

BEREC Report on the application of the Common Position on geographic aspects of market analysis

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EXECUTIVE SUMMARY AND MAIN FINDINGS

The increasing competition in the European electronic communications markets among actors using different network infrastructure, as well as the take-up of regulated (and commercial) access services have led National Regulatory Authorities (NRAs) to pay special attention to the geographic aspects of market analysis. Operators deploying their own access infrastructure and those using the incumbent's network do not necessarily provide their services to the entirety of a national territory. They may also provide different speeds and QoS depending on the geographical area considered.

In October 2008, the European Regulators Group (ERG), a predecessor of BEREC, adopted a Common Position on geographical aspects of market analysis. This document was updated and extended by BEREC in June 2014¹ with a new Common Position on geographical aspects of market analysis (for both market definition and remedies), in which BEREC explored the circumstances under which a geographically differentiated approach to market analysis could be deemed appropriate and how this approach could be implemented. Since its publication, many NRAs have applied this Common Position in the context of market definition and remedies.

In October 2014, the EC published a new Recommendation on relevant markets², in which these geographical aspects were also addressed, and in May 2018 the EC included further guidance in its SMP guidelines³ – in line with BEREC's Common Position – on this issue.

In light of the increasing relevance of geographical segmentation, this report aims to provide an overview of experiences among NRAs applying geographical segmentation to both market definition and remedies. The report provides a snapshot regarding the markets in which geographical segmentation was applied, as of May 2018. It also identifies issues addressed by NRAs regarding the definition of sub-national markets and/or differentiated remedies, as well as the methodologies and tools used in this context.

BEREC sent out a questionnaire to all NRAs in May 2018 with the aim to understand how they have addressed geographical aspects in their latest round of market analyses. The questionnaire was answered by 33 out of 38 NRAs.

The results from the questionnaire show that, as of May 2018, 14 NRAs (all of them EU Member States) applied some form of geographic segmentation to either market definition or remedies on the markets for local access provided at a fixed location (market 3a from the Recommendation 2014/710/EU), central access provided at a fixed location for mass-market products (market 3b) and high quality access provided at a fixed location (market 4). Considering each of these markets separately, there were seven cases of geographic segmentation on market 3a, 13 on market 3b and seven on market 4 (27 cases in total). From the 27 cases, in 14 cases NRAs defined geographic markets, in 11 cases they differentiated

¹ BEREC Common Position on geographic aspects of market analysis (definition and remedies). June, 2014. BoR (14) 73. See:

https://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/common_approaches_positions/4439-berec-common-position-on-geographic-aspects-of-market-analysis-definition-and-remedies

² Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation (2014/710/EU) of 9 October 2014, see: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.295.01.0079.01.ENG

³ 2018 European Commission SMP guidelines. See <https://ec.europa.eu/digital-single-market/en/news/communication-smp-guidelines>

remedies geographically and in two cases, geographic segmentation of remedies was applied in a sub-national market. Geographic segmentation in markets other than 3a, 3b or 4 (i.e. markets from previous versions of the Recommendation on relevant markets) were rather more exceptional, with only three cases highlighted by NRAs in response to the questionnaire.

The main reasons for the growing relevance of geographic analysis observed in Markets 3a, 3b and 4 relate to the NGA rollout by both alternative and incumbent operators and (in particular on market 3b) the take-up of regulated access services. As these developments continue, geographic analysis is likely to gain further importance in the future, in particular in markets 3a and 4, where the number of cases is still low compared to market 3b. BEREC considers that a harmonised approach to this increasingly relevant issue is important to ensure consistency across EU Member States.

The replies to the questionnaire also indicated that NRAs in general adhered to the BEREC Common Position on geographic aspects of market analysis (definition and remedies), as well as to the European Commission's SMP guidelines, when applying geographic segmentation. Usually, a high number of geographic units were analysed based on a set of criteria and then these were grouped together in two or more areas where competitive conditions were largely homogeneous, in line with the BEREC Common Position.

These criteria were mostly based on "structural market indicators", such as the coverage of the alternative networks, the market share of the incumbent operator and the number of "significant" competitors, rather than on market outcomes, such as prices (either retail or wholesale) or non-price features of the products.

NRAs have ended up with a range of outcomes, in terms of differentiating markets and remedies geographically, reflecting differences in national conditions. Neither the EC nor the national courts have challenged geographical market analyses (although not all cases challenged at national courts were closed by the time the present report was made). This suggests that the current regime allows substantial scope for NRAs to exercise their judgement in reflecting local conditions.

Given these results, and since no major issues with the BEREC Common Position on geographical aspects of market analysis were raised in the replies to the questionnaire, BEREC currently does not see a need to revise the Common Position.

1. INTRODUCTION AND OBJECTIVES

The increasing competition in the European telecommunications markets among actors using different network infrastructure, as well as the take-up of regulated access services, have led NRAs to pay special attention to the geographic aspects of market analysis. Operators deploying their own access infrastructure or those using the incumbent's network do not necessarily provide their services to the entirety of a national territory. They may also provide different speeds and QoS depending on the geographical area considered.

When defining relevant markets in accordance with Article 15(3) of Directive 2009/140/EC, national regulatory authorities should identify geographic areas where the conditions of competition are similar or sufficiently homogeneous, and which can be distinguished from neighboring areas in which the prevailing conditions of competition are appreciably different. NRAs have to pay attention to whether the potential Significant Market Power (SMP) operator acts uniformly across its network area (territory) or whether it faces appreciably different conditions of competition to a degree that its activities are constrained in some areas but not in others.

In October 2008, the European Regulators Group (ERG), a predecessor of BEREC, adopted a Common Position on geographical aspects of market analysis. This document was updated and extended by BEREC in June 2014 with a new Common Position on these issues⁴, in which BEREC explored the circumstances under which a geographically differentiated approach to market analysis could be deemed appropriate and how this approach could be implemented. Since its publication, many NRAs have applied this Common Position in the context of market definition and remedies.

In October 2014, the European Commission (EC) published a new Recommendation on relevant markets⁵, in which these geographical aspects were also addressed, and in April 2018 the EC included further guidance in its SMP guidelines⁶ – in line with BEREC's Common Position – on this issue.

In light of the increasing relevance of geographical segmentation, this report aims to provide an overview of experiences among NRAs applying geographical segmentation to both market definition and remedies. The report provides a snapshot regarding the markets in which geographical segmentation was applied, as of May 2018. It also identifies issues addressed by NRAs regarding the definition of sub-national markets and/or differentiated remedies, as well as the methodologies and tools used in this context.

Section 2 of this document provides an overview of relevant background documents. Sections 3 to 5 summarise the findings from BEREC's data collection, with section 3 providing a first overview, section 4 describing details on geographic segmentation applied on markets 3a, 3b

⁴ BEREC Common Position on geographic aspects of market analysis (definition and remedies). June, 2014. BoR (14) 73. See:

https://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/common_approaches_positions/4439-berec-common-position-on-geographic-aspects-of-market-analysis-definition-and-remedies

⁵ Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation (2014/710/EU) of 9 October 2014, see: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2014.295.01.0079.01.ENG

⁶ 2018 European Commission SMP guidelines. See <https://ec.europa.eu/digital-single-market/en/news/communication-smp-guidelines>

and 4⁷ and section 5 briefly discussing geographic segmentation on other markets. Section 6 concludes.

2. RELEVANT BACKGROUND DOCUMENTS

BEREC published an updated Common Position on geographical aspects of market definition on June 5, 2014⁸ (BEREC CP), which can be considered as primary guidance to NRAs for the task of geographical market definition. The basis of this Common Position is the underlying European regulatory framework, as well as the observations from the European Commission on cases in the context of Article 7/7a procedures related to geographical market segmentation.

NRAs are obliged to define relevant geographic markets according to Article 15 of the Framework Directive⁹, taking utmost account of the Recommendation on relevant product and service markets¹⁰ and the guidelines for market analysis and the assessment of significant market power (SMP guidelines)¹¹. Given the aim of the present report, the relevant documents for assessing geographical aspects of market analysis can be regarded as: the BEREC Common Position, the Commission's Recommendation on relevant markets, its accompanying Explanatory Note¹² and the SMP guidelines.

SMP Guidelines

The SMP guidelines provide general guidance for procedures of market definition based on competition law. While the SMP guidelines were updated in May 2018, the market definitions addressed in this report were carried out by the NRAs applying the 2002 SMP guidelines, which were still in place at the moment of the relevant market reviews. Thus, we first summarise the advice contained in the 2002 guidelines. According to the guidelines, one possible way to define the relevant market should be the application of the SSNIP test within a given geographic area to identify the relevant product market.¹³ The next step is to identify geographic markets, which comprise areas in which the conditions of competition are similar

⁷ Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation (2014/710/EU) from October 9 2014, see: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014H0710&from=en>.

⁸ BoR (14) 73: BEREC Common position on geographical aspects of market analysis (definition and remedies), 05.06.2014. This CP is an update of the 2008 Common Position on the same topic.

⁹ Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (Framework Directive), 7. March 2002.

¹⁰ Commission Recommendation on relevant product and service markets within the electronic communication sector susceptible to *ex ante* regulation (2014/710/EU) from October 9 2014, see: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014H0710&from=en>.

¹¹ Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C 165/03), 11.07.2002 (SMP guidelines 2002) and Communication from the Commission – Guidelines on market analysis and the assessment of significant market power under the EU regulatory framework for electronic communications networks and services (2018/C 159/01), 07.05.2018 (SMP guidelines 2018). While the SMP guidelines 2018 effectively replaced the SMP guidelines 2002 on the 7 May 2018, the market definitions addressed by the present report were still carried out while the latter version was in place. This remains largely a technical detail however, since the update of the SMP guidelines didn't bring any visible changes with regards to the definition of geographic markets.

¹² Explanatory Note accompanying the document Commission Recommendation on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation (2014/710/EU) from October 9, 2014. See: <https://ec.europa.eu/digital-single-market/en/news/explanatory-note-accompanying-commission-recommendation-relevant-product-and-service-markets>

¹³ SMP guidelines 2002, para. 40 and 41.

or sufficiently homogenous to a degree that is distinguishable from neighbouring areas of the same relevant product market.¹⁴

The limits of any geographic market are defined applying the same considerations on demand- and supply-side substitution that are applied when defining the relevant product market.¹⁵ Thus, with regard to demand-side substitution, geographic patterns of purchase and consumers' preferences are to be examined.¹⁶ For supply-side substitution, short-term market entry from operators active in other geographic areas under SSNIP-considerations should lead to an expanded geographic market definition that includes the respective areas.

The guidelines specifically highlight two main criteria to determine the geographical scope of the relevant market: a) the area covered by a network and b) the existence of legal and other regulatory barriers.¹⁷ While the same considerations on chain substitutability applicable to product markets are also relevant for geographic markets, the guidelines point out that a finding of chain substitutability should be substantiated adequately, in order to prevent an excessive widening of the market scope.¹⁸

The 2018 SMP guidelines underline that both the analysis of the relevant product market and the assessment of geographic areas should be carried out by applying a modified Greenfield approach, i.e. by analysing the retail market absent regulatory intervention based on SMP in the wholesale market concerned and any related wholesale markets further upstream.¹⁹ They also acknowledge the requirements on the actual geographic units,²⁰ which were originally addressed in the Explanatory Note accompanying the 2014 Recommendation on relevant product and service markets. They also point to the possibility of geographical differentiation at the remedies stage if regional differences are found but are not considered sufficient to support different geographic markets or SMP findings.²¹ In general, with regard to geographic aspects of market analyses, the 2018 SMP guidelines are largely in line with the BEREC CP and the 2014 Recommendation on relevant product and service markets.

Recommendation on relevant product and service markets 2014

The 2014 Recommendation on relevant product and service markets addresses the question as to whether a potential SMP operator acts uniformly across its network area or whether it faces different conditions of competition to a degree that its activities are constrained in some areas but not in others.²² The Explanatory Note accompanying the Recommendation states that small scale entry in limited geographic areas may not necessarily lead to market segmentation, as those areas may still be considered to be part of a wider defined market.²³ Moreover, the Explanatory Note refers to the established practice under Article 7 of the Framework Directive that geographic units should be of an appropriate size, in the sense that competitive conditions within the unit don't vary significantly, yet they should not be so small

¹⁴ SMP guidelines 2002, para. 56.

¹⁵ SMP guidelines 2002, para. 57.

¹⁶ SMP guidelines 2002, para. 58.

¹⁷ SMP guidelines 2002, para. 59.

¹⁸ SMP guidelines 2002, para. 62.

¹⁹ SMP guidelines 2018, para. 17.

²⁰ SMP guidelines 2018, para. 49.

²¹ SMP guidelines 2018, para. 50.

²² Recommendation on relevant product and service markets 2014, recital 7.

²³ Explanatory Note 2014, page 9.

to a degree that might lead to an extensive micro-analysis and a fragmentation of markets.²⁴ Additionally, those units should be able to reflect the network structure of all relevant operators and have clear and stable boundaries over time.

The Explanatory Note emphasises that any geographic analysis should be carried out by NRAs following a modified Greenfield approach.²⁵ This specifically means that the competitive conditions at the retail level are to be examined applying suitable criteria under the assumption that no SMP-based regulatory intervention occurs at the most upstream-level of related wholesale services (e.g. market 3a, Wholesale local access provided at a fixed location). After imposing regulatory remedies at the most upstream wholesale level, a "modified Greenfield approach" should be carried out at retail level in order to determine whether ex ante regulation of a more downstream market is necessary as well in order to remedy any remaining competition problem (e.g. market 3b, wholesale central access provided at a fixed location for mass-market products).²⁶ Depending on the product or service market concerned, suitable criteria for this task might be the number and size of potential competitors, the distribution of market shares, price differences or variation in prices across geographic areas, differences in commercial offers and marketing strategies. To assess supply-side substitutability, actual competitors have to be identified, while potential entrants under SSNIP-conditions should be taken into account either (preferably) at the level of SMP analysis or in market definition.²⁷

If sub-national markets are not clearly identified under the above mentioned set of criteria, the possibility remains to address varying competitive constraints on the SMP operator at the remedies stage (geographically differentiated constraints on the SMP operator exist, but they are not substantially and objectively different and stable over time).²⁸

BEREC Common Position on geographical aspects of market analysis²⁹

BEREC's Common Position (BEREC CP) carries out a comprehensive analysis on Article 7 cases related to geographic market segmentation up to the date of its publication. While the BEREC CP addresses all electronic communications markets included in the Recommendations on relevant markets, BEREC pointed out that the broadband access markets³⁰ are most likely to be prone to varying competitive conditions that might lead to the definition of sub-national markets.³¹ Due to competitive pressure from local loop unbundling imposed on market 3a, this may be particularly the case for market 3b. However, the increasing development of alternative infrastructures (e.g. fibre) with varying take-up across a country may lead to varying competitive conditions also in market 3a. Given the increase in broadband supply and take-up, BEREC found that the geographical analysis in these markets was becoming more relevant and, at the same time, presented more complexities from an analytical point of view.

²⁴ Explanatory Note 2014, page 14.

²⁵ Explanatory Note 2014, page 13.

²⁶ Explanatory Note 2014, page 37.

²⁷ Explanatory Note 2014, page 14.

²⁸ Explanatory Note 2014, page 14.

²⁹ BoR (14) 73 from 05.06.2014, see

https://berec.europa.eu/eng/document_register/subject_matter/berec/download/0/4439-berec-common-position-on-geographic-aspe_0.pdf

³⁰ Markets 3a and 3b of Recommendation 2014/710/EU (former markets 4 and 5).

³¹ BoR (14) 73, pages 4, 15-16.

The BEREC CP describes the following steps when an analysis of geographic markets has to be carried out. To avoid a time consuming process for a full geographical analysis, NRAs could consider a preliminary analysis, using a set of indicators identified by BEREC:³²

- Coverage of alternative regional/local infrastructures that are suitable to exert competitive constraints on the services of the SMP operator(s)³³.
- Number and relative size of operators offering retail services in a particular geographic area.
- Geographical differences or uniformity of prices. This has to be looked at carefully, as uniform pricing by the incumbent operator might not necessarily lead to the conclusion of a nationwide market if the prices of alternative operators vary regionally. Furthermore, even if the incumbent's prices differ regionally, it has to be checked if any price differences reflect varying underlying costs or stem from distinguishable competitive constraints.

When carrying out the actual geographical market analysis, BEREC highlights that particular care has to be taken when choosing the appropriate geographic unit, as in some countries retail conditions may be primarily driven by wholesale access and alternative infrastructure, while in other countries the retail conditions may be primarily driven by inter-platform competition.³⁴ Generally, the following criteria for the geographic units should be met:

- They are mutually exclusive and less than national;
- The network structure of all relevant operators and the services sold on the market can be mapped onto the geographic units;
- They have clear and stable boundaries;
- They are small enough for competitive conditions to be unlikely to vary significantly within the unit, but at the same time large enough that the burden on operators and NRAs with regard to data delivery and analysis is reasonable.

Once the geographic unit has been identified, BEREC considers the following indicators for competitive constraints:³⁵

- The barriers to enter the market;
- The number of operators that exert a relevant competitive constraint on the (supposed) SMP operator;
- The market shares of the SMP operator and the alternative operators;
- Price differences;
- Other aspects that may derive from relevant competitive differences between the geographic areas (e.g. marketing strategies, commercial offers and functionalities of the offers, nature of demand, etc.).

³² BoR (14) 73, pages 14-15.

³³ BEREC points out that, with regard to market 3b, competitive constraints stemming from intra-platform competition via regulated access more upstream (e.g. LLU) cannot be considered on market 3a under a modified Greenfield approach. Thus, the likelihood of geographical markets and deregulation on market 3a is lower, as competitive constraints are only asserted by alternative infrastructures (CP pages 19 – 21).

³⁴ BoR (14) 73, page 21.

³⁵ BoR (14) 73, page 25.

Competitive conditions do not have to be perfectly homogeneous within the boundaries of one geographic market, but rather should be sufficiently similar.³⁶ NRAs will have to find suitable thresholds for the criteria listed above to assess whether they point to a more competitive situation in a given geographic unit compared to other areas (e.g. a certain number of operators, a certain percentage in market shares, etc.). The criteria identified as relevant by the NRAs should be applied cumulatively.

If the evidence found points to varying competitive conditions, but the differences between geographic areas are not yet sufficiently stable, a national market could still be defined.³⁷ Geographical variations in competitive conditions can then be addressed at the remedies stage (e.g. price control obligations might be lifted for some areas, if sufficient safeguards exist). The determination of whether differences in competitive conditions are sufficiently stable or sustainable remains largely open to interpretation, but it has been subject to Article 7 procedures in the past.³⁸ Specifically, the European Commission pointed out that the NRA has to check if NGA deployment is likely to modify competitive conditions and affect the boundaries between the geographic areas considered. However, in the case concerned, it was the geographical differentiation of remedies that was challenged, rather than the definition of sub-national markets.

Before we show in depth how NRAs have applied the above mentioned criteria in markets 3a, 3b and 4, we will give an overview of which Member States have addressed geographical issues either at the stage of market definition or at the remedies stage (section 3).

3. GENERAL VIEW ON MARKET AND REMEDIES SEGMENTATION

BEREC sent out a questionnaire in May 2018 to all NRAs, with the aim to understand how they have addressed the assessment of the geographical dimension in their latest round of market analyses. NRAs were asked about the rationale and the criteria applied for choosing whether to differentiate remedies or to define sub-national markets, about the reasons for geographic variations, the geographic units considered and how they were analysed. The full questionnaire can be found in Annex 1.

The questionnaire was answered by 33 NRAs (out of 38). A first overview of cases with and without geographic segmentation is given in Table 1.

³⁶ BoR (14) 73, page 29.

³⁷ BoR (14) 73, page 35.

³⁸ Case ES/2008/0805: The EC opened an Article 7 Phase II procedure and expressed its view that in this specific case the evidence didn't support regional differentiation. In contrast, BEREC's predecessor, IRG, mainly supported CMT's segmentation of remedies. However, CMT modified its draft measure and defined the market and the remedies along national lines.

Table 1: Overview of cases with/without geographic segmentation (as of May 2018)

	market 3a	market 3b	market 4	other markets
geographic market segmentation		BE ³⁹ , DE, ES, IE, PL	AT	BE ⁴⁰ , ES ⁴¹
		HU		
		FI, UK		
		PT ^{42,43}		
geographic differentiation of remedies in a national market	CY, ES	SI	IE ⁴⁴	
		FR		
		DK	PT ⁴³	
		BE ³⁹		
no geographic segmentation	BG, CH, CZ, EE, HR, GR, IT, LI, LT,LU, LV, ME, MT, NL, NO, RO, ⁴⁵ RS, SE, SK			

According to the answers to the questionnaire, 19 NRAs out of 33 have not so far applied geographical segmentation in their market analyses, neither at the stage of market definition, nor when imposing remedies.

Among the 14 NRAs that applied geographical segmentation in their last round of market analyses (either when defining markets or when imposing remedies), three of them (BIPT, FICORA and OFCOM) have done it in markets 3a, 3b and 4, and five of them have done it in two different markets (CNMC, DBA and NMHH in market 3a and 3b, and ARCEP and ANACOM in markets 4 and 3b). Considered market by market, there are seven cases of geographic segmentation on market 3a, 13⁴⁶ on market 3b and seven on market 4 (27 cases in total). There are only three cases of geographic segmentation in markets other than 3a, 3b or 4. In 14 cases NRAs defined geographic markets, in 11 cases they differentiated remedies geographically and in two cases, geographic segmentation of remedies was applied in a sub-national market.

In most of the cases there is a national incumbent operator and geographic considerations were a consequence of differences in competitive conditions across the territory due to differences in the infrastructure roll-out and/or take-up of regulated wholesale access services by alternative operators. There are also some countries, however, where several incumbent operators are active in different areas of the country. This scenario in itself gives rise to geographic considerations, which are not necessarily of the same nature as the ones considered in the previous/standard scenario. These countries are Finland (with 21 regional incumbent operators), Hungary (with three) and the UK (with two – BT and KCOM – the latter active in a relatively small area – the “Hull area”, which is the city of Kingston upon Hull and the surrounding area in the North of England). In addition to these, BIPT (Belgium) considers

³⁹ BE has defined two separate 3b markets for: (a) copper/fibre (differentiation of remedies) and (b) cable (geographic market segmentation and differentiation of remedies).

⁴⁰ BE other: Retail and wholesale broadcasting markets

⁴¹ ES other: Wholesale trunk segments of leased lines (market 14/2003)

⁴² PT other: Wholesale trunk segments of leased lines (market 14/2003)

⁴³ PT market 4: ANACOM defined sub-national geographic markets and then differentiated remedies geographically within the sub-national markets.

⁴⁴ IE: Terminating segments of leased lines (market 6/2007)

⁴⁵ In Romania, the markets 3a, 3b and 4 have all been deregulated.

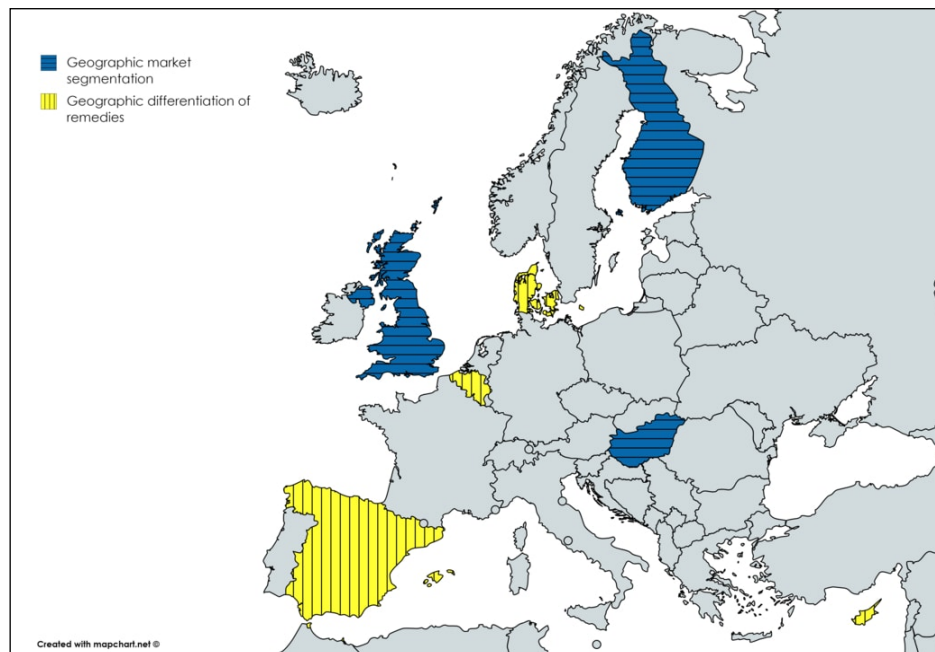
⁴⁶ If the market 3b case in Belgium is considered as two cases.

three areas corresponding to the coverage areas of the three cable networks in the market definition of market 3b for access to cable networks.

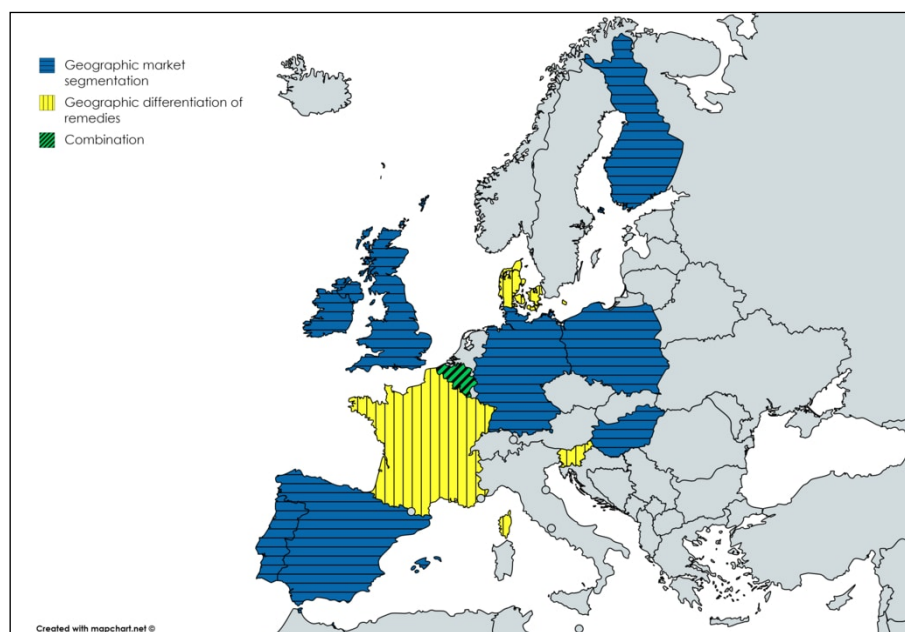
The UK market 3a is a special case within this category because the Hull area is small and therefore a further geographic segmentation of markets or remedies within this area based on an analysis of several geographic units has not been applied as it was done in the rest of the cases considered in this report (including the Finnish, Hungarian and Belgian cases).

The following three maps show, by market, the countries, which applied geographic segmentation, and whether geographic markets were defined or remedies were geographically differentiated.

Map 1: Regulatory approaches in Europe – Market 3a



Map 2: Regulatory approaches in Europe – Market 3b



Map 3: Regulatory approaches in Europe – Market 4

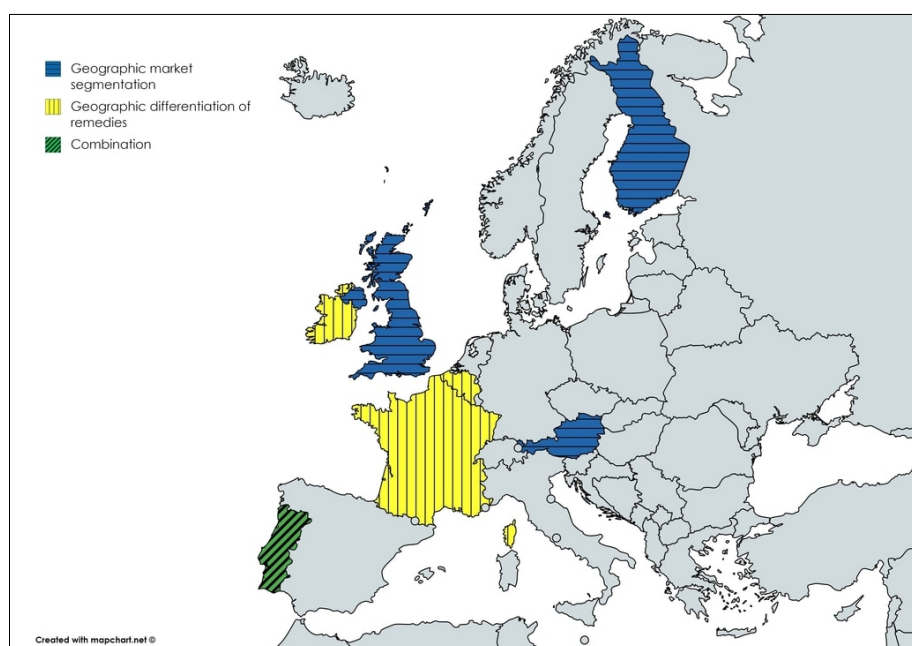


Table 2 shows the conclusions concerning the geographical aspects of market analysis, considering each market separately.⁴⁷ Considering the definition of sub-national geographic markets and the geographic differentiation of remedies together, market 3b is outstanding with 13 cases (or twelve, if the Belgium case with two separate product markets within 3b is considered as one case).

Table 2: What was the conclusion concerning the geographical aspects of market analysis (on the relevant market)?

	M 3a	M 3b	M 4
Definition of sub-national geographical markets	3	8	3
Geographic differentiation of remedies in a national market	4	4	3
Geographic differentiation of remedies in a sub-national geographic market	0	1	1
Other	0	0	0
Number of cases	7	13⁴⁸	7

While on market 3a more NRAs differentiated remedies (compared to defining sub-national geographic markets), it is the other way around for markets 3b and 4. The findings also show that sub-national markets have been defined three times as often in market 3b compared to market 3a. This is probably the result of increasing and stronger geographical differences in competitive conditions in market 3b due to the remedies imposed on market 3a in several countries. In fact, under modified Greenfield assumptions, the competitive conditions in market 3b are affected by the wholesale access products offered in market 3a, as well as by the associated retail offers.. This increases the likelihood of geographically varying competitive

⁴⁷ The tables in the main text only report the number of countries in a certain category. Annex 2 contains tables with country abbreviations.

⁴⁸ For the purpose of this table, the market 3b case in Belgium is considered as two cases.

conditions because wholesale take-up usually does not occur uniformly across geographic areas, but is rather centred in high-density areas.

In market 3b, BIPT (Belgium) not only defined sub-national geographic markets, but also geographically differentiated the remedies in a national market. This is mainly due to the separation BIPT made between 3b product markets for copper/fibre (3b1) and cable (3b2). On the former, the market definition is national - as it is the case for market 3a - and remedies are geographically differentiated based on the number of NGA networks (in both market 3a and 3b1). Remedies are geographically differentiated based on the number of NGA networks. On the latter, the market definition was differentiated according to each cable operator's network coverage area.

In market 4, ANACOM (Portugal) defined sub-national geographic markets and further differentiated the remedies geographically within the non-competitive area by not imposing a cost orientation obligation in a set of geographic units that were considered as "non-competitive at the moment of the analysis", but which showed some signs of prospective competition in the medium and long term.

NRAs were also asked about the reasons why they opted for sub-national geographic markets or geographically differentiated remedies. The main reason for NRAs opting for the definition of sub-national geographic markets related to the existence of stable conditions within the boundaries of sub-national geography in markets 3a, 3b and 4 (see Table 3).

Table 3: Why did you choose to define geographic markets and not to differentiate remedies geographically? (multiple answers are possible)

	M 3a	M 3b	M 4
The competitive conditions within boundaries of the different sub-national geographical markets are stable enough	3	8	3
Other reasons	1	4	2
Number of cases (with definition of sub-national geographic markets)	3	9	3

The reasons given by NRAs for opting for differentiating remedies related to differences in competitive conditions (namely, its technological basis, i.e. fibre or copper, and coverage) across areas (despite the fact that the incumbent has an SMP position in a national market) ("Other reason" in Table 4).

Only one NRA (AKOS, Slovenia) referred as an additional reason to the lack of stable competitive conditions within the relevant boundaries as (an additional) reason to differentiate remedies in market 3b, mainly due to ongoing network deployment/upgrades and market consolidations.

Table 4: Why did you choose to differentiate remedies geographically and not to define geographic markets?

	M 3a	M 3b	M 4
The competitive conditions within boundaries of the different sub-national geographical markets are not stable enough	0	1	0
Other reasons	4	4	3
Number of cases (with geographically differentiated remedies)	4	4	3

4. GEOGRAPHICAL SEGMENTATION ON MARKETS 3a/3b AND 4

This section provides details on the geographic analyses made on markets 3a, 3b and 4. It discusses the reasons for geographic variations, which geographic units were chosen and how they were analysed and grouped together, issues concerning the SMP analysis, how future developments were taken into account, practical issues, and issues raised by the EC or national courts.

Assessment of competitive conditions on the retail market

NRAs that either defined geographic markets or differentiated remedies geographically were asked whether they assessed the geographical differences in the competitive conditions that prevail at the retail level in the absence of wholesale ex-ante regulation. The results are shown in Table 5.

Table 5: Did you start the geographical analysis by assessing geographical differences in the competitive conditions prevailing at the retail level in the absence of wholesale ex-ante regulation?

	M 3a	M 3b	M 4
Yes	5	8	3
No	1	3	4
Other ⁴⁹	1	1	0
Number of cases	7	12⁵⁰	7

The majority of NRAs carried out such analysis when reviewing markets 3a (five out of seven responded affirmatively) and 3b (eight out of 12). This is not the case with market 4, where three out of seven NRAs responded that they had assessed the geographical differences in the retail market in this way.

Most of the NRAs which started with an analysis at the retail level noted that the retail analysis was an important basis for the wholesale analysis. For example, CNMC (Spain), UKE (Poland), NMHH (Hungary) and BNetzA (Germany) identified sub-national markets concerning market 3b based on the differences in competitive market conditions that they observed at the retail level.

The reasons that NRAs set out to explain the lack of analysis of the competitive conditions at the retail level are the following:

- in the absence of regulation, there would likely be no commercial sales of wholesale access to third parties, therefore the pattern of retail competition would resemble the pattern of competition at the wholesale level (OFCOM, UK – in markets 3a, 3b and 4);
- Ethernet services and dark fibre are an input to any communication service and cannot be attributed to a particular retail market (RTR, Austria – in market 4).

⁴⁹ BIPT leaves this question open and explains that the review of markets 3a and 3b (i) contains a description of the market conditions at the retail level, but (ii) does not define the geographic market at the retail level because the regulation was imposed on the wholesale level.

⁵⁰ In this section, the Belgian 3b case is considered as only one case, since the answers to the questions dealt with in this section are the same for both sub-markets copper/fibre (3b1) and cable (3b2).

Reasons for geographic variations

NRAs that either defined geographic markets or differentiated remedies geographically were asked about the main reasons for competitive variations across the territory. The results are shown in Table 6.

Table 6: Which of the following answers provide(s) the main reasons for competitive variations across the territory? (multiple answers are possible)⁵¹

Geographic differences in ...	M 3a	M 3b	M 4
Coverage of alternative networks (e.g. cable or fibre).	4	9	5
The take-up of regulated access services in an upstream market.	1	5	1
Retail market shares of the incumbent.	1	6	1
Wholesale market shares of the incumbent.	2	6	4
Geographical differences resulting from commercial wholesale offers of alternative operators.	1	2	2
Retail prices of the incumbent operator and/or alternative operators.	0	2	1
Retail commercial offers (other than price) or marketing strategies of the incumbent operator and/or alternative operators.	0	1	0
Wholesale prices of the incumbent operator and/or alternative operators.	0	1	2
Population density (economies of scale)	0	3	2
Other	3	1	3
number of cases	7	12	7

The coverage of alternative networks is the main factor that explains the variations in competitive conditions: four out of seven NRAs have considered this factor in market 3a while nine NRAs out of 12 in market 3b. As regards market 4, this factor is slightly more relevant than the wholesale market share of the incumbent because four NRAs out of seven selected the latter while five NRAs chose the former.⁵²

The differences in both the wholesale and the retail market shares of the incumbent are further important criteria to explain the variations in competitive conditions in market 3b (six out of twelve NRAs considered these criteria). The take up of regulated access services in an upstream market is equally important in market 3b, as market 3a is an upstream market of 3b.

Only a few NRAs considered that the differences in commercial wholesale offers or the characteristics of retail commercial offers (i.e. price and non-price related) of the incumbent and/or alternative operators contributed to explain geographic variations in competitive conditions.

The differences in wholesale prices of the incumbent (and/or alternative operators) are not particularly important either, with the exception of market 4 where two NRAs (one third of the total) referred to this element.

With regard to other reasons, FICORA (Finland) mentioned that there are different incumbent operators in different regions in all markets considered and OFCOM (UK) mentioned the density of business demand in market 4.

⁵¹ For example, as to market 3b, nine out of twelve NRAs selected more than one option.

⁵² Since multiple-choice answers are possible it is worth clarifying that the five NRAs that have selected the coverage of alternative networks are not necessarily different from the four NRAs that have selected the wholesale market share of the incumbent. Indeed four of them have chosen both; i.e. ANACOM, OFCOM, ARCEP and RTR.

In summary, it can be said that a variety of factors are taken into account by NRAs, although the coverage of the alternative operators' networks appears to be the most important one.

Geographic units

NRAs were further asked which geographic unit was chosen for the analysis, why this unit was chosen and how many units were considered.

Table 7: What geographic unit have you applied for the geographical segmentation? (multiple answers are possible)

	M 3a	M 3b	M 4
Network based on MDF-level ⁵³ of the incumbent(s)	1	5	2
Network based on ODF-level ⁵⁴ of the incumbent(s)	0	0	0
Network of alternative operators	0	0	0
Administrative units (municipality, district, commune) or postal code areas	5	7	5
Other	3	1	1
Number of cases	7	12	7

The type of geographic unit NRAs have chosen is depicted in Table 7. In markets 3a and 4, most NRAs did not use network-based geographic units, but rather used administrative units or postal code areas. Exceptions are CNMC and ARCEP. CNMC considered both municipalities and MDF in market 3a because it imposed differentiated geographic remedies on a number of municipalities that are chosen according to an analysis at the level of the incumbent operator's MDF exchanges. ARCEP followed a dual approach for market 4 because it made use of MDFs when imposing differentiated remedies on the copper network, but used municipalities when remedies related to the access to the incumbent operator's NGA network.

The situation in market 3b is more balanced: seven NRAs considered either administrative or postal code units while five opted for a network-based unit, in particular the MDF level of the incumbent. Since competition in market 3b is often (also) based on unbundling, the network structure of the incumbent is more important (compared to markets 3a or 4). Neither the ODF-level of the incumbent nor the network of alternative operators were used as geographic units in any of the markets.

In the category "other", there is COMREG (Ireland), which based the segmentation in market 4 on the aggregation node network topology of the incumbent, BIPT (Belgium), which used the network coverage of cable operators for markets 3a and 3b and OCECPR (Cyprus), which used a distinction between urban and rural areas in market 3a.

It can also be observed that FICORA (Finland), NMHH (Hungary), DBA (Denmark) and OFCOM (UK)⁵⁵, which applied market segmentation for both market 3a and 3b, used the same geographic unit for both markets. Despite the fact that CNMC considered the municipality when imposing geographically differentiated remedies in market 3a and the MDF when defining sub-national markets for market 3b, it used the MDF as the primary geographic unit for the analysis in both markets 3a and 3b.

⁵³ MDF: Main Distribution Frame

⁵⁴ ODF: Optical Distribution Frame

⁵⁵ The Hull Area – with a different incumbent operator – is defined as a separate sub-national market for both markets 3a and 3b. With regard to the rest of the territory, OFCOM further defines two sub-national markets for market 3b, whereas market 3a is considered to be a single market.

With regard to why a particular geographic unit was chosen, the majority of NRAs stated that the units: (i) are small enough to ensure homogeneity within the unit and large enough to meaningfully analyse competitive conditions; and (ii) have stable and well understandable/established boundaries (see Table 8). In particular, in market 3b there were also several NRAs which responded that the network topology of operators matches the borders of the geographic unit (e.g. because of importance of LLU). Regarding other reasons, OFCOM (UK) mentioned consistency over time, BNetzA (Germany) mentioned the availability of data and CNMC (Spain) argued that investment decisions are taken at the municipality level. OCECPR (Cyprus) mentioned the levels of past and expected investment.

Table 8: Why did you choose that geographic unit? (multiple answers are possible)

	M 3a	M 3b	M 4
Network topology of operators matches the borders of the geographic unit (e.g. because of importance of LLU).	3	7	1
Stable and well understandable boundaries.	6	9	5
The unit is small enough to ensure homogeneity within the unit and large enough to meaningfully analyse competitive conditions.	5	11	5
Other reason	2	2	1
Number of cases	7	12	7

The number of units considered varies widely and is, of course, also dependent to some extent on the size of the country. Usually, there are several hundreds or even thousands of units for which NRAs collect and analyse information.

But there were also three cases with a limited number of geographic units: BIPT (Belgium) considered three different areas in the market definition of market 3b2 (market 3b for access to cable networks), which corresponded to the coverage areas of the three cable network operators, Telenet, Brutélé and Nethys.⁵⁶ OCECPR (Cyprus) distinguished between urban and rural areas for market 3a, based on the definition of the National statistical office. OFCOM (UK) considered the UK excluding the Hull area separately from the Hull area for market 3a (as there is a different incumbent operator in the Hull area).

Aggregation of geographic units

After analysing the geographic units, in the next step they are usually grouped together according to the homogeneity of competitive conditions (e.g. in a competitive and a non-competitive area). For this aggregation, different criteria can be used. Table 9 shows the criteria which have been used by the NRAs that applied a geographic segmentation.

⁵⁶ For the geographic differentiation of remedies, in both market 3a and market 3b, approximately 20,000 areas were considered.

Table 9: What were the relevant criteria applied to aggregate the geographic units into homogeneous sub-national markets (or equivalently, areas where geographically differentiated remedies were imposed)? (multiple answers are possible)

	M 3a	M 3b	M 4
Number of competitors	1	6	5
Number of competitors with an individual market share above a certain threshold	2	3	0
Number of competitors with an individual infrastructure coverage above a certain threshold	4	7	2
Market share of the incumbent operator below a certain threshold	3	8	3
Minimum volume of total access lines supplied (by the incumbent and alternative operators).	0	1	2
Population or total number of (potential) access lines in the geographic unit	1	3	1
Price differences	0	0	0
Differences in the existence or terms of wholesale commercial offers	0	0	0
Differences in retail commercial offers (other than price) or marketing strategies	0	0	0
Others	5	8	2
Number of cases	7	12	7

There are two main indicators which are used to aggregate geographic units: (i) the number of competitors (including any of the first three criteria) and (ii) the market share of the incumbent operator. In 13 of the 26 cases, the two indicators (one or more of the criteria related to the number of competitors and the market share of the incumbent operator) were considered together (as cumulative criteria). In some of these cases other criteria were also used (see Annex 2, Table for Q10).

The number of competitors was, in some cases, combined with certain conditions, for example if the operator has a certain market share or a certain coverage (“significance threshold”). While the significance threshold for market share was set at either 10% or 15%, the significance threshold for coverage varied more widely between 20% and 75% (the latter being cumulative coverage, however). The threshold for the number of operators (or significant operators) was often set at three (or equivalently two competitors in addition to the incumbent operator), but in some cases it was set at two or four (including the incumbent operator). The threshold for the incumbent’s market share (upper limit) was set at either 40% or 50%.

Table 10: Thresholds applied

	M 3a	M 3b	M 4
Number of (“significant”) alternative operators	2 (ES, HU)	1 (FR), 2(PT, HU), 3 (DE)	1 (FR, AT), 2 (PT, UK)
Competitors’ market share	10% (ES), 15% (HU)	10% (ES, IE), 15% (HU)	
Competitors’ coverage	20% (ES), 60% (HU), 75% (DK) ⁵⁷	30% (IE), 50%(PT), 60% (HU), 65% (SI), 75% (DK) ⁵⁸	50% (PT)
Market share of the incumbent operator	40% (DK) 50% (ES, HU)	40% (DE, DK, SI) 50% (ES, HU, IE, PT)	40% (AT) 50% (PT, FR)

Other criteria that were applied for the purposes of aggregation were based on the prevalence of different incumbent operators (e.g. in Belgium, Finland, UK) and the deployment of a fibre network by the incumbent (e.g. in Cyprus).

⁵⁷ Cumulative coverage of alternative operators.

⁵⁸ Cumulative coverage of alternative operators.

In the majority of cases, the geographic units were grouped into two areas: competitive and non-competitive or two areas where different sets of remedies apply. But there were also a number of cases in which more than two areas were used. In the case of differentiated remedies for market 4, ARCEP (France) defined five different areas⁵⁹ and ANACOM (Portugal) defined three areas. More than two geographic markets were defined in particular in cases with more than one incumbent operator, such as Belgium, Finland, Hungary and the UK.

SMP analysis

With regard to the SMP analysis in sub-national markets, for the non-competitive areas it is always the historic incumbent (within the respective area) that has been designated as having SMP. No alternative operator / entrant has been designated as having SMP so far. Also, there have been no cases of joint dominance in sub-national geographic markets so far.

In the case of geographic markets with several different SMP operators (several historic incumbents in different areas), NRAs were asked whether the analysis was the same for all of the SMP-areas or not. FICORA (Finland) and BIPT (Belgium) said that the analysis was the same for all operators that were designated as having SMP (Finland: 21 operators in markets 3a, 3b and 4; Belgium: three operators in market 3b). NMHH (Hungary) stated that it looked at the same set of criteria in each case, but there were some differences in the relevance of these criteria across the cases⁶⁰ (there were three SMP operators in markets 3a and 3b).

In the case of Belgium und Hungary, the remedies were the same for each SMP operator. In Finland, the remedies were in principle the same for each sub-national market, however, the remedies differed somewhat between the three major SMP operators and the small SMP operators. For example, price caps for FTTH/B unbundling services applied only to the three major SMP operators (DNA, Elisa and Telia). The rest of the SMP operators were very small and FICORA concluded that it was not proportionate to impose pricing remedies for small SMP operators' wholesale local access services.

Future Developments

Most NRAs that applied geographic segmentation also took into account future developments, mainly based on expected developments in market shares and/or coverage (see Table 11).

Table 11: How did you take into account future developments in your geographic segmentation? (multiple answers are possible)

	M 3a	M 3b	M 4
Expected development in market shares	2	4	1
Expected development in coverage	4	5	2
Other	0	3	1
It was not taken into account	1	2	0
Number of cases	7	12	7

⁵⁹ ARCEP defined 2 areas with fibre and 3 with copper. Each area corresponded to a certain degree of competition.

⁶⁰ NMHH stated that not all criteria proved to be relevant and in all cases there were relevant criteria which did not characterise each SMP operator.

Regarding the question about whether the NRAs have foreseen the update of the geographic segmentation on a periodic basis (before the next market review), most NRAs answered “no”, mainly due to the burden on NRAs and operators and due to regulatory certainty. Some NRAs, however, planned to investigate the geographic segmentation before the next market review (Denmark for markets 3a and 3b) or to conduct the next market review earlier, i.e. before the three-year period (Portugal and Ireland for market 3b⁶¹).

Practical issues

Regarding the question about which software was used to conduct the analysis, all NRAs said that they used MS Excel. Some NRAs also used Geographic Information Systems (GIS, QGIS, MapInfo). Other software mentioned by individual NRAs were MS Access, Alteryx, SQL, Gadmin and SIIS.

Regarding the difficulties encountered during the analysis, NRAs mentioned the matching of networks to administrative units or postal codes, the change of political boundaries, different network topologies (copper, NGA, cable) and difficulties to get data, in particular from small operators.

Issues raised by the EC or courts

In some of the cases considered, the EC commented explicitly on the geographic segmentation.

In a case involving Spanish markets 3a and 3b (ES/2015/1818 and ES/2015/1819), the EC commented on the proposed methodology for the categorisation of municipalities, According to which the existence of one single ultra-fast broadband (UFB) MDF would classify the whole of a municipality as UFB for the purpose of remedy differentiation in both the local access market and the central access market in zone 2 (the non-competitive area). The EC asked CNMC to closely monitor the market and ensure that the UFB MDFs accurately reflected the level of competition in the corresponding UFB municipality over time, so that adequate measures are imposed according to the actual level of competition. Furthermore, the EC asked CNMC to monitor whether its proposed methodology gave rise to strategic investment behaviour by the SMP operator, potentially targeting the maximum number of municipalities which are prone to become UFB municipalities with the minimum investment necessary to secure deregulation, rather than determining its investment strategy on the basis of market conditions and signals. Finally, the EC was of the view that the proposed geographic differentiation of remedies was highly complex and supported CNMC’s approach of not updating the geographic segmentation as new data became available.

CNMC responded that it was to continue monitoring the geographical competitive conditions periodically, as it had already done since the second review of the wholesale markets for broadband access in 2009. CNMC further stressed that the strategic investment behaviour in question was not expected because the SMP operator lacked the capacity to act unilaterally in light of the criteria that a municipality was required to meet to be considered as UFB: e.g.

⁶¹ The NRA in Ireland, Comreg, did not propose to re-examine the boundaries of the sub-national geographic markets that it had defined, but rather to examine whether, given changing competitive conditions over time, it would be appropriate to remove any remedies from areas within the (less competitive) sub-national geographic market.

the presence of at least two competitors with an individual market share of 10% and significant deployment of alternative NGA networks.

In the case SI/2017/2005 (Slovenia, market 3b), the EC commented on the geographic differentiation of the price control remedy. The EC noted that some of the geographic units chosen by AKOS may be characterised by possibly heterogeneous competitive developments within the settlement area, meaning that competitive conditions may not be stable over time. It invited AKOS to closely monitor the evolution of market conditions at both the retail and wholesale levels and to revisit its analysis before the end of the upcoming regulatory period, as well as to carry out a more granular assessment of the appropriate geographic units, where appropriate. As a consequence, AKOS is closely monitoring the evolution of market conditions at both the retail and wholesale levels and will update the geographical analysis in case the competitive conditions in the market change significantly.

In the case PL/2014/1632 (Poland, market 3b), the EC's comments concerned the reliance on LLU (Local Loop Unbundling) for the geographic market definition. The EC invited UKE, in its final measure, to either take more full account of only (physical) infrastructures not related to Orange (i.e. suppliers in the retail market that are not dependent on LLU based access services purchased from Orange) or to safeguard that the LLU operators do actually exert, and can continue to exert in future, a significant competitive constraint as a "third" infrastructure-based provider at the retail level.

In the case UK/2016/1849 (UK, market 4), the EC asked OFCOM to consider a more granular differentiation of remedies and suggested that OFCOM could identify areas suitable for lighter remedies, based on a set of clear criteria reflecting all relevant parameters of the state of infrastructure-based competition. In reaction to this, OFCOM looked again at a range of indicators of competitiveness and judged that the remedies proposed were appropriate to the markets it had defined and that lighter-touch remedies were not appropriate.

No issues raised by national courts were reported by NRAs.

5. GEOGRAPHICAL SEGMENTATION IN OTHER MARKETS

There are only three cases other than those relating to markets 3a, 3b and 4 where a geographic segmentation has been applied: The market for trunk segments of leased lines in Portugal and Spain and the wholesale broadcasting market in Belgium.

Regarding trunk segments of leased lines in Portugal, ANACOM defined six geographic markets: competitive routes (Routes C); non-competitive routes (Routes NC); routes/circuits over submarine cables to (and within) the Atlantic islands of Azores and Madeira; and access to international submarine cables landing in Portugal (on three landing stations, corresponding to three separate geographic markets). In Spain, CNMC followed a similar approach and defined a separate market for each national submarine route connecting small islands with larger ones (e.g. Mallorca and Menorca) and archipelagos with the mainland (e.g. Canary Islands-Mainland).

For the wholesale broadcasting market in Belgium, the NRA followed a similar approach as for the wholesale central access market (3b), defining three geographic markets, corresponding to the coverage areas of the three cable network operators, Telenet, Brutélé and Nethys.

Since these cases seem to be exceptional, they are not discussed here in more detail.

6. CONCLUSIONS

Geographical segmentation is an increasingly relevant aspect for the market analyses carried out by NRAs for markets 3a, 3b and 4. The results from the BEREC questionnaire show that, as of May 2018, 14 NRAs (all of them EU Member States) applied some form of geographical segmentation, either when defining the markets or when imposing remedies for markets 3a, 3b and 4. Considering each of these markets separately, there were seven cases of geographic segmentation on market 3a, 13 on market 3b and seven on market 4 (27 cases in total). In 14 cases NRAs defined geographic markets, in 11 cases they differentiated remedies geographically and in two cases, geographic segmentation of remedies was applied in a sub-national market. Geographic segmentation in markets other than 3a, 3b or 4 (from previous Recommendations on relevant markets) are rather more exceptional, with only three cases highlighted by NRAs in response to the questionnaire.

The main reasons for the growing importance of geographic analysis observed in markets 3a, 3b and 4 relate to the NGA rollout of alternative operators (in particular on market 3b) and the take-up of regulated wholesale access services. As these developments continue, geographic analysis is likely to gain further importance in the future, in particular in markets 3a and 4, where the number of cases is still low compared to market 3b. Therefore a harmonised approach to this issue is important to ensure consistency across EU Member States.

The replies to the questionnaire indicated that NRAs in general adhered to the BEREC Common Position on geographic aspects of market analysis (definition and remedies), as well as to the SMP guidelines, when applying geographic segmentation. Typically, a high number of geographic units were analysed based on a set of criteria and these were then grouped together in two or more areas where competitive conditions were largely homogeneous.

These criteria were mostly based on “structural market indicators”, such as the coverage of the alternative networks, the market share of the incumbent operator and the number of “significant” competitors, rather than on market outcomes, such as prices (either retail or wholesale), as well non-price features of the products.

At the same time, NRAs have ended up with a range of outcomes, in terms of differentiating markets and remedies geographically, reflecting differences in national conditions. Neither the EC nor the national courts have challenged the results (although not all cases challenged at national courts were closed by the time the present report was made). This suggests that the current regime allows substantial scope for NRAs to exercise their judgement in reflecting local conditions.

Given these results, and since no major issues with the BEREC Common Position on geographical aspects of market analysis were raised in the replies to the questionnaire, BEREC currently does not see the need to revise the previously adopted Common Position.

ANNEX 1: QUESTIONNAIRE

Market and Economic Analysis EWG (MEA EWG): Geographical Market Definition

Questionnaire to NRAs

Please reply to PM@berec.europa.eu no later than **25th of May 2018**.

Country:
Organisation:
Name of the contact:
Phone number:
Email address:

Dear Members,

After the BEREC Common Position on geographic aspects of market analysis (definition and remedies) published in June 2014, many of the NRAs applied this Common Position in the context of market definition and geographical segmentation of remedies and, in October 2014, the European Commission published a new recommendation on relevant markets.

In accordance with the draft BEREC 2018 work Programme BoR (17) 238, the MEA EWG is in charge with delivering a public Report to be adopted in BEREC Plenary 4, intended to provide an overview of the experiences of NRAs in applying geographical segmentation to both markets and remedies. To such an extent, this questionnaire gathers selective information from NRAs' practice.

Please, answer the following questions for each of the markets where your NRA has addressed geographical aspects either in the market definition and/or in the imposition of remedies.

Please, indicate in your response any details that are considered as confidential. The information and data you will provide will be analysed by the EWG MEA members and the information provided not explicitly marked as confidential may be used in the draft report, citing it as related to the country. Any other information that is to be marked as confidential will only be treated in an aggregated way. In both cases, all NRAs will have the opportunity to review the final draft to ensure that the level of confidentiality is maintained and the data is correct.

Please fill the following table, highlighting those markets that are currently regulated in terms of geographic segmentation and the application of regulatory remedies.

Overview					
Market	Year of Decision	Market definition		Remedies	
		National	Sub-national	National	Sub-national
	Refer to latest decision	Tick where applicable, subject to the market being regulated		Tick where applicable, subject to the market being regulated	
1 / 2007					
2 / 2007					
4 / 2007					
5 / 2007					
6 / 2007					
3a / 2014					
3b / 2014					
4 / 2014					
Other 1					
Other 2					
Other 3					

Please also answer the following questions for each of the relevant markets where your NRA has defined sub-national geographic markets and /or differentiated remedies geographically.

If you addressed geographical aspects in more than one relevant market, please fill in the questionnaire separately for each market.

If you addressed geographical aspects repeatedly in a particular market, please only refer to your most recent decision for this market.

Market (name and number in the 2014 Recommendation or the 2007 one if not present in the 2014 Recommendation):

Year of decision:

Case number (EC):

A. General Issues

1. Did you start the geographical analysis by assessing geographical differences in the competitive conditions prevailing at the retail level in the absence of wholesale ex-ante regulation?

(Yes/No; if no, please explain)

2. If yes, how did the retail analysis concerning geographic differences affect the analysis at the wholesale level?

3. What was the conclusion concerning the geographical aspects of market analysis (on the relevant market)?
 - a) Definition of sub-national geographical markets (Yes/No);
 - b) Geographic differentiation of remedies in a national market (Yes/No)
 - c) Geographic differentiation of remedies in a sub-national geographic market (Yes, please explain/No)
 - d) Other (Yes, please explain/No)

4. In cases of definition of sub-national geographical markets (i.e. "yes" to answer 3a): Why did you choose to define geographic markets and not to differentiate remedies geographically? (multiple answers are possible)
 - a) The competitive conditions within boundaries of the different sub-national geographical markets are stable enough (Yes/No)
 - b) Other reason (Yes, please explain/No)

5. In cases of geographic differentiation of remedies (i.e. answer 3b): Why did you choose to differentiate remedies geographically and not to define geographic markets? (multiple answers are possible)
 - a) The competitive conditions within boundaries of the different sub-national geographical markets are not stable enough (Yes/No)
 - b) Other reason (Yes, please explain/No)

B. Reasons for Geographic Variations

6. Which of the following answers provide(s) the main reasons for competitive variations across the territory? (multiple answers are possible)
- a) Geographical differences in coverage of alternative networks (e.g. cable or fibre). (Yes/No)
 - b) Geographical differences in the take-up of regulated access services in an upstream market. (Yes/No)
 - c) Geographical differences in retail market shares of the incumbent. (Yes/No)
 - d) Geographical differences in wholesale market shares of the incumbent. (Yes/No)
 - e) Geographical differences resulting from commercial wholesale offers of alternative operators. (Yes/No)
 - f) Geographical differences of retail prices of the incumbent operator and/or alternative operators. (Yes/No)
 - g) Geographical differences in retail commercial offers (other than price) or marketing strategies of the incumbent operator and/or alternative operators. (Yes/No)
 - h) Geographical differences of wholesale prices of the incumbent operator and/or alternative operators. (Yes/No)
 - i) Population density (economies of scale) (Yes/No)
 - j) Other (Yes, please explain/No)

C. Geographic Units

7. What geographical unit have you applied for the geographical segmentation?
- a) Network based on MDF-level of the incumbent(s) (Yes/No)
 - b) Network based on ODF-level of the incumbent(s) (Yes/No)
 - c) Network of alternative operators (Yes/No)
 - d) Administrative units (municipality, district, commune) or postal code areas (Yes, please specify/No)
 - e) Other (Yes, please specify/No)
8. Why did you choose that geographical unit?
- a) Network topology of operators matches the borders of the geographic unit (e.g. because of importance of LLU). (Yes/No)
 - b) Stable and well understandable boundaries. (Yes/No)
 - c) The unit is small enough to ensure homogeneity within the unit and large enough to meaningfully analyse competitive conditions. (Yes/No)
 - d) Other reason (Yes, please explain/No)
9. How many geographical units did you analyse?

D. Aggregation of geographic units

10. What were the relevant criteria applied to aggregate the geographic units to homogeneous sub-national markets (or equivalently, areas where geographically differentiated remedies were imposed)?
- a) Number of competitors (Yes, please provide number/No)
 - b) Number of competitors with an individual market share above a certain threshold (Yes, please explain and specify the threshold used /No)
 - c) Number of competitors with an individual infrastructure coverage above a certain threshold (Yes, please explain and specify the threshold used /No)
 - d) Market share of the incumbent operator below a certain threshold (Yes, please provide threshold/No)
 - e) Minimum volume of total access lines supplied (by the incumbent and alternative operators). (Yes, please provide number/No)
 - f) Population or total number of (potential) access lines in the geographic unit (Yes, please provide number/No)
 - g) Price differences (Yes, please explain/No)
 - h) Differences in the existence or terms of wholesale commercial offers (Yes, please explain/No)
 - i) Differences in retail commercial offers (other than price) or marketing strategies (Yes, please explain/No)
 - j) Others (Yes, please explain/No)
11. How many areas (either sub-national markets or geographically differentiated remedies) did you group the geographic units into?

E. SMP analysis

12. If you defined sub-national geographic markets, please specify:
- a. The number of areas with individual SMP operator (historical incumbent):
 - b. The number of areas with individual SMP operator (alternative operator/not the historical incumbent):
 - c. The number of areas with joint SMP:
 - d. The number of areas without SMP operator
13. In cases of sub-national geographic markets with several different SMP operators:
- a. Was the SMP-analysis (criteria looked at) the same for each sub-national market or did it differ? If it differed, in which respects?
 - b. Are the remedies the same for each sub-national market or do they differ? If they differ, in which respects and for what reasons?

F. Future developments

14. How did you take into account future developments in your geographic segmentation?
 - a. Expected development in market shares (Yes, please explain/No)
 - b. Expected development in coverage (Yes, please explain/No)
 - c. Other (Yes, please explain/No)
 - d. It was not taken into account (Yes/No)

15. Have you foreseen the update of the sub-national markets (or equivalently, areas where different remedies apply) on a periodic basis (before the next market review)? (Yes, please specify/No, why not, please explain)

G. Practical issues

16. Please list the software used for the analysis of geographical segmentation/differentiation.
 - a) Excel (Yes/No)
 - b) Others (Yes, please specify /No)

17. Did you face any problems acquiring and/or updating the data used for the geographical segmentation/differentiation? (e.g. matching of boundaries among political / administrative areas and network topology; small size of the geographical unit increases the burden, problems with obtaining detailed data from operators, etc.) (Yes, please explain /No)

H. Issues raised by EC or courts

18. Did the EC raise any relevant comments on the application of geographical segmentation/differentiation? If so, please, provide the case number, summarize the main points made by EC feedback and the NRA views and reactions on them.

19. Was the analysis for geographical segmentation/differentiation challenged in the national courts? If so, please, summarize the main points made by the court on this subject and the NRA views and reactions on them.

ANNEX 2: TABLES

Q1 – Did you start the geographical analysis by assessing geographical differences in the competitive conditions prevailing at the retail level in the absence of wholesale ex-ante regulation? (Table 5 of the Report)

	Answer	Count	NRA
Market 3a	Yes	5	CNMC, DBA, NMHH, OCECPR, FICORA
	No	1	OFCOM
	Other	1	BIPT
Market 3b	Yes	8	ANACOM, BNETZA, CNMC, COMREG, DBA, FICORA, NMHH, UKE
	No	3	AKOS, ARCEP, OFCOM
	Other	1	BIPT
Market 4	Yes	3	ANACOM, COMREG, FICORA
	No	4	ARCEP, OFCOM, RTR, BIPT
	Other	0	-

Source: BEREC Questionnaire; answers from 33 NRA.

Q3 – What was the conclusion concerning the geographical aspects of market analysis (on the relevant market)? (Table 2 of the Report)

	Answer	Count	NRA
Market 3a	Sub-national geographic markets	3	FICORA, NMHH, OFCOM
	Geographic differentiation of remedies in a national market	4	BIPT, CNMC, DBA, OCECPR
	Geographic differentiation of remedies in a sub-national geographic market	0	-
	Other	0	-
Market 3b	Sub-national geographic markets	9	ANACOM, BNETZA, CNMC, COMREG, FICORA, NMHH, OFCOM, UKE
	Geographic differentiation of remedies in a national market	4	AKOS, ARCEP, BIPT, DBA
	Geographic differentiation of remedies in a sub-national geographic market	1	BIPT
	Other	0	-
Market 4	Sub-national geographic markets	3	FICORA, OFCOM, RTR
	Geographic differentiation of remedies in a national market	3	ARCEP, COMREG, BIPT
	Geographic differentiation of remedies in a sub-national geographic market	1	ANACOM
	Other	0	-

Source: BEREC Questionnaire; answers from 33 NRA.

Note: For the purpose of this table, the market 3b case in Belgium is considered as two cases.

Q4 – In cases of definition of sub-national geographical markets (i.e. “yes” to answer 3a): Why did you choose to define geographic markets and not to differentiate remedies geographically? (Table 3 of the Report)

	Answer	Count	NRA
Market 3a	Stable conditions within boundaries of sub-national geographical markets	3	FICORA, NMHH, OFCOM
	Other	1	FICORA
Market 3b	Stable conditions within boundaries of sub-national geographical markets	8	ANACOM, BNETZA, CNMC, COMREG, FICORA, NMHH, OFCOM, UKE
	Other	4	ANACOM, CNMC, FICORA, OFCOM
Market 4	Stable conditions within boundaries of sub-national geographical markets	3	FICORA, OFCOM, RTR
	Other	2	FICORA, OFCOM

Source: BEREC Questionnaire; answers from 33 NRA.

Q5 – In cases of geographic differentiation of remedies (i.e. answer 3b): Why did you choose to differentiate remedies geographically and not to define geographic markets? (Table 4 of the Report)

	Answer	Count	NRA
Market 3a	Unstable conditions within boundaries of sub-national geographical markets	0	-
	Other	4	BIPT, CNMC, DBA, OCECPR
Market 3b	Unstable conditions within boundaries of sub-national geographical markets	1	AKOS
	Other	4	AKOS, ARCEP, BIPT, DBA
Market 4	Unstable conditions within boundaries of sub-national geographical markets	0	-
	Other	3	ARCEP, COMREG, BIPT

Source: BEREC Questionnaire; answers from 33 NRA.

Q6 – Which of the following answers provide(s) the main reasons for competitive variations across the territory? (Table 6 of the Report)

	Answer	Count	NRA
Market 3a	Geographical differences in coverage of alternative networks	4	BIPT, CNMC, DBA, NMHH
	Geographical diff. in the take-up of regulated access services in an upstream market	1	CNMC
	Geographical diff. in retail market shares of the incumbent	1	CNMC
	Geographical diff. in wholesale market shares of the incumbent	2	DBA, NMHH
	Geographical diff. resulting from commercial wholesale offers of alternative operators	1	CNMC
	Geographical diff. of retail prices of the incumbent and/or alternative operators	0	
	Geographical diff. in retail commercial offers (other than price) or marketing strategies of the incumbent and/or alternative operators	0	
	Geographical diff. of wholesale prices of the incumbent and/or alternative operators	0	
	Population density (economies of scale)	0	
	Other	3	FICORA, OCECPR, OFCOM
Market 3b	Geographical differences in coverage of alternative networks	9	AKOS, ANACOM, BIPT, CNMC, COMREG, DBA, NHMM, OFCOM, UKE
	Geographical diff. in the take-up of regulated access services in an upstream market	5	AKOS, ANACOM, BNETZA, CNMC, OFCOM
	Geographical diff. in retail market shares of the incumbent	6	AKOS, ANACOM, BNETZA, CNMC, COMREG, UKE
	Geographical diff. in wholesale market shares of the incumbent	6	AKOS, ARCEP, BNETZA, COMREG, DBA, NMHH
	Geographical diff. resulting from commercial wholesale offers of alternative operators	2	AKOS, CNMC
	Geographical diff. of retail prices of the incumbent and/or alternative operators	2	CNMC, OFCOM
	Geographical diff. in retail commercial offers (other than price) or marketing strategies of the incumbent and/or alternative operators	1	CNMC
	Geographical diff. of wholesale prices of the incumbent and/or alternative operators	1	OFCOM
	Population density (economies of scale)	3	AKOS, ANACOM, BNETZA
	Other	1	FICORA
Market 4	Geographical differences in coverage of alternative networks	5	ANACOM, OFCOM, RTR, BIPT, ARCEP
	Geographical diff. in the take-up of regulated access services in an upstream market	1	ANACOM
	Geographical diff. in retail market shares of the incumbent	1	ANACOM
	Geographical diff. in wholesale market shares of the incumbent	4	ANACOM, ARCEP, OFCOM, RTR
	Geographical diff. resulting from commercial wholesale offers of alternative operators	1	ANACOM
	Geographical diff. of retail prices of the incumbent and/or alternative operators	1	OFCOM
	Geographical diff. in retail commercial offers (other than price) or marketing strategies of the incumbent and/or alternative operators	0	
	Geographical diff. of wholesale prices of the incumbent and/or alternative operators	2	OFCOM, RTR
	Population density (economies of scale)	2	ANACOM, ARCEP
	Other	3	COMREG, FICORA, OFCOM

Source: BEREC Questionnaire; answers from 33 NRA.

Q7 – What geographical unit have you applied for the geographical segmentation? (Table 7 of the Report)

	Answer	Count	NRA
Market 3a	Network based on MDF-level of the incumbent(s)	1	CNMC
	Network based on ODF-level of the incumbent(s)	0	
	Network of alternative operators	0	
	Administrative units (municipality, district, commune) or postal code areas	5	BIPT, CNMC, DBA, FICORA, NMHH
	Other	3	BIPT, OCECPR, OFCOM
Market 3b	Network based on MDF-level of the incumbent(s)	5	ARCEP, BNETZA, CNMC, COMREG, OFCOM
	Network based on ODF-level of the incumbent(s)	0	
	Network of alternative operators	0	
	Administrative units (municipality, district, commune) or postal code areas	7	AKOS, ANACOM, BIPT, DBA, FICORA, NMHH, UKE
	Other	1	BIPT
Market 4	Network based on MDF-level of the incumbent(s)	2	ARCEP, BIPT
	Network based on ODF-level of the incumbent(s)	0	
	Network of alternative operators	0	
	Administrative units (municipality, district, commune) or postal code areas	5	ANACOM, ARCEP, FICORA, OFCOM, RTR
	Other	1	COMREG

Source: BEREC Questionnaire; answers from 33 NRA.

Q8 – Why did you choose that geographical unit? (Table 8 of the Report)

	Answer	Count	NRA
Market 3a	Network topology of operators matches the borders of the geographic unit (e.g. because of importance of LLU)	3	BIPT, FICORA, OFCOM
	Stable and well understandable boundaries	6	CNMC, DBA, FICORA, NMHH, OCECPR, OFCOM
	The unit is small enough to ensure homogeneity within the unit and large enough to meaningfully analyse competitive conditions	5	BIPT, CNMC, DBA, FICORA, NMHH
	Other	2	CNMC, OCECPR
Market 3b	Network topology of operators matches the borders of the geographic unit (e.g. because of importance of LLU)	7	ARCEP, BIPT, BNETZA, CNMC, COMREG, FICORA, OFCOM
	Stable and well understandable boundaries	9	AKOS, ARCEP, CNMC, COMREG, DBA, FICORA, NMHH, OFCOM, UKE
	The unit is small enough to ensure homogeneity within the unit and large enough to meaningfully analyse competitive conditions	11	AKOS, ANACOM, ARCEP, BIPT, CNMC, COMREG, DBA, FICORA, NMHH, OFCOM, UKE
	Other	2	BNETZA, COMREG
Market 4	Network topology of operators matches the borders of the geographic unit (e.g. because of importance of LLU)	1	ARCEP
	Stable and well understandable boundaries	5	ARCEP, FICORA, OFCOM, RTR, BIPT
	The unit is small enough to ensure homogeneity within the unit and large enough to meaningfully analyse competitive conditions	5	ANACOM, ARCEP, FICORA, OFCOM, RTR
	Other	1	OFCOM

Source: BEREC Questionnaire; answers from 33 NRA.

Q 10 – What were the relevant criteria applied to aggregate the geographic units to homogeneous sub-national markets (or equivalently, areas where geographically differentiated remedies were imposed)? (Table 9 of the Report)

	Answer	Count	NRA
Market 3a	Number of competitors	1	FICORA
	Number of competitors with an individual market share above a certain threshold	2	CNMC, NMHH
	Number of competitors with an individual infrastructure coverage above a certain threshold	4	BIPT, CNMC, DBA, NMHH
	Market share of the incumbent operator below a certain threshold	3	CNMC, DBA, NMHH
	Minimum volume of total access lines supplied (by the incumbent and alternative operators)	0	-
	Population or total number of (potential) access lines in the geographic unit	1	DBA
	Price differences	0	-
	Differences in the existence or terms of wholesale commercial offers	0	-
	Differences in retail commercial offers (other than price) or marketing strategies	0	-
	Others	5	BIPT, FICORA, NMHH, OCECPR, OFCOM
Market 3b	Number of competitors	5	ANACOM, ARCEP, BNETZA, FICORA, OFCOM, UKE
	Number of competitors with an individual market share above a certain threshold	3	CNMC, COMREG, NMHH
	Number of competitors with an individual infrastructure coverage above a certain threshold	7	AKOS, ANACOM, BIPT, COMREG, DBA, NMHH, OFCOM
	Market share of the incumbent operator below a certain threshold	8	AKOS, ANACOM, BNETZA, CNMC, COMREG, DBA, NMHH, UKE
	Minimum volume of total access lines supplied (by the incumbent and alternative operators)	1	BNETZA
	Population or total number of (potential) access lines in the geographic unit	3	AKOS, BNETZA, DBA
	Price differences	0	-
	Differences in the existence or terms of wholesale commercial offers	0	-
	Differences in retail commercial offers (other than price) or marketing strategies	0	-
	Others	8	AKOS, BIPT, BNETZA, COMREG, FICORA, NMHH, OFCOM, UKE
Market 4	Number of competitors	5	ANACOM, ARCEP, FICORA, RTR, BIPT
	Number of competitors with an individual market share above a certain threshold	0	-
	Number of competitors with an individual infrastructure coverage above a certain threshold	2	ANACOM, OFCOM
	Market share of the incumbent operator below a certain threshold	3	ANACOM, ARCEP, RTR
	Minimum volume of total access lines supplied (by the incumbent and alternative operators)	2	ARCEP, RTR
	Population or total number of (potential) access lines in the geographic unit	1	ARCEP
	Price differences	0	-
	Differences in the existence or terms of wholesale commercial offers	0	-
	Differences in retail commercial offers (other than price) or marketing strategies	0	-
	Others	2	FICORA, OFCOM

Source: BEREC Questionnaire; answers from 33 NRA.

Q 14 – How did you take into account future developments in your geographic segmentation? (Table 11 of the Report)

	Answer	Count	NRA
Market 3a	Expected development in market shares	2	DBA, NMHH
	Expected development in coverage	4	BIPT, CNMC, NMHH, OCECPR
	Other	0	-
	Not taken into account	1	FICORA
Market 3b	Expected development in market shares	4	BNETZA, DBA, NMHH, OFCOM
	Expected development in coverage	5	ANACOM, BIPT, CNMC, NMHH, OFCOM
	Other	3	AKOS, ARCEP, BNETZA
	Not taken into account	2	FICORA, UKE
Market 4	Expected development in market shares	1	RTR
	Expected development in coverage	2	ANACOM, OFCOM
	Other	1	ARCEP
	Not taken into account	1	BIPT

Source: BEREC Questionnaire; answers from 33 NRA.

Q 15 – Have you foreseen the update of the subnational markets (or equivalently, areas where different remedies apply) on a periodic basis (before the next market review)?

	Answer	Count	NRA
Market 3a	Yes	1	DBA
	No	6	BIPT, CNMC, FICORA, NMHH, OCECPR, OFCOM
Market 3b	Yes	3	ANACOM, COMREG, DBA
	No	9	AKOS, ARCEP, BIPT, BNETZA, CNMC, FICORA, NMHH, OFCOM, UKE
Market 4	Yes	1	ARCEP
	No	4	ANACOM, FICORA, OFCOM, RTR

Source: BEREC Questionnaire; answers from 33 NRA.

ANNEX 3: ABBREVIATIONS

Abbreviations for countries

Abbreviation	Country	Abbreviation	Country	Abbreviation	Country
AT	Austria	FR	France	MT	Malta
BE	Belgium	GR	Greece	NL	Netherlands
BG	Bulgaria	HR	Croatia	NO	Norway
CH	Switzerland	HU	Hungary	PL	Poland
CY	Cyprus	IE	Ireland	PT	Portugal
CZ	Czech Republic	IT	Italy	RO	Romania
DE	Germany	LT	Lithuania	RS	Serbia
DK	Denmark	LU	Luxembourg	SE	Sweden
EE	Estonia	LV	Latvia	SI	Slovenia
ES	Spain	LI	Liechtenstein	SK	Slovakia
FI	Finland	ME	Montenegro	UK	United Kingdom

Abbreviations for NRAs

Abbreviation	Country	Abbreviation	Country	Abbreviation	Country
ACM	Netherlands	COMREG	Ireland	NKOM	Norway
AGCOM	Italy	CRC	Bulgaria	NMHH	Hungary
AK	Liechtenstein	CTU	Czech Republic	OCECPR	Cyprus
AKOS	Slovenia	DBA	Denmark	OFCOM	United Kingdom
ANACOM	Portugal	EETT	Greece	PTS	Sweden
ANCOM	Romania	EKIP	Montenegro	RATEL	Serbia
ARCEP	France	ETRA	Estonia	RRT	Lithuania
BAKOM	Switzerland	FICORA	Finland	RTR	Austria
BIPT	Belgium	HAKOM	Croatia	RU	Slovakia
BNetzA	Germany	ILR	Luxembourg	SPRK	Latvia
CNMC	Spain	MCA	Malta	UKE	Poland