Technological Convergence and Competition on the Edge - „Emerging Markets“ and Their Regulation

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Technological convergence, on the one hand, tends to point out new roles - and sometimes also markets - for the players in the communications industry, producing the segmentation of different functions and phases in the value chain. On the other hand, technological convergence could bring forth numerous specific antitrust issues, such as an increase in the market power of the suppliers of more appealing services or contents, or a premature foreclosure of the new market due to leveraging of the power maintained by a company in another market.

A topic of particular interest, till now quite neglected by legal doctrine, is that of the regulation of „emerging markets“ for innovation processes, especially technological convergence, i.e. those markets which are just emerging are not likely to satisfy (at least for the moment) the three criteria provided by the 2003 EU Recommendation on relevant markets.

This paper, analysing both „hard law“ and „soft law“ provisions, tries to isolate some (initial) criteria for the decision of whether or not to intervene in a new emerging market with a regulation (be it a regulatory action ad hoc, or eventually the application of the antitrust law in force).

1. The Era of Multimedia Communications - New Socio-Economic Dynamics and Legal Questions on Competition.

Communication networks and information systems are determining factors of social and economic development. Networks, computers and electronic devices are tools in our daily life, which are as common and essential as running water or electricity; so much so, that we can increasingly define the present as the „age of multimedia communication“. The diffusion of binary numerical language as a means for the dissemination of information, and therefore of digital technology and the transmission of the same, commenced the process - still ongoing and ever increasing - of the so-called „convergence“ among the sectors of information technology, telecommunications and broadcasting.

This phenomenon makes services or contents historically connected to different environments homogeneous, and thereby deliverable on the same channels: those of telephony, broadcasting and information technology. Digital technologies make it possible to transform moving images, texts or sounds in bits, and make them immediately usable by all media currently existing on the market; this, in a substantially independent way from the technology by which they are realised, with the only limit being the capacity of the individual means of transmission.

Those tools make it possible for an increasing number of people worldwide, through the use of common information technology, telecommunications or broadcasting infrastructures, to receive
services and applications of information and/or communication in an even more advanced, multimedial and interactive way (therefore characterising the „neutrality“ of the means in respect to the delivered content). We already have the ability, for instance, to accomplish many of the basic functions of daily life electronically; in this sense, we should consider how they are continuing to spread even more. And with respect to the implementation, we should consider not only the essential communicative tools of today such as e-mail and sms (or mms), but also innovative ways of socio-economic interaction concerning the relationships between citizens and the public administration, such as e-government, e-banking, health-on-line, etc.\(^5\)

On the one hand, as a consequence of the phenomenon of technological convergence with regard to the „consumer/user“, significant interoperability exists among media, together with a greater interactivity between users and communication devices. On the other hand, the same phenomenon implies radical consequences for companies involved in this new development process, a redefining of their business models and, consequently, functional profiles.\(^6\) The modifications in the strategies of companies deriving from the technological innovations touched on above, and especially the extension by these companies of their functioning perimeter in sectors near to that in which they began their business, concern the production, the company’s organisation,\(^7\) but also, from the point of view of the result from the productive process, the ways in which the outputs are perceived by end consumers.\(^8\)

Nevertheless, the process of convergence among broadcasting, telecommunications and IT, even if simplified by technological innovation, is made more complex by various factors. These include the nature of the market asset of the communications industry in general, the organisation of the three traditional „macro-segments“ that form the whole, the different regulatory approaches usually in force inside the same, and also solid „cultural“ barriers.\(^9\) In particular, considering the systemic structure of the industry and its present network economics,\(^10\) the options related to new investments and product innovation have to take into account the previous history of the network, of the choices made in the past whose effects are still present, and also all the physical and immaterial accumulated assets.\(^11\) Moreover, other factors of relevant importance are the existence of legal and/or regulatory restrictions concerning the different market segments, as well as the problems of compatibility and standardisation, which influence the options and restrict the sphere of the possibilities for development.

The result of such a complex root when managing to go beyond the above-mentioned „barriers to development“ consists in the definition of new borders inside the value chain of the communications industry, with the entry of new operators into the markets concerned and consequent new balances and positions on the specific value chain of different sectors. Before the advent of digitisation, different communication services formed distinct chains of components that limited the perception of various genres of data and contents to specific distribution networks and terminals. In many cases, in particular for the sectors of telephony, telegraphy and also broadcasting, the supplier/operator was vertically integrated along the whole value chain. However, even when the same company was not vertically integrated along the value chain, a vertical structure was maintained by technological barriers which impeded the transfer of information in a simple way from one means of communication to another.\(^12\)

Nowadays, the result of the process of convergence of both networks and the contents delivered through them has transformed the previous vertical division of the above-mentioned sectors into a whole market asset. This asset is related in general to digital media, composed of various horizontal operative segments within which, from the user’s point of view, ultimately services of telecommunications, broadcasting and IT applications - all continuously evolving - are offered through
different devices: mobile phones, televisions, personal computers and so on. Moreover, the development of convergence among media exerts a strong, “expansive” pressure of the market towards a fragmentation of the operators, with a related “exaltation” of their single- and tendentially different-roles and performances. In a context where digital contents can be delivered through any network capable of the digital transmission of data, in general there are mainly two fundamental “macro-categories” of players that cooperate, and at the same time compete, to offer them: access suppliers on the one hand, and content suppliers on the other. In such categories it is (usually) possible to distinguish the subjects managing delivery infrastructures from those dealing with programs, the carriers from packagers, etc.

As a consequence of such a process, the quality and the efficiency of digital transmissions depend essentially on the capacity of networks and on the characteristics of the receiving device, while the typology of the contents and the ways in which they are generated are indifferent. Consequently, through the new technologies it is possible to transmit multimedia data to any device which has the necessary attributes for the reception and processing of the data, e.g. a personal computer, a television, a mobile phone, an MP3 player, or another of the even more numerous devices either currently in existence or on the way.

The above-mentioned factors have so far determined relevant effects in the entertainment industry. In particular, convergence impacts the structure of the market because of the tendency of both traditional broadcasters and operators of the sectors of telecommunications and IT to develop and offer means of broadband interactive communication permitting the simultaneous access to a huge quantity of services, video programming channels, telephony and access to the network; on the other hand, convergence also acts on the typologies of contents offered. As a result, the markets of information services and those of programmes and contents tend even more to connect in a single - but segmented - new market of interactive contents. Therefore, the construction of a real, new value chain in the communications industry is conceivable, with a possible - or even better in a pro-competitive view, desirable - increase in the number and specialisation of the players operating in it.


Regarding the innovation mentioned thus far, it must be emphasised how the behaviour of companies and the welfare of consumers are strongly influenced not only by the evolution of technology but also by the institutional framework, and in particular by the choices concerning the regulation of markets. Already, the process of liberalisation and opening of the global telecommunications market have so far produced “flowing” benefits for all the subjects involved: both for consumers, who have enjoyed continually falling prices and better services, but also, on a larger scale, for the operators of industry, which have uncovered new fields of activity.

Technological convergence produces, in particular, two orders of relevant consequences. On the one hand, it tends to point out new roles, and sometimes markets, for the players in the communications industry, producing the segmentation of different functions and phases of the value chain and the related diffusion of subjects “specialised” in every compartment, with a linked distinction of roles, mainly among network operators, service providers and content suppliers. Moreover, a more efficient exploitation of networks brings (physiologically) an increase in opportunities to offer transmission
capacity to content or service providers, with the possibility for the different digital platforms to transmit the same content. Such a phenomenon could determine a growth of the market power of the suppliers of more appealing contents.\textsuperscript{16}

On the other hand, convergence will be able to contribute to the development of distributing platforms which strengthen their relevance on the market, expanding the range of services and/or contents which are available to the end user.\textsuperscript{17} Technological evolution, in fact, makes it possible for players on the market to develop more functions contemporarily and to operate in various markets, with a view to satisfying the different needs of users. A particularly current example of such an evolution is that of an even greater diffusion of the so-called media companies, which are firms that adopt a business model essentially based on the distribution of contents through different transmitting platforms.

In similar cases, public institutions, which are responsible for ruling and/or controlling that the process of convergence ensures a higher level of competition in the affected markets, should function so as to ensure that the „fruits“ thereof produce a workable competition among platforms. Clearly, the advantages produced by digital convergence will be so much more relevant if the possibility to benefit from greater opportunities in terms of distributive systems and transmissive capacity will be ensured to different network operators and content or service providers. In this regard, the conditions of access to networks applied by operators or - especially in the cases of a great concentration in distributive means - determined by regulation seem of primary importance in order to reach that objective.

From the point of view of regulation, the process of convergence implies the analysis of a series of fundamental issues, among which, in particular, are: (a) the regulation - and the related management - concerning the authorisations needed by the different players to operate in the various segments of the communications market, avoiding an exercise of activities not adequately regulated, which could create undue barriers to competition; (b) the prevention of anti-competitive behaviour impeding operators from exploiting the opportunities offered by convergence among the different industrial segments based on information and communication technologies, for instance through the use of barriers to access by competitors in order to defend or extend the power held in a certain market (even to a contiguous market); (c) the adoption of standards which allow the greater interoperability and integration between network infrastructures and services, in order to permit a free delivery of contents through different networks; (d) and with regards to the broadcasting sector, the prevention of excessive concentrations of media, to avoid affecting pluralism.\textsuperscript{18}

In order to allow technological convergence to be assisted by an adequate „regulatory convergence“, the authorities should adopt an approach, on the one hand, founded on neutrality among different existing technologies, and on the other, aimed at favouring the development of the most competitive asset of the market, based on the openness and the access to networks, and on the equality of opportunities among the various operators of the new value chain.

On the basis of the afore-mentioned considerations, it appears evident that convergence could have a relevant impact not only with respect to the new opportunities offered to consumers/users, but also on the grounds of the formation of market power by any company: this, evidently, makes the role of the authorities\textsuperscript{19} regulating the sector very tricky. In fact, an effective convergence - characterised by a high level of substitution among networks and services - can enlarge the relevant market, thereby decreasing the market power that an operator would hold considering a narrower context. On the contrary, convergence, by allowing the operator to expand its business model over the borders within which it has been traditionally circumscribed could enable the subjects which have reached positions of strength
in a certain market to extend into another - possibly new - contiguous (and converging) market. Where instead, among networks and services, those reputed to be convergent face difficult conditions of substitution both on the side of supply and demand, it shall be excluded that the market power of a player could be compromised, or in any way conditioned, by the competition of different convergent services or platforms.

Moreover, the flow of data and information digitised and delivered in ways that are increasingly „multi-platform“ and „multi-channel“, as a consequence of the cited technological innovations, can produce a possible increase of security threats to such data, and so, in the end, to the individual’s privacy right. Should this happen, there could be a reduction of the inclination of potential users to utilise new means of electronic communication.20

With the development of digital media, the value chain evolves towards forms of specification more complex - with regard to the supply of content and programs, to the methods of transmission and delivery - in comparison to those which have characterised analogue contents till now. This phenomenon creates a new fundamental uncertainty - and at the same time new opportunities for consumers and companies - in respect to which there could be the options of integration, and as a consequence the operational connections for competition, or of cooperation among the „economic actors“ present in the „scenery“ of networks and the players active in contents.


A „healthy“ evolution from a technological perspective evidently requires a regulatory context, technologically neutral, with rules of access to the market as homogeneous as possible for the different digital platforms. This is the approach adopted at the EU level with the so-called „package“ of directives enacted in 2002 named, respectively, directive „framework“, „access“, „authorisation“, „universal service“, and „directive related to private life and electronic communications“21 - which have substituted the directives of harmonisation adopted beginning in the early nineties and have outlined a new regulatory framework for the sector, dealing with the issues raised by technological convergence and thereby including into the same discipline all communication networks and services.

The „package“ of 2002, which starts from the understanding that the convergence of telecommunications, broadcasting and IT implies the need to provide the same framework for all the communication networks and services, has the aim to overtake any distinction among the uses to which the different categories of networks and services are destined, in order to include them in the new liberalised discipline.22 The main characteristic of the new EU framework of the sector introduced by the 2002 directives, which extend antitrust principles and concepts23 to the action of National Regulatory Authorities, consists in the adoption of the appearance of a regulation that could be defined as „moving“ towards antitrust law.

A fundamental new element introduced by the regulatory framework, outlined by the Commission in relation to the process of definition and evaluation of the level of competition of markets and of the positions of operators in them, is the alignment of the definition of „significant market power“ (SMP) to that used by the European Court of Justice for the notion of dominant position ex Art. 82 EC Treaty. So it is presumed that a company has a significant market power when it, individually or jointly with others, enjoys a market power equivalent to a dominant position according to antitrust law, that is,
a position of economic strength which allows it to act in a way significantly independent from competitors, clients and, in the end, consumers.

More specifically, in 2003 the Commission adopted - as envisaged in the „framework“ directive - a recommendation regarding the definition of relevant markets of the electronic communications sector. In the document, the Commission pointed out the markets of products and services in the sector of electronic communications, whose characteristics are such to justify the imposition of regulatory remedies established by particular directives. The analysis is based on the examination of whether: (a) there are non-transitory barriers to the access; (b) a natural evolution of the market towards competitive forms is not foreseeable in an adequate period; and (c) antitrust law does not allow a remedy to the identified deficiencies (so-called „triple test“). In the same direction, the Commission also enacted guidelines containing a synthesis of its trends with respect to the interpretation of the concept of significant market power in the electronic communications industry, which the NRAs must take into full consideration in their market analyses.

At the end of June 2006, the European Commission began a public hearing concerning the strategic alternatives for the update of the regulatory framework of electronic communications introduced with the above-mentioned „package“ of the 2002 directives. The initiative is known as „Review 2006“.

First of all, in its relation concerning the functioning of the existing framework, the Commission has signalled the significant progress reached from 2002 until now in opening national communication markets to competition, and has proposed, therefore, to gradually abolish the ex ante regulation in at least six of the 18 market segments singled out by the Recommendation on relevant markets of 2003, including those of national and international calls. Moreover, the proposal - which is based on two fundamental principles: (1) „technological neutrality“, that is, the freedom to use any technology or standard on the basis of common conditions, and (2) „service neutrality“, i.e. the freedom of operators to supply any type of electronic communication service - provides the passage to a more market-oriented EU strategy for the assignment of radio frequencies.

In particular, within the project of a new Recommendation on relevant markets, the Commission evaluates the possibility to reduce the current list of 18 specific segments of the market of electronic communications for which an ex ante regulation is justified. According to the Commission, as a consequence of such regulation, in recent years most of the Member States have registered the diffusion of a strong competition in the supply of services of national and international calls. In these markets, according to the project presented, it would be possible to proceed towards a progressive abrogation of regulation. Moreover, in the documents published by the Commission, those interested are requested to express their view about the possibility to exclude two other markets from the list of those for which the same regulation is justified. These are the market of access and call origination on public mobile telephone networks and that of broadcasting transmission services.

The condition of competition in general is again too precarious, however, to justify the abrogation of specific sector regulation in other wholesale markets, such as for instance the broadband market. The incumbents continue to control the „bottleneck“ infrastructural elements and newcomers depend again on access to such infrastructures in order to be able to compete. In such cases, the Commission proposes to make regulation more flexible and efficient in order to simplify the procedural steps. In particular, according to the Commission, for many retail markets the existing wholesale agreements already ensure sufficient competition in order to guarantee convenient prices to consumers. This situation has been underlined in the market analyses of various NRAs. Competition at the retail level -
which the published documents specify - should increase again when the wholesale remedies till now adopted by the national regulators have been entirely applied and have produced their effects.

More specifically, the retail markets which the Commission considers mature enough for the abrogation of *ex ante* regulation are those related to publicly available local, national and international telephone services provided at a fixed location for residential customers (markets Nos. 3 and 4), publicly available local, national and international telephone services provided at a fixed location for non-residential customers (markets Nos. 5 and 6), and to the minimum set of leased lines (market No. 7). Moreover, provision is made for the merging of the markets of access to the public telephone network at a fixed location for residential customers (market No. 1) and of access to the public telephone network at a fixed location for non-residential customers (market No. 2). In such a way, the markets for which *ex ante* regulation is justified would be reduced from the current 18 to 12.

In the public hearing, the Commission also asked if other markets - those of access and call origination on public mobile telephone networks (market No. 15) and of broadcasting transmission services (market No. 18) - should be excluded from those included in the Recommendation. Concerning the market of broadcasting, the draft of new Recommendation on relevant markets first of all underlines that broadcasting is subjected, according to national legal systems, to different forms of particular regulation not strictly linked to the market power of companies: the central role played by the protection of the principle of pluralism appears evident in such a sense. The characteristics of any of the Commission notices diverge significantly among the different Member States. Therefore, it is difficult to evaluate on an EU basis the effective dynamics behind those notices which appear as barriers to entry into it. In general, while the dynamics related to satellite or cable transmissions result mainly in effective competition, in most Member States the situation is different concerning terrestrial broadcasting transmissions. The Commission therefore affirms that the result of competition law *ex se* seems likely to not be fully efficient in this particular instance as the exclusive use of such a tool could not impose and readily monitor the adequate measures. Thus, in the documents it was preferred to leave „open“ the option of whether the broadcasting market would be included at all - or only partially - into the new Recommendation on relevant markets. The Commission opts at the moment for the inclusion of the market into the Recommendation; this with the specification that - given the limited number of notifications related to this market received till now (because the analysis of many NRAs is still ongoing) and the complexity of the issues arising therefrom - the Commission intends to verify the answers which will come from the public hearing launched regarding the documents presented.

Moreover, concerning the so-called „emerging markets“ - i.e. those which due to their position are not susceptible to satisfying (at least for the moment) the three criteria provided for by the 2003 Recommendation on relevant markets - the draft of the new Recommendation presented by the Commission re-proposes the approach already contemplated in 2003, implemented in the document adopted in 2004 and reviewed in 2006 by the European Regulators Group on the so-called remedies, the measures potentially imposed by NRAs in the outcome of the market analysis: an approach substantially based on the absence of regulatory actions, until the new market has developed to the point of being able (hypothetically) to satisfy the three general criteria already provided in the 2003 Recommendation.

Lastly, having acknowledged the necessity of a major harmonisation in the application of remedies by National Regulatory Authorities (NRAs), the Commission proposed to extend its „veto power“,
provided by the actual framework directive in relation to the market analyses, including the remedies those NRAs intend to adopt in the outcome of such analyses.  

The reform proposals presented by the Commission were subjected to public consultation till the end of October 2006. On the basis of the contributions received, the Commission intends to propose legislative measures to the European Parliament and the Council and to publish the new Recommendation by autumn 2007. According to the objectives issued by the Commission, in the end national legal systems should comply with the new rules by 2010.


An issue of particular interest till now quite neglected by the doctrine is that of the regulation of „emerging markets“ for innovation processes, especially from technological convergence. Competition and innovation, as is known, are highly interconnected phenomena. From this point of view, the competitive dynamic has been authoritatively defined as a process of „creative destruction“. The innovation process is capable of creating positions of considerable market power, at the moment in which a new product succeeds in being perceived as innovative, for instance conquering an already existing market or, hypothetically, also creating one ex novo. On the other hand, if the competitive dynamic develops correctly, or is adequately protected, the aforesaid market power will only be temporary: a successful product - in a competitive environment based solely on innovation - is in any case destined to find a competitive product which will be preferred by consumers sooner or later.

Moreover, in the communications industry, apart from the difficulties deriving from the network economics which characterise it, newcomers can also find themselves facing actions - legitimate or illegitimate - undertaken by the incumbent operators, aimed at delaying or dissuading their access to the market. The incumbents, in fact, can adopt anticompetitive behaviour: for instance, that of making their products incompatible with those of newcomers, or of spreading false news in relation to their or others’ products, or to the companies newcomers in the market. Thus, in a similar context, it is necessary to carefully observe impeding innovation and competition from other operators in order to avoid a situation where companies strengthen and maintain a significant market power especially through the control of access of actual or potential competitors, and of users, to the networks; in other words, to avoid the aforementioned mechanism of „temporary dominance“ originating from technological innovation leading to a phenomenon of „persistent dominance“.

In general, in the different markets of today’s communications industry, when phenomena of convergence determined by technological progress have created new economic opportunities - regarding both the introduction of innovative products and the possible synergies and economies associated with the bundled offering of services - there is an increasing tendency of operators towards the expansion of their playing fields. This, for the most part, is the result of a natural process of the adequacy of companies’ strategies with respect to the new economic (and in some cases regulatory) context, often favouring a positive evolution of the interesting markets towards more dynamic and efficient assets. However, the phenomenon highlights the relevance of the role - and the connected responsibilities - of the public authorities established to protect or to promote competition in guaranteeing, on the one hand, that the regulatory framework in force, and its application, do not compromise the development of new products and services, or hypothetically of new markets; on the
other, that the market power acquired by some companies is not exploited by them in order to impede or compromise the competitive dynamics of existing markets, or to address non-competitive assets in new "emerging markets".\footnote{41}

In particular, barriers to entry into the market within the context of emerging markets from the process of technological convergence can be fundamentally of two types: (a) barriers in upstream markets, with regard to the availability of the network of access or of a transmissive platform necessary for supplying the service; (b) barriers related to the availability of contents (or *lato sensu* data) to be distributed through the service.\footnote{42} The barriers in upstream markets are constituted, to a large extent, from the existence of obstacles to the access to one of the transmissive platforms necessary for the supply of new services. In this situation, evidently, the presence of subjects’ "gate-keepers" in the market of access influences and conditions its development and the future dynamics of the rising markets. As a consequence, antitrust authorities examine with particular attention the foreclosing effects determined by the presence of dominant positions, or in any case of market power, in the market of access.

In the view proposed thus far, the matter of mergers, horizontal or vertical, realised by operators which already maintain a considerable market power in the market of the value chain related to the offer of new services and/or products plays a relevant role.\footnote{43} Regarding this topic, it has been pointed out how, in new economy sectors, where access to networks is essential in order to be able to provide a wide range of services, "gate-keeper effects can become a major concern. [...] Control over important communication infrastructures … could be used to leverage the parties’ positions into related markets".\footnote{44}

With reference to the theme of leveraging market power maintained by a company in another market linked to it, or in general derived from it (for instance as it uses the same networks and/or infrastructures), Art. 14(3) of the framework directive explicitly states:

> Where an undertaking has significant market power on a specific market, it may also be deemed to have significant market power on a closely related market, where the links between the two markets are such as to allow the market power held in one market to be leveraged into the other market, thereby strengthening the market power of the undertaking.\footnote{45}

Moreover, para. 84 of the Commission’s Guidelines on market analysis and the assessment of significant market power for electronic communications specifies how in practice, if an undertaking has been designated as having SMP on an upstream wholesale or access market, NRAs will normally be in a position to prevent any likely spill-over or leverage effects downstream into the retail or services markets by imposing on that undertaking any of the obligations provided for in the access Directive which may be appropriate to avoid such effects. Therefore, it is only where the imposition of *ex-ante* obligations on an undertaking which is dominant in the (access) upstream market would not result in effective competition on the (retail) downstream market that NRAs should examine whether Article 14(3) may apply.

In other words, the effects of pre-emption deriving from the above-mentioned processes impede the obtainment of economies of scale necessary for the implementation of a competitive offering of services to potential competitors. Such consequences can result, and may even be amplified where possible conglomeratic effects are connected to vertical effects deriving from such operations.\footnote{46} The players in dominant positions in upstream markets, again, could put into practice acts of defensive leveraging,\footnote{47} based on the monopolisation of related markets, or in particular, in the case of emerging markets, on the neutralisation of the pro-competitive effects that could originate from a complete
openness of the access market, or in general to the development of the ancillary market or the new platform.

The European Commission seems to have adopted, in the matter of emerging markets, an approach based on a „cautious surveillance“ that could be defined as innovation-oriented. The model pointed out by the Commission, to sum up, aims to avoid the risk of an intrusive discipline - and of its application - which, in the light of the defence or promotion of competition, appears to impede the development of services or products with a high degree of innovation.

5. Emerging Markets and the (First) Criteria for Their Regulation.

In the communications industry, and in particular with regards to emerging markets, evidently in order to favour investments in innovation, the 2002 regulatory framework states, in general, that regulatory actions ex ante in respect to new markets must be avoided. This principle, ex se clearly agreeable, appears to produce relevant profiles of complexity concerning its application in practice. It refers, in fact, not to new services, but to services which are radically innovative, with all the related difficulties of identification and of economical/juridical analysis.

Moreover the Commission, in the documents concerning the new framework, has not furnished precise indications for the individualisation of such markets. This is a reason for which incumbent operators have given an extensive interpretation of such a concept for a long time. On this matter, a relevant contribution is contained in the Common Position on the approach to appropriate remedies in the ENCS regulatory framework adopted by the European Regulators Group (ERG) in 2004 and reviewed in May 2006, which, among other things, has proceeded to such an extent regarding the concept of emerging markets and the regulatory approach to be adopted in this regard. The document highlights how the „emerging market“ concept was adopted by the framework directive, in recital 27. This envisaged that the guidelines, which the Commission would have subsequently provided to define the criteria that NRAs are compelled to follow in the evaluation of whether in a certain market there is effective competition and whether some companies have a significant influence, should also face „the issue of newly emerging markets, where de facto the market leader is likely to have a substantial market share but should not be subjected to inappropriate obligations“.

Such criteria contained in the Commission’s Guidelines on market analysis for electronic communications have first of all followed the indication, specifying how the above-mentioned rule has been stated because the premature imposition of a regulation could unfairly influence competitive conditions still in the creation phase. At the same time, however, the Commission has also expressed its conviction according to which it is necessary to impede leading companies from precluding such markets. Thus, the document envisages that, in maintaining the opportunity of an intervention by the antitrust authorities in some cases, NRAs will have to justify any form of premature regulation in an emerging market as they would nevertheless have the possibility to intervene later in the context of periodical review of relevant markets. In case of a real threat that market power could be reproduced in the new market, the Guidelines have affirmed the necessity of preventing this, if possible, by a specific regulation of the upstream market, the „source“ of the market power. Moreover, regarding the above-mentioned provision of a framework directive Art. 14(3) - according to which, should a company maintain a significant power in a specific market, it can be presumed that it has the same in a market that is directly related - the Commission has stated that it cannot be applied with respect to the
leverage power exercised from a „regulated“ market towards an emerging market which is „not regulated“. In such an event, potentially damaging conduct in the emerging market will be punishable according to Art. 82 EC.

In general, concerning the possibility to regulate ex ante emerging markets, the above-mentioned ERG document has clarified that these markets will also have to be subjected to the criteria of the so-called „triple test“ provided by the Recommendation on relevant markets. More specifically, the ERG has particularised the distinctive characteristic of such markets as being „immature“, i.e. characterised by a high level of uncertainty of demand, with the consequence that the companies interested in entering into them will have to face major risks. In such cases, the document affirms that it is not possible to determine with certainty whether the market satisfies the above-mentioned three criteria or not, and therefore if it is susceptible to ex ante regulation within the framework of the procedure. On the other hand, considering what has been highlighted till now with regard to the short/medium term - essential for the development of the market - the ERG has added that a careful auditing of the situation by NRAs is sufficient. In particular, the document specifies what is essential in the assumption where the emerging markets are ancillary to markets already developed in which there are one or more companies maintaining SMP, citing as an example the case of entrance in an emerging market that depends on inputs held by the dominant companies which can not be replicated or substituted in a reasonable period of time.

In case it is necessary to intervene in order to avoid possible effects of premature foreclosure of such markets, the ERG has explicitly affirmed how „there may be grounds for early regulatory intervention in the market from which the market power could be leveraged to guarantee access to this input in the normal manner, in order to allow competition to develop in the emerging market“; clarifying that, in such a way, „the distinct nature of the emerging market is maintained whilst at the same time preventing foreclosure by applying regulation only on the necessary input market and not on the emerging market itself“.

In such circumstances, according to the same document, an NRA will have to engage itself at the most to leave the incumbent and the new entrant „in an equivalent position in terms of investment incentives“. Thus, both the players will be able to exploit equally the opportunities of the new market, in terms of access to non-replicable network infrastructures. In any case, the document details again, whenever the new investment originates from the new entrant who necessarily needs an input maintained by an operator in a dominant position, the authorities will have the role „to ensure that access to this input is not denied, delayed or otherwise obstructed“.

6. Conclusion.

In conclusion, on the basis of the considerations developed thus far, it seems possible to sum up that only a case-by-case approach, which takes into account the nature and relevance of the single technological innovation, the degree of substitution with already existing infrastructures and services, and the options of duplicability by other actual or potential operators, can permit a decision on the possibility of whether to intervene or not in a new emerging market with a regulation, consisting of a regulatory action ad hoc, or eventually of the application in respect to the same of the antitrust law in force.

Therefore, the matter to be dealt with concerns the intensity of the regulatory intervention in particular, which will have to be based on the principle of proportionality, i.e. a result proportioned with respect
to the problems faced. The investments and risks undertaken by the operator on which regulator remedies or commitments are imposed must be taken into account, and on the other hand the incentives for investment and innovation for both the incumbents and new entrants must be preserved, in order to instil long-term, workable competition.

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Such a phenomenon is also defined as „functional convergence“; see again OECD, supra note 3.


In particular, regarding the transmission of information among the different company divisions.


In this regard, the economic doctrine uses the concept of „path dependence“.


Which has a sufficiently broad transmission capacity.


EU and national, according to the respective tasks.


See also on this matter, „Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions - i2010 - A European Information Society for growth and employment“, COM(2005) 229, 1 June 2005, available at: http://europa.eu.int/eur-lex/lex/LexUriServ/site/it/com/2005/com2005_0229it01.pdf, in which the Commission, considering that: „Digital convergence requires policy convergence and a willingness to adapt regulatory frameworks where needed so they are consistent with the emerging digital economy“, has undertaken „to examine the rules affecting the digital economy to make their interplay more coherent and oriented to economic and technological realities“ (Communication at 3 and 5). Concerning the 2002 directives and their relationship with „general antitrust“ law, see especially P.L. Nihoul & P.B. Rodford, „EU Electronic Communications Law - Competition and Regulation in the European Telecommunications Market“ (Oxford, New York 2004); A. de Streel & R. Queck, „Un nouveau cadre réglementaire pour les communications électroniques en Europe“, in „Journal des tribunaux - droit européen“, No. 101, 193 (2003) (also available at:
Beginning with that of dominant position - wholly "imported" from the EU jurisprudence to modify the concept of significant market power - until that of relevant market, etc.


30 See European Commission, „Commission Working Staff Document - Draft Commission Recommendation On Relevant Product and Service Markets“ 44, 53. Still, the Commission adds that the wholesale national market for international roaming on public mobile networks (market No. 17) should be excluded from the Recommendation as soon as entry into force of the EU regulation on the topic which will be approved in the coming months.

31 The ERG for electronic communications networks and services, composed of representatives from 33 NRAs and the Commission, has been set up to provide a suitable mechanism for encouraging cooperation and coordination among these bodies in order to achieve consistent application, in all Member States, of the provisions set out in the directives of the new regulatory framework. The document cited in the text is the following: ERG, „Revised Common Position on the approach to appropriate remedies in the ENCS regulatory framework“, ERG (06) 33, May 2006, available at: http://erg.eu.int/doc/meeting/erg_06_33_remedies_common_position_june_06.pdf.


34 For a first view of the Commission’s proposals contained in the documents on the Review 2006, see also A. Renda, „Last call for Lisbon? Suggestions for the Future Regulation of E-Communications in Europe“, CEPS Task Force Reports (Brussels 2006); A. Stazi, supra note 9, at para. V.3.2.


37 On this matter, see especially C. Shapiro & H.R. Varian, supra note 10, at 211, 367.

38 Even if this option ex se, when the standard is patented, is legitimate. On this matter, and in general concerning the relationship between regulatory public choices - especially regarding standards - and private investments, see J. Farrell & M.L. Katz, „Public Policy and Private Investment in Advanced Telecommunications Infrastructure“, July 1998 IEEE Communications Magazine 87, also available at: http://groups.haas.berkeley.edu/imio/crtp/publications/workingpapers/wp52.pdf; and id., „The Effects of Antitrust and Intellectual Property Law on Compatibility and Innovation“, Fall/Winter 1998 Antitrust Bulletin 609; M. Motta & M. Polo, supra note 10, at 83.

39 With regard to the different anti-competitive practices possible in the network industries and the role of antitrust enforcement against them, see especially (in addition to the works cited in para. 1, supra note 10), D.L. Rubinfeld, „Antitrust Enforcement in Dynamic Network Industries“, Fall/Winter 1998 Antitrust Bulletin 859.

40 See M. Monti, „Antitrust e regolamentazione nell’industria delle comunicazioni elettroniche - principi e prospettive“, speech at the seminar „La costruzione del mercato delle telecomunicazioni fisse e mobili: il bilancio dell’era ONP e le prospettive del nuovo quadro regolamentare della UE“, organised by the Italian Communications Authority in Naples (Castel dell’Ovo), 22 March 2004, Speech/04/144, available at: http://ec.europa.eu/comm/competition/speeches/index_speeches_by_the_commissioner.html, 3. On this matter, Microsoft’s case - even if the profiles in that particular instance do not appear to concern specifically the category of „emerging markets“ as isolated in the present paper. On this matter, ex multis, see lastly F. Lévêque, „Innovation Leveraging and Essential Facilities: Interoperability Licensing in the EU Microsoft Case“, 1 World

41 For a definition of the category, see para. 5; additionally A. Stazi, supra note 9.


46 Concerning this topic, it has been emphasised how, „the more important the network becomes, the greater the risk that competition problems will emerge“ (M. Monti, „Competition and Information technologies“, speech at the congress „Barriers in Cyberspace“, Brussels, Kangaroo Group, 18 September 2000, Speech/00/315, available at: http://ec.europa.eu/comm/competition/speeches/index_2000.html).


49 This model, more generally, appears coherent with the overall process regarding the „more economic approach“ being adopted at the EU level in the application of antitrust law (lastly Art. 82 EC), an effects-based approach focused on the presence of anti-competitive effects that harm consumers and are founded on the examination of each specific case based on sound economics and grounded on facts. Concerning this topic and the related ongoing debate (on Art. 82), see especially the documents DG Competition, „Discussion Paper on the Application of Art. 82 of the Treaty to Exclusionary Abuses“, December 2005, available at: http://europa.eu.int/comm/competition/antitrust/others/ discpaper2005.pdf; J. Gual, M. Hellwig, A. Perrot, M. Polo, P. Rey, K. Schmidt & R. Stembacka („Economic Advisory Group on Competition Policy“), „An

50 In such cases, in fact, „The high degree of uncertainty, and consequent value of flexibility, argue for an approach in which regulation seeks to ‘do no (unnecessary) harm’ to investment incentives“. (J. Farrell & M.L. Katz, supra note 38, at 21).

51 On this matter, in particular on the questions arising from operations like the definition of the relevant markets and the analysis of substitutability among products, etc., see T. Madiéga, „Innovation and Market Definition under the EU Regulatory Framework for Electronic Communications“, 1 World Competition 55 (2006); A. Stazi, supra note 9, at para. IV.4.1.

52 ERG, „Revised Common Position on the approach to appropriate remedies in the ENCS regulatory framework“, ERG (06) 33.

53 In general, see also, in this regard, the „Commission Recommendation on Relevant Product and Service Markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services“, recital 15, according to which: „The decision to identify a market as justifying possible ex ante regulation should also depend on an assessment of the sufficiency of competition law in reducing or removing such barriers or in restoring effective competition. Furthermore, new and emerging markets, in which market power may be found to exist because of ‘firstmover’ advantages, should not in principle be subject to ex ante regulation“.  

54 See Guidelines, paras. 32 and 83-85.

55 This without otherwise excluding the option of moving the perspective of analysis towards the criteria stated by Art. 14(3) of the framework directive (see Guidelines para. 84); in this regard, see infra.

56 Guidelines, note 92.

57 According to which it shall be verified if: (a) there are high and non-transitory entry barriers whether of structural, legal or regulatory nature; (b) the structure of the market does not tend towards effective competition in an adequate period; and (c) competition law would not adequately address the market failure(s) („Recommendation on relevant markets“, recital 9).

58 In particular, „Even if a firm makes non-trivial investments to be able to provide a new service, there is no guarantee that, in an innovative and fast moving sector, a cheaper alternative mechanism for delivering the service will not be found. It is also difficult to assess the dynamic of competition behind any entry barrier, as many potential entrants will not make firm plans to enter a new service area until the market is seen to be a commercial proposition…. It is only with the elapse of a sufficient amount of time that these questions can be
answered“ (ERG, „Revised Common Position on the approach to appropriate remedies in the ENCS regulatory framework“ 20).

59 ERG, „Revised Common Position on the approach to appropriate remedies in the ENCS regulatory framework“, May 2006, at 84.

60 See ERG, „Revised Common Position on the approach to appropriate remedies in the ENCS regulatory framework“ 85.

Concerning the roles, and the spheres of intervention, for regulation and antitrust in respect to emerging markets, see the interesting analysis of OPTA (the Netherlands Communications Authority) „Regulating Emerging Markets“ Economic Policy note No. 5, April 2005, available at: http://www.opta.nl/download/epn05%5fuk%2epdf, in which it is proposed that: „... emerging services running on legacy infrastructure are subject to competition law constraints but not to ex ante regulation. It is important to prevent leverage of market power from an established market into an emerging market. But this is best prevented by regulating the established market; - neither emerging services nor established services running on new infrastructure are subject to ex ante regulation“ (note 35).

See also on the topic, for the same case-by-case approach proposed in this paper, A. Stazi, supra note 9, especially para. V and Conclusions (in which the recent case study of the regulation of Mobile TV in Italy is analysed).


62 See, in this regard Directive No. 2002/19/EC, recital 19, which in particular points out that, „Mandating access to network infrastructure can be justified as a means of increasing competition, but national regulatory authorities need to balance the rights of an infrastructure owner to exploit its infrastructure for its own benefit, and the rights of other service providers to access facilities that are essential for the provision of competing services. Where obligations are imposed on operators that require them to meet reasonable requests for access to and use of networks elements and associated facilities, such requests should only be refused on the basis of objective criteria such as technical feasibility or the need to maintain network integrity. Where access is refused, the aggrieved party may submit the case to the dispute resolutions procedure referred to in Articless 20 and 21 of Directive 2002/21/EC (Framework Directive). An operator with mandated access obligations cannot be required to provide types of access which are not within its powers to provide. The imposition by national regulatory authorities of mandated access that increases competition in the short-term should not reduce incentives for competitors to invest in alternative facilities that will secure more competition in the long-term“; and Art. 12.2, Directive 2002/21/EC, recital 27.