

# DETERMINATION

## Methodology for the Definition of Telecommunications Markets

# Methodology for the Definition of Telecommunications Markets

A Determination issued by the Telecommunications  
Regulatory Authority

19 April 2003

**Purpose:** To describe the methodology the TRA will use for defining telecommunication markets in Bahrain when considering whether to impose any ex ante regulatory measures.



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### 1 Introduction

The Bahraini primary legislation (Legislative Decree No. 48 of 2002 promulgating the Telecommunications Law) provides a definition of dominance and SMP, but leaves it to the TRA to determine the methodology it will follow in defining relevant markets, and specifying the markets in which an organisation has dominance or SMP. This determination describes the methodology the TRA will use for defining telecommunication markets in Bahrain, when considering whether to impose any regulatory measures. It has been prepared following the publication of a consultation paper<sup>1</sup>, the receipt of replies to that paper, and the TRA's consideration of those replies.

#### 1.1 Process

In general, the regulatory process will follow the steps outlined below:

- 1) The TRA will define relevant telecommunications markets that may be considered for the application of some form of regulation;
- 2) The TRA will investigate whether the market is sufficiently competitive or expected to become so in the near to medium term such that any regulatory intervention would be unwarranted, by undertaking a market dominance/significant market power analysis.
- 3) If the market is not likely to become effectively competitive then the TRA will identify which operator or operators are dominant or have significant market power in a relevant market or markets.
- 4) The TRA will then identify the most appropriate regulatory measures to apply. It is possible that regulatory measure would be targeted at another market than that where the results of the market failure are most apparent, especially upstream bottleneck markets.
- 5) The TRA will define appropriate regulatory instruments and quantify any direct measures that that will be employed.

The overall objective of the TRA in undertaking this process will be to enhance user and consumer benefits in terms of choice, price and quality by encouraging competition in the supply of services.

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<sup>1</sup> This document is available on the TRA's website.

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### 2 Definition of ‘relevant markets’

Under Bahraini law the imposition of *ex ante* regulation on any licensee must be based on a finding of either market dominance (section 57), or in the case of sections 58 and 64, on significant market power (SMP). These concepts are defined in the law. They are concerned with market power. *Ex ante* regulation is primarily intended to address the problems associated with market power.<sup>2</sup>

Market power implies a lack of effective competition. The problems associated with a lack of effective competition are well documented and include excessive prices, a lack of responsiveness to customer needs, high levels of operational inefficiency, and a range of other problems that detract from the economic wellbeing of citizens compared to a situation where the provision of services occurred in markets that were effectively competitive.

In order to identify a **relevant market**, requires the identification of the **goods or services** traded in that market, and an **area** in which a hypothetical monopolist could profitably sustain a rise in the price(s) of those goods or services. Further clarification may be provided by also describing the functional level of the market. The definition of the market is crucial in order to determine whether any firm has dominance or SMP in that market.

#### 2.1 Definition

The concept of market definition has been developed over the last 20 years or so, mainly by economists working with various competition law authorities. The concept of market definition as used by competition authorities is now highly developed, although nevertheless a complicated exercise.

The leading contributor to this development has been the US antitrust authorities, especially the Department of Justice (DOJ). In 1982 the DOJ developed the hypothetical monopolist test for the purpose of providing an analytical framework for market delineation. The wording of this test has been slightly modified since this time.<sup>3</sup> It requires that the practice of defining markets should start from a competitive price, and enquire whether it be profitable, over a period of about one year, to implement a hypothetical small (in the range of 5 to 10 %) increase in price? In any particular case the answer to this question will depend on the degree to which consumers would switch to other products (demand substitution) and the degree to which additional supply would materialise (supply substitution).

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<sup>2</sup> Another form of market failure that regulation may address are know as ‘externalities’. When regulating the telecommunications sector, the existence of externalities may result in the TRA designing regulatory mechanisms so as to take account of some form of externality.

<sup>3</sup> “A market is defined as a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a “small but significant and nontransitory” increase in price, assuming the terms of sale of all other products are held constant.” Section 1.0 Horizontal Merger Guidelines, DOJ, issued 1992, revised 1997.

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The application of the market definition process to the ex ante regulation of telecommunications is relatively recent, and is not problem free. As respondents to the consultation pointed out, due to peculiarities in telecommunications industry that are not shared by many other industries, the test must be applied with skill in order to prevent a bias toward markets being too narrow defined.<sup>4</sup> The TRA will take the appropriate care in this regard.

The hypothetical exercise is relevant only in the context of the economic assessment of where the boundaries lie regarding relevant markets. It is not directly relevant for analysing whether an entity has dominance or SMP in a relevant market. (This part of the analysis will occur after the relevant market has been identified). In applying the test, the TRA will take care not to begin with a geographic scope that is too broad, nor with a group of products or services that is too broad.

In general, the TRA will begin with the end-user product or service that appears to be at the core of the market power problem. This will require the TRA to identify the functional level on which the market power problem is centred. The hypothetical monopolist test will then be applied.

In its design the hypothetical monopolist test is concerned with the response of consumers at the margin (i.e. those most likely to switch) and *not* the average or typical user. It is whether these marginal customers are sufficient in number to make any attempt by a firm to increase prices for a product unprofitable, that is important for market definition purposes. While there may be many customers who would not switch under any realistic circumstances, this has no relevance to the outcome of the SSNIP test<sup>5</sup>. Ultimately, it is an empirical matter, and one that cannot be addressed by simple factual analysis and assertions (which risk being arbitrary and capable of mistakenly identifying very narrow markets).

In practice, the TRA may not start the process with individual products or services, as there may be several unmistakably strong and effective substitutes for the product or service in question. Consequently, the TRA may begin by applying the test to a range of obviously substitutable products or services.

The TRA agrees with respondents, that the test can not be applied in a mechanistic way. Peculiarities with the telecommunications industry require the test to be applied intelligently, and even here, where so many costs are common between 2 or more services, the application of the test must not overlook groupings of goods or services, where the demand or supply complementarities are such as to make stand-alone provision non-viable (see the Annex for a more detailed explanation).

The TRA will follow this methodology for defining relevant markets.

## 2.2 Timeframe for analysis

Under competition law the process of market definition requires subtle differences depending on whether the process is motivated by the investigation of an alleged restrictive trade practice (RTP) or abuse of dominance, or whether it is in regard to a merger or acquisition. RTPs or abuses of dominance involve the investigation of events

<sup>4</sup> The issues are discussed in a little more detail in the annex to this determination.

<sup>5</sup> SSNIP stands for “Small but significant and nontransitory increase in price”.

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that have already taken place. Consequently, the enquiry is one which assists them in defining the market that existed or exists at the time of the impugned event, i.e., in the past or present. As for merger analysis, however, it is the “predictable” future that is most important for market definition for the purposes of *ex ante* regulation. There is no information available from a future period.<sup>6</sup>

As for merger analysis, market definition for the purposes of applying *ex ante* regulation requires that TRA to define markets taking account of the predictable future. The standard timeframe within which markets are usually delineated using the hypothetical monopolist test applied to merger regulation is 1 year. Concern has been voiced that this timeframe may be too short and result in relevant markets being too narrowly defined for the purpose of telecommunications regulation. It has been suggested that in dynamic markets characterised by factors such as evolving technology and technological applications, new innovative business models, and an evolving regulatory structure, markets will tend to be too narrowly defined, with the result being that dominance or SMP may be too readily found, and regulation imposed that undermines more cost-effective market-based solutions.

In order to delineate a market the TRA will look to the coming 1 to 2 years in order to make an assessment of whether market power (be it dominance or SMP) is likely to be enduring. If commercial events are thought likely to occur outside of a 1 to 2 years period (as discussed above), the TRA will consider these possible events when deciding whether to impose any regulation, and in the design of any such regulation.

### 2.3 Treatment of supply substitution

In the consultation paper the TRA asked respondents for their views on the differences between US and EU jurisdictions in the way they treat supply substitution. In the European Union supply substitution is included in the process of market definition. In the US supply substitution is considered in the identification of firms that provide sufficiently similar services to constrain the behaviour of those firms that are currently offering the service in question. In effect, the respondents seem to have agreed that the difference is found in the application of the two approaches, rather than in principle.

The TRA has decided to adopt the EU approach to addressing supply substitution. The TRA’s reasons for this choice are partly based on the fact that Bahrain retains an integrated incumbent operator as has occurred in the EU as well as Australia and New Zealand, and markets definition and precedent from those jurisdictions are thus likely to be of more relevance to Bahrain than are the market definition and precedent taken for the US.

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<sup>6</sup> In regard to restrictive trade practices (RTP) or abuse of dominance, the investigation involves events that have already taken place. Consequently, the relevant market the authorities are in need of defining, will actual have existed at the time of an alleged illegal event.

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### 3 Summary of key points of the determination

- The TRA is required by law to identify dominance or SMP in *markets* prior to implementing regulations;
- The TRA will employ the hypothetical monopolist test to identify *relevant markets*;
- The TRA will employ a forward-looking approach to defining markets, and this will be limited to 1 to 2 years.
- Commercial developments that are thought likely to occur after this period will be considered by the TRA when it decides whether to take regulatory action and in the design of any such action.
- In defining markets the TRA will include in the market definition exercise, other supplies that can switch their supply to compete in the market at relatively little cost, i.e. the TRA will use the EU approach to including supply substitution.

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### A1 Annex - Replies to the Consultation

The TRA received two replies to the Consultation paper on market definition: one from Batelco and one from Kalaam Ltd.

One respondent recommended that the TRA make explicit its intention to also look at the *function level* of the market as well as defining markets in terms of the Product and Geographic Area of the market. The respondent was keen that the TRA guard against market definitions that were not adequately focussed on the vertical level of the value chain, and which may therefore result in *ex ante* regulation being applied in areas where competition should instead be relied upon.

Both respondents pointed out the difficulties posed by 'clusters' of goods or services, with one warning that for the purposes of market definition, cluster markets should only be defined where certain conditions exist. These conditions have been outlined by economists and include the requirement that:

- unbundling of consumption imposes identifiable costs on consumers;
- these costs are substantial relative to the level of outlays on the cluster of the consumers accounting for a large share of consumption;
- demand for the items comprised in the bundle is correlated among consumers;
- the items are broadly similar in terms of the factors which generally shape firms' marketing strategies; and
- suppliers' market shares for each item in the cluster respond to the prices they charge for the other items.

This is in addition to the more general supply-side issue noted in the consultation document in regard to the various services provided with 2G and 2.5G mobile technologies, i.e. that of economies of scope such as to make stand-alone provision of certain individual services uneconomic. One respondent urged the TRA to consider the potential for services to be rightly included in markets at the outset, following an analysis of the demand and supply characteristics.

Also raised by this respondent were the difficulties of applying the SSNIP test in industries with large sunk costs. The implication is that prices in such industries will already be in excess of marginal cost, meaning that if prices are marked up above marginal cost by 5%-10%, as is recommended by the SSNIP test, the result may indicate a lack of substitutability into other services / products erroneously suggesting an anti-trust market where such mark-ups can be too little to allow a hypothetical monopolist to earn a sufficient return on its capital - including its fixed costs.

The TRA acknowledges that the SSNIP test for market definition requires that the SSNIP test must be applied carefully, and not as it would be for industries where fixed costs were less important.

Both respondents note that in industries characterised by rapidly developing technology, the traditional SSNIP will result in markets that are too narrowly defined. Indeed, a few academic commentators have suggested that the test should be fundamentally modified so as to include other performance variables such as innovation, and the effect of product innovation on customer response.

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The TRA is not confident, that in practice these other factors could be well enough assessed to make for a sufficiently robust methodology, enabling the adaptation of the present approach to market definition, to make it suitable for industries characterised by rapid technological innovation.

At present these factors are assessed during dominance / SMP tests, when the authorities would make an assessment of whether market power exists, the causes of that market power, and thus decide on a suitable regulatory response if regulation was considered necessary. While these aspects are currently being investigated in preparation for further developments to the new telecommunications regulatory framework in the EU, the TRA takes the position that in difficult cases, such as where there are important non-price factors e.g. large sunk investments in R&D that suggest that competition may [also] be *for the market* rather than simply *in the market*, these factors will be considered when reviewing the causes of market power.

The TRA also notes that while technological development has been very important to the telecommunications industry, much of the development has occurred outside of telecommunications networks or service providers, through firms that design, make and sell equipment to telecommunications networks or service providers. Network operators have tended to be buyers of this technologically rich equipment on an international market, rather than being the inventors of it. Because of this, the particular problems of applying the SSNIP test to highly innovative industries, would appear to be of rather less importance for national telecommunications regulatory authorities than some commentators have claimed.

On the question of supply substitution, specifically whether the EU or US approach to including supply effects in the market analysis exercise, the respondents were of contrasting views. While one acknowledged the results provided in both cases should be similar, its preference for the US approach was based on a wish to avoid the authorities guessing at the predicted supply response following a hypothetical SSNIP price rise. The other's preference for the EU approach (also shared by Australia and New Zealand), was that the US approach would result in confusion and duplication of analysis.

In regard to the TRA's request for comments on the timeframe over which the market analysis should take place, both respondents have urged that a flexible approach be used, although with one urging a longer period compared to the other's suggestion that in most cases a 1 year timeframe would be appropriate.

Finally, one respondent urged the TRA to commit to reviewing its market definitions in 12 months, rather than for the TRA to retain its discretion to choose to review these definitions within 2 years unless the conditions warranted an earlier review.