corporations. In practice, the EC liberalization directives have thus opted for accounting and legal separation. Some Member States have, however, gone further to require full unbundling through divestment. Because these approaches involve trade-offs, the debate over the optimal level of unbundling continues to rage among lawyers, economists and policy-makers.

From a more general perspective, liberalization has stimulated the creation of new products and services and, as a consequence, generated a range of new markets populated with new firms. While, for instance, the telecommunications sector was typically controlled by one or a small number of firms prior to liberalization, market opening reforms have allowed the entry of numerous new firms, large and small, providing new innovative services. Small firms without necessarily much capital and infrastructure, such as for instance Mobile Virtual Network Operators (MVNOs) in mobile telephony,[38] have seized the opportunities created by regulatory reforms to create new business models and compete on the marketplace. The same observation can also be made in the energy sector where liberalization has stimulated the development of trading and retail activities. Activities that were once carried out by a single vertically-integrated operator are now performed by a wide range of firms specialized into one or several transactions.

B. The breaking down of barriers between network industries

Under the monopoly model, markets tended to be clearly divided across sectoral lines. To put it simply, electricity producers sold electricity and natural gas operators sold natural gas. Multi-energy operators were rare. The same was true in the communications sector were there was, for instance, a clear divide between telecommunications firms, cable operators and broadcasters.

38 A MVNO is a "mobile operator that does not own its own spectrum and usually does not have its own network infrastructure. Instead, MVNO's have business arrangements with traditional mobile operators to buy minutes of use (MOU) for sale to their own customers." See: http://www.mobilein.com/what_is_a_mvno.htm

The liberalization of network industries combined with technological evolution has radically modified this picture. Today, firms compete across a range of network industries seeking opportunities for growth and synergies. Liberalization has rendered this possible by removing exclusive rights, which prevented network industries operators from entering into each other's markets. Energy producers are increasingly active on several markets. The border between the electricity and the natural gas markets is increasingly fluid particularly since natural gas is an input for the production of power. In the communications sector, technological innovation also played a major role through the so-called process of convergence whereby digitalization has allowed the information technology, telecommunications, and audiovisual services to merge into what appears to become a single industry. Today, telecommunications operators provide audiovisual services while cable operators provide telecommunications services. Digitalization allows a range of networks to provide similar services. Barriers are collapsing and opportunities abound.
This new borderless world generates economies of scale and scope, as well as a range of other efficiencies. New products or services, such as for instance the so-called triple-play offerings in the communications field, may also be particularly convenient for consumers.[39] The fact that utilities are now able to enter into each other's markets may also stimulate competition as incumbents will now face new sophisticated competitors, which control vast resources.[40] Yet, the development of multi-utilities may also create competition law concerns. For instance, mergers between electricity and natural gas firms may create foreclosure effects as there is a risk that the electricity operations of the merged operator gain privileged access to the natural gas supplied by the merged firm's gas operations.[41] Similarly, when a firm that is dominant on one market becomes active on a neighbouring competitive market, risks of anti-competitive cross-subsidization appear.[42] These concerns can typically be addressed through a mix of ex ante regulation and ex post application of competition rules.

An important challenge created by the penetration of utilities into each other's markets is to ensure consistency between the decisions adopted by sectoral regulators. Up to now, in a mono-utility environment, sector-specific regulators have been able to work in quasi-isolation from each other. In a multi-utility environment, this wil not be longer possible. Inconsistent decisions over issues such as accounting separation and costs allocation would indeed generate regulatory inefficiency and place multi-utilities in a position of non-compliance with some of their regulatory obligations.

One way of avoiding inconsistent decisions would be to merge all the sectoral regulators into a cross-sectoral regulatory authority.[43] Given the growing convergence between the electricity and gas industries, the formerly distinct UK electricity (Offer) and gas (Ofgas) regulators

39 Triple Play is a term to used to describe the provisioning of the three services: high-speed Internet, television (Video on Demand or regular broadcasts) and telephone service over a single broadband connection.

40 The European Commission recognized the pro-competitive nature of such entry in several of its decisions. For instance, in its decision clearing a telecommunications joint venture (Newco) between BT, the Electricity Supply Board of Ireland and the American International Group, the Commission noted that the creation of Newco was "a pro-competitive development in the Irish telecommunicati-

41 See Piergiovanni, supra note 22.

42 Note that, while cross-subsidization may sometimes occur, the risks of anti-competitive behaviours associated with this practice are often exaggerated. First, when activities on non-competitive markets are subject to tight price control (which is generally the case), there may be very limited room for cross-subsidization. Costs-based price regulation reduces the ability of companies to misallocate costs. Alternatively, imposing a price cap on services facing less competition eliminates incentives for the incumbent to finance low prices for competitive services with higher prices for less competitive services. J. Hausman and T. Tardiff, "Efficient Local Exchange Competition", (1995) 40 *Antitrust Bulletin*, p. 529. Moreover, besides price control constraints, there is no evidence that profit maximizing firms will be prepared to reduce their profits on non-competitive markets to cover losses in competitive markets.

43 For a discussion of the advantage of cross-sectoral regulators, see Warrick Smith, "Utility Regulators - Roles and Responsibilities", 128 (October 1997) Viewpoint, The World Bank, available at http://rru.worldbank.org/Documents/PublicPolicyJournal/128smith.pdf

have been merged into a single body (Ofgem).[44] The convergence process taking place between the telecommunications, broadcasting and information technology industries has also led some countries (e.g. Italy, Portugal, and Spain) to set up an integrated communications authority.[45] But the creation of cross-sectoral regulators covering a broad(er) range of sectors, including telecommunications, broadcasting, energy, and postal services, is not on the policy agenda of European nations.[46]

Another radical option would be to dismantle the sectoral regulators and entrust economic regulation to an economy-wide body such as the competition authority. This approach has been pursued in Australia where, a few years ago, the government decided to dismantle the telecommunications regulator (AUSTEL) and to transfer its economic regulation duties to the Australian Competition and Consumer Commission (ACCC).[47] Interestingly, though an economy-wide body, the ACCC is in charge of implementing telecommunications specific regulatory requirements dealing with issues such as interconnection or cross-subsidization.[48] Although it has many attractive features[49], the Australian approach is rather unique and unlikely to be applied in the EU in the years to come.

The policy path that has been chosen in most EU Member States is

44 See http://www.ofgem.gov.uk

45 See D. Geradin, "Institutional Aspects of EU Regulatory Reforms in the Telecommunications Sector: An Analysis of the Role of National Regulatory Authorities", 1 (2000) *Journal of Network Industries*, pp. 5, 21.

46 In contrast, in the United States, cross-sectoral regulators exist at the state level. They take the form of public utility commissions (PUCs).

47 See Department of Communications and the Arts, "Liberalisation of the Telecommunications; Australia's Experience", August 2000, available at http://www.dcita.gov.au/tel/telstra_shareholder_role/telstra_shareholder_-_history/liberalisation_of_the_telecommunications_sector_-_australias_experience

48 See Stephen Corones, "Anti-Competitive Conduct in Telecommunications", 26 (1998) *Australian Business Law Review*, p. 251.

49 See M. Kerf and D. Geradin, "Controlling Market Power in Telecommunications: Antitrust vs. Sector-Specific Regulation - An Assessment of the United States, New Zealand and Australian Experiences", 14 (1999) *Berkeley Technology Law Journal*, pp. 919, 1003.

to work towards a greater co-operation between sectoral regulators. For instance, in October 1999, the UK regulators overseeing the telecommunications, energy, water, and rail sectors, formalized and deepened the co-operation they had pursued for a number of years in a joint public statement.[50] The document identifies a number of areas of joint working such as for instance the development of best practice principles in a series of areas (multi-utilities regulation, the testing of transition from pre-competitive to competitive markets, the compilation and dissemination of competitive price information, etc.). Co-operation is less formalized in other countries, but will inevitably be stimulated by the creation of multi-utilities.

C. The progressive withdrawal of the State

As noted before, prior to liberalization, network industries were generally dominated by public monopolies, i.e. monopolistic enterprises controlled by the State. These enterprises were generally part of the administration and supervised by one or several ministers. While there is no conceptual link between liberalization and privatization as the former translates in market opening reforms while the latter in the disposal of public assets, liberalization has generally led to a progressively relaxation of State control. In some cases, governments decided to corporatize public operators in order to give them more managerial freedom. Often this was a first step towards privatization. Besides the increasingly widely held view that States are not well placed to run corporations, especially in fiercely competitive markets, governments also sought privatization as an opportunity to generate large sums of money for the State budget. In some cases, this introduced a tension between the liberalization and the privatization processes. Since monopolistic firms are worth more than those facing competition, governments might have been tempted in some cases to slow the liberalization process in order to ensure the financial success of their privatization efforts.

Yet, liberalization and privatization should not mean a complete withdrawal from the State in network industries markets. The role of the

50 See "Statement by Oftel, Ofgem, Ofwat, Orr, and Ofreg on Joint Working", October 1999, available at http://www.ofcom.org.uk/static/archive/oftel/publications/1999/consumer/regs1099.htm

State in such markets should rather evolve. For reasons discussed above, network industries are very sensitive to regulation. Rather than running telecommunications or energy operators, the primary role of the State should be to develop (or transpose) competition-inducing regulatory frameworks and establish agencies capable of implementing and enforcing such frameworks. Moreover, governments should pursue economic policies stimulating innovation and investment in these industries. Unfortunately, less laudable forms of government intervention abound. For instance, even when operators have been entirely privatized, some governments still seek to protect these firms from take-overs by foreign competitors. As will be seen below, this attitude should be severely criticized as it impedes the creation of integrated network industries markets.

V. Remaining bottlenecks

The liberalization process has now been completed in a number of sectors and is well on its way in others. This does not mean, however, that all network industries markets are competitive. The level of competition in the electricity and natural gas markets is, for instance, extremely small in a number of Member States despite the fact these markets are almost fully liberalized.[51] There are indeed a number of significant bottlenecks, which still prevent competition to take place. These are discussed hereafter.

A. Poor transposition of EC directives

A first problem is the inadequate implementation of liberalization directives in some of the Member States.[52] One advantage of relying

51 See European Commission, "Energy Sector Inquiry Confirms Serious Problems and Sets out Way Forward", Press release IP/06/174 of 16 February 2006.

52 For a good discussion on the main features of directives, see Paul Craig and Grainne de Búrca, *EU Law – Text, Cases and Materials*, (2003) 3rd Ed., Oxford University Press, p.99. From a legal perspective the choice of a directive as a legislative instrument implies a division of competences between the EC and the MS. The EC institutions set the legislative goals to be achieved, while the MS are left free as to the form and method of achieving these goals

on directives is that they give some degree of flexibility to the Member States. This may be important considering the different national situations in terms of market structures, administrative traditions, etc. The problem of this instrument is that directives have to be implemented by the Member States and that some of them are dragging their feet to introduce EC provisions in their national legislation. This creates a degree of asymmetry in the level of regulation which applies to network industries in the different Member States, as well as distortions of competition. The tools at the disposition of the Commission to force Member States to implement directives are, however, quite ineffective. Legal actions against Member States for failure to implement directives typically take several years before the European Court of Justice (the "ECJ") adopts a judgment.[53] In the meantime, the regulatory asymmetries denounced above persist.

B. Lack of EU-wide regulatory authorities

As noted above, the EU system relies on the implementation of regulatory obligations through national agencies. The advantage of this approach is that national authorities are closer to the regulated firms than European agencies would be. This may contribute to improve the quality of regulation. On the other hand, there exists a degree of asymmetry between the levels of independence, competence, resources, and accountability of the national agencies. While some authorities, such as OFCOM or OFGEM in the United Kingdom, are well-resourced and independent, authorities in several other Member States are still closely associated with their national government and their resources may be insufficient to adequately perform their missions. This may be another source of distortion in the internal market.

Of equal concern is the fact that national authorities seem poorly adapted to deal with cross-border issues as their scope of action is

53 According to the official statistics of the European Court of Justice, a judicial procedure lasts 20,2 months on average http://www.curia.europa.eu/fr/instit/presentationfr/rapport/stat/st04cr.pdf

typically limited to their Member State borders.[54] Yet, there are a certain number of regulatory issues of a cross-border nature, such as, for instance, the regulation of electricity flows across Member States. The lack of EU-wide regulatory authorities has been somehow compensated by various forms of cooperation between the Commission and the national regulatory agencies, but it is not clear that such cooperation is as effective as fully-fledged European agencies would be.[55] There are, of course, European agencies in fields such as air or rail transport, but the competences of these agencies are essentially limited to safety and inter-operability issues. In contrast, they are not competent with the complex economic regulation issues, which have been discussed above.[56]

54 This mismatch was recently acknowledged in a high-profile study (generally referred to as "the Sapir Report") delivered by a group of distinguished scholars to the Commission. The report pointed out that "a policy may be inappropriately allocated between the EU and the MS levels with respect to the objective that is being pursued (either inappropriate centralisation or decentralisation)" and consequently raised the question whether "the current assignment of competences between the EC and the MS could be considered optimal". See "An Agenda For a Growing Europe - Making the EU Economic System Deliver", Report of an Independent High-Level Study Group established on the initiative of the President of the European Commission, July 2003, at p.88. This document is available at www.europa.eu.int/comm/dgs/policy_advisers/experts_group/ps2/odcs/agenda_en.pdf

55 Another model, which has been used in the energy sector, is for the Commission to encourage market players to cooperate in order to find solutions to the main cross-border issues through voluntary measures. This led to the creation of the so-called Florence Forum (dealing with cross-border issues in electricity) and the Madrid Forum (dealing with cross-border issues in gas). See, on the "Florence Forum", Burkhard Eberlein, "Regulating cross-border Trade by Soft Law? The Florence Process in Supranational Governance of Electricity Markets", (2003) 2 *Journal of Network Industries*, 13. Information on the Florence Forum is available at http://www.europa.eu.int/comm/energy/en/elec_single_market/florence/index_en.html. Information on the Madrid Forum is available at http://www.europa.eu.int/comm/energy/en/gas_single_market/madrid.html. The Commission realized, however, the intrinsic limits to this cooperative approach and decided to deal with cross-border issues through EC legislation. See Regulation 1228/2003 of the European Parliament and of the Council of 26 June 2003 on conditions for access to the network for cross-border exchanges in electricity OJ L 176 of 15 July 2003, pp.1-10.

56 See D. Geradin and N. Petit, "The Development of Agencies at EU and National Levels", *Yearbook of European Law* 2004, Oxford 2005, at p. 147.

C. Anti-competitive behavior on the part of the incumbents

The opening of the network industries' markets to competition does not mean that such market will overnight become competitive. In fact, following liberalization, the incumbents typically retain very strong market positions and thus remain dominant for a number of years. For instance, although the UK telecommunications market was opened to competition in the 1980s, BT still remains dominant in a variety of market segments. The same can be said about most incumbents in network industries.

Incumbents will often rely on their market power to prevent entry on the market. They can do that through a variety of practices, such as refusal to give access to essential network elements,[57] abusive pricing practices (e.g., margin squeeze), anti-competitive cross-subsidization,[58] etc. EU directives typically contain regulatory measures designed to prevent such abuses of market power, but the creativity of incumbents when it comes to protect their dominant position is such that these measures are often insufficient. This requires the intervention of the European Commission, the national competition authorities, and the national courts on the basis of competition rules. Over the last twenty years, competition authorities have sanctioned many incumbents for abuse of market power in all network industries sectors.[59] Because EC competition rules give significant powers of

57 See, e.g., in the rail sector, Commission Decision of 27 August 2003, *GVG/FS*, (especially at § 120) OJ L 11 of 16 January 2004, pp.17-40 and O. Stehmann, "Applying Essential Facility Reasoning to Passenger Rail Services in the EU – the Commission Decision in the Case GVG", (2004) 7, *European Competition Law Review*, 290.

58 For instance, on the 20 March 2001, the Commission issued a decision holding that Deutsche Post AG was using revenues from its profitable letter-post monopoly to finance a strategy of below-cost selling in parcel delivery services. The complainant UPS, alleged that without the cross-subsidies from the reserved area, Deutsche Post AG would not have been able to finance below-cost selling for any length of time. UPS therefore called on the Commission to prohibit Deutsche Post AG's fidelity rebate scheme and policy of below-cost selling. UPS further requested the Commission to impose a structural separation of the reserved area and the parcel services open to competition. Case COMP/35.141, *Deutsche Post AG*, 2001 O.J. (L 125) 27

59 See the various contributions in D. Geradin, *Remedies in Network Industries*, Intersentia, 2004..

investigation and enforcement to the European Commission, these rules are the most powerful instrument at the disposal of the Commission to prevent abuses of market power.

D. Economic patriotism

One of the key objectives of the European Commission when it nitiated the liberalization process was the creation of truly integrated EU markets.[60] Yet, while liberalization has introduced a degree of competition within national markets, it has so far failed to create such EU-wide markets. There are a number of reasons for that. First, as noted above, regulation is essentially a national matter. This does not facilitate the operations of firms with European ambitions. Moreover, network infrastructures were usually conceived for national markets, not a European one. For instance, national rail infrastructures are often incompatible, thus preventing trains from traveling across Member States. Interconnectors at national borders typically have insufficient capacity to allow significant electricity exchanges. The flow of goods and services is thus impeded by the lack of cross-border infrastructures. This is an area where more investments are needed.

An additional factor is that there are relatively few EU-wide operators in network industries. Airlines or rail companies are still largely national. The same can be said of telecommunications, energy and postal operators. Network industry sectors in Europe are thus composed of dozens of operators most of which being relatively small and operating in one Member State only. This contrast with the situation in the United States where with some exceptions network operators tend to be large and operate throughout the nation. The number of cross-border mergers in these sectors has remained relatively modest although things are progressively changing.

60 See, *e.g.*, in the energy sector, A. Piebalgs, "The situation of Internal Markets in Gas and Electricity", SPEECH/06/94 of 16 February 2006; N. Kroes, "Towards an Efficient and Integrated European Energy Market – First Findings and Next Steps", SPEECH/06/92 of 16 February 2006, European Commission Conference, Energy Sector Inquiry – Public Presentation of the Preliminary Findings Brussels.

In recent months, however, one has observed a powerful movement in certain Member States for the protection of their national champions. One can cite, for example, the efforts of the:

- French government to merge Suez with GDF as a way to counter a bid by Enel on Suez;[61]
- Luxembourg, French, Spanish, and Belgian governments to block a hostile takeover of Mittal on Arcelor;[62]
- Spanish government to advance a merger between Endesa and Gas Natural to which it was favorable;[63]
- Polish government to prevent Unicredito to take over BHP, a large local bank, though its acquisition of HBV, a German bank controlling BHP.[64]

This has triggered strong reactions from certain Member States, opposed to this new form of protectionism, but also from the Commission, which considers that the above efforts could run counter internal market rules and competition rules.[65] Economic patriotism is a serious concern because it is fundamentally at odds with the creation of EU-wide firms operating on an EU-wide market.

VI. Can we do away with sector-specific regulation?

It is frequent to hear incumbents claiming that it is time for the progressive phasing out of sector-specific regulation. This claim is obviously motivated by the fact that regulation places restrictions on their behavior and generates implementation costs. Most experts agree that sector-specific regulation should in principle be transitory

61 H-H. Härtel, "The Threat of Economic Patriotism", (2006) 2, *Intereconomics*, 58 at p.59.

62 See *Le Figaro*, "Arcelor-Mittal: la «grammaire des affaires» a finalement eu raison de celle des politiques", Y. de Kerdrel, 28 juin 2006.

63 H-H. Härtel, supra note 61, at p.59.

64 European Commission, "Commission launches procedure against Poland for preventing Unicredit/HVB merger", Press Release IP/06/277 of 8 March 2006

65 N. Kroes, "Competition policy in a Lisbon context – the State of Play", SPEECH/06/439 of 6 July 2006, German Bundestag – Europaausschuss, Berlin.

and that, as regulation is rolled-back, network industries should be increasingly controlled through general competition rules. On the other hand, new entrants are against this phasing out of regulation as they see themselves somehow protected by these rules.

In the telecommunications sector, the Commission has already engaged in a deregulatory process through its proposal for a new electronic communications regulatory framework, subsequently adopted by the Council of Ministers and the European Parliament.[66] This framework is deregulatory in the sense that it requires that sector-specific regulatory requirements be only adopted or maintained provided that the market in question is identified as non-competitive due to the presence of a dominant firm.[67] This means that, as markets become increasingly competitive, sector-specific rules should progressively disappear. In absence of such rules, these markets would be subject to the discipline imposed by competition rules, just like other sectors of the economy. There is no doubt that this approach could and probably should be replicated in other network industries, but the level of competition in these sectors is probably insufficient to justify such a deregulatory effort at the moment.

Moreover, even in the electronic communications field, it is unlikely that sector-specific regulation will soon, if ever, completely disappear.

66 Directive 2002/21 on a common regulatory framework for electronic communications networks and services, 2002 O.J. L 108/33.

67 The new regulatory framework for electronic communications does provide for a review system whereby regulatory requirements can only be imposed or maintained on operators holding significant market power as long as they are necessary to correct a market failure. See recital 27 of the preamble of the Framework Directive: "It is essential that ex ante regulatory obligations should only be imposed where there is not effective competition, i.e. in markets where there are one or more undertakings with significant market power, and where national and Community competition law remedies are not sufficient to address the problem". See D. Geradin and G. Sidak, "European and American Approaches to Antitrust Remedies in the Regulation of Telecommunications", in S. Majumdar, I. Vogelsang and M. Cave, eds., *Handbook of Telecommunications Economics*, Vol.II: Technology Evolution and the Internet, North-Holland,2004.

First, the local loop still holds natural monopoly features and until wireless technologies are able to entirely replace the telephone network, it will still have to be regulated. In addition, regulation will remain necessary to maintain a reasonable level of universal service. In the absence of regulation, universal service would not be provided spontaneously by market forces as it entails providing services to unprofitable customers, as well as in loss-making areas. The same remark can be made for the other network industries. Universal service would thus remain the last bastion of regulation.

One has thus to expect a progressive reduction of the level of sector-specific regulation, which is currently observed and an increasing reliance on competition rules to prevent incumbents from abusing their market power. It is, however, unlikely that sector-specific regulation will entirely disappear.

VII. Conclusion

Liberalization has largely been a successful process, which should be led to completion. Lower prices, higher quality, greater innovation, and more customer-friendliness are some of the main achievements of this process, although of course exceptions can be identified on some markets. The challenge at this stage is no longer whether liberalization should take place. It is to ensure that EU citizens will indeed be able to enjoy the benefits of competitive markets.

The EU institutions and the Member States should thus seek to remove the various bottlenecks identified above, which still impede the development of competitive markets. While the European Commission has the power to initiate proposals for new legislation, the ball is essentially in the hands of the Member States. Faster and better implementation of EU directives, the putting into place of independent and well-resourced regulators, investments in network infrastructures, and the absence of protectionist policies are principles/actions that should significantly contribute to the development of competitive network industries markets.

Ik heb gezegd