

REPORT

On Additional Mobile Licenses Consultation

The possibility of issuing additional mobile licenses in the Kingdom of Bahrain

A report issued by the Telecommunications
Regulatory Authority
13 May 2007

Purpose: To report on the initial consultation on introducing further competition into the mobile sector of the Kingdom of Bahrain



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1 Introduction

1.1 PURPOSE

In July 2006, the Telecommunications Regulatory Authority of Bahrain (TRA) issued a consultation document on “The possibility of issuing additional mobile Licenses in the Kingdom of Bahrain”. This Statement summarises the responses received on that consultation and responds to the issues raised in these responses.

In the Consultation document, TRA presented for comment its initial views regarding the potential scope for issuing additional Licenses in the mobile telecommunications market in Bahrain. The consultation document posed a number of questions relating to both the scope for entry in the Bahrain mobile telecommunications market, and the possible impact of entry on existing operators, mobile customers and the Bahrain economy more widely.

TRA has received responses from:

- Batelco;
- Bharti Communications;
- The CDMA development group (CDG);
- Etisalcom;
- The Global Mobile Suppliers Organisation;
- Mena Telecom;
- Moobility Telecom;
- MTC-VB-Vodafone Bahrain (MTC-VB); and
- Stone Company SPC.

In the summaries that follow, specific statements or arguments are not normally ascribed to a particular respondent. Where it seems relevant, it may be indicated whether particular evidence, argument or comment is made by an existing operator (an incumbent) or by another respondent. The exceptions to this treatment are the responses to Questions 2.1 and 5.4. Batelco’s response to question 2.1 raises objections to the Consultation process itself. Batelco was the only respondent to make such objections.

The remainder of this document therefore presents in turn, each question included by TRA in the consultation, a summary of the replies it received on each question and TRA’s consideration of the issues raised. Some questions are closely related and so to avoid repetition these have been grouped together. The questions are presented according to the relevant chapter headings in the consultation document.

During the period of the Consultation, the context in which any decision about issuing additional licenses has evolved significantly. As explained in the accompanying Statement (TOD/0507/061), TRA has decided to await the outcome of its Strategic Review before drawing final conclusions on the way forward in this area.

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2 The analytical framework

Question 2.1:

- Please set out whether you agree with the proposed analytical framework of the TRA and in particular the nature of the likely trade-offs outlined by the TRA in this Section of the consultation.

In the consultation document, TRA proposed to conduct a cost-benefit analysis of entry in mobile markets, considering entry by mobile network operators (MNOs) and mobile virtual network operators (MVNOs).

In its response to this consultation, Batelco includes a section objecting to the present consultative process. In particular, Batelco believes that additional mobile Licenses, of any kind, should not be issued until a formal market review has been carried out and any decisions as to market dominance made. Additional Licenses should, in Batelco's view, be issued only if it can be categorically demonstrated that the market is not effectively competitive. This approach, it is stated, would also involve, inter alia, reconsidering the price approval process to which it is subject. Batelco argues that the issuing of additional mobile Licenses should not take place until Batelco itself is able to price without the present regulatory constraints. Batelco (and another respondent) also remark that TRA should not have a presumption in favour of competition.

Most respondents however supported the proposed TRA analytical framework. Batelco was the only respondent which criticised the Consultation process in this way (though another respondent questioned the presumption in favour of competitive entry and argued that emphasis should be placed on improving competition amongst current incumbents).

TRA does not accept that Batelco's views are the right way forward. The Telecommunications Law sets out the promotion of competition as one of TRA's principal objectives. The promotion of competition may involve many actions but amongst the foremost is the removal of barriers to entry. The need for a License which is not currently available is a regulatory barrier to entry to a telecommunications market. If a regulatory barrier to entry is to be maintained it must be for a good reason. In the present case, this might be because of the prospect of:

- inadequate spectrum management;
- manifest and significant loss of economies of scale and waste in network investment to the evident detriment of end users;
- manifest reduction in innovation and consequent longer term costs and prices that are higher than necessary; or
- adverse impacts such as manifest rises in costs elsewhere in the economy.

If firm evidence of the possibility of any of these costs exists, it is necessary to balance the benefits of competition against any costs of competition. If

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sufficient information exists it may be possible to do this as a formal cost-benefit analysis.

This is the approach that is being taken in this Consultation. If there are no firm evidence of such net costs, there is no justification for any regulation that might diminish competition; the regulator does not have to make a judgment as to whether there is effective competition or whether one or more players have significant market power. The presumption in favour of competition simply represents the duty of TRA to promote competition, as set out in the Telecommunications Law.

The present Consultation is therefore in no way an investigation of actual or potential anti-competitive behaviour. The issue of whether competition should be declared to be effective is not directly relevant to this Consultation. It is nevertheless for other reasons important to identify market power, and this is the subject of a separate TRA review. This will enable TRA to decide if any other actions are needed in relation to the development of competition in the market, including the introduction of additional measures and the removal or amendment of existing ones.

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3 Current state of the mobile market in Bahrain

Question 3.1:

- a) To what extent do respondents consider that the usage baskets and comparators employed by the TRA in this analysis are appropriate?
- b) Should the TRA consider further analysis of comparative price data, and if so, what should this analysis cover and why?

In the Consultation document, TRA proposed to use in its analysis of mobile prices, usage baskets based on weighting similar to those employed by the Organisation for Economic Cooperation and Development (OECD), checked for appropriateness against local conditions. The consultation document presented some analysis on this basis. The purpose of this analysis was to consider the extent to which mobile prices in Bahrain were similar to those in other comparable jurisdictions, not to conduct an exhaustive analysis of price differences.

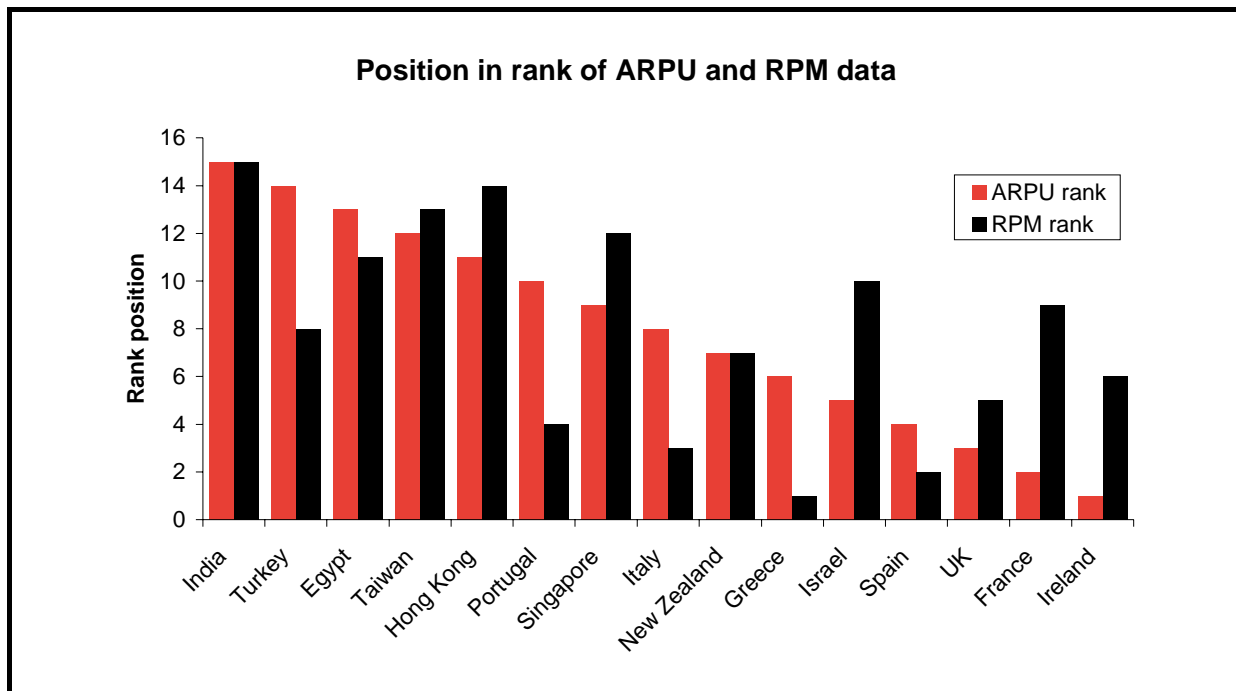
Comparison across countries of telecommunications prices, especially for mobile telephony, can be difficult. Respondents provided a variety of additional evidence, indicating that it is possible to show different relative levels and trends of prices depending on the selection of comparators and the manner of comparison. Such differences are evident in the information provided by respondents. Data was supplied that showed a particular measure of 'prices' to be higher in Bahrain than in Europe, while other measures suggested the opposite. For example, one operator stated that on an Average Revenue Per User (ARPU) basis, price levels in Bahrain are still significantly above those of operators in competitive markets around the world, whilst another used a comparison of Revenue per Minute (RPM) to show that, based on this measure, current prices in Bahrain are below those in other mature and highly developed markets, and also lower than in other markets in the region.

TRA believes these differences can be understood by considering the characteristics of ARPU and RPM. ARPU is a function of prices and usage and RPM is affected by the composition of customers and tariffs (for example, post- and pre-pay and 'non-linear' tariffs). Figure 1 presents ARPU and RPM for a number of countries and shows there is little positive correlation between these indicators. In this chart, a rank position of 1 for either measure of price indicates that under that measure, prices were higher in the particular jurisdiction than for the others in the sample.

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Figure 1: Comparison of ARPU and RPM data in a number of jurisdictions



Source: Merrill Lynch Global Wireless Matrix, September 2004

Further, some of the differences in data provided by respondents may arise from the use of different time periods for comparison. As noted in the Consultation document, the evidence suggests that the prospect of entry by MTC led to an initial lowering of prices by Batelco but that further reductions have been very modest. The impact of entry on prices for mobile telephony services has also been observed in other jurisdictions.¹

Respondents highlighted the importance of the basket of services chosen for comparison and stated that the data presented by TRA was not based on a sufficiently detailed segmentation of consumers. In addition, respondents suggested that mobile telecommunications markets can be quite significantly segmented and that such segmentation should be taken into account in price comparisons, with different basket weights being adopted.

One respondent suggested that comparisons should be made at 'purchasing power parity' (PPP) exchange rates.

In its Consultation document, TRA selected comparison of consumer baskets as the most reliable measure of prices levels. Such a measure, chosen by the OECD for comparisons of prices in its Communications Outlook, minimises differences in methods of pricing, quality and consumption patterns to which comparisons of ARPU or revenues per

¹ Evidence for Ireland is contained in a Comreg Consultation Paper "Market analysis – Wholesale Mobile Access and call origination" published in January 2004; for Luxembourg in European Commission documents "Report on the implementation of the EU communications regulatory package" for 2003, 2004, 2005; and for Greece in Tarifica data on the price of mobile calls from 2000-03.

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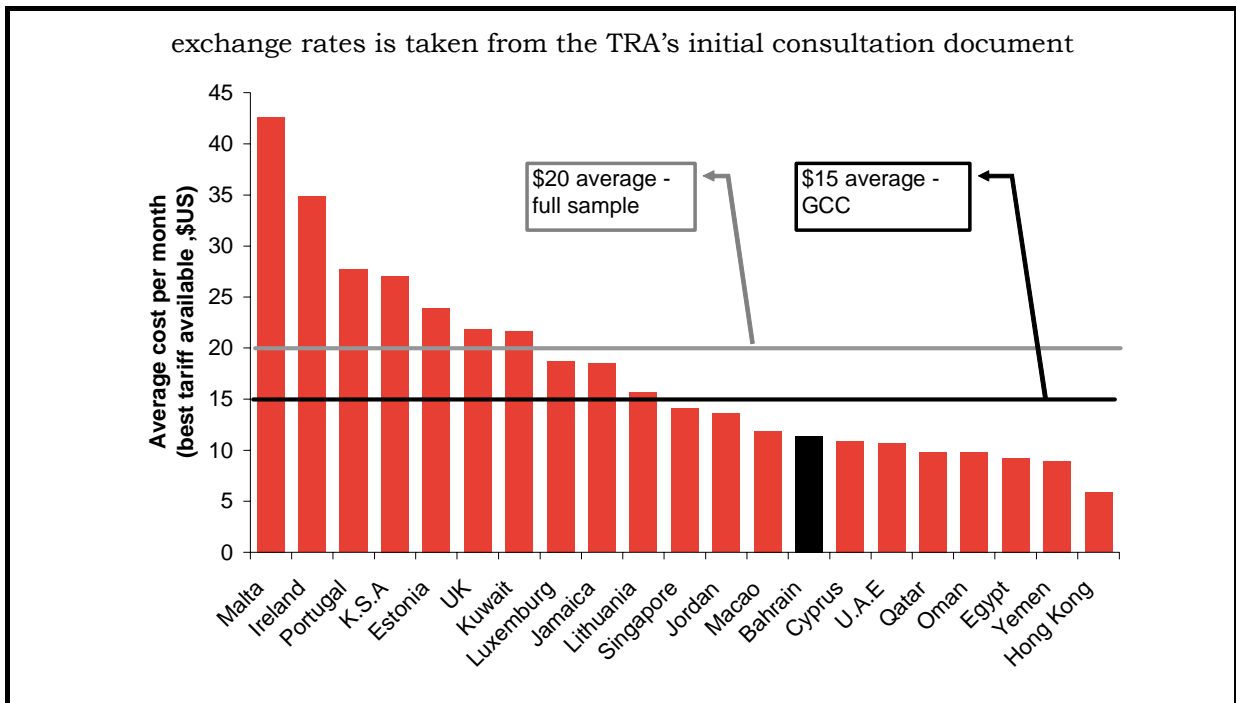
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minute are liable. TRA believes that the comparisons presented in the Consultation document represented a reasonable assessment.

TRA does however believe the suggestion to conduct the comparison using PPP exchange rates has merit and adopts this approach in Figures 2 and 3.

Figure 2 compares the cost of the pre-pay basket definition adopted in the consultation document under both market and PPP exchange rates. The chart showing the cost of the basket under market exchange rates is taken from the TRA's initial consultation document

Figure 2a: Comparison of the cost of the pre-pay basket, market exchange rates (February 2006)



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Figure 2b: Comparison of the cost of the pre-pay basket, PPP exchange rates (based on World Bank exchange rates for 2005)²

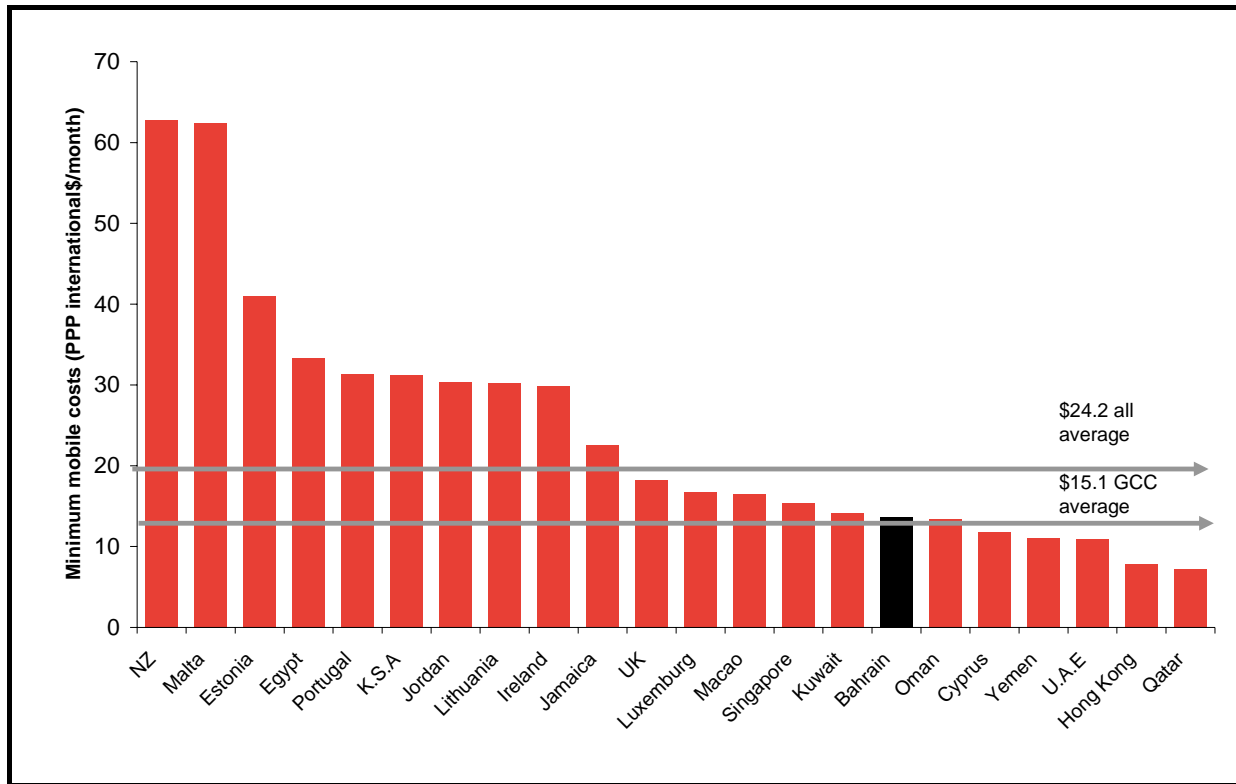


Figure 3 compares the cost of the post-pay basket definition adopted in the consultation document under both market and PPP exchange rates. The chart showing the cost of the basket under market exchange rates is taken from the TRA's initial consultation document

² Where data was not available, PPP rates were used from 2004

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Figure 3a: Comparison of the cost of the post-pay basket, market exchange rates (February 2006)

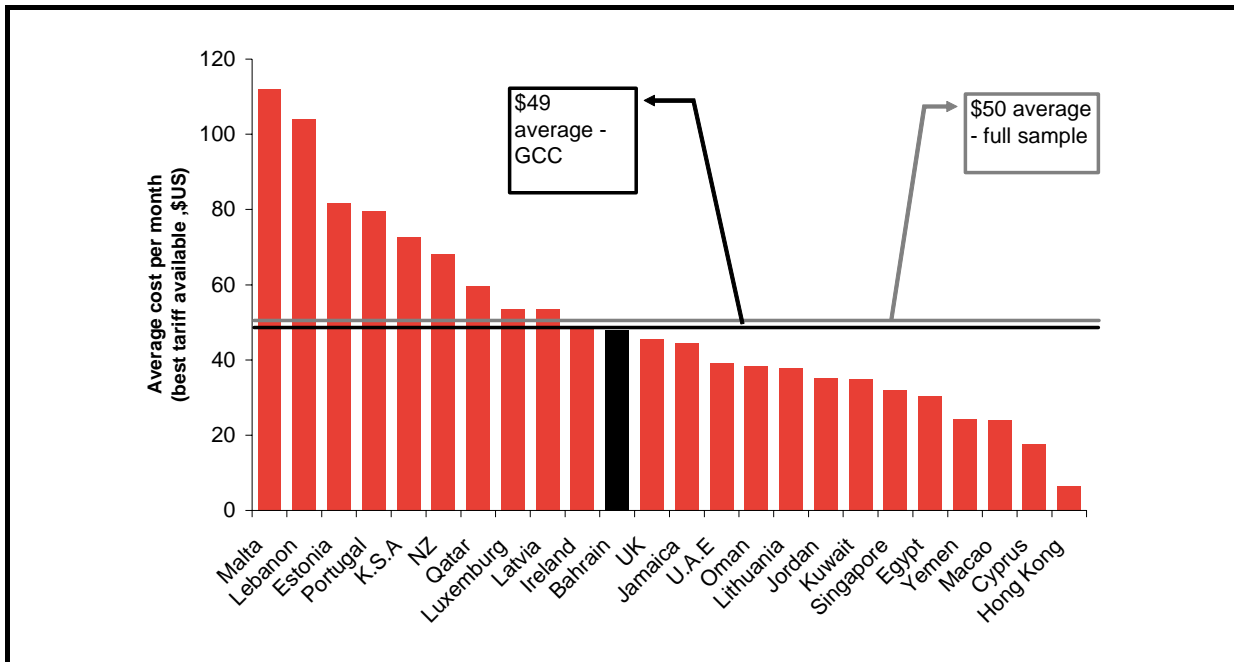
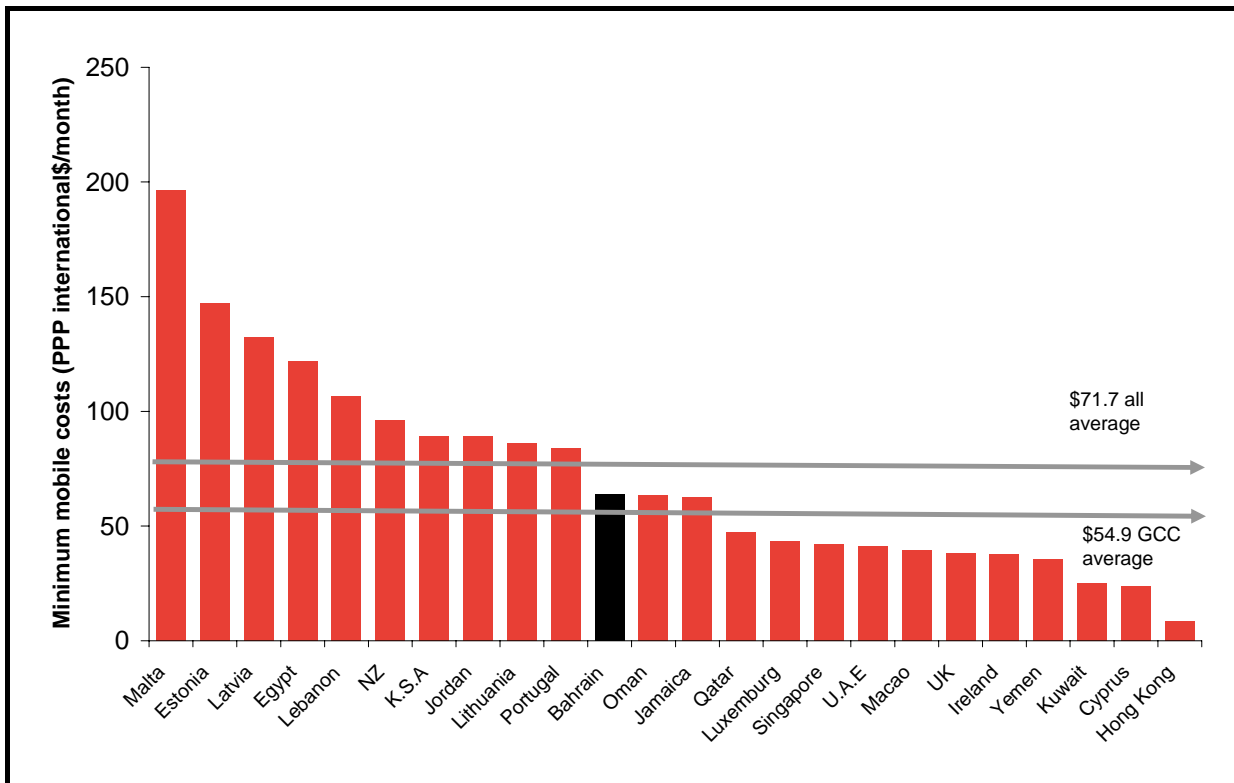


Figure 3b: Comparison of the cost of the post-pay basket, PPP exchange rates (based on World Bank exchange rates for 2005)³



³ Where data was not available, PPP rates were used from 2004

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The impact of using PPP exchange rates is to raise the average level of prices for both the sample of countries as a whole and the GCC sub-group. Figures 2 and 3 show that in the case of both pre-and post-pay, Bahrain moves closer to the GCC average. The Figures indicate that there are a number of small jurisdictions and jurisdictions within the GCC in which PPP prices are below those in Bahrain.

It is notable that, in Bahrain, post paid prices for the baskets adopted by TRA are more than three times higher than pre-paid prices for a basket that has the same relative weights but has consumption levels of each element three times higher. This relationship is not evident for most of the comparator jurisdictions; indeed it is normally the case that post-paid prices are relatively lower on a per minute basis.

TRA believes it would not be possible, as some have argued, to provide an unequivocally accurate statistical comparison of prices, even if much greater sophistication were attempted. However, given the purpose of this analysis, namely to consider the relative level of mobile tariffs in Bahrain, TRA considers that its analysis, augmented where appropriate by taking into account additional information in the responses of the operators, does *not* show that the generality of prices in Bahrain are amongst the lowest in the world, nor within the GCC region.

Question 3.2:

- To what extent do respondents consider that there currently exists a significant degree of price competition in the provision of mobile services in Bahrain?

In the Consultation document, TRA reported that there appeared to be little movement in mobile prices over the period since the entry of MTC-Vodafone.

One respondent provided additional information to that set out in the Consultation document. The data appeared to indicate that prices had fallen by up to a third since the announcement of the second mobile License.

In assessing the degree of price competition in mobile markets it is necessary to take account of the likely form of that competition, including the prices for existing products/packages and the introduction of new (cheaper) packages and short term promotions.

New tariff packages

When MTC-Vodafone entered the Bahraini market at the end of 2003, it did so at a competitive price offering relative to Batelco. For example, from the time of entry in 2003, registration for prospective MTC-Vodafone pre-pay customers was free, as compared with a headline rate for prospective Batelco customers of BD5. TRA also understand that since entering the market, MTC-Vodafone has launched a number of new post-pay tariff packages such as the “Flex Personal” package and the “Flex Network”

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package, which both offer cheaper line rental than MTC's other packages but which do not include free minutes or text messages.

In comparison, the information provided by Batelco to the TRA suggests that it may not have introduced any new post-pay tariff packages into the market since MTC entered. It does now offer an international version of its pre-pay tariff, where users get two international call minutes for the price of one.

Short term promotions

A further tool used by mobile operators is that of short term price promotions or other customer offers. For example, both operators regularly offer reduced tariffs for calls to certain overseas destinations during religious festivals or other holiday periods. Other special promotions may be tied to particular events in Bahrain, such as the Grand Prix. A third type of promotion involves giving customers who call certain numbers/access certain services the opportunity to enter a raffle or prize draw.

Question 3.3:

- a) To what extent do respondents consider that the mobile operators are currently providing a reasonable level of (network) quality of service?
- b) To what extent do respondents consider that the mobile operators are currently providing a reasonable level of customer service?

Question 3.4:

- To what extent do respondents consider that mobile operators in Bahrain offer similar ranges of services to those offered by mobile operators in other jurisdictions?

In the Consultation document, TRA reported that operators appear to be meeting current minimum requirements for network quality of service but that it was not possible to compare this performance with that in other comparable jurisdictions.

Most respondents argued that quality and range of services available in Bahrain was reasonable. One respondent provided detailed information on quality of service that reinforced this view. Comparisons made were, however, usually regional rather than in relation to more developed competitive markets.

Based on its assessment, TRA considers that meeting current minimum service standards does not appear to be a major issue in this market. In addition, similar services to those available in other markets also appear to be available in Bahrain.

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Question 3.5:

- Are there any other factors the TRA should consider in its review of the current state of the mobile telecommunications market in Bahrain?

Almost all respondents mentioned that the relatively small population of Bahrain should be taken into account when reviewing the mobile telecommunications market.

One incumbent argued that the inherent balance between competition and the minimum efficient scale meant that two operators was a reasonable number for the Bahraini market. To support this view it presented information purporting to show that countries with population of fewer than 5 million typically have between 1 and 2 operators. In contrast, other respondents used international comparisons to argue that Bahrain's mobile market can sustain a third operator. For example, details were given of relatively smaller markets that have 3 or more operators.

One respondent raised two other factors to be considered: the well developed nature of Bahrain's mobile market and the timing of potential entry. One incumbent claimed that the strong market growth after the entry of the second operator demonstrated the effective competition in the market. The same incumbent also provided information to show that in most countries entry has occurred at a time of relatively low penetration and where there was scope for future growth in the market.

Another respondent argued that TRA should consider other regulatory issues before it diverted resources in a new licensing process. In particular, it proposed that TRA should consider the introduction of number portability as a method to increase competition, and also raised as issues the approval of Batelco RIO rates, the quality of interconnection and wholesale services, and the implementation of the access regime.

One respondent referred to the complexity of the mobile market and the need for TRA to conduct a proper segmentation of the market during its analysis.

TRA will assess and where appropriate incorporate data provided by respondents in its final decision. It seems clear that the industry environment is changing rapidly in both Bahrain and comparator jurisdictions. In promoting the development of competition, it is also evident that the intensity of competitive behaviour within markets is as important as the ease and effectiveness of entry.

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4 The possible impact of further entry into the market

Question 4.1:

- a) To what extent do respondents consider that there is scope for further price reductions in Bahrain's mobile market?
- b) To what extent do respondents consider that prices for mobile services in Bahrain currently reflect efficient economic costs of providing those services?
- c) How should the TRA assess the profitability of the existing mobile operators in Bahrain?
- d) Do respondents consider that there are other factors the TRA should take into account in its analysis of prices and profits?

Opinions among respondents differed as to the scope for additional entry and its likely effects. Present incumbents argued that prices were at competitive levels and that if they were to be pushed down further, quality and service innovation would suffer. Others argued that there is considerable scope for further price reductions and quality improvements, despite their present levels, because costs can be low in the Bahraini environment and profitability is currently considered high.

Respondents also differed as to the profitability of mobile services in Bahrain. One provided extensive suggestions as to how profitability may appear to be higher than it actually is and suggested measures that might be used to assess profitability. Other respondents expressed dissatisfaction with the operation of the duopoly and suggested that margins were high, allowing for the possibility of successful entry. One respondent indicated that the principal deficiency of competition resulted from Batelco dominance.

Published information indicates that overall profitability in the sector is high, which supports the view that prices are above costs. However, TRA has decided not to investigate the current profitability of incumbents further in the context of this Consultation. Such investigation, as part of an open Consultation, would require information that is currently considered confidential to be placed in the public domain.

TRA concurs with the view of most respondents that there is likely to be room for further price reductions. The view in particular that quality and range of services would suffer if price competition followed entry by MVNOs is not supported. Experience in other jurisdictions suggests that MVNOs can profitably exploit particular market segments, also growing the market as a whole (see also Question 4.3 and 4.5, below).

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Question 4.2:

- To what extent do respondents consider that the potential impact on mobile prices from MNO and MVNO entry may differ?

In the Consultation document, TRA indicated that entry by either MNOs or MVNOs would be expected to place downward pressure on prices, although the magnitude of the effect in each case could be different.

Respondents also differed in their views on the likely relative effects of MNO and MVNO entry. Present incumbents argued that MVNOs would compete primarily on price and so threaten quality and service competition. This in the longer term could, they claim, raise costs, and therefore prices, above the levels they might otherwise have been absent entry. Most agreed that MNOs may be more interested in service innovation than MVNOs; several pointed out that MVNOs will place considerable competitive pressure on network providers to enable the services that they seek to sell.

Question 4.3:

- Do respondents consider that further MNO entry into the Kingdom's mobile sector might lead to an increase in the quality of mobile services offered in Bahrain?

Question 4.4:

- To what extent do respondents consider that the entry of MVNOs might impact on the quality of mobile services offered in the Kingdom?

In the Consultation document, TRA suggested that the impact of entry on quality of network services would be expected to be greater where existing services did not meet customer requirements – and that this did not appear to be the case in Bahrain. Further, it expressed the view that MVNO entry may lead to innovations in the range of products and services offered as well as increased competition in the provision of customer services.

Opinions among respondents were again divided on these questions. Both incumbents expressed the opinion that the introduction of further competition was likely to have a negative impact on the quality of services provided, given the relatively high quality of services that existed and the risk that entry would lead to a reduction in the network investment of the incumbents.

The incumbents believed that no significant network improvements would result from the entry of MVNOs. One incumbent stated that MVNOs would also be likely to have no, or negative impact on customer care and service quality levels. The other incumbent did acknowledge that a new MVNO may attempt to differentiate its business by providing more effective customer

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service. However, given what it considered the high level of customer satisfaction already existing in the market it concluded that there was limited scope for such improvements.

All other respondents stated that increasing competition would lead to an improvement in the quality and range of value added services. They also argued that MVNOs would be likely to seek to differentiate themselves from the incumbents through product innovation and customer service.

Question 4.5:

- Do respondents consider that further MNO entry into the Kingdom's mobile sector might lead to an increase in the range of products, tariffs and services on offer?

Question 4.6:

- To what extent do respondents consider that the entry of MVNOs might impact on the range of mobile products and services offered in the Kingdom?

In the consultation document TRA suggested that issuing additional Licenses could lead to increased innovation in the mobile sector, which could in turn have a positive impact on the range of products and services offered. New entrants could attempt to provide new and different products and services, potentially spurring the incumbent operators to bring forward new service innovations.⁴

In response to this, one incumbent cited evidence from an necg⁵ report on the relationship between competition and innovation, and the dynamics of innovation competition. The context for the report was a proposal to issue an additional mobile License in Hong Kong. The report provides an overview of different approaches to analysing the relationship between competition and product innovation. In its response, the operator pays particular note to the theory that proposes an “inverted-U” relationship between competition and innovation. The theory states that competition stimulates innovation up to a point where, as the number of potential innovators increase, the returns from innovation and the incentives to innovate decrease, as the likelihood for any innovator to develop a new successful product decreases. On these grounds, the operator presents Bahrain as a competitive and small but saturated market, where the threat of entry may adversely impact on firms incentives to innovate. The other incumbent presents Bahrain as a forerunner in the launch of new technologies and

⁴ Although TRA has not attempted to measure them, the welfare benefits of new products and services can be very large because of the significant increments of consumer surplus that they typically provide.

⁵ necg – “Innovation and Competition – Licensing of Mobile Services in Hong Kong” – 19 June 2004

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services, reducing the scope for improvement in the array of products and services offered through increased competition.

Both incumbents also point out potential new MVNOs, given their primary focus on retail – rather than network – competition – will not encourage product innovation as compared to additional MNOs.

One of the incumbents also points out that a higher number of operators may drive down prices, which would reduce the amount of resources available to existing operators to invest in new technologies and product development.

Most other respondents agreed that MNOs may be more interested in service innovation than MVNOs; several pointed out however that MVNOs will place considerable competitive pressure on network providers to enable the services that they seek to sell.

TRA considers that the argument that entry would reduce innovation because Bahrain is a small and saturated market seems to confuse a saturated market in terms of penetration, with a highly competitive one. In fact, high penetration rates, in markets which are at the forefront of technology adoption, might encourage firms to innovate in order to gain additional consumers. In general, in these saturated markets, many consumers already use mobile telecommunications services, and it is precisely these consumers who may be prepared to pay for more sophisticated products. In such a situation, entry could be expected to be positively related to innovation in order to develop new products and services to attract higher ARPU.

In addition, the “inverted-U shaped” theory of competition and innovation is largely based on an innovation sector requiring large and specific up-front investments. The kind of innovation that could be expected in the telecommunications market in Bahrain would be based on the introduction of new products and services through transfer of international technology. In that case, the entry of an additional operator could in fact be expected to imply positive effects on innovation. Further, the context of the argument in this case appears quite different to the case under consideration in Hong Kong and which was the subject of the necg report.⁶

One incumbent seems to argue that the expected levels of investment may be higher in a market where prices are higher. Whilst it is true that the expected future profits of each player may be lower in a market with a larger number of players, the resulting impact on investment of the entry of these players will depend on the expected additional profit from that investment. Though a higher level of profits could imply a higher expected level of return from investment, greater competition could be expected to increase the

⁶ The regulatory proposal at issue in Hong Kong was that, as a result of disappointing penetration of 3G services, OFTA was proposing to issue a highly specific License that would have many specific conditions as to the character and behaviour of an acceptable entrant. As the necg paper puts it, “*new innovations by existing players would have to compete against compulsorily produced innovations by the entrant, reducing returns and incentives to develop such innovations*”. Such regulatory action is not proposed in Bahrain where TRA is considering an enabling regulatory action.

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incentive of players to invest (and innovate) to win market share from competitors. Which effect will on balance be more significant will depend on specific market conditions.

MNOs vs. MVNOs

The arguments on the potential innovation strategies of MNOs versus MVNOs do potentially have some merit. MVNOs may be more likely to limit their 'innovation' to new tariff and service packages, sometimes addressed to specific niche groups. This argument is diminished, however, if the principal form of 'innovation' is the adoption of innovations created and developed elsewhere. In this case, it is more a matter of investment incentives. MVNOs are likely to put pressure on network suppliers to invest in networks (such as 3G networks) that adopt such innovations as customer demand naturally progresses to more sophisticated products. The intensity of network competition will be increased by the presence of MVNOs.

TRA therefore concludes that entry would be highly unlikely to damage innovation incentives, or the adoption of innovations developed elsewhere. Indeed, TRA believes that, in the circumstances of the Kingdom of Bahrain, freer entry is more likely to raise the rate of development and adoption of new services and more efficient networks.

Question 4.7:

- Do respondents consider that further entry into the Kingdom's mobile sector might lead to a significant change in the average unit costs of existing operators? (Evidence should be provided to substantiate the argument in either case.) Do respondents agree with the TRA about how this effect would be expected to differ between MNO and MVNO entry?

In the consultation document, TRA set out the various possible impacts of entry on costs and suggested that there might be few economies of scale expected in the provision of mobile services in Bahrain.

Both incumbents argued strongly that economies of scale would be lost following further entry, both in the network and in downstream and retail activities. Both incumbents stated that the entry of a third mobile operator would drive up their unit costs, and by reducing the scale of their operations (in terms of the number of customers they serve, compared to a situation without entry), reduce the economies of scale that both they and their customers benefit from. Neither, however, provided any direct data to support this view. Further, it was also suggested that entry might raise input costs for mobile operators by increasing competition for scarce skill resources. The operators stated that this could happen with MVNO entry as well as MNO entry because not only network activities would be affected.

A number of other respondents also concurred that there may be some loss of economies of scale following further MNO entry and that these losses would not be incurred if only MVNO entry were allowed.

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TRA assesses that any such increases in costs are not likely to be large. No respondent provided evidence that there are currently large economies of scale available to the existing operators. Incumbent respondents argued that current fixed costs would be spread over lower outputs but did not indicate the size of that effect, nor the extent that it might be offset by market growth. No respondent argued that there is currently high spare network capacity. Rather, TRA notes that arguments regarding costs focused on the impact of competition on future investment and innovation. This has been dealt with in response to Question 4.5 and 4.6.

TRA presented in the consultation some reasons why it may be expected that losses of economies of scale may be small. For the benefits of respondents, these arguments are repeated below.

- given the geographic and demographic characteristics of Bahrain, with densely populated areas, the amount of fixed costs are likely to represent a relatively low proportion of total costs;
- the potential reduction in the number of subscribers of the current mobile operators, arising from additional entry by a new MNO, compared to the situation of no entry, may only have a minor impact on the unit cost faced by the operators;
- the licensing of MVNOs does not represent a reduction in the level of traffic using the networks of the existing operators. The entry of MVNOs could in fact be expected to stimulate consumption, with the effect of marginally reducing the unit cost of service provision by the (host) network operators.⁷

In the case of MVNO entry, traffic generated by the MVNO's customers will be carried over the networks of the incumbent operators. Therefore, loss of scale economies will be most relevant in a scenario of MNO entry (without MVNO entry) or for a network operator that does not host a MVNO. Insofar as the entry of MVNOs increases competition, lowers prices and thereby increases overall demand, the effect of any network economies of scale could be to lead to slight declines in average unit costs, reflecting economies of scale. TRA has not received evidence to suggest that significant economies of scale exist at the retail level, and hence does not consider that any losses of retail economies of scale are likely to be significant.

⁷ There was an additional point made in the responses to the consultation that even MVNO entry involves the duplication of some fixed costs (for example, building costs), hence unit costs could also increase under a scenario of MVNO entry. Whilst this is strictly speaking true, these fixed costs are again estimated to be relatively modest, and TRA is not aware of any examples of countries where MVNOs have been established for a period of time and prices have risen.

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Question 4.8:

- a) Are there any other factors the TRA should consider in assessing the potential attractiveness of the market to new investors?
- b) What are the views of respondents regarding the relative merits of MNO and MVNO entry?
- c) Should the TRA consider a period of 'exclusivity' for any further MNO licensee, similar to the one that applied when the second mobile License was granted? Should the TRA consider any other measures to facilitate entry?

In the Consultative document, TRA set out comparative international evidence that indicated the feasibility of entry into small markets. TRA did not express views as to the relative merits of different forms of entry or the desirability of exclusivity for potential further entrants.

Several respondents suggested that the high level of penetration of mobile services in Bahrain would be a limiting factor to the desirability and success of competitive entry. Some further suggested that entry would only increase 'churn' thereby raising marketing and customer acquisition costs. In one case it was also argued that it would "stifle incentive for existing operators to collate market research and analysis".

Others argued that there was opportunity for entrants to provide lower prices and better services to existing customers, as in any developed market. There were similar differences about the opportunities that might be provided, particularly to MVNOs to exploit market segmentation. Some felt that such profitable segments did not exist; others that MVNOs would be able to target many customer groups.

One respondent argued that there is "no international precedent for a third entrant (sic) being licensed under similar market conditions". The comment is accompanied by a list of MVNO consolidations in Denmark and other European countries (where there is no longer a traditional licensing regime).

The role of market penetration

Considerable play was made by incumbent respondents, and recognition by others, of the claim that the mobile sector in Bahrain is becoming saturated. Penetration is certainly high and the first stage of market growth by increasing penetration may well be drawing to an end. It would be quite wrong, however, to assume that the beneficial effects of competition can only be felt in a market that is growing as a result of simple expansion of its customer base, nor that entry will only be desirable under these circumstances. Once they have purchased for the first time, all customers may increase their use of services, seek lower price or higher quality alternatives, and shift consumption to new and improved products and services. This customer behaviour will both grow the overall value of the

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market (in terms of both minutes and value) and enhance value added by new services.

Competition has vital roles to play in bringing about costs and price reductions and quality and service improvements through the possibility of customer switching and service innovation. This is the normal process of competition. The intensification of competition can provide once-off benefits in reducing excess margins and therefore prices. But equally or more important is the power of competition to provide a continuous and dynamic stimulus to cost reduction, efficiency improvement and consumer satisfaction. No respondents provided convincing explanations of why such competition should not be effective in meeting consumer demands and incentivising operator improvement in mobile telecommunications; some respondents put forward the view that they and others would be able to compete successfully in these ways.

TRA does not, therefore, take the view, expressed forcefully by one respondent, that there are no possible benefits from further competitive entry.

The relative benefits of MVNOs

The comment regarding the lack of international precedent for MVNO entry was made despite other respondents providing examples additional to those in the Consultation document, especially of MVNO entry. It may arise from a very specific definition of “similar market conditions”; as noted above, benchmarking of mobile services is a complex issue. Further, the cases of consolidation the respondent identified primarily coincide with the global downturn of the telecommunications sector around 2000-01.

TRA has carried out a survey of the growth and impact of MVNOs around the world. This reveals that the creation of MVNOs has been the joint result of commercial opportunity, driven partly by changes in markets and technical progress, and the spread of liberalisation. Some MVNOs have concentrated on price competition whereas others have been orientated towards new (3G) services and opportunities. Initially, MVNOs seemed most appropriate in liberalised markets with maturing competition. Although regulatory power to provide access to MNOs has often been accompanied by market interest by MVNOs, they have usually reached commercial agreements with their network suppliers. The diversity of possible kinds of MVNO have meant that they have evolved quickly and although there has been some consolidation and permanent linkage with MNOs in the most active markets, there are few indications that these developments have adverse impacts on markets. Furthermore, the TRA notes from responses to the consultation document that the majority of respondents appeared to be interested in MVNO opportunities.

In some markets, MVNOs have competed successfully against incumbents' standard services, in others their main competitors have been smaller market players. They have fulfilled particular roles in disciplining prices and growing markets by serving specific customer segments. In the United States, it appears that they are beginning to further the development of 3G

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services – speeding the adoption of innovations - in association with companies from sectors of the media industry. These roles are valuable and can be achieved without significant social costs.

TRA believes that wherever possible, competition should be the mechanism by which public policy objectives are achieved. MVNO entry is potentially an important route by which this may take place. In particular:

1. There are no frequency spectrum implications of MVNO entry. An MVNO does not require its own spectrum. The overall demand for capacity is likely to be increased by MVNO entry (resulting from falling prices or better service) but this has no immediate implications for current spectrum assignments.
2. MVNOs may place competitive pressure on network operators which may both reduce prices and encourage innovation.
3. Experience suggests that profitable entry would normally be possible; this is anyway for potential entrants to assess. If entry were to take place but later result in exit or consolidation, this would be a reflection of normal market processes.
4. Experience suggests that MVNO entry is highly unlikely to threaten the financial viability of existing operators, not the least because network demands are unlikely to fall.
5. It is unclear to TRA that MVNOs in other markets have diminished investment and innovation, certainly as long as network access prices are determined appropriately.
6. It was argued by incumbents that MVNO entry was inappropriate in a saturated market. Experience elsewhere suggests that MVNO entry may be especially appropriate in that circumstance. MVNOs have often been attracted to mature markets in which a second round of MNO entry has taken place.

A period of exclusivity

TRA recognises that by allowing any new entrant a period of exclusivity before further Licenses are granted may serve to increase the possibility of successful entry and maximise the interest in any new Licenses that may be awarded. This would particularly be the case for any MNO Licenses. However, such a policy might not be consistent with TRA's stated objective of removing regulatory barriers to entry wherever such action would not cause net social costs for the Kingdom.

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Question 4.9:

- Are there any other potential benefits that the TRA has not included in its discussion set out above?

Both incumbents argued that the Consultation document had failed to take into account important potential wider social costs such as upward pressure on wages. However overall, the majority of respondents felt that entry would create net benefits for the Bahraini economy.

Incumbent respondents suggested that the main impact of entry would be to raise wages and prices. There are several reasons to expect why this may not be the case. First, there may be unused resources in the Bahraini economy that will allow the expansion of employment and therefore income. Second, entry and consequent increases in output in the telecommunications sector will encourage investment in training and skills in relevant activities. In addition, incumbent operators may possess some distorting monopsonistic power over labour markets that may be diminished by entry. TRA therefore believes that the impact of entry on the Bahraini economy is highly likely to be positive.

Question 4.10:

- To what extent do respondents agree with the TRA's initial analysis, as outlined in Section 4 of the consultation?

The incumbents argued either that there is currently effective competition or that future entrants could not operate profitably and enhance competition; consequently that there will be no benefits to entry to be set against any cost of entry. This view was confined to incumbent respondents.

In particular, the incumbents argued that entry would strongly disincentivise investment and innovation and reduce the financial resources available for them. One argued that innovation would be reduced by further entry and also that an increase in the number of operators would drive down prices which would in turn reduce the resources available for investment in new technologies and product development. Both incumbents argued that the focus of MVNO entry on retail rather than network competition will not encourage product innovation as much as additional MNO entry.

Both incumbents argued that while current profitability might appear to reduce the threat of reduced investment funds, the measurement of profitability would have to be carefully carried out. No such analysis of profitability was, however, provided.

Non-incumbent respondents, on the other hand, generally agreed with TRA's initial analysis. In addition, MVNOs would not reduce the existing scale economies enjoyed by the incumbents. Whilst the respondents considered

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that the existing networks have both the quality and capacity required to deliver the mobile sector's needs, they argued (unlike the incumbents) that entry would be unlikely to have a negative impact on service quality

One respondent also raised the importance of issuing a converged license to further improve economies of scale and scope to any new operator.

TRA recognises, as set out in the analytical framework for the consultation, that further entry into the mobile sector could promote a range of benefits for consumers of mobile services and the wider Bahraini economy.

TRA considers that the benefits to consumers of mobile services may be most likely to arise from further entry into the sector driving additional price competition. As set out previously in response to Question 4.9, TRA also believes that further entry may have positive effects for the wider Bahraini economy.

TRA has also set out in response to questions 4.5, 4.6 and 4.7, that it does not consider further entry into the sector will either reduce the incentives for innovation and investment, and there are good reasons to consider that in the medium to longer term, innovation and choice could increase. In terms of other potential costs, no evidence has been provided to indicate that additional entry could have a material impact on any potential economies of scale that are available to the existing operators. Taken together, TRA considers therefore that it is reasonable, at this stage, to assess that on balance, further entry into the sector is likely to be beneficial for the Bahraini economy.

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5 Other issues to be considered

Question 5.1:

- The TRA seeks respondents' views on the appropriateness of each of options outlined above.

Question 5.2:

- The TRA seeks respondents' views on the appropriateness of assigning spectrum in the 1900 MHz band to any further mobile operator.

Question 5.3:

- The TRA seeks respondents' views on the appropriateness of assigning 3G spectrum (as set out in Section 5) to any further mobile operator.

The Consultative document sets out the possible options for the assignment of spectrum should a license or licenses be awarded, while indicating its desire for any award to be technologically neutral.

A number of different views were expressed about the precise assignments of spectrum that would best serve the development of the sector. Some of these responses dealt in general terms with the spectrum assignments of specific technologies that might be used by entrants. The point was made by one respondent that successful MNO entry would require 3G spectrum.

TRA notes that there were no serious misgivings expressed about spectrum policy that threaten a decision according to TRA's present objectives.

There is clearly sufficient spectrum available to enable further entry on the basis of a number of technologies.

Question 5.4:

- a) The TRA considers that (potential) MVNOs and MNOs should reach commercial agreements regarding the terms and conditions for network access. Please state, with reasons, whether you agree with the proposal.
- b) If it is not possible for MVNOs and MNOs to reach a commercial agreement, the TRA considers that the current legal framework gives it the power to intervene in disputes. Please state, with reasons, whether you agree with this, and if intervention by the TRA is required, which method(s) of intervention you consider to be most effective.

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In the Consultation document TRA indicated its preferences as stated in the text of question 5.4.

Almost all respondents argued that, in the first instance, commercial agreements should be reached. Most respondents, however, felt that this would need to take place within the right regulatory framework and would be likely to require the intervention of TRA should agreement not be reached.

With respect to this issue, the incumbent operators have made the following points:⁸

1. Batelco believes that new entrants should independently reach commercial agreements regarding terms and conditions for network access. Batelco states that it is firmly against TRA mandating existing MNOs to provide access to MVNOs.
2. Similarly MTC-VB favours the position that new entrants should independently reach commercial agreements regarding terms and conditions for network access. However, MTC-VB proposes that in the event of failure by the parties to reach a commercial agreement, mandated access should be implemented as part of Batelco's Reference Access Offer.
3. In addition MTC-VB notes that in some jurisdictions MVNOs have been granted network access at excessively favourable wholesale rates to the detriment of service levels and quality.
4. Batelco has suggested that an MVNO using an existing network of a MNO may reduce the MNO's incentives to attract subscribers through network expansion.

One respondent stated that regulated access agreements could negatively impact its future incentives to invest. It is true that access to the infrastructure of existing operators could reduce the incentives to realise future investments if the access is mandated at terms which do not allow the network operators to recover their investment costs. An efficient mandated access regime should therefore preserve the incentives for the access provider to expand and upgrade its network, and reflect the risks involved. The extent to which TRA could intervene may also depend on the sequencing of MVNO entry. If a prospective MVNO is already a licensed operator at the time it is negotiating an access regime, TRA may have a greater authority to act (because, in the event of a dispute, the dispute will be between licensed operators). Such cost-orientated terms would be "fair and reasonable" in reflecting the appropriate costs for the nature of the relationship involved.

⁸ In this and the next sections, the arguments of Batelco and MTC-VB are separately identified. This is necessary because they differ in important respects and the various aspects of their arguments are interdependent.

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TRA does not though expect to take regulatory action on network prices unless it is revealed to be necessary. Any regulatory price determination, if incumbent networks and entrant MVNOs were unable to reach commercial settlements, should be expected to reflect the appropriate range of costs and risks for the required network services.

TRA is therefore considering how MVNOs that might make commercial agreements with existing network operators could be licensed and given access to numbers.

TRA acknowledges that an MVNO using an existing operator's network may reduce the incentives of that operator to compete for customers through network expansion. However, given the current levels of mobile network coverage and mobile penetration in Bahrain, we would not expect it to have a material impact.

Question 5.5:

- The TRA seeks the views of respondents on the importance of national roaming and the extent to which it should influence the determination of the terms of any roaming agreement.

In the Consultation document, TRA set out the legal position on national roaming and the factors that would need to be taken into account in determining the desirability of national roaming.

Although different opinions were expressed, few respondents regarded roaming as a critical issue. Some respondents considered roaming agreements unnecessary due to the relatively small size of the jurisdiction, arguing that new licensees should be required to build out coverage across the Kingdom in a relatively short period of time. On the other hand, other respondents recommended that existing operators should be required to offer national roaming services. They argued that such a service would allow the new entrant to offer nationwide services while giving it a reasonable period of time to deploy its own network.

Question 5.6:

- The TRA seeks the views of stakeholders with regard to MNP in Bahrain and the extent to which the entry of additional mobile providers might be influenced by the introduction of MNP.

In its consultation document TRA refers to the introduction of mobile number portability (MNP) as an instrument for enhancing competition in the mobile telecommunications market, due to the reduction of customer's switching costs. In a mature market like Bahrain, where competition will focus on attracting existing customers to switch between providers, rather than on winning unserved consumers, the introduction of MNP may be particularly important.

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One respondent emphasised the importance of MNP in its response to the consultation paper. It stressed that, in its opinion, the question of the introduction of MNP should be resolved before TRA takes any decision on further entry. It states that without MNP, entry will not succeed and competition will not increase regardless of new entry being allowed.

In addition to the introduction of MNP, this respondent also expressed concern that the consultation process evaluating whether new entry in the mobile telecommunications market is suitable, might delay the decision by TRA on other regulatory issues, like the access regime and the interconnection offer by Batelco.

The introduction of MNP can be of primary importance in a mature market and is expected generally to increase the level of competition in a mobile telecommunications market, and further, to facilitate the entry of additional operators. TRA will consider the issue of mobile number portability following the Strategic Review.

Question 5.7:

- The TRA seeks the views of respondents regarding the appropriate License selection method for issuing a License to any further mobile network operator.

Different positions were expressed with regard to the License selection method. One incumbent agreed with the proposed process of the TRA, specifically supporting an auction preceded by a prequalification stage as the most transparent and efficient manner to allocate scarce resources.

In contrast, two respondents stated that they preferred the “beauty contest” method of allocation, as it has more pre-defined criteria to judge applicants and to identify those bidders who have realistic possibilities to build the network.

Most other respondents did not state a position on this point, other than stating that the allocation method should ensure an efficient, transparent allocation of spectrum and be open to all.

The way in which spectrum allocated for telecommunications is assigned should create conditions as close as possible to ‘an open spectrum policy’ – that is, a policy which allows spectrum to be used in ways that create a high level of overall efficiency. Such a policy would require that spectrum assigned to individual operators should be available indirectly to the most efficient users.