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Sub-national Geographic Markets within the Electronic Communications Sector

Liyang Hou*

Traditionally the geographic market definition in the electronic communications sector in the field of EU competition law was significantly relied on two factors: network reach and regulatory conditions. This method, after introduced into the electronic communications regulation, usually led to the definition of national markets. Nevertheless, the recent uneven investments in electronic communications infrastructures have results into regional variance in competitive conditions within some Member States. This fact makes the definition of national markets no longer appropriate. In order to demonstrate this trend in market definition, the national regulatory authorities, with the assistance of the European Commission, established a new approach to define geographic markets, in particular sub-national geographic markets. Nevertheless, this approach has not yet attracted much academic attention. The objective of this article is thus to provide a detailed description of this new approach. Based on a number of recent Commission decisions, it identifies a two-step analysis: (1) to define geographic units and (2) to group geographic units with homogeneous conditions of competition. Subsequently, a discussion of the criteria used for each of the two steps and an evaluation of this approach are provided as well.

1. INTRODUCTION

The regulatory framework in relation to electronic communications requires national regulatory authorities (NRAs) to impose regulatory obligations according to competition law principles. In particular, NRAs must follow a three-step analysis: first, to define a relevant market, second, to examine whether there is an undertaking individually or undertakings collectively, enjoying significant market power on that market, and then, to impose regulatory obligations only on the undertaking(s) with significant market power.¹ As far as the first step, that is market definition, is concerned, NRAs should delineate two dimensions, namely product dimension and geographic dimension. While the product dimension of relevant markets has been pre-defined by the European Commission (Commission),² the geographic dimension falls into the

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¹ Alexandre de Streef, 'The Integration of Competition Law Principles in the New European Regulatory Framework for Electronic Communications', *World Competition* 26, no. 3 (2003).

² 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, 2003/311/EC, 8 May 2003, OJ L 114/45, hereinafter 'First Market Recommendation'. It has been replaced by 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 communications networks and services, 2007/879/EC, 28 Dec. 2007, OJ L 344/65, hereinafter 'Second Market Recommendation'.

discretion of NRAs. In order to facilitate the analysis of the geographic dimension, the Commission provides two criteria: (1) the area covered by a network; and (2) the existence of legal and other regulatory instruments.³ These two criteria usually result into the definition of national markets. Part of the reasons may be that, first, electronic communications licenses tend to be national after the abolition of exclusive or special rights to operate electronic communications networks and/or services⁴ and, second, the incumbents, that is, the former national monopolists, have ubiquitous networks covering the whole territories of their Member States. Nevertheless, local or regional markets were also found within some Member States, for example, Finland, Hungary, and the UK (the Hull area), because the incumbents did not have networks with fully national coverage due to license limitation before liberalization.

This method of defining geographic markets is nevertheless based on a presumption that competition must be developed proportionately within the area covered either by an incumbent's network or by a particular regulatory regime. A logical risk of this presumption is that competition variance between parts of that area could invalidate the conclusion of defining that area as a single geographic market. This risk has been acknowledged by the Commission that 'investment in alternative infrastructure is often uneven across the territory a Member State, and in many countries there are now competing infrastructures in parts of the country, typically in urban areas. Where this is the case, an NRA can in principle find sub-national geographic markets'.⁵

However, the Commission did not establish a method to define sub-national geographic markets until the groundbreaking case with regard to the market review of the wholesale broadband market in the UK in February 2008.⁶ After this case, many NRAs started to include sub-national geographic market analysis in their market review. Until July 2009, there have been twelve Commission decisions where seven NRAs conducted analyses on sub-national geographic markets in two types of markets: (1) the market of wholesale broadband access; and (2) the market of wholesale terminating segments of leased lines.⁷

³ Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services, OJ C165/6, 11 Jul. 2002, hereinafter 'Commission Guideline', para. 59.

⁴ Commission Directive 2002/77/EC on competition in the markets of electronic communications networks and services, OJ L249/21, 17 Sep. 2002, Art. 2.

⁵ Commission Staff Working Document, Explanatory Note Accompanying document to 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 communications networks and services (second edition), {(C(2007) 5406)}, SEC(2007) 1483 final, 12.

⁶ Case UK/2007/0733, Wholesale Broadband Access in the UK, Brussels, 14 Feb. 2008. When an NRA has completed a market analysis based on the three steps above-mentioned, it must notify the Commission of the analysis and the draft measure. After reviewing the notification, if the Commission agrees with the NRA, it then issues a decision to approve the draft measure; if the Commission does not agree, it can either make comments and invites the NRA to amend the draft measure, or even veto the draft measure (though seldom used). All those Commission decisions can be found at: <http://ec.europa.eu/information_society/policy/ecomm/implementation_enforcement/article_7/index_en.htm>.

⁷ Ofcom also investigated the possibility of sub-national geographic markets in the market of wholesale trunk segments of leased lines. However, this article does not cover this market for two reasons. First, Ofcom is the only NRA that made sub-national geographic market analysis in this market; and second, this market has been removed from the list of market susceptible to ex ante regulation by the Second Market Recommendation. Therefore, it is only exceptional to regulate to this market in the future. Joint Cases UK/2008/0747, Wholesale terminating segments of leased lines in the UK and UK/2008/0748, Wholesale trunk segments of leased lines in the UK, Brussels, 26 Mar. 2008.

The Commission gave important comments on the analysis of sub-national geographic markets in those decisions, and even raised serious doubts on two draft measures proposed respectively by the Spanish NRA⁸ and the Finnish NRA,⁹ which eventually made the two NRAs change their original proposals. In addition, the European Regulators Group (ERG) also published its common position on sub-national geographic markets in 2008.¹⁰

Table 1. Commission Decisions Related to Sub-national Markets Analysis

Date	Member State	Product Market
14 February 2008 ¹¹	UK	Wholesale broadband access
26 March 2008 ¹²	Austria	Wholesale broadband access
26 March 2008 ¹³	UK	Wholesale terminating segments of leaded lines
18 July 2008 ¹⁴	France	Wholesale broadband access
08 August 2008 ¹⁵	UK	Wholesale terminating segments of leaded lines
30 November 2008 ¹⁶	Spain	Wholesale broadband access
18 December 2008 ¹⁷	Austria	Wholesale terminating segments of leaded lines
23 December 2008 ¹⁸	Finland	Wholesale broadband access
05 January 2009 ¹⁹	Portugal	Wholesale broadband access
14 April 2009 ²⁰	Italy	Wholesale broadband access
20 April 2009 ²¹	Finland	Wholesale broadband access
09 July 2009 ²²	Austria	Wholesale terminating segments of leaded lines

⁸ Joint Cases ES/2008/0804 and ES/2008/0805, Wholesale (Physical) network infrastructure access and Wholesale Broadband access in Spain, Brussels, 13 Nov. 2008.

⁹ Case FI/2008/0848, Wholesale broadband access in Finland, Brussels, 23 Dec. 2008.

¹⁰ ERG Position on Geographic Aspects of Market Analysis (definition and remedies), October 2008, ERG(08)20 final CP Geop Aspects 081016, hereinafter 'ERG Position'.

¹¹ Case UK/2007/0733, n. 6 above.

¹² Case AT/2008/0757, Wholesale broadband access in Austria, Brussels, 26 Mar. 2008.

¹³ Joint Cases UK/2008/0747 and UK/2008/0748, n. 7 above.

¹⁴ Joint Cases Case FR/2008/0780, Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location and Case FR/2008/0781, Wholesale broadband access, Brussels, 8 Jul. 2008.

¹⁵ Case UK/2008/0787, Wholesale terminating segments of leased lines in the UK, Brussels, 8 Aug. 2008.

¹⁶ Joint Cases ES/2008/0804 and ES/2008/0805, n. 8 above.

¹⁷ Joint Cases AT/2008/0836, Wholesale terminating segments of leased lines with low and high bandwidths and AT/2008/0838, Retail market of the minimum set of leased lines up to and including 2 Mbit/s, Brussels, 18 Dec. 2008.

¹⁸ Case FI/2008/0848, n. 9 above.

¹⁹ Joint Cases PT/2008/0850, Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location and PT/2008/0851, Wholesale broadband access, Brussels, 5 Jan. 2009.

²⁰ Joint Cases IT/2009/0890, Access to the public telephone network at a fixed location for residential and non-residential customers; IT/2009/0891, Wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location and IT/2009/0892, Wholesale broadband access, Brussels, 14 Apr. 2009.

²¹ Case FI/2009/0900, Wholesale broadband access in Finland, Brussels, 20 Apr. 2009.

²² Case AT/2009/0932, Wholesale terminating segments of leased lines, Brussels, 9 Jul. 2009.

In spite of such progress, sub-national geographic markets however have so far not attracted much academic attention. The objective of this article is thus to examine the above-mentioned materials with an aim to identify the approach to defining sub-national geographic markets. A thorough exploration of these decisions leads to a two-step method of defining sub-national geographic markets: first, to define geographic unit, and then, to group geographic units with homogeneous competitive conditions into sub-national geographic markets. Moreover, since the analysis of sub-national geographic market involves a great amount of regulatory burden, it is suggested that NRAs conduct a preliminary analysis before the substantial analysis. The subsequent three parts are dedicated to the assessment at every step in turn. The last part provides an evaluation of this method as well as some conclusions.

2. PRELIMINARY ANALYSIS

It is not necessary to conduct sub-national market analysis in every market. Before initiating a substantial analysis of sub-national markets, NRAs are suggested to conduct a preliminary analysis to examine whether there is strong evidence of sub-national geographic markets, or that there is evidence which suggests the existence of a national market. If it is the latter, there is no need of further analysis of sub-national geographic market.

As regards this preliminary analysis, it should be noted first that there are two types of markets that may possibly not raise sub-national geographic market concern. The first is mobile markets where most or all network operators have or are intended to have national coverage and price on a national basis. Therefore, a detailed sub-national geographic analysis usually will not be necessary.²³ The second concerns termination markets where a principle has been established that one network constitutes one termination market.²⁴ Thus, there is no need of sub-national geographic market analysis either.

Secondly, with regard to the preliminary analysis in other markets the ERG within its common position proposes the following three indicators:

- (1) One or several alternative operators have substantial but less than national coverage and exert a significant competitive constraint in the areas where they are present, or the incumbent loses considerable market share in some areas, though it may still hold significant market power on a national basis.
- (2) The incumbent operator differentiates prices geographically, or the incumbent operator is setting a national uniform price while there are significant price differences between the incumbent operator and alternative operators where the latter are present.

²³ ERG Position, 9, n. 10 above.

²⁴ Case DE/2005/0144, Call termination on individual public telephone networks provided at a fixed location, 17 May 2005, para. 45.

- (3) There are significant geographic differences in product characteristics, which may suggest heterogeneity in consumer demand.²⁵

The three indicators are not cumulative. An observation of any of them is worthy of a further sub-national geographic market analysis.

3. DEFINING GEOGRAPHIC UNITS

Once the preliminary analysis leads to a positive sign of geographic difference in competitive conditions, NRAs must initiate a sub-national geographic markets analysis. With regard to geographic market definition, it is normal practice to start with a narrow market definition and then to see how this can be augmented. Therefore, at the first step NRAs should select a criterion (or criteria) to define geographic units. A geographic unit is the smallest area where the competitive conditions are assumed homogenous and on which the subsequent examination of possible expansion can be based. Since the definition of geographic units is based on assumption, there is a trade-off between granularity and practicality (or feasibility) in selecting the relevant criteria. On the one hand, a geographic unit cannot be defined too large so as to cover geographical areas where competitive conditions are heterogeneous (the principle of granularity); on the other hand, a geographic unit cannot be defined too narrow to the extent to which the overwhelming number of geographic units would make it impossible for NRAs to process (the principle of practicality).

In general, there are two main options to define geographic units: (1) based on the network structure of the incumbent operator; or (2) based on political or administrative boundaries. Different demarcation points in each of the options would result into different geographic units. The selection of geographic units varies with the market features of every market. The following paragraphs describe the common practice of NRAs with regard to the market of wholesale broadband access and the market of wholesale terminating segments of leased lines, which are the two markets where sub-national markets have been extensively delineated.

3.1. THE MARKET OF WHOLESALE BROADBAND ACCESS

A noticeable feature in the market of wholesale broadband access in a majority of Member States is that operators based on local loop unbundling (LLU) are the main driver of competition. Mandated LLU access can allow alternative operators to co-locate their equipments into, for example, local exchanges of operators with significant market power, and then connect to their customers' premises, without necessarily establishing a completely new network. Since the investment decisions of LLU operators are made on a local exchange by local exchange basis, their competitive constraints on the operators with significant market power are thus exercised at the level of each local exchange.²⁶

²⁵ ERG Position, 9, n. 10 above.

²⁶ Case UK/2007/0733, 10, n. 6 above.

Consequently, the geographic unit in the market of wholesale broadband access can be defined by the local exchanges of the operators providing LLU.

It may be attractive to consider the area covered by each local exchange as one geographic market. However, the principle of feasibility does not allow for this idea. As a matter of fact, there are always thousands of local exchanges in a Member State, for example 1,480 in Austria,²⁷ 10,400 in Italy,²⁸ and 5,587 in the UK.²⁹ Such tremendous number of 'geographic markets', if so defined, would make the subsequent assessment of significant market power excessively difficult, if not impossible. This difficulty was acknowledged by the Commission.³⁰ As a practical solution, a further expansion of such geographic units cannot be avoided.

So far all the NRAs having conducted sub-national geographic markets analysis in the market of wholesale broadband access employed local exchange as the criterion to define geographic units.³¹ However, this approach is not flawless. Local exchange is a concept used only within copper access networks, and thus, it is not technologically neutral. This non-neutrality would result into two problems. First, it is an appropriate approach in a geographic area where there are only copper access networks. However, if there are other types of access networks, such as cable access or fibre access, in a geographic unit, it is not easy to map them into the areas defined by local exchanges. Furthermore, the exclusion of those access networks would raise doubt on the geographic market definition, especially when the market power of those operators cannot be ignored. The solution to this problem will be discussed in the next section.³² Second, copper access networks are being replaced by next generation networks. Once a complete replacement takes place, the concept of local exchange will disappear. This transitional feature of local exchange triggers an alarm that relying on local exchanges to define geographic units on the market of wholesale broadband access is only temporary. Once this concept is obsolete, NRAs should select other concepts, which exist at certain points in the structure of the new network that can best support the entry of alternative operators under the obligation of LLU. This point may be the first concentration point within the network structure, for example the street cabinet in case of fibre to the street cabinet.³³

3.2. THE MARKET OF WHOLESALE TERMINATING SEGMENTS OF LEASED LINES

Unlike the market of wholesale broadband access, the investment decisions of leased line operators depend not on a convenient entry obligation, such as LLU, but on the location of

²⁷ Case AT/2008/0757, 5, n. 12 above.

²⁸ Joint Cases IT/2009/0890, IT/2009/0891, and IT/2009/0892, 3, n. 20 above.

²⁹ Case UK/2007/0733, 4, n. 6 above.

³⁰ *Ibid.*, 11.

³¹ Case UK/2007/0733, 4, *ibid.*; Case AT/2008/0757, 5, n. 12 above; Joint Cases Case FR/2008/0780 and Case FR/2008/0781, 5, n. 14 above; Joint Cases ES/2008/0804 and ES/2008/0805, 5, n. 8 above; Case FI/2008/0848, 4, n. 9 above; Joint Cases PT/2008/0850 and PT/2008/0851, 4, n. 19 above; Joint Cases IT/2009/0890, IT/2009/0891 and IT/2009/0892, 3, n. 20 above; and Case FI/2009/0900, 4, n. 21 above.

³² Text to n. 45 below.

³³ ERG Position, 11, n. 10 above.

customers, in particular large business customers. In other words, leased line investors prefer building their networks in business zones. Furthermore, once a leased line operator enters the market, they also prefer building their networks incrementally, which is different from the strategies of LLU operators that may build 'isolated' networks. Since the location of customers is out of the control of any electronic communications operator, it is not appropriate to define geographic units based on network structure. In view of the investment decision of leased lines operators, NRAs normally rely on political or administrative boundaries to define geographic units. It falls into the discretion of NRAs to select the most appropriate political or administrative level as geographic unit. For example, the UK NRA divided geographic units based on postal sectors,³⁴ while the Austrian NRA used communities as geographic units.³⁵ Nevertheless, the balance between granularity and practicality, as discussed earlier, should be kept into mind.

4. GROUPING GEOGRAPHIC UNITS WITH HOMOGENEOUS CONDITIONS OF COMPETITION

4.1. INTRODUCTION

After defining geographic units, it would be ideal to assess the market power in each of the geographic units. However, it is impractical due to the overwhelming number of geographic units. It is accordingly necessary to group geographic units with homogeneous conditions of competition, thereby reducing the number of geographic markets to the extent to make the subsequent significant market power assessment practicable.

In the area of EU competition law, the homogeneous conditions of competition is tested on demand-side and supply-side substitution in case of a small but significant non-transitory increase in price (usually 5%–10%). The demand-side substitution test asks a question whether customers in the test area would like to move to other areas and to be served there if the price in the test area increases 5%–10%; the supply-side substitution test examines whether suppliers in other areas would like to move to the test area and to serve there if the price in the test area increases 5%–10%. If one of the answers is affirmative, particular areas can be considered to belong to the same geographic market.³⁶ However, this method cannot be easily applied to fixed-line electronic communications services. First, demand-side substitution, if existing, would necessarily mean that customers must change their premises if they would like to be served by the fixed-line operators in another geographic area. Since the cost of moving location is probably much more than the increased price of a certain electronic communications service, demand-side substitution is either very weak or non-existent. Second, concerning the supply side, although the entry

³⁴ Postal sectors represent an aggregation of a group of postcodes that are geographically close to one another. Joint Cases UK/2008/0747 and UK/2008/0748, 3, n. 7 above.

³⁵ Joint Cases AT/2008/0836 and AT/2008/0838, 3, n. 17 above.

³⁶ Commission Notice on the definition of relevant market of the purpose of Community competition law, 97/C 372/03, OJ C372/5, 9 Dec. 1997, hereinafter 'Commission Notice', paras 15–18.

barriers in the electronic communications sector have been lowered down considerably since the liberalization, it is still difficult to see that electronic communications operators would enter a market simply because of a 5%–10% price increase, at least not in a short term. Consequently, supply-side substitution is also significantly limited.³⁷ Such limitation would probably lead to a narrow geographic market definition, or in other words, each geographic unit could constitute one geographic market. However, as already mentioned, this option is not feasible. It is therefore necessary to find a new approach to check the homogeneity of competitive conditions, which is the very innovation of the sub-national geographic market analysis established by NRAs, together with the Commission.

The competitive conditions of a market can be described not only by demand-side and supply-side substitution but also by a set of structural indicators, for example, the number of sellers, the number of buyers, the distribution of market shares, and behavioural indicators, such as pricing and market strategies. Therefore, Ofcom, the UK NRA, in the milestone sub-national geographic market analysis case³⁸ began to consider using those structural and behavioural indicators as a method to examine the degree of competition between geographic units, and then group together geographic units presenting similar economic indicators.³⁹ The core of the approach lies in the number of operators within geographic units, that is, grouping geographic units with same number of operators. Nevertheless, the Commission has repeated that a sole reliance on the number of operators is not sufficient for a geographic market definition. It requires NRAs to further examine other structural and behavioural evidence, such as the distribution and evolution of local market shares over time, the pricing of both incumbent and alternative operators and its evolution over time, the population density, differences in the functionalities or types of products being offered, the marketing strategies being pursued or the entry conditions in different areas, the stability of any proposed market boundaries over time and so on.⁴⁰ This method has been followed and further developed by other NRAs and now become the common method.

The following paragraphs describe how each of those structural and behavioural factors functions in the analysis of sub-national geographic markets. This article organizes all these economic indicators into two groups: quantitative and qualitative criteria. The quantitative criteria include: (1) number of competitors, (2) distribution of market shares, and (3) consumer density. The evaluation of each of the three criteria requires a

³⁷ Ofcom Review of the wholesale broadband access markets 2006/2007 Identification of relevant markets, assessment of market power and proposed remedies, Explanatory Statement and Notification, published on 15 Nov. 2007, hereinafter 'Ofcom Broadband Consultation', 48–49, available at: <www.ofcom.org.uk/consult/condocs/wbamr07/wbamr07.pdf>; Ofcom Business Connectivity Market Review, Review of the retail leased lines, wholesale symmetric broadband origination and wholesale trunk segments markets, Publication date: 17 Jan. 2008, hereinafter 'Ofcom Leased Lines Consultation', 102–103, available at: <www.ofcom.org.uk/consult/condocs/bcmr/>; and ARCEP Consultation publique relative à l'analyse des marchés de gros du haut débit et du très haut débit, published date: December 2007 Part 'Marché de gros des offres d'accès haut débit activées livrées au niveau infranational', 11, available at: <http://circa.europa.eu/Public/irc/info/ecctf/library?l=/france/registeredsnotifications/fr20080780-0781/marchs_4_et_5/consultation_nationale/consultation_publique/_FR_1.0_&a=d>.

³⁸ Case UK/2007/0733, n. 6 above.

³⁹ Ofcom Broadband Consultation, 55, n. 37 above.

⁴⁰ Case UK/2007/0733, 7–8, n. 6 above.

specific threshold, or thresholds.⁴¹ In view of their mathematical certainty, quantitative criteria are usually used as the main criteria to define sub-national markets. Qualitative criteria comprise: (1) geographically differentiated pricing, (2) stable market boundaries, (3) marketing strategy, and (4) contiguous market boundaries. No specific threshold is required here, and NRAs usually keep them as correction factors to crosscheck the conclusion based on the quantitative criteria. The following paragraphs in turn illustrate how each of these criteria is evaluated within the Commission decisions.

4.2. QUANTITATIVE CRITERIA

The three quantitative criteria are correlated under the logic that the more competitors on a market, the less market share held by the incumbent; and the more customers on a market, the more competitors expected there. Of the three criteria, the number of competitors is the most obvious to observe and the most convenient to calculate, thus turning it into the most important criterion. Nevertheless, the value of the number of competitors can be affected by the other two criteria to the extent to which, on the one hand, the relative size of every competitor is equally important to the number, and on the other, the consumer density determines the extent of the sustainability of competition. Therefore, the three criteria should be considered as a whole.

4.2.1. *Number of Competitors*

The number of competitors clearly represents a continuum of competitive conditions and is the most important criterion for sub-national geographic market definition. The method in principle requires NRAs to first calculate the number of operators in each of the geographic units and then to group geographic units with the same number of operators. Since the numbers of operators can vary from one to many, NRAs normally choose to a numeric threshold or thresholds to further group geographic units. For instance, geographic units with less than three operators may be grouped together when the competition conditions in those geographic units are considered significantly different from those with more than three operators. However, while it is rather easy to calculate the number of competitors in a geographic unit, it is very difficult to choose the numeric threshold(s) that can be used to measure difference in competitive conditions. For example, those geographic areas served solely by one operator, usually the incumbent, are apparently less competitive than those geographic areas where there are a number of competitors. Nevertheless, it is less certain when comparing areas, for example, with two operators with areas with three operators. Since the determination of the threshold(s) of the number of competitor is combined with

⁴¹ NRAs usually divide all the geographic units into two groups: a competitive group and a non-competitive group. In this case, only one threshold needs to be decided. Nevertheless, for example, in the market of wholesale broadband access in the UK, Ofcom grouped all geographic units into three groups: competitive markets, non-competitive markets, and monopolist markets, based on two thresholds. Case UK/2007/0733, 5, n. 6 above.

the assessment of the distribution of market shares, it will be discussed subsequently with the latter.

Furthermore, with regard to the calculation of the number of competitors, attention should be paid to the following three issues. First, competitive conditions may not only differ in the number of operators but may also be related to their absolute size.⁴² Competitive constraints can only be exercised by operators with a certain scale. One way to account for this could be to look only at operators which have a certain market share or coverage on a geographic unit. This criterion is easy to apply and can also 'exclude' operators that may only exert a limited competitive constraint on other operators. In practice NRAs set up a certain threshold to exclude small alternative suppliers. In other words, only suppliers that are bigger than a certain size would be included. For example, Ofcom decided to take into consideration only alternative operators that had covered at least 10% of the area at a local exchange in the market of wholesale broadband access in the UK.⁴³

Second, the market analysis within the electronic communications regulation should be conducted on a prospective method.⁴⁴ The number of suppliers should also be calculated from a forward-looking perspective. In other words, NRAs should calculate not only the suppliers already active on the relevant market but also suppliers that plan to enter the market in the short term, namely within the current market review (normally two or three years).

Third, with regard to the market reviews in the market of wholesale broadband access all the NRAs used local exchanges to define geographic units. Nevertheless, this approach is not technologically neutral because the term local exchange refers only to copper networks, and not to other types of networks, for example, cable or fibre networks. Therefore, a tangible risk is that a unit of those networks, equivalent to a local exchange of copper networks, may be overlapped with more than one local exchange. As discussed earlier,⁴⁵ a prominent problem with regard to the sub-national market analysis is how to include those networks into the map delineated by local exchanges, in particular when they cover many local exchanges. Obviously, those operators cannot be examined in every local exchange where they set foot. Otherwise, it could be either impractical, or lead to overestimating those operators' market power. Consequently, the practical part of this question is to what extent and in which local exchange those operators should be analysed. The key is that operators of other types of networks can only exert competitive constraints when they have achieved a certain degree of economies of scale. Operators below this scale can only exert limited competition constraints and accordingly can be ignored for the purpose of this analysis. Therefore, NRAs can choose a threshold in terms of the size of operators of other types of networks within a geographic unit, the form of which could be market shares. This method, on the one hand, can exclude small operators from the sub-national market analysis, and on the other hand and also most importantly, can place operators of other types of networks into a certain local exchange. Thus, operators of

⁴² ERG Position, 14, n. 10 above.

⁴³ Case UK/2007/0733, 4, n. 6 above.

⁴⁴ Commission Guideline, para. 35, n. 3 above.

⁴⁵ Text to n. 32 above.

other types of networks are considered in the geographic market analysis. In the market of wholesale broadband access in the UK, for example, Ofcom decided to take into account Virgin Media, a cable company, due to its considerable market power. Regarding the difficulty to map Virgin Media into the framework of local exchanges, Ofcom considered Virgin Media as being present within an exchange only if it was able to supply at least 65%⁴⁶ of the homes and business within that exchange.⁴⁷ This method has also been used by other NRAs.⁴⁸

4.2.2. *Distribution of Market Shares*

Market share is another direct and convenient indicator of conditions of competition, as the Commission maintains that, first, very large market shares, in excess of 50%, are in themselves evidence of significant market power, save in exceptional circumstances; and second, single dominance concerns normally arise in the case of undertakings with market shares of over 40%.⁴⁹ However, the market share examined here is not the market share within the assessment of significant market power since geographic boundaries have not been delineated yet. It rather refers to the market share of every operator within a geographic unit. Furthermore, in view of the work burden to collect the data of market shares in every geographic unit, the Commission allows NRAs to use proxies of market shares. For example, Ofcom used wholesale service share as a proxy of market shares.⁵⁰ The value of the distribution of market shares is two-fold: First, analysing the market share of the incumbent towards different numbers of competitors can contribute to the determination of the threshold(s) of the number of suppliers; and second, a threshold of market share of the incumbent can be used to assist the grouping analysis in complicated cases, both of which will be elaborated in due course.

First, the principle approach of NRAs to assess homogeneous conditions of competition is the number of suppliers. Nevertheless, the key of the approach, that is selecting an appropriate numeric threshold of operators, is not easy. The first case involving sub-national geographic market analysis was the review of the market of wholesale broadband access in the UK. In this case, the conclusion of Ofcom on the threshold of the number of suppliers was nevertheless based on intuition, rather than reasoning. Ofcom identified two thresholds, one operator and more than three operators, and organized all the geographic units into three groups: (1) a group with only one operator; (2) a group with two or three operators; and (3) a group with more than three operators. It is indeed reasonable to assume that a monopolized market is different from a market with more

⁴⁶ Since operators of other types of network cannot take advantage of LLU obligation, they have to build their own networks or upgrade existing networks. In either case entry barriers for them are higher than those for LLU operators. Therefore, the threshold of coverage for operators of other types of networks is higher than LLU operators.

⁴⁷ Case UK/2007/0733, 4, n. 6 above; and Ofcom Broadband Consultation, 196, n. 37 above.

⁴⁸ Case AT/2008/0757, 5, n. 12 above; Joint Cases PT/2008/0850 and PT/2008/0851, 5, n. 19 above; and Joint Cases ES/2008/0804 and ES/2008/0805, n. 8 above.

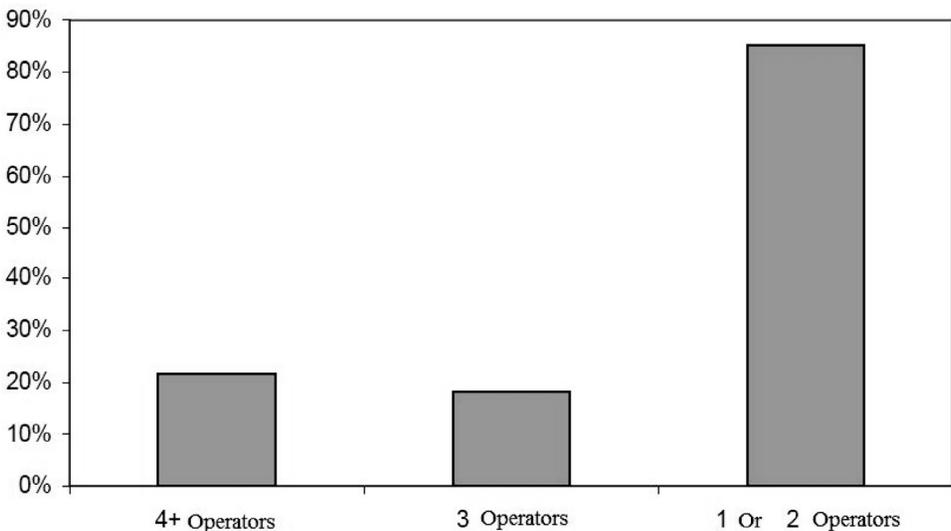
⁴⁹ Commission Guideline, para. 75, n. 3 above.

⁵⁰ Service shares are not market shares, but the proportion of leased lines services in the relevant product market provided by operators in each postal sector. Ofcom Leased Lines Consultation, 160, n. 37 above.

than one operator. However, Ofcom did not explain why it chose more than three operators as the second threshold.⁵¹ Although the Commission did not raise serious doubts about Ofcom's arbitrary conclusion, it nevertheless commented that the number of competitors present at a given exchange was in itself not sufficiently detailed or robust to identify real differences in competitive conditions for the purposes of market definition. The Commission furthermore indicated that the number of competitors should be considered in conjunction with the distribution of market shares.⁵² The Commission nevertheless did not clarify this point.

After this case, some NRAs began to set up a correlation between the threshold(s) of the number of suppliers with the distribution of market shares. A good example was the Austrian NRA's analysis in its review on the wholesale market of terminating segments of leased lines. The Austrian NRA investigated the market share of the incumbent towards different numbers of operators, that is, one and two operators, three operators, and four and more operators, and found some interesting results, which are illustrated in the following Figure 1.

Figure 1. The Distribution of Market Share of Telekom Austria towards Different Numbers of Operators⁵³



⁵¹ Ofcom Broadband Consultation, 62–63, n. 37 above.

⁵² Case UK/2007/0733, 11, n. 6 above.

⁵³ Marktabgrenzung Mietleitungsmärkte (Trunk-Segmente von Mietleitungen, Terminierende Segmente von Mietleitungen, Mindestangebot an Mietleitungen), publication date: November 2008, available at: <<http://circa.europa.eu/Public/irc/info/ecctf/library?!=/sterreich/registerednotifications/at20080838&vm=detailed&sb=Title>>, 33.

This figure presents a clear picture why the Austrian NRA chose three operators as the criterion to group geographic units. There was a clear break in competitive conditions in the case of three operators. When a geographic unit presented three or more operators, the market shares of Telekom Austria were significantly limited, which was obviously different from the situation of one or two operators. A similar approach also appeared in the market reviews of the Austrian NRA in the market of wholesale broadband access,⁵⁴ Ofcom in the wholesale market of terminating segments of leased lines⁵⁵ and the Portuguese NRA in the market of wholesale broadband access.⁵⁶

In addition to this value, market share of the incumbent is also particularly useful where, firstly, the analysis of the distribution of market shares towards the numbers of competitors cannot suggest an obvious break as that in Figure 1 and, secondly, the number of operators in some geographic units indicates different competitive conditions from the real world, for example, that an undertaking can still be dominant even if the number of competitors in some geographic units is above the particular threshold. Under these two situations, NRAs can introduce an extra parameter, in the form of a certain amount of market share of the incumbent, to group geographic units. Since the electronic communications regulation only concerns non-competitive markets, NRAs usually divide geographic units into two groups, a competitive group and a non-competitive group. Based on this parameter, they can exclude from the group of competitive markets geographic units where the number of operators is above the relevant threshold and nevertheless the incumbent still has a great amount of market share. As mentioned earlier, the practice of EU competition law has suggested a link between market shares and the extent of market power, that is a more than 40% market share raises the concern of dominance and a more than 50% market share can be presumed to be dominant save in exceptional circumstances.⁵⁷ Therefore, it is rational for NRAs to use this link as a basis to establish the threshold here. For example, the Finnish NRA used 50% market share as the threshold in its renotification of the market of wholesale broadband access,⁵⁸ and the Portuguese NRA used 40% in the same market.⁵⁹ Although the threshold of market shares is not fixed by the Commission, it should be noted that the thresholds used by the Finnish NRA and the Portuguese NRA corresponded with the Commission suggestion on using market share

⁵⁴ The Austrian NRA found significantly different market shares of Telekom Austria between areas with three or more major operators and areas with one or two major operators. Entwurf einer Vollziehungshandlung gemäß §128 Abs. 1 TKG 2003, M 1/07-22, available at: <<http://circa.europa.eu/Public/irc/info/ecctf/library?l=/sterreich/registeredsnotifications/at20080757&vm=detailed&sb=Title>>, 17.

⁵⁵ Ofcom found that the threshold of three operators closely matched the area in which BT's service shares were relatively low. Ofcom Leased Lines Consultation, 172, n. 37 above.

⁵⁶ Mercados De Fornecimento Grossista De Acesso (Físico) À Infra-Estrutura De Rede Num Local Fixo E De Fornecimento Grossista De Acesso Em Banda Larga: Definição dos mercados do produto e mercados geográficos, avaliações de PMS e imposição, manutenção, alteração ou supressão de obrigações regulamentares, publication date: December 2008, hereinafter 'Portuguese Broadband Consultation', available at: <http://circa.europa.eu/Public/irc/info/ecctf/library?l=/portugal/registeredsnotifications/pt20080850-851/mercados_4_5pdf/_PT_1.0_&a=d>, 51-57.

⁵⁷ Text to n. 49 above.

⁵⁸ Case FI/2009/0900, 4, n. 21 above.

⁵⁹ Portuguese Broadband Consultation, 52-55, n. 56 above.

to assess market power. A significant deviation from the suggestion would nevertheless trigger the Commission's serious doubts. For example, the Commission raised serious doubts about the Finnish NRA's proposal to take 70% as the threshold within its first notification of the market of wholesale broadband access.⁶⁰ This resulted in the Finnish NRA altering the threshold to 50% in its renotification.⁶¹

4.2.3. *Consumer Density*

While the above two criteria provide NRAs with information about the supply side, the consumer density can give NRAs knowledge on the demand side. Furthermore, it can indicate the sustainability of competition. The development of electronic communications networks or services requires a certain degree of consumer density by reason of the permanent economies of scale in this sector. With the increase in the consumer density, the costs of providing services decrease (all other things remaining equal). On the other hand, if the number of customers in a market can only allow one efficient operator or even cannot allow an efficient entry, this market may never become effectively competitive. Furthermore, the consumer density can also be used to correct the overestimation of prospective competition. Insufficient density of customers may suggest that a geographic unit where the number of active, together with prospective operators, is above the relevant threshold should be grouped into the group with less competition.⁶²

In view of the importance of the consumer density, NRAs always include it into the parameters to group geographic units. The form of the threshold of the consumer density varies depending on the different features of every market. In the market of wholesale broadband access, NRAs have as the threshold the number of premises served by the local exchange in a geographic unit, for example, 10,000 premises per local exchange in the UK⁶³ and Spain⁶⁴ and 2,500 in Austria.⁶⁵ Moreover, the customers in the market of wholesale terminating segments of leased lines are usually business companies. NRAs can therefore calculate the number of leased line operators around big business centres. For example, Ofcom investigated the number of operators around business sites with over 240 employees.⁶⁶ By contrast, the Austrian NRA did not count on business sites but relied on the density of the population based on an assumption that business site density highly correlates with population density.⁶⁷

⁶⁰ Case FI/2008/0848, 9–10, n. 9 above.

⁶¹ Case FI/2009/0900, 4, n. 21 above.

⁶² Case UK/2007/0733, 5, n. 6 above; and Ofcom Broadband Consultation, 63–65, n. 37 above.

⁶³ Case UK/2007/0733, 5, n. 6 above.

⁶⁴ Joint Cases ES/2008/0804 and ES/2008/0805, 5, n. 8 above.

⁶⁵ Case AT/2008/0757, 5, n. 12 above.

⁶⁶ Joint Cases UK/2008/0747 and UK/2008/0748, 3, n. 7 above.

⁶⁷ Joint Cases Case AT/2008/0836 and Case AT/2008/0838, 5–6, n. 17 above.

4.3. QUALITATIVE CRITERIA

In addition to the quantitative criteria, the Commission also requires NRAs to examine other criteria. These criteria are also important to sub-national geographic market definition. Nevertheless, it is impossible to establish numerical thresholds, which is the reason to categorize them as qualitative criteria. They include geographically differentiated pricing, stable market boundaries, marketing strategy and contiguous market boundaries. These criteria usually serve as correction factors to check the validity of the conclusion based on the three quantitative criteria.

4.3.1. *Geographically Differentiated Pricing*

Pricing is another indicator of competitive conditions, as different competitive conditions usually end with different pricing. Supposing an incumbent operator maintains a national uniform price even when confronted with regional heterogeneous conditions of competition, this incumbent has to strike a balance between setting the monopoly price in areas where it is dominant and setting a competitive price in areas where it is not. The final price would probably be set above the competitive level.⁶⁸ Competitors located in areas where the incumbent is not dominant can take advantage of this by setting their price below the incumbent's, but equal to or also above the competitive level. The competition exerted by these alternative operators will erode the incumbent's market power in those areas. To a certain extent, the incumbent can make no profit by maintaining a national uniform price and eventually the rational choice for this incumbent must be to differentiate prices according to the competitive conditions in different regions.⁶⁹ Therefore, the principle to assess geographically differentiated prices is that a national uniform price of the incumbent suggests a common competitive constraint across the country, hence, a national market, whereas geographically differentiated pricing of the incumbent indicates various competitive conditions, then sub-national markets.

Nevertheless, before applying this principle NRAs should investigate whether the pricing on the market is the result of competition. If a national uniform price is the outcome of regulation, it cannot be a credible indicator of a national geographic market.⁷⁰ Even if it is not the result of regulation, NRAs should further examine whether it is the consequence of difference in competitive conditions or the consequence of difference in costs. Only the former can be evidence of sub-national markets.⁷¹

⁶⁸ It would be irrational for the incumbent to set the level of the national uniform price below the competitive level (it would make a loss) or equal to the competitive level (it would make loss in the areas where it is dominant and it would not be possible to subsidize the loss).

⁶⁹ ERG Position, 14–15, n. 10 above.

⁷⁰ ERG Position, 15, n. 10 above. It is typically possible for NRAs to fix the price for an electronic communication service. Nevertheless, it does not typically exist in practice on wholesale markets. Nowadays most price-related regulations are cost oriented.

⁷¹ Joint Cases ES/2008/0804 and ES/2008/0805, 3 and 10, n. 8 above; and Joint Cases AT/2008/0836 and AT/2008/0838, 3, n. 17 above.

Furthermore, when all the operators on a market provide nationwide services of the same quality and with the same characteristics at the same prices, it is easy to conclude that the geographic market is national.⁷² It is also not difficult to conclude sub-national markets when both the incumbent and alternative operators apply geographically differentiated prices.⁷³ However, the situations between the two extreme cases are of a delicate matter. There is no common method to assess geographically differentiated pricing. Nevertheless, the practice within the Commission decisions suggests the following two implications. First, in some cases the geographically differentiated prices only affect a single sub-product, rather than all the products in the relevant product market. Under this situation, the existence of geographically differentiated prices of this single sub-product normally cannot be considered to have broken down the common pricing constraint throughout the whole territory. Hence it is still a national market.⁷⁴ Secondly, in some cases there are no geographically differentiated prices at wholesale level (or the wholesale prices are not observable or available) and nevertheless there are geographically differentiated prices at retail level. In this case sub-national geographic markets may still be concluded based on geographically differentiated prices at retail level.⁷⁵

However, NRAs cannot rely entirely on the boundaries of geographic prices to define the exact boundaries of geographic markets. Reasons are bifurcated. First, geographically differentiated prices may be the strategy of the incumbent to manipulate the result of geographic market definition in order to seek for deregulation in certain regions.⁷⁶ Secondly, since this approach depends on the prices at a certain time point, it risks disregarding the prospective aspects of competition over the period of market review.⁷⁷ Therefore, geographically differentiated prices cannot be a reliable indicator to define the exact boundaries of geographic markets.

4.3.2. *Stable Market Boundaries*

The Commission has repeatedly underlined the importance of the stability of sub-national market boundaries, in particular in the cases where deregulation is justified.⁷⁸ The examination of the stability aims to ensure that the current alternative competition is robust and sustainable and will not be lessened by the incumbent within the time framework of the current market review. Consequently, there involves a prospective analysis. This prospective analysis requires NRAs to investigate the following three criteria, the evolution of

⁷² Joint Cases IT/2009/0890, IT/2009/0891 and IT/2009/0892, 3–4, n. 20 above.

⁷³ Case UK/2007/0733, 4, n. 6 above; and Ofcom Broadband Consultation, 29–30, n. 37 above.

⁷⁴ Case AT/2008/0757, 3, n. 12 above; and Ofcom Leased Lines Consultation, 168, n. 37 above.

⁷⁵ Case UK/2008/0787, 3, n. 15 above; and Joint Cases PT/2008/0850 and PT/2008/0851, 4, n. 19 above.

⁷⁶ ERG Position, 15, n. 10 above.

⁷⁷ Ofcom Broadband Consultation, 58, n. 37 above.

⁷⁸ Case AT/2008/0757, 7, n. 12 above; Joint Cases AT/2008/0836 and AT/2008/0838, 5, n. 17 above; Case AT/2009/0932, 3, n. 22 above; Case FI/2008/0848, 8, n. 9 above; Case FI/2009/0900, 6, n. 21 above; Joint Cases Case FR/2008/0780 and FR/2008/0781, 11, n. 14 above; Joint Cases PT/2008/0850 and PT/2008/0851, 8, n. 19 above; Joint Cases ES/2008/0804 and ES/2008/0805, 10, n. 8 above; and Case UK/2007/0733, 8, n. 6 above.

market shares, the development of pricing behaviours, and potential competition advantages or superiority of the incumbent.

The evolution of market shares and pricing behaviours can present a relatively reliable market trend, which allows NRAs to forecast relatively accurately how market shares or prices might be expected to evolve over the next several years and whether any observed variation in current or historic market shares or prices are likely to increase, decrease, or remain relatively stable. Ideally the more points in time concerning which NRAs can provide relevant data of market shares and prices, the more reliable the prediction is. However, the collection of the necessary data is associated with a high administrative burden for operators as well as NRAs. Therefore, the ERG suggests that it is sufficient to consider two points in time to draw inferences about trends in market conditions.⁷⁹

Furthermore, competition is not sustainable when the incumbent has less or no significant market power at present, and it will nevertheless regain significant market power in the foreseeable future. Therefore, after investigating the evolution of market shares and prices NRAs should continue to take a look at the potential competitive advantage of the incumbent. For example, attention can be paid to the new technology being, or to be, launched by the incumbent. NRAs should assess whether the new technology could grant the incumbent a significant competitive advantage in the near future and thus endanger alternative competition. Concerning the draft measure related to the market of wholesale broadband access in Spain, for example, the Commission raised serious doubts on the market review conducted by the Spanish NRA. One of the Commission's comments was that the Spanish NRA did not examine the stability of the boundaries between the geographic areas, in particular whether the deployment of next generation networks was likely to modify the competitive conditions and affect any such boundaries between areas.⁸⁰

4.3.3. *Marketing Strategies*

Marketing strategy can reveal the operators' perspective on the differences in the demand and supply conditions. It can be observed by advertisements, prices, and the products of companies. A company that holds a national marketing strategy usually makes advertisement nationally, applies national pricing, and/or offers (including planning to offer) the same product to the whole nation. The fact that the operation of an alternative competitor that aims for a national marketing strategy is currently only limited to several regions does not support sub-national markets, as such market boundary would be not stable. On the other hand, the geographic boundary of a market can be considered national when the major operators hold national market strategies. For example, one of the reasons for the French NRA to consider that there were no sub-national markets in the market of

⁷⁹ ERG Position, 14, n. 10 above.

⁸⁰ Joint Cases ES/2008/0804 and ES/2008/0805, 10, n. 8 above.

wholesale broadband access was that France Télécom, the incumbent, and Free, one of the major alternative competitors, both had a national marketing strategy.⁸¹

4.3.4. *Contiguous Market Boundaries*

Since the above-mentioned criteria only relate to demand or supply conditions, their conclusion accordingly cannot guarantee that the grouped geographic units are adjacent to each other, in other words contiguous. There is great likelihood that this approach would lead to a definition of non-contiguous geographic markets, for example, a very big competitive geographic area with several tiny non-competitive geographic areas dispersing inside or vice versa. The adoption of this approach may have the potential to cause confusion and uncertainty to consumers, retail providers, and wholesale operators. Therefore, NRAs can assess whether it is more appropriate to define the geographic boundaries of relevant markets in such a way that these markets are geographically contiguous. If NRAs decide to take into account the principle of contiguity, they include small geographic units that are predominantly surrounded by areas with heterogeneous conditions of competition into the latter.

In applying the principle of contiguity NRAs should weigh the pros and cons. The main advantages to take into account the principle of contiguity are that: (1) it has the potential to reduce confusion or uncertainty that may benefit all the market players; and (2) it may be consistent with the market behaviour that operators seek to price on a broad and contiguous geographic basis and not on the basis of the criteria to define sub-national geographic markets. On the other hand, the main disadvantages are that: (1) it introduces an element of subjectivity into the geographic market definition exercise; and (2) it risks exposing consumers in an area where there is little or no competition to the exercise of market power, or in a more competitive area, the maintaining of ex ante regulation where this is no longer necessary.⁸²

In addition, the decision of whether or not to apply the principle of contiguity is also affected by the investment decisions taken on every market. For example, the investment decision of the LLU operators, the main driver of competition in the market of wholesale broadband access, is often made on a local exchange by local exchange basis, which is not necessarily contiguous. Therefore, the principle of contiguity may be not especially relevant to the market of wholesale broadband access.⁸³ Nevertheless, the definition of geographically contiguous markets is probably relevant to the market of wholesale terminating segment of leased lines since leased lines networks tend to be built incrementally.⁸⁴

⁸¹ Joint Cases Case FR/2008/0780 and Case FR/2008/0781, 5, n. 14 above.

⁸² Ofcom Broadband Consultation, 67, n. 37 above.

⁸³ *Ibid.*

⁸⁴ Ofcom Leased Lines Consultation, 172, n. 37 above.

5. CONCLUSIONS

After years of liberalization the electronic communications sector is showing such a particular development that alternative providers are increasingly investing in their own networks, especially in more densely populated areas. More specifically, the development of alternative competition presents two regional variations: (1) not every alternative operator has a national ambition and some of them have started limiting their business to certain regions; and (2) even alternative operators with national strategies, though may have no demand where they have infrastructures, will still have sub-national demand where they do not, and/or will not, have infrastructures since the customer density is too low to allow for an efficient entry. Such regional variations indicate heterogeneous conditions in competition as well as the possibility of sub-national geographic markets.

Given such development, a new method to define geographic markets has emerged as regards the electronic communications sector. The new method is such that:

- (0) NRAs conduct a preliminary analysis to check whether there are geographic competitive variations that require a further sub-national geographic market analysis;
- (1) NRAs segment the whole country into small geographic units by taking into account, firstly, the market features of every market, and secondly, the balance between granularity and feasibility; and
- (2) NRAs group together units with homogeneous competitive conditions based on the quantitative criteria (number of competitors, distribution of market shares and consumer density) and the qualitative criteria (geographically differentiated prices, stable market boundaries, marketing strategies and contiguous market boundaries).

A second consideration of the second step would reveal that the criteria involved there can also be criteria to assess significant market power.⁸⁵ Accordingly, NRAs conduct part of the significant market power assessment in the stage of market definition. In view of this fact, the core of the new method to define sub-national markets can be re-summarized as follows. First, NRAs divide the whole country into blocks where competition in any of those blocks is assumed homogeneous. This is not so different from the practice in competition law since the latter also starts its analysis from small blocks. Subsequently, they can conduct a 'simplified' significant market power assessment on each of those geographic blocks by having recourse to some key criteria that can be convenient and direct proxies of competitive conditions. Based on those criteria, NRAs differentiate the group of geographic units that can fulfil those criteria from the group that cannot, which is the very innovation of the sub-national geographic market analysis. Then a 'complete' significant market power assessment within each of the two groups is undertaken.

This new method deviates from the competition law method, that is the demand-side and supply-side substitution test, from two perspectives. First, under the competition law method the borderline between market definition and the assessment of market power is quite clear. By contrast, the two steps within the new method are mixed up to some extent, though the Commission emphasizes that the geographic market definition and the

⁸⁵ Commission Guideline, paras 72 et seq., n. 3 above.

significant market power assessment should be distinguished.⁸⁶ Furthermore, it makes the analysis of grouping geographic units more like a preliminary assessment of market power than a decisive conclusion on market definition. However, as already discussed it is a matter of compromise because the assessment of market power cannot be processed without grouping geographic units. Secondly, the new method gives considerable weight to the number of operators. This approach that disregards the identities of operators, when applied to other economic sectors, may nevertheless create difficulty within the subsequent assessment of market power. Supposing there are two geographic areas, each with two companies, it makes less sense to consider the two areas as one single geographic market if these comprise four different companies. Nevertheless, it is appropriate in the electronic communications sector where there is usually an undertaking, that is the incumbent, which has a ubiquitous network within a Member State and is present in every geographic unit. Furthermore, the purpose of the electronic communications regulation is to motivate alternative operators, regardless of their identities, to reduce the market power of the former monopolist. Thus the neglect of the identities of undertakings does not affect the subsequent assessment of significant market power.

Last but not least, sub-national geographic markets can contribute to the further development of competition in the electronic communications sector. This approach usually means to divide a Member State into two regions: a region with effective competition and a region with ineffective competition. The region with effective competition is then to be deregulated. The significance of this approach is two-fold. First, it can allow deregulation to be gradually realized from one region to another, which is extremely important for electronic communications markets where national deregulation cannot be achieved in the short term. Second, after deregulating regions with effective competition NRAs can dedicate their limited resources and efforts to regions where there is no effective competition and which require more regulatory attention.

⁸⁶ Case FI/2008/0848, 8, n. 9 above.

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 - (h) Heading levels should be clearly indicated.
 - (i) Oxford-z spelling is preferred, unless the whole article comes from an American author or the material is an extract from an American case or document.
- (15) Contributions should be posted to José Rivas, Bird & Bird, Avenue Louise 235 box 1, 1050 Brussels, Belgium or sent electronically to jose.rivas@twobirds.com or world.competition@twobirds.com