

Market power and competition

1. The use of exclusive rights in response to the market power problem

From a historical perspective, the delivery of electricity and telecommunications services has been subject to a substantial legislative interest and regulation. An interest which in most European countries was translated into tight regulation, use of exclusive rights, and state retention of ownership. The organisation of markets around monopolies also involving regulatory tasks, such as settling conflicts, mandating terms, and securing long-term planning, was rooted in a perception of the sectors as unsusceptible for competition. A perception loosely founded on a cocktail of factors, including the strategic position of the sectors, their unique technical and economic realities and derived advantages of retaining providers as vertically integrated monopolies.¹ Presumably in combination with a fear that the free market for these reasons would not deliver services in adequate volumes and at acceptable prices. Furthermore, from an EU perspective, the European Community appears to have accepted this, largely by allowing the two sectors to remain dormant, eluding not only regulation but also competition enforcement in the early years of the community's history.

For many reasons it is difficult, if not impossible, to check the merits of this perception. Until the dawn of the eighties, it appears to have been generally accepted, also within the EU Commission, that it was necessary to confine competition and competition law to a limited role in these sectors, as neither could adequately contain the ability to exercise market power. Consequently, any attempt to introduce competition would come at the cost of the consumers and be detrimental to the overall public interest of the security of supply. Nevertheless, contemplating these shortcomings of competition law and its ability to offer a contribution to the regulation of electricity and tele-

1. For further on the organisation before EU liberalisation, see chapter VII and VIII.

communications should therefore open with an understanding of the market power concept and its relationship to competition law. Generally and in relation to the delivery of electricity and telecommunications as it might come in a qualified form here. Below such an attempt is ventured for the purpose of providing a frame for further analysis.

2. Market power and competition

The *market power* concept uses economic theory and describes the ability of an undertaking to raise its prices profitably above its costs.² A decisive factor is the reaction of customers and competitors to any alteration in prices and quantity, which again is dependent on the customers' price sensitivity, ability to switch to alternative products or services, and competitive restraints that prevent competitors from reacting and negating price increases. In particular barriers and other restraints are therefore of paramount importance for the market power concept.

2.1. Market power creates welfare loss and foreclosure

The perception of market power, provided it has some substance, as something negative is linked to the embedded understanding of market power as detrimental to consumers, leading to welfare losses in the form of monopoly inefficiency, e.g. inflated costs, insufficient supplies, and increased prices. Further, companies with market power might be able to foreclose equally or more efficient competitors, reducing competition with an associated indirect long-term welfare loss. Foreclosure that in addition to the direct market could involve markets upstream or downstream in a vertical distribution chain or neighbour markets often referred to as *leverage* and a *leverage strategy*. Conceptually, it might be relevant to make a distinction between vertical and horizontal foreclosure,³ where the latter includes foreclosure of the direct market and neighbouring markets. In particular, vertical foreclosure would require both *ability* and *incentive* to foreclose, where the latter might be lacking.⁴ Eliminating, or even pinning down, a downstream customer would

2. See Massimo Motta, *Competition Policy, Theory and Practice*, Cambridge, 2004, pp. 40-41.
3. See e.g. DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses, recitals 69-73.
4. See Massimo Motta, *Competition Policy, Theory and Practice*, Cambridge, 2004, pp. 362-377.

inevitable hurt the upstream turnover and hence potentially the overall profitability. In addition, in the long run, customers would most likely take active steps to emancipate themselves from the risk, either by establishing themselves upstream or support others' attempts of such, offsetting any short term gains and making even feeble indications of foreclosure ambitions dangerous. On the other hand, different forms of *economies of scale*, *scope* and *network effects* could serve as an incentive to foreclose, in particular combined with price regulation,⁵ while market position of monopoly strength might reduce the associated risks.⁶ The persistent presence of all these elements within the two sectors should, however, not elude attention and must be allocated due considerations as part of the analysis.

2.2. The manifestation of market power is well known

Regardless of the embedded uncertainty related to the foreclosure risk it cannot be ignored. If not for other reasons then because it might serve as a self-fulfilling prophecy legitimising a permanent need for governmental oversight, exclusive rights and limitations of competition. Further, a reputation for aggressive behaviour could serve as a strategic barrier indicating that any entry attempt would trigger a harsh reaction. In particular as foreclosure does not require actual exclusion of competitors or that a broad number of these are victimised.⁷ It is sufficient that these are disciplined to loosen the competition pressure or that strategic barriers are created henceforth. These are objectives that would be particularly easy to achieve in the early phases of a market opening process, potentially through narrow and extremely selective instruments. Further, foreclosure could come in the form of input *or* customer foreclosure,⁸ i.e. involving either an attempt to increase the competitors' costs *or* their ability to serve customers, all for the purpose of creating a foreclosure.

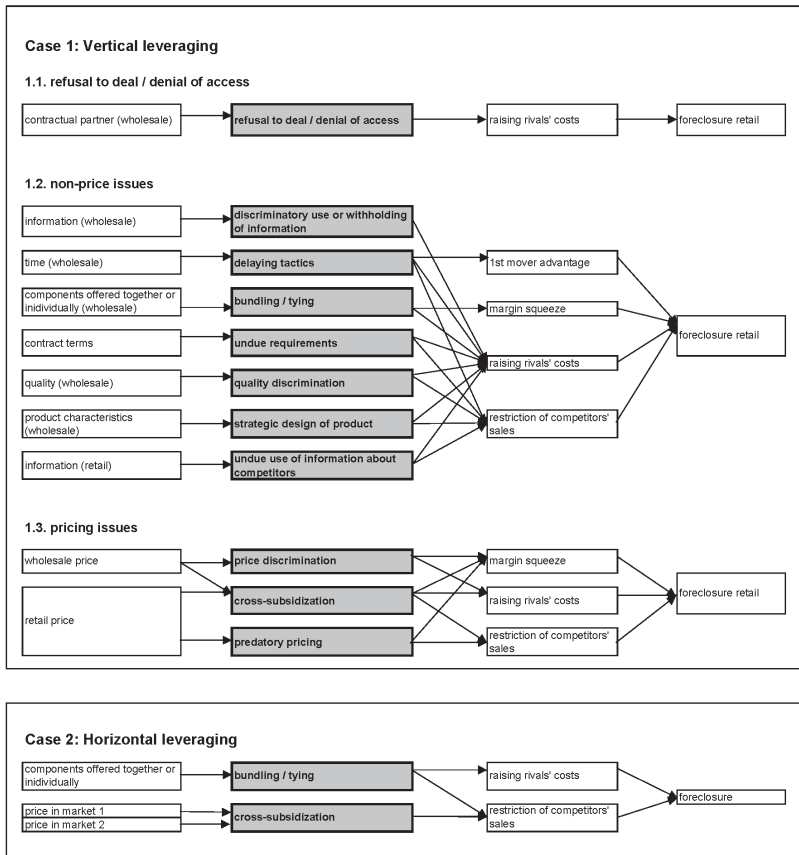
5. See *Restructuring Public Utilities for Competition*, OECD August 2001, pp. 10-11, and Robert O'Donoghue and Jorge Padilla, *The Law and Economics of Article 102*, Second Edition, Hart Publishing, 2013, pp. 368-371.
6. See Massimo Motta, *Competition Policy, Theory and Practice*, Cambridge, 2004, p. 341.
7. See e.g. Communication from the Commission — Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings, recital 19, and case T-286/09 – *Intel*, recitals 88 and 116.
8. See e.g. Bishop and Mike Walker, *The Economics of EC Competition Law: Concept, Application and Measurement*, Sweet & Maxwell, 2010, pp. 433-451.

For the purpose of understanding the risks better, the Commission has fostered a number of documents,⁹ describing foreclosure and more traditional exploitations of customers. Specifically for telecommunications, this involved the identification of 27 generic competition problems that individually or jointly represent different forms of market power manifestations. These are further compiled into 4 cases, below referred to as case 1 to 4, representing *ability* which, as already pointed out, not always would be the same as *incentive*. Further, the concept *leveraging* is used rather than *foreclosure*. However here, it would be the same.¹⁰

9. This involved in particular DG Competition discussion paper on the application of Article 82 of the Treaty to exclusionary abuses, recital 73, and Revised ERG Common Position on the approach to Appropriate remedies in the ECNS regulatory framework, (ERG (06)33), 2006, pp. 39-40. The listing has been taken from the latter but could easily be related to electricity. For instance, many of the problems are listed in the Commission's Energy Sector Inquiry from February 2006. See e.g. recitals 366-419 and recitals 420-471.
10. *Leverage* is often used synonymously with *foreclosure*, but as detailed in chapter II, it is legally a form of dominance, making it relevant to make a distinction later.

2. Market power and competition

strategic variables of the undertaking	behaviour (standard competition problem)	possible effects
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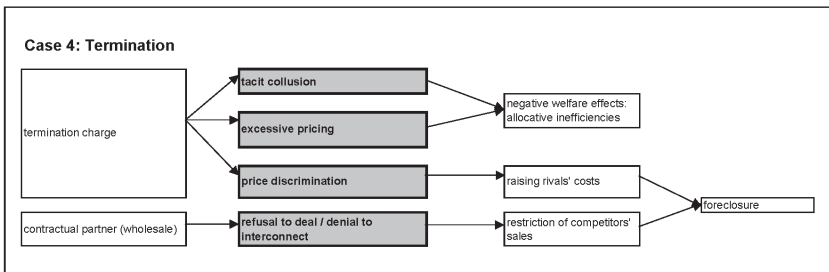
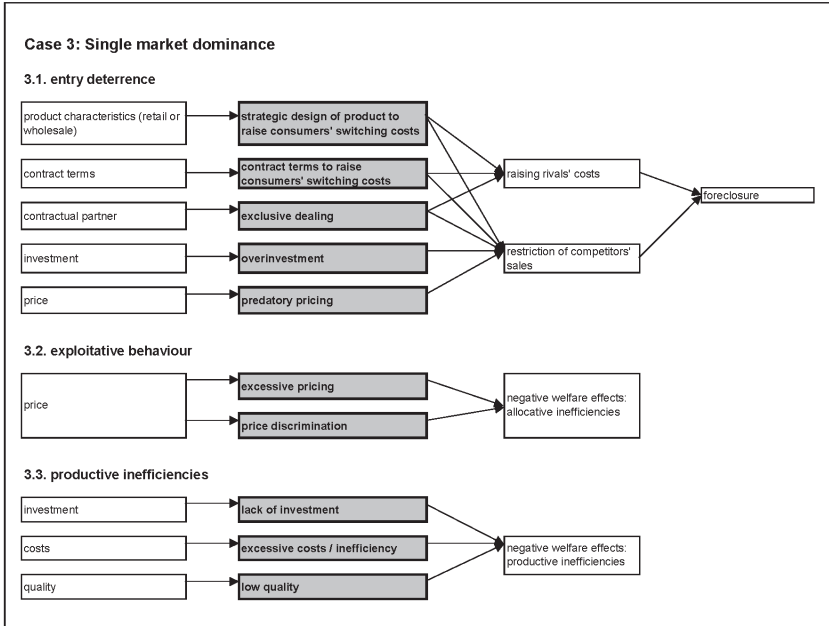


As seen in the diagrams case 1 and 2, market power can through the generic competition problems, marked with grey, lead to a vertical or horizontal foreclosure of wholesale and retail markets. Further, this is secured by targeting the competitors' competitiveness, costs, sales, or margin.

In addition to the foreclosure of related markets, also the direct market could fall prey to the exercise of market power. Either through a direct (and traditional) exploitation of customers and ultimately consumers, or a foreclosure of competition leading to welfare loss in a longer perspective. This is detailed in the diagram below, referred to as case 3. Once again, the foreclosure is secured through targeting either the competitors' costs or sales. Finally, in respect of telecommunications, a special form of exploitation is

related to the final delivery of calls at the receiving end, referred to as *termination*. Case 4 relates to this.

strategic variables of the undertaking	behaviour (standard competition problem)	possible effects
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A shared feature of cases 1 to 4, and the identified generic competition problems, marked with grey, is how these overall problems support either a foreclosure strategy or a traditional exploitation of consumers. Further, the foreclosure strategy is secured by increasing competitors' costs, reducing their sales, or squeezing the margin. More importantly, however, is that most of the generic competition problem involve concepts known, or at least poten-

tially known, to competition law. This perhaps indicates a more active role for competition law than is traditionally accepted.

Despite being developed for the purpose of telecommunications, cases 1 to 4, the generic competition problems and the underlying analysis could easily be translated to electricity. Several of these are e.g. listed in the Commission's *Energy Sector Inquiry* from 2006,¹¹ allowing for a form of overview of market power manifestation across both sectors. A successful application of competition law to the delivery of electricity and telecommunications would therefore require an ability to handle the 27 generic competition problems; to the extent they have a competition law equivalence. In section 4 below, the different forms of abuse are detailed for the purpose of further analysis in chapter III.

3. Market power and the supply of electricity and telecom

While it might be a bit premature to draw firm conclusions merely against the analysis offered above, it should be safe to rebut the presumption of no role for competition law in the regulation of electricity and telecommunications if based solely on a presumption of being unqualified in addressing the market power issue. As already noted, many of the generic competition problems might be abusive under Article 102. However, as noted initially, historically no or only a limited room for competition law in the regulation of electricity and telecom has been accepted. Even today, this perception might still persist, making it plausible that other issues or concerns could be found, e.g. that the ability to exercise market power might be enhanced due to the nature of the involved sectors and markets. For the purpose of the later analysis, this shall shortly be developed.

3.1. An enhanced level of market power

It is possible to identify a number of conditions that could indicate a qualified and enhanced ability to exercise market power when dealing with electricity and telecommunications compared to other (and more normal) activities. Conditions adding to the general incumbent advantages, e.g. massive market shares and privileged contact with all customers, and present in particular in the initial phases of the market opening. These conditions could involve for example:

11. *Energy Sector Inquiry*, February 2006, e.g. recitals 366-419 and recitals 420-471.

- Demand for electricity is inelastic (stable),¹² allowing the withholding of even a minor amount to translate into significant price increases.
- The supply of electricity is overall secured against a number of different production forms with different production costs and levels of flexibility.¹³ Nuclear power is e.g. perceived to be inflexible but with low marginal costs, making it ideal for the supply of the base load, while gas operated plants have the revered profile, making it ideal to supply the marginal load.
- The infrastructure, and ability to utilize this, plays a decisive role for market access, but has nevertheless remained vertically integrated with the incumbents, compelling newcomers to conclude agreements with these.
- The privileged control with the (established) infrastructure creates a unique *ability* to foreclose vertically linked retail markets, undermining any market opening process. An ability that of course should be set off against the potentially lack of an incentive but nevertheless should not be ignored.
- There are substantial access barriers for newcomers, for example the need to procure production capacity and infrastructure often from the incumbents. Elements impeding their ability to exercise a competitive pressure on the incumbents and creating an environment prone for *collusion* rather than *competition* due to the oligopolistic nature of the market once competitors actually emerge and develops.
- If the market conditions become prone for collusion, the outcome of a market opening would not be competition and the containing of the incumbents' ability to exercise market power, but rather that this would be exercised jointly with the newcomers.
- The cost structures are unusual with a higher portion of fixed costs than normally linked to the utilization of capital intensive assets as infrastructure and power plants. This provides for declining marginal costs when production is expanded, creating an incentive to secure additional customers, at the expense of competitors, void of a clearly articulated foreclosure strategy.
- Due to the declining marginal costs, there are substantial *economies of scale* associated with an expansion of production. And for telecommuni-

12. For further, see e.g. Ignacia J. Pérez-Arriaga (editor), *Regulation of the Power Sector*, Springer, 2013, pp. 49-50.

13. For further, see Ignacia J. Pérez-Arriaga (editor), *Regulation of the Power Sector*, Springer, 2013, pp. 51-58, and Philippe Chauve and Martin Godfried, *Modelling competitive electricity markets: are consumers paying for a lack of competition?* Competition Policy Newsletter, No 2/2007, pp. 18-25.

3. Market power and the supply of electricity and telecom

- cations different forms of *economies of scope* when producing multiple products and *network effects* where the value is increased exponentially with the number of users.¹⁴ Conditions making it pivotal, to secure a minimum customer base often referred to as a *minimum efficiency scale*,¹⁵ for successful market entry and retention. These, in particular the *economies of scale*, might be so massive that part of both sectors could be considered a *natural monopoly*,¹⁶ making it unattractive to introduce competition.
- Parts of the electricity grid¹⁷ are under-dimensioned for the purpose of supporting permanent trading of electricity. This is particularly acute for the *interconnectors* linking zones and countries, originally only conceived to allow trading in extraordinary situations e.g. fallouts, providing for occasional fragmentation of otherwise integrated zones when congestions occur.¹⁸

In the early phases of the market opening process, the ability to exercise market power could be enhanced due to certain incumbent advantages, including:

14. For further on these concepts and associated competition implication, see e.g. Richard Whish and David Bailey, *Competition law*, eighth edition, Oxford 2015, pp. 10-13; Francisco Enrique Gonzalez-Diaz and Robbert Snelders, *Abuse of Dominance Under Article 102 TFEU*, Claey's & Casteels 2013, pp. 85-86; Mathias Dewatripoint and Patrick Legros, *Mergers in Emerging Markets with Network Externalities: The case of Telecoms*, discussion paper 2000; and Suiyi Zhang, *How have network effects affected the European Commission's enforcement of competition law in technology enabled markets?*, ECLR 2015 (36), issue 2, pp. 82-92. Practice on network effects is ambiguous as illustrated by case T-79/12 – *Cisco Systems Inc.*, recital 76 rebutting network effect as establishing an advantage per se.
15. The Commission does e.g. appear to consider a market share of 20% as ideal for an optimised mobile operator, see. Annex to *Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU*, O.J.2009L 124/67. This indicates the Commission as subscribing to a minimum efficiency scale.
16. For further, see e.g. David M. Newbery, *Privatization, restructuring, and regulation of network utilities*. The MIT Press, Cambridge, Mass., 1999, p. 27; and Jean Tirole, *The theory of industrial organization*, Cambridge, Mass. MIT 1989, pp. 19-20 and 311-312.
17. For further on the grids and their sub-elements, see Ignacia J. Pérez-Arriaga (editor), *Regulation of the Power Sector*, Springer, 2013, pp. 202-205 (distribution) and 253-260 (transmission).
18. See e.g. COMP/M.3729 – *EDF/AEM/Edison*, recitals 39-41; COMP/M.3268 – *Sydskraft/Graning*, recital 24; and COMP/M.4368 – *Edison/Eneco Energia*, recital 13.

- Multiple turnover layers in a vertical distribution chain, e.g. production, wholesale and retail sale of electricity in addition to the embedded market for transport and distribution over the infrastructure. Turnover layer, or in a competition concept, markets that all might initially be integrated into a single undertaking making it easier to mask any exercise of market power.
- An incumbent with a quasi-monopoly versus newcomers with limited foothold on the market, making it significantly easier to foreclose the market. Perhaps it is even possible to foreclose it by pre-emptive prevention of market entry in the first place. In particular if different forms of economies of scale and scopes provide for a minimum efficient scale to allow entry.
- Public ownership negating the need to pursue a normal profit maximising strategy.¹⁹ Either supported by privileged access to capital or a preference for maximising the customer base and the securing of universal services, including safety of supply and low prices.
- Multiple products and services are produced concurrently with different levels of competition, allowing for cross-subsidisation, potentially through an arbitrary allocation of common and shared costs.²⁰

There is a double element to the listed incumbent advantages as some of them are not merely limited to the initial phases of the market opening but could potentially be of a more permanent nature. Further, due to the occasional fragmentation of the electricity market caused by congestions in the grid and the different production forms, a temporary form of market power,

19. See David E.M. Sappington and J. Gregory Sidak, *Competition Law for State-Owned Enterprises*, *Antitrust Law Journal*, Vol. 71, No. 2, 2003, pp. 479-523 and *The economic impact of enforcement of competition policies on the functioning of EU energy markets*, EU Commission 2016, p. 20, for further on distortions caused by access to state resources.

20. The concept covers general costs that is not product specific, referred to as *common costs*, and costs that is linked in a manner where one cannot be produced without the other, referred to as *shared costs*. For further, see Robert O'Donoghue and Jorge Padilla, *The Law and Economics of Article 102*, 2nd Edition, Hart Publishing, 2013, pp. 319-324.

3. Market power and the supply of electricity and telecom

referred to as *spatial market power*,²¹ (might) exist in this sector.²² Safe from the non-persistent element, this would, however, be identical to normal exercise of market power.

3.2. Limited ability to contain market power

The organisation of the delivery of electricity and telecommunication around regional and national monopolies prior to the EU liberalisation process in the eighties was largely a response to these concerns, real or not, and hence not without some merits. Further, the use of vertical integration not only simplified regulation and governance but also addressed the potential welfare loss associated with market power at multiple levels in a vertical distribution chain,²³ often referred to as *double marginalisation*. Vertical integration is normally held as an effective instrument to mitigate this by allowing for an overall perspective rather than suboptimal pricing. In addition to these concerns, EU's drive for market opening was complicated by a number of largely political challenges, e.g. that:

- Delivery of electricity and telecommunications was secured across entire member states, also at rural or isolated areas, at the same (low) price.
- Security of supply was safeguarded also in case of disaster or crisis, which for electricity required a permanent retaining of a reserve capacity.

21. See Klaus Skytte, *Market imperfections on the power markets in northern Europe: a survey paper*, Energy Policy, Volume 27, Issue 1, January 1999, pp. 25-32, and Anne-Sophie Pype, *Dominance in peak-term electricity markets*, ECLR 2011, pp. 99-105. Spatial market power is not limited to peak load but can emerge under normal conditions due to the different production cost profiles between e.g. coal, water, wind, gas and nuclear. Market prices would normally be dictated by the marginal supplier, allowing owners of “cheaper” production plants to reap substantial profits, see Commission's *Energy Sector Inquiry*, recitals 376-383, and Konkursverket's *Market Dominance and Market Power in Electric Power Markets – a Competition Policy Perspective* from 2005.
22. For further on the competition problems associated with different production forms and associated costs, see Ignacia J. Pérez-Arriaga (editor), *Regulation of the Power Sector*, Springer, 2013, pp. 51-58.
23. For further, see Damien Geradin and Michael Kerf, *Controlling Market Power in Telecommunications*, Oxford University Press, 2003, p. 59; Ignacia J. Pérez-Arriaga (editor), *Regulation of the Power Sector*, Springer, 2013, pp. 95-96 and 100; Massimo Motta, *Competition Policy, Theory and Practice*, Cambridge, 2004, pp. 307-313, *Non-Horizontal Merger Guidelines*, recital 55, and case COMP/M.7421 – *Orange/Jazztel*, recitals 729-747.

- Certain sectors or areas benefitted from a form of cross-subsidisation supported by others, often involving private consumers subsidising industrial and commercial customers (electricity) or international calls supporting domestic calls (telecommunication).
- It was disapproved that a profit could be made on fundamental goods as the supply of electricity and telecommunications services.
- For security policy reasons, it was held imperative that a level of governmental involvement was retained for the purpose of ensuring smooth operation also in case of war or crisis.
- For planning and investments purpose, a stable regulatory frame is essential in addition to a need for a more nuanced approach to long-term agreements incorporating exclusive elements, selective discounts and discriminatory terms than normally demonstrated under Article 102. In particular, as higher retail prices could be the alternative if the amortisation time is substantially reduced, alternatively no investments are made.

All of these concerns can be summarised under what later will be referred to as *Universal Service*, covering a broad umbrella of concerns warranting regulation and regulatory overview in the post-liberalisation environment. Further, many of the concerns would most likely fit under Article 106(2), significantly hampering the application of other provisions, including Article 102, empowering the concerns legally in the post-liberalisation environment.

3.3. Strong barriers for competition

In addition to already detailed market features, enhancing the ability to exercise market power, there are a large number of barriers for competition, restricting the competitors' ability to exercise a countervailing pressure negating any market power. These barriers can be qualified against the large number of EU competition cases involving the two sectors, in particular mergers.²⁴

3.3.1. Barriers and the supply of telecommunications

In respect to the delivery of telecommunications services, the identification of single market power has, in addition to large market shares, been supported by one or more of the following observations:

24. The cases have been found using NACE codes on DG COMP domain address followed by segmentation, limiting the search to cases within what could be considered the core of the sectors. For obvious reasons, that line between different elements supporting the ability to exercise market power can be somewhat blurred.

3. Market power and the supply of electricity and telecom

- Problems with gaining market access due to exclusive rights;²⁵ need for (mobile)licenses and spectrum allocations;²⁶ large often sunk capital costs;²⁷ suboptimal regulation on shared use of infrastructure;²⁸ limited market size²⁹ or weak national regulation of prices and price related abuse.³⁰
- Privileged control of the infrastructure, access to this;³¹ its technical configuration;³² unique infrastructure elements e.g. local loops³³ or a transnati-

25. Case IV/29.877 – *British Telecommunications*, recital 26; IV/35.337 – *Atlas*, recitals 24, 28; IV/35.617 – *Phoenix/Global One*, recital 31; IV/35.830 – *Unisource*, recital 49; IV/35.738 – *Uniworld*, recitals 45, 68-71.
26. Case COMP/M.1430 – *Vodafone/Airtouch*, recital 27; COMP/M. 2016 – *France Telecom/Orange*, recitals 25 and 33; COMP/M.1074 – *ENEL/FT/DT*, recital 27; COMP/M.1795 – *Vodafone Airtouch/Mannesmann*, recital 28; COMP/M.2803 – *Telia/Sonera*, recitals 63 and 69; COMP/M.5650 – *T-Mobile/Orange*, recitals 122-139; COMP/M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 287-289; and COMP/M.7018 – *Telefonica Deutschland/E-plus*, recital 846; COMP/M.6992 – *Hutchison 3G UK/Telefonica Ireland*, recitals 262-264.
27. Case M.856 – *British Telecom/MCI (II)*, recitals 26, 72-75; COMP/M.2803 – *Telia/Sonera*, recital 95; COMP/M.1741 – *MCI WorldCom/Sprint*, recital 200; COMP/38.784 – *Telefónica*, recitals 224-225; COMP/39.525 – *Telekomunikacja Polska*, recitals 648, 658-660 and 684-685; COMP/M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 290-294; and COMP/M.7018 – *Telefonica Deutschland/E-plus*, recital 84; COMP/M.6992 – *Hutchison 3G UK/Telefonica Ireland*, recital 267; COMP/M.7499 – *Altice/PT Portugal*, recital 122; COMP/M.7421 – *Orange/Jazztel*, recital 587; COMP/39.523 – *Slovak Telekom*, recitals 282 and 288.
28. Case COMP/M.2300 – *YLE/TDF/DIGITA/JV*, recital 27; COMP/M.1439 – *Telia /Telenor*, recitals 130 and 150; and COMP/M.7421 – *Orange/Jazztel*, recitals 172 and 602.
29. Case COMP/M.M.2300 – *YLE/TDF/DIGITA/JV*, recital 27.
30. Case COMP/M.1439 – *Telia/Telenor*, recital 131.
31. Case M.856 – *British Telecom/MCI (II)*, recitals 64 and 65; IV/35.830 – *Unisource*, recital 50; IV/35.738 – *Uniworld*, recital 44; COMP/M.2803 – *Telia/Sonera*, recital 113; M.1069 – *WorldCom/MCI (II)*; recitals 91, 117; COMP/M.1741 – *MCI Worldcom/Sprint*, recitals 91 and 119; COMP/M.2300 – *YLE/TDF/DIGITA/JV*, recital 37; M.1439 – *Telia/Telenor*, recital 169; COMP/38.784 – *Telefónica*, recitals 224 and 234.
32. Case M.856 – *British Telecom/MCI (II)*, recital 61; COMP/M.2803 – *Telia/Sonera*, recital 90; *AOL/Time Warner*, recital 60; COMP/M.1741 – *MCI WorldCom/Sprint*; recitals 147-151; *Telia/Telenor*, recital 136.
33. Case COMP/37.451 – *Deutsche Telekom AG*, recitals 65, 83; COMP/M.1439 – *Telia/Telenor*, recital 130; M.2903 – *DaimlerChrysler/Deutsche Telekom/JV*, recital 58; COMP/39.523 – *Slovak Telekom*, recital 279.

- onal or international network;³⁴ i.e. a regional or pan-European network,³⁵ and the ability to control the conclusions of network sharing agreements.³⁶
- Group membership allowing for privileged access to commercial and technical know-how, capital, synergies;³⁷ or membership of a strong alliance.³⁸
 - Larger financial strength attributable to presence on multi markets,³⁹ higher margins on products and services or ability to internalise costs due to ownership of networks;⁴⁰ membership of an alliance;⁴¹ larger customer portfolio;⁴² economies of scale and scope, network effects⁴³ and problems of securing a sufficiently large customer base in a mature market.⁴⁴
 - Further, the following has been singled out: a) transparency in the market;⁴⁵ b) larger product portfolio⁴⁶ or consumer demand for bundles (triple play);⁴⁷ c) mature and well established brands;⁴⁸ d) lack of potential com-

34. Case COMP/37.451 – *Deutsche Telekom AG*, recital 97; COMP/M.2016 – France Telecom/Orange, *recital 32*.
35. Case COMP/M.1439 – *Telia/Telenor*, recital 160; M.1795 – *Vodafone Airtouch/Mannesmann*, recitals 36-48; JV.48 – *Vodafone/Vivendi/Cana Plus*, recital 80; and COMP/M.2016 – France Telecom/Orange, *recitals 36-41*.
36. COMP/M.5650 – *T-Mobile/Orange*, recital 94-96.
37. Case COMP/38.233 – *Wanadoo*, recitals 223-246.
38. Case COMP/M.4035 – *Telefónica/O2*, recital 37.
39. Case COMP/38.233 – *Wanadoo*, recitals 247-252.
40. Case COMP/M.1439 – *Telia/Telenor*, recitals 13, 136, 157, 203, 207-208; IV/M856 – *British Telecom/MCI (II)*, recitals 35 and 62.
41. Case COMP/M.4035 – *Telefónica/O2*, recitals 39-40.
42. Case COMP/M.1795 – *Vodafone Airtouch/Mannesmann*, recital 47.
43. Case IV/M.856 – *British Telecom/MCI (II)*, recital 58; COMP/M.2803 – *Telia/Sonera*, recital 95; *WorldCom/MCI (II)*; recital 126; *AOL/Time Warner*, recital 82; JV.48 – *Vodafone/Vivendi/Canal Plus*, recital 71; *MCI WorldCom/Sprint*; recitals 136-138; COMP/38.784 – *Telefónica*, recitals 226 and 237; COMP/39.525 – *Telekomunikacja Polska*, recitals 656, 661 and 686-687; COMP/39.523 – *Slovak Telekom*, recital 332.
44. COMP/M.7499 – *Altice/PT Portugal*, recital 122.
45. Case IV/35.830 – *Unisource*, recital 43; IV/35.738 – *Uniworltd*, recitals 56-59.
46. Case M.2016 – France Telecom/Orange, *recital 32*.
47. COMP/M.7421 – *Orange/Jazztel*, recital 79.
48. Case M.2016 – France Telecom/Orange, *recital 32*; COMP/M.1439 – *Telia/Telenor*, recital 144; COMP/M.1741 – *MCI WorldCom/Sprint*, recital 198; COMP/38.784 – *Telefónica*, recitals 244 and 251.

3. Market power and the supply of electricity and telecom

petitors;⁴⁹ e) switching costs;⁵⁰ f) vertical integration;⁵¹ g) ability to charge higher prices;⁵² h) conglomerate effects;⁵³ i) fragmented buyer market and lack of buyer power;⁵⁴ j) geographical closeness;⁵⁵ and k) technology leaps.⁵⁶

In a number of cases, it has further been noted how the ability to exercise market power had a joint or oligopolistic nature,⁵⁷ or could be exercised by companies with limited market shares (<30%) without giving it a joint form.⁵⁸

3.3.2. Barriers and the supply of electricity

In respect to the delivery of electricity, the identification of single market power has, in addition to large market shares, been supported by one or more of the following observations:

49. Case COMP/M.2803 – *Telia/Sonera*, recitals 75-77; COMP/M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 367.
50. Case IV/M.856 – *British Telecom/MCI (II)*, recital 37.
51. See COMP/M.2300 – *YLE/TDF/DIGITA/JV*; recitals 30-34; *AOL/Time Warner*, recital 74; COMP/39.525 – *Telekomunikacja Polska*, recitals 678-683; COMP/39.523 – *Slovak Telekom*, recital 291.
52. Case COMP/M.1741 – *MCI WorldCom/Sprint*, recital 130.
53. Case COMP/M.2300 – *YLE/TDF/DIGITA/JV*, recital 27.
54. Case COMP/M.1741 – *MCI WorldCom/Sprint*, recital 170; COMP/39.525 – *Telekomunikacja Polska*, recitals 657, 662 and 691; COMP/M.6497 – *Hutchison 3G Austria/Orange Austria*, recitals 301-304; *COMP/M.7018 – Telefonica Deutschland/E-plus*, recitals 837, 858; 1259; COMP/M.6992 – *Hutchison 3G UK/Telefonica Ireland*, recitals 741-742; COMP/M.7499 – *Altice/PT Portugal*, recitals 123 and 134; and COMP/39.523 – *Slovak Telekom*, recital 289.
55. See e.g. case COMP/M.1439 – *Telia/Telenor*, recitals 146-154, 159 and 180-181.
56. See e.g. *Guidelines on the application of EEC competition rules in the telecommunications sector*, recital 81. However, this is not a case but a notice from the Commission.
57. Case IV/1027 – *Deutsche Telekom/Beta Research*, recital 44; IV/993 – *Bertelsmann/Kirch/Premiere*, recital 118; COMP/M.1430 – *Vodafone/Airtouch*, recital 28; COMP/M.2016 – *France Telecom/Orange*, recital 28, COMP/M.6992 – *Hutchison 3G UK/Telefonica Ireland*, recitals 178 and 582; *COMP/M.7018 – Telefonica Deutschland/E-plus*, recital 777.
58. See e.g. COMP/M.6497 – *Hutchison 3G Austria/Orange Austria*, recital 135; COMP/M.7018 – *Telefonica Deutschland/E-plus*, recital 207; COMP/M.7421 – *Orange /Jazztel*, recitals 188 and 194.

- Problems of gaining market access, or expanding generation capacity, due to exclusive rights;⁵⁹ lack of national regulation on shared use of the transmission network,⁶⁰ or the construction of new generators.⁶¹
- Insufficient transmission capacities on interconnectors;⁶² capital-intensive investments, often with a sunk nature;⁶³ long-term exclusive supply agreements and/or retaliatory threats;⁶⁴ or lack of market size;⁶⁵ or liquidity.⁶⁶
- Privileged control of the transmissions network;⁶⁷ generation capacity;⁶⁸ the delivery of⁶⁹ or storage of gas;⁷⁰ balancing power;⁷¹ or other regulatory limitations or favours.⁷²
- Further, has the following been singled out: a) control of a complementary portfolio of generation forms (e.g. water, nuclear, coal, gas, bio and oil);⁷³ b) conglomerate effects/ability to offer combined gas and electrici-

59. Case COMP/M.1853 – *EDF/EnBW*, recital 35; COMP/39.351 – *Swedish Interconnectors*, recital 25.

60. Case COMP/M.1673 – *VEBA/VIAG*, recitals 120-125; COMP/M.1853 – *EDF/EnBW*, recital 40; COMP/M.3440 – *ENI/EDP/GDP*, recital 382; COMP/M.4180 – *Gaz de France/Suez*, recitals 881, 915 and 927.

61. COMP/M.4180 – *Gaz de France/Suez*, recital 878.

62. Case COMP/M.2684 – *EnBW/EDF/Cajastur/Hidrocantabrico*, recitals 29 and 32; COMP/M.1673 – *VEBA/VIAG*, recitals 113-114; COMP/M.3440 – *ENI/EDP/GDP*, recitals 79, 284, 390; COMP/M.2434 – *Grupo Villar Mir/EnBW/Hidroeléctrica del Cantabrico*, recital 41.

63. Case COMP/M.1853 – *EnBW/EDF/Cajastur/Hidrocantabrico*, recital 32; COMP/M.1673 – *VEBA/VIAG*, recitals 110-114; COMP/M.3440 – *ENI/EDP/GDP*, recital 465; COMP/M.2434 – *Grupo Villar Mir/EnBW/Hidroeléctrica del Cantabrico*, recital 41.

64. Case COMP/M.1853 – *EDF/EnBW*, recitals 34, 36 and 51.

65. COMP/M.5911 – *Tennet/Elia/Gasunie/APX-Endex*, recital 67.

66. COMP/M.4180 – *Gaz de France/Suez*, recital 878(g).

67. Case COMP/M.1673 – *VEBA/VIAG*, recitals 59, 105-109.

68. Case COMP/M.1673 – *VEBA/VIAG*, recitals 97-104; *Grupo Villar Mir/EnBW/Hidroeléctrica del Cantabrico*, recitals 38-39.

69. COMP/M.3440 – *ENI/EDP/GDP*, recitals 380 and 405.

70. Case COMP/M.3440 – *ENI/EDP/GDP*, recital 403; and COMP/M.3696 – *E.On/MOL*, recitals 698-700.

71. Case COMP/M.2947 – *Verbund/Energie Allianz*, recital 119.

72. Case *ENI/EDP/GDP*, recitals 100 ff and 294-298; COMP/39.386 – *Long-term contracts France*, recital 26; COMP/M.5911 – *Tennet/Elia/Gasunie/APX-Endex*, recital 67.

73. Case COMP/M.931 – *Nestle/IVO*, recitals 38-40; COMP/M.3440 – *ENI/EDP/GDP*, recital 292; COMP/M.2434 – *Grupo Villar Mir/EnBW/Hidroeléctrica del Cantabrico*, recitals 41 and 48; AT.39.727 – *CEZ*, recital 14; COMP/39.386 – *Long-term contracts France*, recital 26; COMP/M.5224 – *EDF/British Energy*, recital 29.

3. Market power and the supply of electricity and telecom

city (dual offers);⁷⁴ c) vertical integration;⁷⁵ d) unique market position as pan-European supplier⁷⁶ or a superior (geographical) location of generations plants;⁷⁷ e) higher efficiencies/lower costs;⁷⁸ f) lack of potential competitors;⁷⁹ g) ability to dictate the marginal prices for electricity;⁸⁰ h) customer loyalty;⁸¹ i) consumer demand for “green” electricity;⁸² and j) privileged insight into the competitors’ productions cost.⁸³

In a number of cases it has further been noted that the ability to exercise market power had a joint or oligopolistic nature,⁸⁴ or could be exercised by

74. Case COMP/M.1853 – *EDF/EnBW*, recital 41 (wholesale electricity and balancing power); COMP/M.3696 – *E.On/MOL*, recitals 699 and 719 (gas and electricity); COMP/M.4180 – *Gaz de France/Suez*, recitals 827, 861-866 (gas and electricity).
75. Case COMP/M.1853 – *EDF/EnBW*, recital 48; COMP/M.1673 – *VEBA/VIAG*, recitals 115-119; case COMP/M.3440 – *ENI/EDP/GDP*, recitals 299, 366 and 368; AT.39.727 – *CEZ*, recital 14; COMP/39.386 – *Long-term contracts France*, recital 26; COMP/M.5224 – *EDF/British Energy*, recital 40.
76. Case COMP/M.1853 – *EDF/EnBW*, recitals 85-89; COMP/M.4110 – *E.ON/Endesa*, recital 31; and COMP/M.3696 – *E.On/MOL*, recital 570.
77. Case COMP/M.3440 – *ENI/EDP/GDP*, recitals 302 and 467.
78. Case COMP/M.3440 – *ENI/EDP/GDP*, recital 304; COMP/M.2947 – *Verbund/Energie Allianz*, recital 117.
79. Case COMP/M.2684 – *EnBW/EDF/Cajastur/Hidrocantabrico*, recital 37; COMP/M.2434 – *Grupo Villar Mir/EnBW/Hidroeléctrica del Cantabrico*, recital 48; COMP/M.3440 – *ENI/EDP/GDP*, recitals 318 and 325.
80. Case COMP/M.2434 – *Grupo Villar Mir/EnBW/Hidroeléctrica del Cantabrico*, recital 38
81. Case COMP/M.1606 – *EDF/Sourth western electricity*, recital 19.
82. Case COMP/M.2947 – *Verbund/Energie Allianz*, recital 117.
83. Case COMP/M.5978 – *GDF Suez/International Power*, recital 81; COMP/M.4180 – *Gaz de France/Suez*, recital 855.
84. See e.g. COMP/M.2684 – *EnBW/EDF/Cajastur/Hidrocantabrico*, recitals 33 and 42; COMP/M.1673 – *VEBA/VIAG*, recitals 60-90; COMP/M.3440 – *ENI/EDP/GDP*, recital 321; COMP/M.3868 – *DONG/Elsam/Energi E2*, recitals 622-629; COMP/M.5467 – *RWE/Essent*, recitals 237-265; case C-393/92 – *ALMELO*, ECR 1994, p. II, 1477; COMP/39.388 – *German electricity wholesale market*, recitals 13-24; and *Small mines*, XX Report on Competition Policy (1990), recital 145, and XXI Report on Competition Policy (1991), recital 107.

companies with limited, but unspecified, market shares,⁸⁵ without giving it a joint form.⁸⁶

3.3.3. *The barriers might not be that unknown*

Across cases and two sectors, it is possible to identify a large number of competitive advantages, disadvantages, and barriers. The bulk of these are taken from concentrations, where the Commission enjoys a wider discretion in identifying impediments to competition compared to Article 102 cases. However, that shouldn't shadow for the embedded link between merger analysis and the concept of *dominance* under Article 102. It would therefore be plausible to accept that most of the identified barriers could be used as part of a dominance analysis under Article 102. Not even the identification of joint market power is potential troublesome as Article 102 also covers joint dominance. Consequently, despite the massive barriers for competition in electricity and telecommunications, there are no clear indications that these should render competition law unqualified for a more active role.

4. Competition law contributing to the market opening

Despite the concerns indicating not only an enhanced ability to exercise market power beyond normal incumbent advantages, but also a more persistent nature of these, it should be obvious that there is a lack of clear reasons to rebut a role for competition law per se. Even prior to the EU liberalisation process, most of the generic competition problems, identified in section 2.2 above, have a competition law counterpart potentially covering the same concepts. The same can be held for the competitive advantages, disadvantages, and barriers identified in actual cases in section 3.3, potentially utilisable as part of the dominance analysis under Article 102. Regardless, it has been accepted with little or no questioning that there would be no, or only a limited, role for competition law in governing the supply of electricity and tele-

85. COMP/39.388 – *German electricity wholesale market*, recital 13; COMP/M.5224 – *EDF/British Energy*, recital 24; COMP/M.5549 – *EDF/Segebel*, recitals 61 and 82. In *The economic impact of enforcement of competition policies on the functioning of EU energy markets*, EU Commission 2016, p. 19, the Commission advances a market share of 20% as troublesome when it comes to generation of electricity.

86. In COMP/39.388 – *German electricity wholesale market*, recital 13, it was advanced that more than one company might be single dominant within the same market.

4. Competition law contributing to the market opening

communications services.⁸⁷ Contemplating this further, including whether a wider role for competition law could and henceforth should be accepted, can essentially be narrowed down to whether:

- a. The concept of *dominance* under Article 102 can contain market power void of high market shares, but instead routed in massive competition barriers and/or of joint nature. Further, the concept must also be able to handle abuse that covers multimarket, are vertically linked or has a periodic nature.
- b. The concept of *abuse* under Article 102 can handle *excessive prices*, *predatory pricing*, *cross-subsidisation*, *margin squeeze*, *single banding* (tying, exclusive agreement and loyalty discounts), *discrimination* and *refusals to supply*. Further, this must be done within the unique economic environment presumed to be present in both sectors entailing different forms of economies of scale and scope, network effects and a highly asymmetric allocation of market shares from the onset.
- c. Part of the liberalisation obligation could have been advanced against Article 106(1) and, if Article 106(2) would have limited the scope of other provisions, in particular Article 102.

Further, this should be done in a convincing manner, not only to confine the incentive to exercise market power, but also to secure a stable and clear regulatory frame prone for long-term investments. Without the latter, undertakings might be unwilling to make investments, inducing member states to intervene with instruments potentially legitimised under Article 102(2). Hence, an ill-conceived attempt by EU to force a liberalisation process based solely on competition law could easily backfire, entrenching the use of special and exclusive rights and thwarting the whole process.

A central element in understanding the shortcomings of competition law in general and in respect to the application to the delivery of electricity and telecommunications is the risk of mistakes. Not only a failure to act against

87. However, the Commission has in SEC 2007 1483 – *Explanatory note to Commission Recommendation on Relevant Product and Service Markets*, pp. 10-11, listed four shortcomings in competition law meriting sector regulation: a) the necessary regulatory obligation could not be imposed, e.g. access obligations or specific cost accounting requirements); b) the required intervention is extensive, e.g. the need for detailed accounting for regulatory purposes, assessment of costs, monitoring of terms and conditions including technical parameters; c) frequent and/or timely intervention is indispensable; or d) certainty is of paramount concern, e.g. multi-period price control obligations.

anti-competitive behaviour but also intervention against competition neutral or beneficial behaviour. Conceptually, two concepts can therefore be used:

- *Type I-errors*, where competition law condemns genuine pro-competitive or neutral behaviour not detrimental to the consumer welfare. This is a *false positive decision*, or in layman’s terms “convicting the innocent”.
- *Type II-errors*, where competition law fails to condemn anti-competitive behaviour detrimental to the consumer welfare. This is a *false negative decision*, or in layman’s terms “acquitting the guilty”.

While all errors create losses, the welfare loss of Type I-errors is probably greater when dealing with exclusionary conduct. Only the excluded company is hurt by a Type II-error, while the dominant undertaking following a Type I-error most likely would feel compelled to loosen competition with associated welfare losses.⁸⁸ The negative effects of Type I-errors might also be amplified by the presence of strong private litigation and follow on claims. Consequently, not only actual Type I- and II-errors amount to a restriction for a wider role for competition law in the regulation of the delivery of electricity and telecommunications services, but an increased risk of this could in itself be held as a restriction.

Conceptually, the analysis of embedded shortcomings within competition law can therefore entail considering their ability to:

- a. Contain market power and anti-competitive behaviour in a manner providing for credible and preferable deterrent sanctions against any attempts. However, this requires that the most plausible market power manifestations could be considered abusive under competition law if not eliminating, at least reducing, the risk of Type II-errors. A perception normally rebutted.
- b. Supplement and support adopted sector regulation (and reverse) for the purpose of reducing the risk of mistakes. While also requiring ability to cover the most plausible market power manifestations, the ability to resort to sector regulation in case of Type II-errors might make it less critical if

88. For further on costs related to unclear legal standards and errors, see e.g. Massimo Motta, *Competition Policy, Theory and Practice*, Cambridge, 2004, p. 412; David S. Evans and Jorge Padilla, *Designing antitrust rules for assessing unilateral practices: a neo-Chicago approach*, August, 2005; and Frank H. Easterbrook, *The Limits of Antitrust*, 63 Texas L. Rev. 1 (1984).

4. Competition law contributing to the market opening

there would be lacunas, allowing competition law to offer a meaningful contribution regardless of embedded shortcomings.

- c. Replace sector regulation. Provided it is found plausible that competition law can contain and hence confine most manifestations of market power, it could be contemplated whether they could have replaced sector regulation.
- d. Could have a counter-productive effect, which covers that while no mistakes, as defined, emerge, other elements make the outcome problematic, e.g. inability to handle the special conditions of the two sectors, including the need for a stable regulatory environment, or in an EU context, a single integrated market. Further, unclear legal standards and enhanced fear of Type I-errors could prevent the adoption and pro-competitive agreements.

There is an internal link between the different abilities. If it is accepted that competition law could hardly handle the most plausible manifestations of market power related to the delivery of electricity and telecommunications services, any thought of replacing sector regulation could be ruled out.