Market Definition and Dominance Guidelines

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1 Introduction

1.1 Purpose

The purpose of these Guidelines is to provide as much certainty and clarity as is reasonably possible on the way in which the TRA will define telecommunications service markets, analyse such markets for dominance, and determine regulatory remedies to be imposed on dominant service providers to address the risk of harm that may result for competition in such markets and for the interests of consumers.

1.2 Scope

These Guidelines address the approach that the TRA will take to the following matters:

(a) the identification and definition of telecommunications service markets;

(b) determination of whether such markets are susceptible to ex ante regulation for dominance and are relevant markets for the application of ex ante remedies if service providers are assessed as being dominant;

(c) the determination of appropriate remedies; and

(d) the review and amendment of past determinations in respect of the matters outlined in paragraphs (a), (b) and (c) above.

1.3 Relationship to Anti-Competitive Behaviour and Principles Guidelines and to regulation in response to anti-competitive behaviour

In regulatory theory, a distinction is drawn between ex ante and ex post regulation. Ex ante regulation comprises a set of pre-determined rules and remedies imposed by the TRA on market players who are dominant in specified markets in Oman under Articles 12, 25, 27, 46 bis and 46 bis (1) of the Act and Articles 91-94 of the Executive Regulation while ex post regulation comprises the framework of competition rules described in separate guidelines.

With regard to ex post regulation, the TRA has already determined the Anti-Competitive Behaviour Decision and Anti-Competitive Behaviour and Principles Guidelines that will be applied in the manner in which it responds to anti-competitive behaviour.

1.4 Legal Status

These Guidelines have been developed in accordance with the Telecommunications Regulation Act, the Executive Regulations and the Market Definition and Dominance Regulations, and must be interpreted in a manner that is consistent with this body of legislation.

These Guidelines may be amended from time to time by the TRA.

The Guidelines are not legally binding upon the TRA but reflect the TRA's intentions in relation its approach to ex ante regulation for dominance.

1.5 Structure of these Guidelines

These Guidelines are structured into Chapters as follows:

- Chapter 2: Market Definition and Dominance Report Procedure
- Chapter 3: Definition of Markets
- Chapter 4: Relevant Markets
- Chapter 5: Market Analysis of Dominance
- Chapter 6: Remedies

In the case of each chapter, the relevant principles that the TRA will seek to uphold in relation to the subject matter of the chapter are set out, together with the tests and measures that will be applied by the TRA when it is considering the subject matter.

2 Market Definition and Dominance Report Procedure

2.1 Principles

Whenever the TRA proposes to initially determine or to amend an existing determination associated with ex ante regulation of dominance it will prepare a Market Definition and Dominance Report ("Report") in order to:

(a) express in as clear and transparent a way as reasonably possible the considerations that it is taking into account in this matter;

(b) encourage participation in the process through consultation with potentially affected service providers and interested parties; and

(c) indicate the evidence and default assumptions that have been relied upon for regulatory decisions.

Regulation should not be imposed unless the market forces, if any, at work in a market are insufficient to sustain effective competition or unless competition alone cannot deliver social and economic outcomes that have been set out as desirable in legislation. These circumstances are collectively known as market failures.

The TRA will refrain from intervening in markets unless there is market failure, and will only intervene, if at all, to the minimum extent necessary to address the market failure. In the case of dominance in a market the TRA will only regulate to the extent necessary to address the risk of harm from dominance to competition and to consumer interests.

The TRA is committed to evidence-based regulation and therefore will be guided by the available evidence in determining if there is a requirement to intervene and to regulate, and in assessing the extent and intensity of the regulation required.

2.2 Purpose of Report

A Report on any telecommunications service market or group of markets will set out the evidence and arguments for the proposed regulatory outcome for the purpose of providing a clear rationale to affected and interested parties, and to allow them an opportunity to comment on both the proposed outcome and the reasons adduced for that outcome.

If some of the information available to the TRA has been determined by the TRA to be commercially confidential, and that the harm to the commercial interests of one or more service providers that would likely result from publication is greater than the harm to the public interest in non-disclosure, the TRA will seek to describe the import of the information that has not been published. In such cases the evidentiary burden and the burden of persuasion will be on any party seeking non-publication.

2.3 Coverage of Report

The Report will analyse the definition of the market or markets that it covers, together with their susceptibility to ex ante regulation for dominance, market analysis of dominance and the remedies appropriate if there is dominance.

If the market has been the subject of an earlier Report, then the Report will analyse changes that have occurred in the market or markets in the meantime, insofar as those changes are relevant to a change in regulation.

A Report may cover one or more markets. In the case of some markets the boundary conditions that define the markets are in flux as a result of demand, technology and cost changes, and in these cases it is important not to consider changes affecting only one of a number of adjacent markets.

2.4 Forecasting Horizon of Report

It is accepted that telecommunications service markets are in a period of rapid change resulting from changes in underlying technologies, cost structures and cost relationships and demand. Current markets are characterised by substantial convergence in terms of technologies, services and applications and competitors. This means that regulatory categories require more frequent review to ensure that they are relevant to current and future conditions, and that the regulation based on such categories is supportive of development of telecommunications service markets and services.

In preparing a Report the TRA is concerned with establishing regulation for the present and immediate future. It is not concerned with establishing the basis for longer term regulation. That will be done in later Reports. In order to establish a basis for regulating for the present and immediate future the TRA must consider how far it can foresee with a reasonable degree of certainty. The forecasting horizon may vary depending on the level of dynamic and predictable change that is occurring in the sector.

At present the TRA considers that a period of two years represents a reasonable forecasting horizon and it intends to use that period as a horizon in its Reports, unless specific circumstances suggest otherwise for specific markets.

2.5 Frequency and Periodicity of Reports

The TRA does not intend to commit to a fixed cycle of Reports or to a Report preparation frequency, other than to undertake a review of each market in which it has imposed ex ante remedies for dominance at least every five (5) years from the completion and publication of the previous review.

On the other hand, because the forecasting horizon for each Report will typically be two years it is very unlikely that the TRA will wish to commence a further review of a market in less than two years from the publication of the Report of the previous review.

It is important to note that the forecasting horizon has been linked to a period in which forecasts of market circumstances might be reasonably certain. In practice, however, the circumstances may last well beyond two years, notwithstanding that they could not be foreseen to apply for an extended period at the time of the review and of the Report preparation. Therefore, the forecasting horizon of, typically, two years, does not imply that a further review and Report will be required for each market at the end of two years from the previous Report.

2.6 Initiation of a review and the preparation of a Report

The TRA may initiate a review of the definition, dominance and remedies in a relevant market and the preparation of a Report either of its own motion or in response from an application from any service provider licensed under the Act.

The TRA may refuse any application for the preparation, review or amendment of a Report, according to its discretionary powers, for reasons the TRA will disclose, such as where the application is frivolous or unsubstantiated or that the defined telecommunications markets have not sufficiently evolved since the issuance of the last Report and related determinations.

3 Definition of Markets

3.1 Principles

A telecommunications service market for the purpose of these Guidelines comprises all network services which are substitutes for each other not only in terms of the objective characteristic of those products, their prices or their intended use, but also in terms of the conditions of competition and/or the structure of supply and demand for the product in question. Defining the relevant product market therefore requires a consideration of the extent to which different products are substitutable and exercise a competitive constraint on each other. In addition markets need to be defined in customer terms and in geographic terms, because these affect the limits of substitutability as well.

3.2 The service market

The TRA approach will be to undertake an initial assessment to sort telecommunications services into groups based on the similarity of their characteristics and therefore of their potential substitutability in terms of:

(a) demand-side substitutability, in order to determine the extent to which services are available which could be substituted relatively easily by users for the services under consideration; and

(b) supply-side substitutability, in order to determine the extent to which substitute services to the services under consideration are available, which service providers could provide at relatively short notice (normally meaning within a year).

The TRA may consider any factor that, in its opinion, reasonably affects market definition, including consideration of the smallest group of services and the smallest geographic area in relation to which a service provider can impose and profitably maintain a small but significant non-transitory increase in price (known as a SSNIP) above the competitive level.

In most cases, a 5-10% price increase would be considered significant and a period of one year or more would be considered non-transitory. This test is also known as the Hypothetical Monopolist Test, because the service provider is assumed to be a monopolist for the purposes of the exercise.

The candidate set of products and services will comprise a separate market if a hypothetical monopoly supplier could impose a SSNIP above the competitive level without the SSNIP being unprofitable.

3.3 Geographic markets

The geographical market for any service is the geographic area in which the conditions of service provision and of competition are essentially similar. Some judgement needs to be exercised in determining geographic markets and the extent of differences in the circumstances of competition from one locality to another. The TRA will also take into account:

(a) whether current service providers treat a market as national, regional or local having regard to the differences in the terms of conditions of supply that they offer from place to place;

(b) the geographical treatment of similar service markets in other countries;

(c) the consequences of national, regional and local definitions of market for the development of competition; and

(d) the effectiveness and convenience of regulatory administration resulting from any particular approach to the issue, taking account likely impacts on customers, service providers and the TRA.

3.4 Customer markets

In determining suitable definitions for markets the TRA will consider the customers who constitute the market.

In the case of wholesale markets for the purposes of these Guidelines, the services are those that only licensed service providers are eligible and entitled to acquire.

In the case of retail markets the TRA will consider whether the nature of the services and the terms and conditions associated with their provision vary significantly between customer segments that the customer segmentation should be considered to be part of the definition of the market.

In particular the TRA will have regard to whether the terms and conditions of service differ between business, government and corporate customers on the one hand, and residential or non-business customers on the other.

3.5 Other considerations in defining markets

The TRA may take other factors into consideration in defining markets if those factors are considered important and relevant. As a general rule the TRA will not define markets and services in technology terms.

4 Relevant Markets

4.1 Principles

Relevant markets are those that the TRA has determined, from a list of candidate markets, to be susceptible to ex ante regulation for dominance.

The TRA will seek to regulate in ways that avoid undue interference or distortion in the development of markets.

4.2 The three-criteria test

When considering whether or not to impose ex ante regulation, the TRA will apply the so-called three-criteria test. This states that a market is susceptible to ex ante regulation in cases where:

(a) there are high and non–transitory barriers to market entry;

(b) there is no tendency towards competition behind such barriers; and

(c) ex post control by competition rules is insufficient to address market failures.

If any one of these 3 criteria is no longer satisfied in a market, ex ante regulation may be removed in the course of a market review and the ex post competition framework relied on to address anti-competitive behaviour in the market.

In applying the three-criteria test the TRA will apply the following detailed interpretations:

- Barriers to market entry include structural, legal or regulatory barriers (such as licensing barriers).
- The tendency towards competition that may or may not exist behind barriers to entry will be considered over the forecasting horizon of the review and the Report.
- If there is a tendency towards competition it will need to be one that is material within the forecasting horizon of the review and the Report.

4.3 New service markets

All ex ante regulation has a propensity to affect the development of markets and may even distort that development. The TRA recognises that the tendency for regulation to distort market growth and development is particularly likely where the services in the market are new or emerging and where demand has yet to emerge or is only just becoming apparent.

In the absent of strong evidence of dominance in related markets (particularly those in the same value chain) the TRA will be disinclined to intervene with ex ante regulation for dominance where the services are new and innovative and the demand patterns are unclear.

4.4 Reconsideration of markets as relevant markets

The TRA reserves its position in relation to the reconsideration at a later date of candidate markets that are found in the course of a review not to be susceptible to ex ante regulation for dominance. This reservation is particularly appropriate in cases where the service market has been found to be too embryonic to be susceptible to ex ante regulation, but where is has subsequently developed towards maturity at the time of a later review.

5 Market Analysis of Dominance

5.1 Principles

Once competition intensifies in a telecommunications service market to an appropriate level, reliance on ex-ante regulation of market dominance will be reduced in favour of greater reliance on market outcomes and on the application in the telecommunications sector of ex-post competition controls in cases where there is an allegation of abuse of market dominance or of anti-competitive conduct.

The TRA considers that there will seldom be justification for the ex ante regulation for dominance of downstream retail telecommunications service markets if wholesale markets in the same value chain are either sustainably competitive or effectively regulated. Nevertheless, if wholesale market regulation is untried, there may be a case for a temporary extension of downstream ex ante regulation for dominance until the wholesale market remedy or remedies have been proven to be effective.

There may be single dominance or joint dominance in a market. In neither case is dominance to be considered to be behaviour. Dominance is a capacity for acting independently in a market that is a result of the circumstances of the market and the position in the market of one or more service providers. In the case of joint dominance the TRA will assess the risk of harm that arises from the potential for tacit collusion in a relevant market. No evidence of intent or behaviour is required.

5.2 Criteria for Single Dominance

Without limiting its ability to consider other factors and criteria to determine whether single dominance exists in a market, the TRA will have regard to the application of the following criteria:

A.1 Market share

A.2 Overall size of the undertaking

A.3 Control of infrastructure not easily duplicated

A.4 Network effects

A.5 Technological advantages and superiority

A.6 Absence of or low countervailing buying power

A.7 Easy or privileged access to capital markets / financial resources

A.8 Product / services diversification

A.9 Economies of scale

A.10 Economies of scope

A.11 Vertical integration

A.12 A highly developed distribution and sales network

A.13 Absence of potential competition

A.14 Barriers to expansion

A.15 Ease of market entry

A.16 Excess pricing and profitability

A.17 Lack of active competition on non-price factors

A.18 Switching barriers

A.19 Customers' ability to access and use information

A summary of the measures for and application of each criterion is explained in a fuller manner in Annex A.

5.3 Criteria for Joint Dominance

Dominant position may be held collectively (joint dominance) when two or more legally independent undertakings are linked in such a way that they adopt a common policy in relation to the market.

A three step test is set out with three necessary conditions to establish joint dominance:

- The market must be sufficiently transparent for each member of the oligopoly to monitor the behaviour of other members;
- There must be a clear incentive for individual members of the oligopoly not to cheat by departing from any common policy on the market. Therefore, there should be adequate deterrents to ensure long-term compliance;
- It must be established that the reactions of any actual or future competitors, customers or consumers will not be able to jeopardize the results expected from the common policy.

Without limiting its ability to consider other factors and criteria to determine whether joint dominance exists in a market, the TRA will have regard to the application of some or all of the following criteria:

B.1 Market concentration

B.2 Transparency

B.3 Mature market

B.4 Stagnant or moderate growth on the demand side

B.5 Low elasticity of demand

B.6 Homogenous product

B.7 Similar cost structure

B.8 Similar market share

B.9 Lack of technical innovation, mature technology

B.10 Absence of excess capacity

B.11 High barriers to entry

B.12 Lack of countervailing buying power

B.13 Lack of potential competition

B.14 Various kinds of informal and other links between the undertakings concerned

B.15 Retaliatory mechanisms

B.16 Lack of or reduced scope for price competition

B.17 Existence of incentives for tacit collusion

B.18 Ability to enforce the terms of a collusive agreement or tacit understanding

A summary of the measures for and application of each criterion is explained in a fuller manner in Annex B.

5.4 General rules of application for dominance criteria

The TRA will generally apply the following rules or guidelines in applying dominance criteria, whether for single or joint dominance:

(a) The criteria for dominance include some with overlapping coverage; however the criteria involved have separate and distinct focus so that different aspects of dominance are highlighted. There is advantage in the criteria remaining on the list and no disadvantage in partly overlapping criteria, provided the criteria are applied with appropriate caution and judgment. This means that application methods will be avoided if they involve check-listing and simple weighting based on whether each criterion supports a designation of dominance or not.

(b) The TRA will not prioritise or weight criteria in advance of considering the characteristics of the relevant market in which they are to be applied.

(c) The application of criteria for dominance definition is dependent on the results of market analysis, for which one of more criteria could potentially apply depending on the specific market circumstances.

(d) Some criteria appear to be double-edged in their application and may suggest dominance under some circumstances and effective competition and market rivalry under other circumstances. The circumstances of the relevant market will determine the way in which such criteria apply and also whether they support an assessment of dominance or not.

6 Remedies

6.1 Principles

The TRA will apply the following principles on remedies as far as the circumstances of dominance and the relevant market will permit:

(a) The TRA will apply remedies first to dominance in wholesale markets and only then will it consider whether it is necessary to also apply remedies to dominance in related retail markets, bearing in mind that the wholesale market remedies may preclude the need for retail market remedies.

(b) The TRA will impose the least intrusive remedy that will in its judgement be sufficient to address the market failure from dominance in the relevant market and to protect competition and consumer interests associated with that market.

(c) The TRA will shape remedies and determine their intensity of application to ensure that the remedy is appropriate, reasonable and proportionate to the risk of harm from the dominance found to exist in the relevant market.

(d) As a general principle the remedies applied to dominant service providers that are found to be jointly dominant in a market should be the same.

(e) As a general principle the remedies applied to dominant service providers in similar markets (such as the market for call termination in which each network constitutes a separate market) should be similar, taking account of the burdensome nature that the obligation represents for each dominant service provider.

6.2 Determining appropriate and proportionate remedies

Where it has determined that a service provider is dominant in a relevant market the TRA will then assess the nature of the potential harm that the position of dominance might entail for competition and for consumer interests. In making this assessment the TRA will consider:

- The types of harm that are reasonably associated with dominance in the circumstances of the relevant market;
- The specific orders or remedies that would directly address the harm that might result; and
- How the orders and remedies might best be shaped to be the least intrusive as possible while still being effective in reducing the risk of harm to an acceptable level.

6.3 Shaping the intensity of remedies

Where a remedy is capable of being shaped or varied in intensity the TRA will consider how best to shape and specify the remedy having regard to:

- The potential harm from the dominance revealed on analysis;
- The likelihood of the dominance being reduced or neutralised by impending market development; and
- The risk of the remedy inadvertently reducing genuine competition in the relevant market.

6.4 Available remedies

The TRA has a range of potential remedies from which it can choose to apply through an order on a dominant service provider. Remedies may be applied separately or in combination, as the circumstances of the relevant market and of the nature and source of dominance requires.

The remedies available to the TRA include those listed below, together with an indication of the type of harm from dominance in response to which each remedy would typically be applied:

(a) **Publication of information**: A requirement that the dominant service provider publish certain information to ensure that customers and competitors have improved understanding of some aspect of the operation of the dominant service provider. This remedy would typically be applied where the harm from dominance would likely be based on asymmetry of information in the market place, and where the dominant service provider, buy virtue of its position in the market or its longer time in the market has access to better and greater information than other service providers and customers.

(b) **Tariff filing and approval**: A requirement that the dominant service provider should file with the TRA tariffs related to services in the market in which it is dominant prior to implementation and/or require the TRA's approval before implementation. This remedy would typically be applied where the harm from dominance would result from an ability to impose predatory prices, excessive prices or cross-subsidised prices, and where price competition in the market is weak.

(c) **Tariff Notification**: A requirement that the dominant service provider should notify its tariffs to the market within a nominated time before or after implementation. This remedy would typically be applied where the harm from dominance arises in whole or in part from prices not being made known to the market so that other competitors and customers may not be aware of the price options that they have from the dominant service provider.

(d) Cost studies: A requirement that the dominant service provider should participate in cost studies undertaken by the TRA through the provision of cost and related data in the form and time specified by the TRA. This remedy would typically be applied where the dominant service provider has the capacity to charge prices that are not cost related and are, in consequence, likely to be predatory, excessive or cross-subsidising.

(e) **Price Cap Regulation**: A requirement that the dominant service provider should only charge prices for individual services or for bundles of services in a manner that complies with the provision of the price cap. This remedy would typically be applied where the dominant service provider has the capacity to charge prices that are not cost related and are, in consequence, likely to be predatory, excessive or cross-subsidising, but where some leeway is appropriate to enable the dominant service provider to be innovative and flexible in its approach to pricing in the market.

(f) **Accounting Separation**: A requirement that the dominant service provider should provide accounts to the TRA in accordance with specifications of the TRA relating to periodicity, timing, and content, with all costs and revenues separated into service and other categories outlined by the TRA. This remedy would typically be applied where the regulatory needs to understand the costs and revenues associated with services in markets in which there is dominance or in other related markets.

(g) Subscriber information obligations: A requirement to provide information to subscribers on the inception of service or at periods during the course of a subscription (such as in the course of providing bills) which information is considered by the TRA to be required to better inform subscribers and to enable them to make choices according to their perceived self- interest, and in the interests of service competition. This remedy would typically be applied where there is a substantial likelihood of competition being reduced or limited by information asymmetry in the market and by limited access to relevant information to enable informed choices to be made.

(h) **Terms of service**: A requirement that the dominant service provider shall seek approval from the TRA in relation to nominated categories of terms of service or shall provide services in the market in which it is dominant on terms specified by the TRA. This remedy would typically be applied where the dominant service provider has the capacity to apply terms that are unfair or which express its dominant position in the market.

(i) Quality of service: A requirement that the dominant service provider shall either specify and meet nominated service quality standards or meet standards nominated by the TRA.

(j) Terms and conditions of access and interconnection: A requirement that terms and conditions of access and interconnection shall be negotiated and agreed between the dominant service provider and other interconnected service providers or else be subject to arbitration by the

TRA, at the request of one or both parties. This remedy would typically be applied where the

(k) **Mandated provision of services**: A requirement that the dominant service provider shall provide services mandated by the TRA in markets in which it has been found to be dominant by the TRA. This remedy would typically be applied where a wholesale service is required to be provided by the dominant service provider to facilitate the provision of competitive retail services by other operators.

(l) **Access to essential facilities**: A requirement that the dominant service provider shall permit access to facilities that the TRA has nominated to be essential for the provision of retail services by other service providers competing with the dominant service provider. This remedy would typically be applied where access is required to be provided by the dominant service provider to facilities that are essential inputs to the provision of competitive services by other operators and where the option of supply from other sources is not reasonably available.

(m) **Reference offers (in relation to interconnection, access, and usage)**: A requirement that the dominant service provider shall prepare an offer acceptable to the TRA in relation to the terms and conditions under which it will provider nominated services to eligible service providers, in compliance with content and format requirements specified by the TRA. This remedy would typically be applied where there is a need for non-discriminatory and transparent terms to engender certainty in the provision of interconnection and other services on fair and reasonable terms.

Annex A: Single Dominance Criteria: Measures and Application

Criterion A.1 Market share

Measures

Market shares of all relevant firms in the market can provide an initial picture of the relative competitive positions of the firms in the market.

For most telecommunications services markets it is possible to measure market share in terms of total market revenues, total subscribers or customers, and total services in operation. The measures will not lead to the same market share results because service providers may position themselves to attract higher or lower value customers, or to attract business enterprises as customers, thereby potential having a greater services-to-customer ratio than the market as a whole.

Where a regulator or legislator has indicated a particular preferred measure for market share in the context of market analysis for dominance the choice is for market share measured in terms of revenue – so that the market share of an individual service provider will be the revenues of that service provider as a proportion of the total revenues of all service providers in the relevant market.

There are two main reasons for this preference:

- Sometimes the number of subscribers is not a useful indicator of share, because of the variation in size of customer orders. For example, in the retail market for leased lines, typically only medium to large scale business enterprises operating at more than one location or site are customers and the numbers of leased lines that they rent can vary greatly. In this context the customer count is not particularly helpful in assessing market share.
- In some markets the services are of different capacities or sizes and price. The retail market for leased lines is a good example here as well, because the capacity of leased lines can vary from nx64 Kbit/s to multiples of STM-1. In addition the distance covered will also vary greatly. For these reasons a market share measure based on a count of services will not be helpful for dominance analysis because the services in the set are too varied.

In all circumstances, the analysis of market shares for the assessment of dominance will have to be measured over time, rather than only at a single point in time. It is the strong persistence of certain patterns that could give a strong indication of an industry situation.

Application

Market share is at best an indication of other factors at work in the market. It is the result of these factors, and may reflect their presence. Other factors could include merit-based factors such as product quality, service levels, branding, ubiquity of operation and ease of access of the target customer group.

Best practice usage of market share is as an initial indicator that there may be dominance in the market, but that further assessment is required. This application is based on market share being a high or a low figure, and that the concentration in the market is high. This further application (of concentration) is considered using the HHI method. HHI is the Herfindahl-Hirschman Index a commonly accepted measure of market concentration. It is calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. For example, for a market consisting of four firms with shares of thirty, thirty, twenty and twenty percent, the HHI is 2600 ($30^2 + 30^2 + 20^2 + 20^2 = 2600$). The HHI takes into account the relative size and distribution of the firms in a market and approaches zero when a market consists of a large number of firms of relatively equal size. The HHI increases both as the number of firms in the market decreases and as the disparity in size between those firms increases.

Sometimes the combination of all three measures will add information about the nature of competition in a market that is not clear from examining a single measure of market share in isolation. For example, if the market share measured in revenue terms is considerably greater than the market share measured in terms of services, there may be an implication of dominance in that the service provider has been able to determine that it will have the quality accounts, leaving less valuable and potentially less profitable accounts for competitors in the market. However, this situation is one that needs to be further examined in the context of a specific relevant market, and not in the abstract.

More importantly, the application of the criterion over time is very important, rather than at a single point in time. Single data point analysis, especially when used in threshold tests, may often provide little useful information about the strength and dynamics of competition in a market. For example, if the market share in revenue terms of a service provider is 50% there may be a strong inclination to regard this as evidence of dominance, if tests based on 40% threshold levels for example, are applied. However, the level of confidence associated with this conclusion may be seriously impaired if the additional information from time series analysis is that the share has reduced at 5 percentage points each quarter on average over the last year. Similarly time series analysis of HHI results is important for the same reason.

Criterion A.2 Overall size of the undertaking

Measures

Overall size can be measured on many dimensions including –

- Employment
- Gross or net assets
- Capitalisation
- Net cash flow
- Profitability
- All of the above

The point of these measures is to indicate the extent to which the size of the undertaking varies (is bigger than) the typical or average size of enterprises against which it is competing. Therefore size assessment is about relative size rather than absolute size. Some size related advantages could be in economies of scale, finance, purchasing, production capacity, distribution and marketing.

Application

Enterprise size is not usually a compelling criterion by itself because it is very difficult to measure accurately the impact that size has on competition. A service provider that is large relative to its competitors may be assumed to have the ability to draw on reserves of resources (or excess capacity) that its competitors do not have to compete in the market, for example if a producer is able to switch production in a short time frame in order to respond to a price increase, he exercises a competitive constraint on that market. This in turn may prevent or restrain price increases by its competitors and have potentially a positive impact on competition. On the other hand, the very existence of size may be perceived by competitors in a negative way and reduce their competitive efforts to the level they consider the large competitor may tolerate. As this discussion indicates, it may be inappropriate to draw too many conclusions from the existence of size alone.

Sometimes size may also prove to be a disadvantage, if it becomes a source of inefficiency, rather than an advantage. For example, large enterprises may develop bureaucratic processes for approval and change that become barriers to speedy and responsive market place action, and which hand advantages to smaller, more flexible competitors. Again, further evidence that size has created performance barriers is also needed and should not be assumed.

We conclude that the use of size as an indicator is often fraught with complications and should always be undertaken with care because size is one of the criteria that are a double-edged. There is an assumption that it always supports a conclusion of dominance, but it may be either neutral or work in other ways in the context of specific markets.

Criterion A.3 Control of infrastructure not easily duplicated

Measures

The term 'easily' covers a number of meanings as used in the definition of this criterion. The fundamental economic aspect of the term is that the infrastructure is not economically duplicable. This means that there is no economic basis for duplication of the infrastructure being considered. Infrastructure in this category includes ducts and the customer access network of fixed networks in most locations.

The second meaning is that the infrastructure is not easily duplicated because it is a scarce resource (such as spectrum availability) or because there are other barriers to duplication, such as the requirement for a local council permit that may be readily withheld. Infrastructure in this category includes poles, masts and towers, and rights of way (easements) that need to be considered on a case by case basis.

Application

There is no accepted or standard measure to be applied in the case of control of such infrastructure. If access to a particular type of infrastructure is required in order to compete in a market for services that rely for delivery on that infrastructure, and it is either not economic or otherwise appropriate to seek to duplicate the infrastructure, then this goes to dominance in the relevant market. Because there is no clear measure that is always applicable, consideration of various typical circumstances might lead to a very narrow view of the definition of facilities involved.

For example, in some areas, such as densely inhabited inner city locations and central business districts, the level and density of service demand will make it economic to duplicate customer access cabling systems and in these locations the criterion may not apply to cable and duct infrastructure. However, the exception might not apply beyond such areas.

As a second example, if the reason that major towers above a certain height cannot be easily duplicated is because some Local Government (or Town) Councils want to preserve the visual amenity of their communities, then this may be a reason to apply the criterion on a location by location basis. In those areas where there is a Council prohibition on planning permits for new towers, the criterion would apply, but not in areas where prohibitions did not apply.

Criterion A.4 Network effects

Measures

In economics and business, a network effect (also called network externality) is the effect that one user of a good or service has on the value of that product to other people. When network effect is present, the value of a product or service increases as more people use it. In the case of telecommunications services there is no standard measure but there are factors that can be assessed and which will influence a judgment on whether the network effect is large or small (or effectively non existent).

The factors include:

- The relative size of networks in terms of coverage and subscribers
- The existence of fair, reasonable and efficient interconnection arrangements
- The saturation levels of the service (in terms of % of population)
- The ability of service providers to offer deep discounts for on-net calls and other services (based on an assessment of the charges for on-net services compared to off-net and the potential for discounts)

Application

The information that has been collected and referred to above needs to be analysed in the context of a relevant market, where the comparative situations of the different service providers can be considered.

For example, if there are two competing service providers in a market with similar numbers of subscribers, and where the total service penetration is 10% of the population, this may indicate that, although there appears to be substantial potential for network effects to have effect, the position and opportunities in that regard of each service provider is similar to that of the other. In such a situation it would be reasonable to conclude that there is unlikely to be a position of dominance based on this criterion.

Criterion A.5 Technological advantages and superiority

Measures

The telecommunications systems and platforms equipment market is served by world class technologies from global vendors who are willing to sell to any service provider. All service providers potentially have access to all technologies and to all vendors. This development has been assisted by the development of end to end public standards through the ITU, ETSI and other similar standards bodies. The difference between the capabilities of one vendor's equipment and systems and those of another are reducing, and software-defined upgrades are a constant and regular feature of the service that accompanies such equipment.

Nevertheless it is still possible that a service provider might enjoy technological advantages and superiority as a result of deploying proprietary systems, including software, or because of exclusive contracts with vendors and systems developers. This is the evidence or measure that would be sought in such cases.

Application

If there is evidence of technological superiority, then it will be necessary to examine the nature of the matter to which the superiority relates and also whether in its nature the superiority is temporary or longer term.

Criterion A.6 Absence of or low countervailing buying power

Measures

Countervailing buying power occurs when the power of a seller in one situation is impacted by the converse relationship of the same parties in another situation. This concept recognises that the relationships between service providers in a market are usually complex and multi-dimensional. Countervailing buying power could take different forms for which the analysis of potential competitive constraint on the market needs to be assessed on a case by case basis.

A competitor who may have what would otherwise be dominance in a market, has to refrain from taking advantage of the dominant position having regard to the prospects of 'retaliation' by larger competitors. The retaliatory capability is the countervailing power.

One application in which countervailing buying power is often is in relation to the market for the termination of interconnected calls, where each network is effectively a separate market (in countries where the calling party's network pays – CPNP – for call termination) and even small network operators have a terminating call monopoly. [1]

The leading European case in relation to countervailing buying power in the telecommunications sector is the case involving '3' and BT in the UK. 3 claimed that it did not have significant market power in relation to call termination because BT, the main customer for its call termination services, had countervailing buyer power. Specifically, 3 argued that its termination rates were constrained by the fact that it was dependent on BT to interconnect with its network, rather than the other way around. However, Ofcom concluded that 3 has SMP, partly because of regulatory constraints imposed on BT.

Application

This criterion is applied by inquiring whether there are restraints in practice on the way in which a position of potential dominance in a market might be exercised, and, if so, whether those restraints are associated with other buying relationships that the parties might have in the market.

[1] The situation is one of bilateral monopoly where both sides are dominant, in the sense that they are not constrained by competition

An example might be where a small service provider is assumed to be constrained from charging a larger service provider above costs for call termination services because the small service provider requires a number of wholesale services from the larger operator, including call termination and also, say, wholesale leased lines, unbundled local loops and wholesale line rental (the list might be longer). The hypothesis is that the small operator need not be designated as dominant in relation to call termination because the need to obtain other wholesale services at reasonable rates will be a constraint on its behaviour and encourage it to be reasonable in relation to its own prices.

A deeper inquiry is required. If all of the other wholesale services are subject to ex ante regulation and to regulated cost-based prices then the need to acquire them on reasonable terms may not be a constraint in relation to call termination prices. The test would be whether there is a reasonable apprehension on the part of the smaller service provider that the larger service provider has the capability to inflict commercial damage through non-supply or excessive prices in relation to other transactions and whether being reasonable in relation to the terms for providing services in return might reduce the risk of the capability being exercised.

Criterion A.7 Easy or privileged access to capital markets / financial resources

Measures

The measure or test is twofold;

1. whether a service provider has access to financial resources at costs that are low relative to the risk-adjusted cost of capital appropriate to the relevant telecommunications market (that is, below market rates); and

2. if so, whether the access is easier or on better terms than might reasonably be available to competitors in the market.

Telecommunications markets are generally considered to be capital intensive so access to capital on a preferred or privileged basis, if it occurred, would lead to a position of advantage in the market, and might be a basis for a finding of dominance, especially if considered in conjunction with other criteria.

The audited accounts of the service providers would be a source of information on the cost of capital that has been incurred. More general parameters of the appropriate cost of capital in the market could be obtained by benchmarking or from financial advisory firms in their client reports on the market.

Many service providers are part of larger enterprises and do not necessarily publish the accounts applicable to each operating division or subsidiary, assuming the licensed service provider is a business unit or a subsidiary. These practical difficulties may make it difficult to establish relevant costs of capital for a specific telecommunications business.

Application

If reliable information about costs of capital in the market and in the service provider under consideration is available then the application is straightforward. The costs of capital involved would need to be below an appropriate commercial rate in the market in question. However, this is not sufficient for the criterion to be applied. If all or most of the other significant competitors in the market enjoy similar costs of capital then the service provider under consideration would enjoy no competitive advantage from this source, and would not be dominant in the market on the basis of this criterion. Therefore the availability of capital on easy or privileged terms has to be considered relative to the costs of capital of other service providers in the market.

A further and different application of the criterion could be where general prevailing economic conditions make new capital raising difficult and therefore more expensive for new entrants to the market. Incumbents have been capitalised at least for current operations (even if capital for expansions is costly or scarce), so the advantage in this situation is that access to capital is past access (rather than being strictly *privileged*) and easier access than available to start-ups or other types of new entrants.

Criterion A.8 Product / services diversification

Measures

A service provider with a diversified range of services may have advantages in the market compared with single-product or few-product operators. There are a number of ways in which product diversification is a source of advantage and potential dominance in a relevant market, including:

1. the ability to bundle various services and obtain advantage from the reduced costs of delivery and the improved customer loyalty (or lock-in effects) that results from the discounts that might be offered; and
2. the ability to use market capital (such as brand strength) in one service market to assist commercial operations in other service markets.

The measures that could be applied in relation to this criterion are:

- the number, content and range of bundles on offer;
- the discounts offered with bundles relative to the prices available outside the bundle;
- customer churn of bundled customers relative to churn without bundles and the churn rates of competitors

Application

The application of this criterion requires great care is needed because the impact of diversification (or lack of diversification) on dominance may be ambiguous and depend on specific circumstances. This is because:

- the advantages of diversity might be offset by loss of commercial focus
- service providers with single or few services may be able to generate superior performance or efficiency related to those services and pass on customer benefits (this will depend on the market)

In conclusion, product diversification is most likely to support a finding of dominance in those circumstances where, for various reasons, smaller service providers cannot compete effectively; for example, if they can not create competitive bundles.

Criterion A.9 Economies of scale

Measures

Economies of scale are the efficiencies in terms of unit costs from increased production achieved as a result of fixed costs being spread across a greater scale of outputs. Service providers with substantial scale economies have cost advantages that enable them to achieve and retain a position of advantage and possibly of dominance in a market. Potential entrants in the market would then need to enter the market on a similar large scale to obtain the same economies of scale as the incumbent.

But scale economies do not continue indefinitely. They are exhausted at various levels of production or output. The point of exhaustion will depend on the nature of the market and the technologies used to produce services for that market. The measure of scale economies is in terms of the unit costs at various points along the volume curve, and these costs are determined through accounting analysis or cost modelling.

Application

Economies of scale factors need to be applied with care. If the unit costs of two competitors are similar then the scale advantage will have been exhausted. Where economies of scale is an important consideration for dominance is where an incumbent has maximised its economies of scale and new entrants have high costs and services, but no scale benefits at all. The new entrants will have substantial disadvantages in terms of unit costs.

Criterion A.10 Economies of scope

Measures

Economies of scope are conceptually similar to the economies of scale but they refer to the efficiency gains from having a range of products or services rather then from a single one. Economies of scope occur when the range of businesses and operations of an enterprise allow it to spread its fixed common and overhead costs across the full range, thereby reducing the costs that would otherwise have been incurred by a single business or service. Unit costs are lowered as a result.

Economies of scope can be measures via cost studies and cost modelling to show the impact on unit costs if fixed common and overhead costs can be allocated more widely within the firm.

Application

These factors are applied in the same way as for economies of scale. The applications will determine whether the reduced costs resulting from scope economies give the service provider a significant advantage and potentially put it in a position of dominance in the market.

Criterion A.11 Vertical integration

Measures

Vertical integration occurs when the service provider operates at both the wholesale and retail levels in the market for similar services. An example would be where a service provider competes in the retail broadband market and also in the upstream wholesale market for unbundled local loops (ULL), which might be an essential input to the competitors that supply retail broadband via ADSL means.

The test for vertical integration is to determine what are the wholesale services needed to complete a retail service offering in a market and then to determine whether a single service provider operates at both levels.

Application

This criterion is applied by determining the potential capacity of a service provider to foreclose the potentially competitive retail market. However, vertical integration between retail and wholesale services does not always provide an incentive to foreclose, because the wholesale service provider might also have an incentive to maximize the profit by setting the access price so to extract the entire retail profit ("Chicago Critique"), i.e. implement price squeeze and other strategies to gain competitive advantage in the retail market by either discriminating in favour of its own retail operation or by charging all retailers wholesale input prices that are above cost

A test to determine if advantage is being sought through price squeeze or other pricing strategies is to implement accounting separation and cost studies to enable the costs for the wholesale product to be assessed and to be compared to the prices being charged to retailers.

Imputation tests are also applied. These tests use competitor costs to impute the wholesale price that would permit an efficient competitor to match prevailing retail prices in the market. These tests can be applied in the other direction to determine the appropriate retail rates that should be charged by adding a modelled cost of wholesale service to the additional costs of an efficient service provider. If the retail prices being charged by the integrated service provider are below the appropriate prices calculated via this method, then there is below cost selling and potentially price predation in the market.

Criterion A.12 A highly developed distribution and sales network

Measures

The measure is the ubiquity and exclusivity of the service provider's distribution and sales network.

Application

If the service provider has tied up the preferred channels to market through exclusive contracts that prevent the same channels being used by competitors, then there is a prima facie case for dominance based on this criterion. It is important that the sales and distribution network options for the competitor are reduced significantly by the firs service provider's tied arrangement. If there are a number of department store chains in the economy and the service provider under consideration has only tied up one of them, then this would not be the creation of a potentially dominant position.

Criterion A.13 Absence of potential competition

Measures

This criterion assesses whether there are any potential competitors in adjacent markets who may be encouraged to enter the relevant market. This is an increasingly important consideration in the current era of convergence at all levels in the market. In practice this means that a non-traditional entrant from an adjacent or neighbouring market might well need to be considered as a potential entrant in a converged market.

Application

The criterion is applied by considering what might need to happen for potential competitors to enter the market and whether they would experience any significant barriers to doing so. If barriers to entry are significant the potential competitors that have been identified may not be potential competitors after all.

Criterion A.14 Barriers to expansion

Measures

A key barrier to expansion is that market penetration has reached or is near saturation levels. The measure is penetration per 100 population, or per 100 households, or against whatever penetration metric is appropriate to the market in question. A further measure is an assessment of the potential for penetration, a figure that may be derived from customer surveys of buying intention and by analysing the actual penetration rates of more developed markets in the relevant service field.

Application

The criterion is applied by comparing the actual and the potential penetration levels and assessing whether there remains significant opportunity that might be attractive to new entrant competitors. It should be noted that potential penetration has been under-estimated significantly in some markets in the past, and that saturation might have been assumed prematurely.

For example, it was assumed at one point that the saturation level of mobile service markets was one service for every member of the population (except for very young children) and that as penetration approached the 100% market the expansion potential was disappearing. In practice the penetration levels have gone well beyond 100%, reflecting the take-up on multiple services to obtain the on-net call price discounts.

Criterion A.15 Ease of market entry

Measures

This criterion is concerned with the nature of barriers, if any, to entry into the market. The measures to consider here are:

- Legal or regulatory barriers particularly constraints in licensing and restrictions on the numbers of licences granted
- Structural barriers related to the actual market conditions, i.e. cost or demand structure which create asymmetric conditions between enterprises
- Commercial barriers to entry associated with amassing the capital needed to enter successfully and establish a network based business
- Consideration of the number of licensees actually operating behind the entry barriers, if such barriers exist in the first place. The number of service providers in the market relative to the potential of the market to sustain the existing service providers on a commercially sustainable basis, is a major consideration on whether a new entrant might enter or avoid the market.

Application

There is no standard methodology to apply here. The relative ease of entry needs to be considered having regard to current penetrating levels, future levels based on the potential in the market, and to the number of service providers already in the market serving available demand. Barriers to entry that will need to be considered in this analysis include also structural barriers such as economies of scope and current market conditions, such as the prevailing price levels.

Criterion A.16 Excess pricing and profitability

Measures

The key measures are the profitability of the service provider in the relevant market compared to the profitability that might be expected in the market if it was competitive. The first might be difficult to measure separately from the profitability of the service provider's operations overall. The second might be established have regard to the EBITDA ratios of service providers in comparable but competitive service markets.

Application

A comparison of the two measures (the service provider and a competitive industry) over time will enable a conclusion about whether and by how much and for how long the profitability has been excessive. Even if excessive, if the profitability is reducing to competitive levels this may suggest that competition is becoming effective in competing away excess profitability and prices.

Care must be taken in applying the criterion because low profits need not reflect competitive outcomes. For example, low profits may reflect inefficiency and high costs in a situation where the affordability of the potential customer base is low.

Criterion A.17 Lack of active competition on non-price factors

Measures

There are no standard measures for this criterion. In practice there needs to be an analysis of the number of price packages and other offering that comprise bundles or variations built on non-price factors. Non-price factors may include service quality such as in terms of availability (e.g. improved maintenance and fault response options) or other aspects of technical quality.

Application

This criterion needs to be applied with care. In practice it may serve to modify the assessment of the application of other criteria. For example, in a particular market the overall price levels may not be falling as quickly as the reduction in underlying costs. Normally this would be taken as some evidence that competition was impaired in the market concerned. However, customers in that market may value non-price factors, such as service quality and reliability, very highly, and this may lead to much more competition on those non-price factors. If this is the case, it may well modify the original hypothesis that there is dominance in the market. In fact the competition could be quite robust, but be expressed more in non-price terms than in commoditised markets where price is the key dimension of competition.

Criterion A.18 Switching barriers

Measures

If customers are unable to switch from one service provider to another then this may contribute to a dominant position by the service provider with the largest share of customers. If customers cannot switch or are constrained in doing so, the service providers may do less to ensure they are retained than might be done in a fully competitive market.

The key measure is customer churn as a percentage of total customers and movements in churn over time.

Application

Churn is the typical observed behaviour of customers making choices and changing service providers. The existence of barriers to churn is relevant – such as service contracts with long commitment periods, and the absence of number portability schemes.

Low churn does not necessarily mean that there is low competition. If churn is signalled in advance by the procedures for service cancellation or for porting, then service providers might spend considerable effort in dissuading the potential churnee, through the offer of endorsements to stay. This is particularly the case in number portability where the possibility of porting a number as part of a churn will usually encourage service providers to address the factors leading to churning in the first place. If this competitive initiative is successful, the churn rate will decline. In that sense, churn is not necessarily linked to greater and more intense competition.

Criterion A.19 Customers ability to access and use of information

Measures

Customers who are unable to compare other services with the one they have and who lack information on what is available and under what conditions, will be less inclined to change service providers, and will contribute to the service provider's potential dominance. In some cases the requirements by the regulator that operators notify their prices and publish their tariffs and other conditions of service might increase transparency and reduce the likelihood of single dominance in the relevant market. (It may actually facilitate the conditions for joint dominance however, as discussed later in these Guidelines.)

Application

Judgments are needed on the level of transparency (there being no acceptable standard or gauge) that exists and whether there is a lack of transparency in one or more vital pieces of information that could potentially cause distortion in the market and discourage customer movement.

Annex B: Criteria for Joint Dominance

Criterion B.1 Market concentration

Measures

The smaller the number of firms the more likely is tacit collusion to occur. The measure is the HHI test that is discussed under criterion A.1

Application

The application is discussed under criterion A.1 above. The higher the Index and the market concentration the more likely it will be that the circumstances are favourable for joint dominance.

Criterion B.2 Transparency

Measures

Transparency in this context indicates the visibility of prices and quantities to sustain joint dominance. One of the key factors to sustain joint dominance is the ability to detect deviation from collusive understandings in a timely manner. If for example, price or quantity changes are not observable the rival firm will not be able to discern whether the lower number of customers served is based on a reduction in demand or a price cut from its competitor. Therefore, visibility of prices and price changes firms to achieve collusive outcomes and therefore joint dominance.

Other evidence of transparency may be the movement of staff between service providers in the market over time thereby enabling the service providers to have a substantial understanding of each other's plans and strategies. More direct ways of achieving transparency may also be evident such as disclosure requirements to share markets and securities and exchange commissions.

Application

Application of this criterion is at best a judgement that may support other indicators of joint dominance. The application of this criterion is intended to answer the question about the means by which information might pass between or be known by other competitors about a first competitor.

Criterion B.3 Mature market

Measures

The measures of maturity in a market include market penetration relative to an assessment of potential penetration.

Application

The measures will indicate where a particular market is on the product or service life cycle. The life cycle will be capable of being plotted as an 'S' curve with the points of inflection possibly being drawn from the experience of the particular service in other country markets.

Criterion B.4 Stagnant or moderate growth on the demand side

Measures

The measure will be the level of sales activity over time, expressed in volume (rather than price) terms.

Application

This measure will be evidence that one of a number of possible conditions favourable to joint dominance is fulfilled in the market, and that there is a risk of joint dominance as a result.

Criterion B.5 Low elasticity of demand

Measures

The measure is the change in demand for a service against the price changes that have been applied over time. Time series analysis is important to show whether the price elasticity index is low or high or somewhere in between.

Application

Care has to be taken in applying this criterion. Where price elasticity of demand is low – that is the demand for services is less responsive to price – there may be a tacit acceptance amongst competitors that the customers not be given the benefit of cost reductions. In the other hand if non-price factors become more important to both customers and competitors, then there may well be robust competition in the relevant market. The specific circumstances of the relevant market are very important in applying this criterion.

Criterion B.6 Homogenous product

Measures

Incentives to collusion and potential for joint dominance are higher when products are homogeneous, similar or are perceived to be similar. This is because it is more difficult to punish the rival, and even a significant reduction in price might still leave the deviant firm with a positive demand. In these situations competition will be on price, because of the absence of non-price differences. The approach taken in relation to criterion A.8 is applicable here.

Application

The approach in relation to criterion A.8 is applicable here.

Criterion B.7 Similar cost structure

Measures

The measures will be based on cost studies, with similar scale and coverage being a proxy for determining the potential for similar cost structures.

Application

Symmetry and similar cost structures facilitate joint dominance. Comparison of costs structures or potential costs will enable an assessment of their similarity. However, this is only one factor that adds to the risk of joint dominance in a market and needs to be considered as part of an overall mix of relevant criteria.

Criterion B.8 Similar market share

Measures

Market share measures are discussed in relation to criterion A.1 and are relevant here.

Application

Symmetry and similar market shares facilitate joint dominance. Comparison of market shares and how they are constituted will enable an assessment of their similarity. However, this is only one factor that adds to the risk of joint dominance in a market and needs to be considered as part of an overall mix of relevant criteria.

Criterion B.9 Lack of technical innovation, mature technology

Measures

The evidence will include the capital investment history of the market and the recent of the latest significant investment.

Application

The recency of significant new investment may be compared with overall industry investment in other telecommunications markets. However, the lack of investment may not be complete because even in very mature markets there are often economic opportunities to reduce costs through system improvements and related investments in operational efficiency.

Criterion B.10 Absence of excess capacity

Measures

The measure will be an audit of excess capacity or enquiry of market participants about network utilisation.

Application

Network utilisation and capacity measures need to be assessed over time and against the comparable measures for a growing and competitive market. However the role played by the presence of excess capacity in relation to joint dominance is ambiguous: excess capacity indicates a stronger incentive to deviate from the collusive outcome with a stronger effect if the rival has not the same extra capacity. On the other hand however, the effect is not the same if both firms have the same level of excess capacity.

Also care needs to be taken to ensure that other causes or potential causes of network utilisation and reduced excess capacity have been considered. An example might be the mandated sharing of facilities or services resulting in higher utilisation.

Criterion B.11 High barriers to entry

Measures

The measures in relation to criterion A.15 apply here.

Application

As per A.15.

Criterion B.12 Lack of countervailing buying power

Measures

The measures in relation to criterion A.6 apply here.

Application

As per A.6

Criterion B.13 Lack of potential competition

Measures

The measures in relation to criterion A.13 apply here.

Application

As per A.13

Criterion B.14 Various kinds of informal and other links between the undertakings concerned

Measures

The evidence for such links may come from many sources and be of diverse kinds. There is no standard measure. The movement of senior people between firms is evidence of such linkages and of the potential for knowledge to be transferred between competitors about plans and strategies.

Application

Evidence of linkages may answer the question about how tacit understanding could work in a market.

Criterion B.15 Retaliatory mechanisms

Measures

The level of inter-form wholesale activity is a measure of the opportunity for one competitor to be potentially harmful to another. A second measure is whether the conditions for a price war – progressive retaliation to price initiatives with yet lower prices – exist in a market.

Application

The concept of retaliation in this context is based on the likelihood that the service providers will recognise that they have retaliatory capability and that they will therefore not initiate robust competitive moves. The emphasis is not on actual knowledge, but whether the circumstances of the market create a risk of this occurring.

Criterion B.16 Lack of or reduced scope for price competition

Measures

Cost studies and cost modelling will show how close to cost prices have become over time.

Application

The measures applicable to this criterion need to be analysed over a time period, because both there may be a moving potential for cost reductions with additional investment or new technology that changes costs and cost relationships.

Criterion B.17 Incentives for tacit collusion

Measures

This is a catch-all criterion since many of the specific criteria already mentioned imply incentives for tacit collusion. Summarizing the economic theory suggest that the analysis of joint dominance is based on the so called “incentives constraints” to facilitate collusion, i.e. each firm will compare the immediate gains it makes from deviation with the profit it gives up in the future if the rival reacts.

Important here are measures associated with the profitability and market success of one or more of the service providers in a market with few service providers.

Application

The incentives for market competitors in the circumstances of a relevant market to collude tacitly and to thereby affect market outcomes depends on market circumstances and other relevant factors as explained above (Criteria B1 to B17).

It is sometimes assumed that all competitors have an incentive for collusion, but this need not always be the case. If a service provider is winning that part of the market that it finds most profitable to serve it may have no incentive at all to work in harmony in a collusive manner with the rival that it is beating through direct competition. The incentive criteria would be essentially a negative one, and would be applied particularly in circumstances where there was no evidence of a credible and compelling incentive to collude.

Criterion B.18 Enforceability of tacit collusion or understanding

Measure

As the one above, this criterion relates to whether the circumstances exist for tacit collusion to arise, or whether there is any evidence that suggests the contrary. In part the evidence will overlap with considerations of retaliatory mechanisms covered in elation to criterion B.15 above. However there may be other factors as well that influence consideration of the market such as, for example, large and aggressive customers who purchasing processes that encourage competitive bidding.

Application

Application of this criterion is a judgment based on the evidence that can be adduced.