

COMMENTS
ON THE
CONSULTATION PAPER ON VALUATION AND RESERVE PRICE OF SPECTRUM:
LICENSES EXPIRING IN 2015-16

1. Introduction

- 1.1 This note provides the recommendations of Dua Consulting on the Consultation Paper on Valuation and Reserved Price of Spectrum: Licenses expiring in 2015-16 dated August 7, 2014 ("**Consultation Paper**") issued by the Telecom Regulatory Authority of India ("**TRAI**" or the "**Regulator**" or the "**Authority**").
- 1.2 At the outset, we thank the Authority for initiating this public consultative exercise with such an exhaustive paper surrounding valuation and reserve price of spectrum for the licenses expiring in 2015-16. We take this as an opportunity to resolve all the present ambiguities in the field of telecom including the concerns relating to pricing of the spectrum.
- 1.3 The Consultation Paper entails various aspects relating to the availability of spectrum, the extent to which this spectrum is available in contiguity, and the necessary considerations involved in valuation and reserve price of the spectrum. Before providing our views, we have attempted to provide a background on the telecom policies adopted by the Government from time to time, which have a bearing on the recommendations. We believe that this Consultation Paper is linked to the upcoming auction process of 900 & 1800 MHz spectrum slated to be held in December 2014 and have thus taken the liberty to re-emphasize key issues in this submission which had been brought to your attention during our submission on the Consultation Paper on Valuation and Reserve Price of Spectrum dated July 23, 2013 as well.
- 1.4 We believe that as far as the licenses which are expiring are concerned, they must be auctioned. As far as determination of market price of the spectrum is concerned, we do

not see merit in the linkage with the 2012 or 2013 auction prices, as it otherwise leads to unnecessary litigation. The price discovery must be looked at, bearing in mind the necessary considerations of inflation rates and interest rates. We would urge the Government to hold a simultaneous auction of all the bands as frequent auctions over a short span of time leads to inefficiencies and a duplication of time and efforts on the part of everyone involved. The Government must put the entire available spectrum up for auction as it just leads to an unnecessary creation of artificial scarcity.

- 1.5 An exchange of 15 units of 3G airwaves in the 2100 MHz band in lieu of the 15 units of idle spectrum in the 1900 MHz band will facilitate the liberalization of three extra 5 MHz slots in the 2100 MHz band for commercial use and generate revenue for the government without compromising the spectrum requirements of the armed forces. Considering the acute 3G spectrum crunch in 2100 MHz band and poor traction of CDMA services in India, keeping 15 units of mobile broadband airwaves in the 1900 MHz band idle for another decade for a distant re-farming need is impractical.

2. Key Issues

2.1 Mis-interpretation of Supreme Court judgement dated 2nd February 2012

- 2.1.1 The Supreme Court judgment dated February 2, 2012 led to the cancellation of 122 licenses. We do not agree with this notion that the number of licenses which stand cancelled as a result of the SC Judgement amounts to 122 and the total spectrum which stands quashed amounts to 473.6 MHz.
- 2.1.2 The licenses issued post 2004 and in defiance of the 2003 TRAI Recommendations are 179 [(Aircel 14), (Idea 2), (Vodafone 7), (Reliance 15), (Tata 19) and (122 various others)]. They all, except some, received spectrum post 10th January 2008. The total spectrum thus issued post 10th January 2008 is 673.2 MHz and not 473.6 MHz. The estimated cost of this missing 200 MHz anything from Rupees 20, 000 crore upwards

- 2.1.3 Our humble submission is that these 57 licenses have been fraudulently acquired (Rupees 40, 000 Crore loss), hence must be cancelled and asked to participate in the auction or forced to pay the discovered price and not allowed to continue to that of 2001 price in order to provide level playing field for the distressed licensee who bid in November 2012 and March 2013 and to those whose licenses come up for renewal. It would be prudent for them as well to be part of the price discovery then be subjected to a price discovered by others, should that happen by a quirk of a miracle in DOT to force the discovered price on these 57 licenses. If action is not taken, they would be unlawful owners of licenses and completely upset the level playing field.
- 2.1.4 If no action is taken, it would lead to a skewed level playfield in favour of Aircel, Idea, Vodafone, Reliance and Tata. Most importantly, the spectrum to be auctioned should be increased to the amount vacated and not artificially rationed and hoarded by the government in the name of re-farming, eviction. It is essential that entire spectrum vacated by all cancellations of 179 licenses must be put for auction to avoid creation of artificial scarcity.
- 2.1.5 It may be noted that the mess and ambiguity in the telecom sector for the last over 4 years is because of -
- The Recommendations of the Authority in August 2007, especially relating to the issue of no auction, no Cap
 - The contravention of the October 2003 Recommendations of the Authority, which set out the road map for inducting additional players, and
 - The introduction of combination of technology dispensation, in complete violation of the extant policy then, in favor of Reliance.
- 2.1.6 The Authority could have taken *suo motu* action as per Section 11 (a) (viii) Chapter III of the TRAI Act of 1997 as amended in 2010. In any case, all allocations in 2008 were provisional, conditional and subject to the outcome of various court cases.

2.2 Quantum and Valuation of Spectrum to be Auctioned

2.2.1 We believe that there should be no multiplication factor for auctioning the spectrum. Linkages and arbitraries should be removed and let the market determine the price.

2.2.2 Spectrum cost element in the end tariff - **Authority should rationally identify what exactly should be the reasonable tariff and cost component of spectrum built in to the tariff. We are of the view that there should be a spectrum usage charge and also there should be an extra charge on usage of additional spectrum. Annual spectrum charges should be technology neutral and based on the revenues of the operator. A minimum annual spectrum charge can also be levied based on the quantum of spectrum held so that it acts as a deterrent against spectrum squatters.** In our view validity of the spectrum should be 20 years from the date of allocation of spectrum, as it is in the current scenario. Also, validity of price of spectrum should be between 3 years to 5 years with suitable indexation limited to inflation and PLR (Primary Lending Rate). Government should not allow any deferred payment of spectrum and the payment should be upfront in nature. The industry will come up for any number of excuses to defend their inefficiencies.

2.2.3 As far as the licenses which are expiring are concerned, they must be auctioned. As far as determination of market price of the spectrum is concerned, we do not see merit in the linkage with the 2012 or 2013 auction prices, as it otherwise leads to unnecessary litigation. The price discovery must be looked at, bearing in mind the necessary considerations of inflation rates and interest rates.

2.3 Contiguous Block Size of 5 MHz

2.3.1 We are of the view that the minimum block size to be auctioned should be 5 MHz in an effort to ensure the contiguous form of spectrum holding. We understand that different latest technologies require different carrier sizes. e.g. Universal Mobile Telecommunications System (UMTS) technology can be deployed only with a carrier size of 5 MHz. Long Term Evolution (LTE) technology can be deployed in different

carrier sizes viz. 1.4 MHz, 3 MHz, 5 MHz, 10 MHz and 20 MHz. However, our belief is that 5 MHz is the ideal block size of spectrum as it ensures that any technology can be deployed with the allocated spectrum. Fragmented spectrum results in reduced efficiency, increased requirement of inter operator guard bands and availability of lesser amount of spectrum for productive use.

3 Other important Issues

3.1 Spectrum Squatting

3.1.1 Spectrum is a scarce national resource. In India, up till now, spectrum for wireless telephony was being allocated along with the UAS license under an allegedly flawed spectrum allocation policy. A pan India UAS license with a cost of around Rs 1658 crores, which was a price discovered in 2001, was in reality way below the cost of the 2G spectrum which came bundled with it. Additional spectrum was granted on a subscriber linked criteria. The realization of a flaw in the 2G spectrum allocation policy, probably started to dawn with the sale of Hutch to Vodafone at around \$22 billion. The subsequent stake sales in new telecom licensees Swan and Unitech at multiple valuations to the license fee paid by them appears to have fortified the realization that our spectrum allocation policy was flawed and was leading to huge losses to the public exchequer and benefitting private pockets. These two new licensees had not even rolled out a network, making it obvious that the multiple valuation arrived at reflected the valuation of the spectrum held by these companies. In effect these new licensees, who have failed to rollout any networks, are spectrum squatters, hogging up precious spectrum for making an overnight killing at the expense of the public exchequer.

3.1.2 With these massive losses caused due to the government doling out 2G spectrum, the issue seems to have become explosive in the public arena and it has virtually forced the government to rewrite policy such that future spectrum allocation happens via open and transparent auctions, which can help achieve the market value of the spectrum to the benefit of the public exchequer. The following table reflects, the kind of fee that the

government earns out of license fee/ revenue share and spectrum charges based on the AGR. Thus, spectrum squatting can lead to substantial losses to the public exchequer.

TABLE-1

Year	Approximated Jan to year end-No of mobile users mn	ARPU1 250/m annualised	ARPU2 350/m annualised	TR1 crores	TR2 crores	Govt revenue 1 crores	Govt revenue 2 crores	Per MHz revenue 1 crores	Per MHz revenue 2 crores
1997	0.339	3000	4200	102	142	20	28	0.34	0.47
1998	0.882	3000	4200	265	370	53	74	0.88	1.23
1999	1.2	3000	4200	360	504	72	101	1.20	1.68
2000	1.884	3000	4200	565	791	113	158	1.88	2.64
2001	3.577	3000	4200	1073	1502	215	300	3.58	5.01
2002	6.432	3000	4200	1930	2701	386	540	6.43	9.00
2003	12.998	3000	4200	3899	5459	780	1092	13.00	18.20
2004	33.701	3000	4200	10110	14154	2022	2831	33.70	47.18
2005	52.175	3000	4200	15653	21914	3131	4383	52.18	73.05
2006	129.54	3000	4200	38862	54407	7772	10881	129.54	181.36
2007	233.62	3000	4200	70086	98120	14017	19624	233.62	327.07
2008	346.29	3000	4200	103887	145442	20777	29088	346.29	484.81
March 2009	391.76	3000	4200	117528	164539	23506	32908	391.76	548.46

** Revenues in this chart have been approximated for the purpose of arriving at losses to the government due to spectrum squatting*

3.1.3 The fee that the government earns from spectrum usage includes service tax of 10%, a blended revenue share of 7%, 2% blended spectrum charges and 1% contribution to the Universal Services Obligation Fund (USOF). Thus, spectrum squatting can potentially lead to a 20% of AGR loss to the public exchequer. For the purpose of computation, the total revenue has been projected on the assumption of approximately Rs 250 (ARPU1) and Rs 350 (ARPU2) as the blended average revenue per user (ARPU) and has been used as an approximation of AGR to calculate the approximate government revenues TR1 and TR2. The last column above indicates the per MHz revenue to government on the assumption that approximately 60 MHz of 2G pan India spectrum is in usage and has been calculated both for TR1 and TR2.

- 3.1.4 The calculations from the table clearly suggest that auctioned 3G/2G spectrum, if allowed to remain idle could lead to losses in government revenue. With the government allegedly planning to auction four 5 MHz 3G slots amounting to 20 MHz of spectrum, the potential revenue loss due to spectrum squatting can mount to nearly Rs 9000 crores per year given that the approximate government revenue in 2008 was between Rs 3462 million and Rs 4848 million per MHz as per the table above.
- 3.1.5 It may be argued that the 2G UAS licensees have been stipulated with a rollout obligation. However, it may be noted that the rollout obligation is miniscule in relation to the total revenue potential and the potential loss of revenue to the government. Thus, a player may choose to do a minimum rollout just to continue to hold the spectrum till a suitable buyer for the spectrum is found. There has been a precedent that none of the UAS licensees have rolled out any 2G network till now as apparent from the TRAI release on subscribers. This appears to be a clear example of spectrum squatting leading to huge losses to the government exchequer in terms of revenues to be earned out of license fee, spectrum charges, service tax and USO fund contribution. In the case of 3G it may be argued that a 3G winning bidder who pays a substantial amount for 3G spectrum would want to deploy the spectrum to start earning revenues. However, it is also likely that the 3G winning bidder may want to sit out in the wait for a capital gain and in the process lead to losses to the government. As demonstrated above, the total loss to government on 20 MHz 3G spectrum can mount to Rs 9000 crores. On a per player basis, this would amount to Rs 2250 crores.
- 3.1.6 In this respect some of the following deterrents can be built into the policy framework such that spectrum squatting does not lead to losses to the government:
- A. Introduction of a spectrum trading charge such that sale of spectrum and its subsequent transfer results in a fee payable to the government
 - B. Closure of loop holes like issuance of fresh equity for fresh capital, which can be subsequently en-cashed by issuance of bonus shares and their sale
 - C. A clear re-write of the subjective and arbitrary rollout obligations, which are open to various interpretations by the operators

- D. Introduction of a fee, which becomes due to the government, whether or not the 3G winning bidder deploys the spectrum or not. This fee should take into account the 20% revenue that the government earns from usage of spectrum
 - E. Apply the same yardstick to the 2G spectrum holders to pay up for spectrum squatting.
- 3.1.7 While arriving at a methodology of calculation of a fee to prevent spectrum squatting, the government will need to bear in mind that the announcement of such a fee is likely to depress the upfront bid amounts as the bidding player is likely to factor in such payments into its business model. Too high a fee could depress bids substantially and too low a fee could encourage spectrum squatters. However, it is beyond doubt that a fee to prevent spectrum squatting is necessary and the government will need to establish a fee that does not impact the bid price substantially, but at the same time deters spectrum squatters. Also, this fee needs to be announced before 3G auctions such that various bidders can include it in their business model and determine the bids they would like to place.

4. Issues for Consultation

4.1 Q1. Please comment on the issue of making available additional spectrum in contiguous form (as discussed in para 2.5 and 2.13) in the 900 MHz and 1800 MHz band.

Q2. Please comment whether only contiguous blocks of minimum 5 MHz spectrum should be put for auction.

Q3. What should be the block size to auction the spectrum in (a) 900 MHz band and (b) 1800 MHz band?

Q4. What should be the minimum quantum of spectrum in the 900 MHz and 1800 MHz band that (a) a new entrant and (b) an existing licensee should be required to bid for?

Dua Consulting Response: Fragmented spectrum results in reduced efficiency, increased requirement of inter operator guard bands and availability of lesser amount of spectrum for productive use.

We are of the view that the minimum block size to be auctioned should be 5 MHz in an effort to ensure the contiguous form of spectrum holding. We understand that different latest technologies require different carrier sizes. e.g. Universal Mobile Telecommunications System (UMTS) technology can be deployed only with a carrier size of 5 MHz. Long Term Evolution (LTE) technology can be deployed in different carrier sizes viz. 1.4 MHz, 3 MHz, 5 MHz, 10 MHz and 20 MHz. However, our belief is that 5 MHz is the ideal block size of spectrum as it ensures that any technology can be deployed with the allocated spectrum.

An exchange of 15 units of 3G airwaves in the 2100 MHz band in lieu of the 15 units of idle spectrum in the 1900 MHz band will facilitate the liberalization of three extra 5 MHz slots in the 2100 MHz band for commercial use and generate revenue for the government without compromising the spectrum requirements of the armed forces.

Considering the acute 3G spectrum crunch in 2100 MHz band and poor traction of CDMA services in India, keeping 15 units of mobile broadband airwaves in the 1900 MHz band

idle for another decade for a distant re-farming need is impractical. In fact, going by the trends of the industry, the CDMA airwaves re-farming requirement that is currently being cited is unlikely to even arise in the future.

Besides, it must be kept in mind that the armed forces may also be keen on such an exchange deal as they stand to gain a larger block of contiguous spectrum in the 1900 MHz band that would be ideal for optimizing their network management operations.

4.2 Q5. Should the licensee whose licenses are due for expiry in 2015 and 2016 be treated as an existing licensee or as a new entrant?

Dua Consulting Response: No doubt that the existing licenses have a claim on the spectrum they hold, the investment they have made for setting up the network and the customer base they have, but they must also understand that the renewal conditions were also spelt out. Therefore, we do not believe that there should be separate classes earmarked i.e. blocking any spectrum for them. Having said that the amount of spectrum put up for auction should be adequately more than that to be most likely vacated by them. For the sake of fairness and transparency, all the licensees must be treated at par. The new entrant should acquire licenses as per due process to provide services. This will also avoid any unnecessary litigation emerging as well.

4.3 Q6. Should the valuation exercise for 1800 MHz spectrum be undertaken afresh for all the 22 LSAs?

Q7. Should the prices revealed in the February 2014 auction for 1800 MHz spectrum auction be taken as the value of 1800 MHz spectrum for the forthcoming auction in the respective LSA? Would the response be different depending on whether the forthcoming auction is conducted within one year of completion of last round of auction of February 2014 or later?

Q8. If the prices revealed in the February 2014 auction for 1800 MHz spectrum are taken as the value of 1800 MHz for the forthcoming auction, would it be appropriate to index it for the time gap (even if this is less than one year) between the auction held in February 2014 and forthcoming auction? If yes, what rate should be adopted for the indexation?

Q9. What should be the criteria for defining a 'market clearing price'? Can the auction determined price be considered as market clearing price, when (i) the demand for spectrum is greater than the supply and when (ii) the demand is greater than or equal to the supply? Can the auction determined price be considered as the market discovered price?

Q10. Should the valuation of spectrum and determination of reserve price be done only for those LSAs where market clearing price was not achieved for 1800 MHz spectrum in February 2014 auction?

Q11. Should the auction determined price for LSAs where market clearing price was achieved in February 2014, be taken as equal to the value of spectrum?

And

Q12. Should the market determined price be taken as the value of spectrum in all LSAs?

And

Q13. Should the value of spectrum in the LSAs where market clearing price was not achieved be estimated by correlating the sale prices achieved in similar LSAs where market clearing price was achieved with known relevant variables (paragraph 3.19)? If yes, please suggest which single variable is best suited for this purpose?

Dua Consulting Response: We are of the view that valuation of spectrum for each LSA should be done on an individual basis. A bottom-up valuation of spectrum capturing the unique potential of each individual LSA is desirable. The TRAI has costing data of all service providers in the form of Accounting Separation Reports which could be used to derive the average industry costs for all service providers

As far as determination of market price of the spectrum is concerned, we do not see merit in the linkage with the 2012 or 2013 auction prices, as it otherwise leads to unnecessary litigation. The price discovery must be looked at, bearing in mind the necessary considerations of inflation rates and interest rates. Unless predefined the rates of indexation and that these prices will hold with or without indexation, any half

way house to take this approach would be subjective. Since new price discovery is contemplated, so be it; discover that more or less markets will determine.

4.4 Q.14. Can multiple regression analysis be gainfully employed for this purpose given the limited number of sample data points?

And

Q.15. Should the value of spectrum in 1800 MHz band be assessed on the basis of producer surplus on account of additional spectrum?

And

Q.16. Is there any need for a change/revision of any of the assumptions adopted by the Authority in producer surplus model in the Recommendations of September 2013? Justify with reasons.

And

Q.17. Should the production function model based on the assumption that spectrum and BTS are substitutable resources be used as a valuation approach (as was done in the earlier valuation exercise)? Please support your response with justification/calculations/relevant data and results.

And

Q.18. Should the revenue surplus approach be used to arrive at the value of 1800 MHz spectrum? Do you agree with the assumptions made?

And

Q.19. Should the values contained in the Report of 8th February 2011 for spectrum up to 6.2 MHz be incorporated after indexation in the calculation of the average value of the 1800 MHz spectrum in the current exercise?

And

Q.20. Should the prices revealed in the February 2014 auction for 1800 MHz spectrum auction be used as one of the values of 1800 MHz spectrum?

And

Q.21. Apart from the approaches discussed as above, is there any other approach for valuation of spectrum that you would suggest? Please support your answer with detailed data and methodology.

And

Q.22. Would it be appropriate to value 1800 MHz spectrum as the simple mean of the values thrown up in all the approaches? If no, please suggest with justification that which single approach should be adopted to value 1800 MHz spectrum?

Dua Consulting Response: There should be no linkages other than the determination of a market driven price for the spectrum. We are not in favor of the producer surplus approach. Such an approach is too jargonized in nature and a destructive technique to justify higher input cost. Specially, in urban areas, there would hardly be any visible difference in cell size density for various bands. An accurate comparison of cost for different bands by different people is going to yield in different results.

We believe that any alternate approach for Valuation of Spectrum should be done after studying the Element of Spectrum Cost in the tariff structure. The Authority should rationally identify what exactly should be the reasonable tariff and cost component of spectrum built in to the tariff.

It must be noted that a reserve price is the price at which bidding begins. If there is a transparent auction with enough competition among bidders, the final price will be largely independent of the reserve price (unless the reserve price is set too high, in which case the auction may not result in a transaction). On the other hand, if there is only one bidder, or if there is collusion, then the final price will be close to the reserve price.

In our view, there should be an economic study to analyze the various cost elements involved in the production of data and voice time. These should be taken into consideration before deciding on a reserve price.

Let us take the key performance indicators for the GSM market as a marker to elucidate on this spectrum cost aspect. We have taken the five base years during the period of 2001-13 to illustrate the growth numbers and the element of spectrum cost involved.

TABLE 1- KEY PERFORMANCE INDICATORS IN THE TELECOM DATA¹

Base Year	2001	2004	2007	2010	2013
GSM Subscriber Base (in millions)	3.58	33.7	120	479	894
ARPU (INR/month)	1113	469	301	156	105
MoU (mins/month)	310	322	471	425	360
Total Revenue ² (INR millions)	47814.5	189664	433440	896688	1126440

Let's take the scenario of the 2001 licensing regime. All licences were given by DoT through an auction process. In all these licenses, spectrum was tied to the licence and the entry fee remained constant in respect of each service area, totaling Rs. 1659 crore pan-India. There were four pan-India operators at the time. In the table below, we have analyzed the spectrum cost involved.

TABLE 2- SPECTRUM COST INVOLVED³

Cost Element	Amount (in INR crore)
Pan-India entry fee paid by 4 operators in 2001	7000 crore (approximated)
EMI per month at 1% for 20 years	70 crore
Monthly Book Value (taking into account depreciation and capital amortization)	45 crore
Per day spectrum cost	1.5 crore

¹ All data contained in the table have been sourced from TRAI Study Paper on 'Indicators for Telecom Growth', TRAI Annual Performance Indicator Reports and COAI statistics published on its website.

² Revenue has been computed on the basis of multiplier of the ARPU taken annually and the subscriber base.

³ The values are based on back-of-the-envelope calculation through numbers which have been approximated.

We now examine the correlation between this spectrum cost paid by the operators vis-à-vis the actual performance indicators of the telecom data contained in Table 1 above. We have taken two data sets in the form of 2001 and 2007 when the licensing was still based on an auction process to illustrate the gradual decline in the cost element of spectrum paid up-front with the rapid telecom growth witnessed over the years.

TABLE 3- CORRELATION BETWEEN THE SPECTRUM COST AND SUBSCRIBER USAGE IN 2001 and 2007⁴

Base Year	2001	2007
Per day spectrum cost⁵ involved (In INR Crore)	1.5 crore	1.5 crore
Minutes of Usage (in mins/day/subscriber)	10.33	15.7
GSM Subscriber Base (in crores)	0.358	12
Overall Subscriber Usage per Day⁶ (crores/min)	3.70	188.4
Ratio of the Spectrum Cost to Daily Subscriber Usage (paisa/min)	40 p/min	.79 p/min

It is evident from all the facts and figures contained in the tables above that the cost element of spectrum based on the payment made up-front even under the auction process during the 2001 economic scenario and the licensing regime at the time has gone down exponentially with the growth in the performance indicators in the form of subscriber base as well as minutes of usage. So much so, that the cost of spectrum has become quite negligible in absolute terms.

We therefore believe that there are a lot of misrepresentations made by players when they refer to increasing tariffs and stagnant growth of the economy in seeking reduced reserve

⁴ Id. At Citation 3 above.

⁵ Derived from the value contained in Table 2 contained herein above

⁶ Based on a multiplier of the MoU per day and the GSM subscriber base

price or annual spectrum charges. Annual spectrum charges should be technology neutral and based on the revenues of the operator. A minimum annual spectrum charge can also be levied based on the quantum of spectrum held so that it acts as a deterrent against spectrum squatters.

4.5 Q.23. Should the value of 900 MHz spectrum be derived on the basis of the value of 1800 MHz spectrum using technical efficiency factors (1.5 times and 2 times) as discussed above?

And

Q.24. Should the economic efficiency approach as discussed above be used to calculate the premium for the 900 MHz spectrum, based on the additional CAPEX and OPEX that would be incurred on a shift from this band to the 1800 MHz band?

And

Q.25. Is there any other method that could be used for arriving at the valuation of the 900 MHz spectrum? Please support with detailed methodology.

And

Q.26. As in the case of the September 2013 Recommendations and adopting the same basic principle of equi-probability of occurrence of each valuation, should the average valuation of the 900 MHz spectrum be taken as the simple mean of the valuations obtained from the technical and economic efficiency approaches (and any other method)?

Dua Consulting Response: We are of the view that there should be no linkages other than the determination of a market driven price for the spectrum, hypothesis should be avoided.