

3G — Going, Going, Gone!

A lump sum sunk cost is the only foolproof way to prevent strategic high bidding by some operators who can then renege and renegotiate based on political clout in a different political climate, says **Ravi Bapna**

THE brutal pun notwithstanding, these are interesting times if you care about the air above you. No, it's not about the quality of the air. The issue here is about the economic value of the 25 MHz of spectrum that is soon to become available to the seven or so (some states have only five) licensed cellular operators operating through the country. Technical constraints specified by the International Mobile Telecommunications-2000 (IMT-2000), the global standard for third generation (3G) wireless communications, make feasible three indivisible chunks spectrum that can be sold (5 MHz, 10 MHz, 15 MHz). With potentially seven operators vying for five slots we have a scarce resource, which begs the question of establishing "true" economic value. Put simply, the question facing the Telecom Regulatory Authority of India (Trai) is what mechanism to recommend to the government to decide which cellular firm gets how much spectrum and at what price.

In 2000, in a 3G spectrum auction designed by professors Binmore and Klemperer, telecom operators in the UK, with a population roughly 60 million, paid \$34 billion for five licences. In smaller Belgium, with a population 10.3 million, an auction in 2001 yielded \$140 million per licence to the country's exchequer. In the same year in tiny Slovenia, with a population 1.9 million, the price of the single licence awarded was \$87.5 million. To put things in perspective, at the time of writing there are 117 million paying mobile subscribers in India. Your guess is as good as mine as to where we will be by the end of 2007, when the first 3G services are expected to hit the Indian market.

The fundamental question here is determining a fair and transparent mechanism that decides the allocation and pricing of a scarce national resource. The allocation determines who gets to use the spectrum and the pricing establishes how much they have to pay for getting to use it. Of course, the alloca-



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tion should be efficient. In economic terms, allocative efficiency is maximised when the mechanism is able to identify and transfer the resource to the firm that values it the most. The Trai is also concerned about protecting the consumer. This translates to doing what it can to ensure lower prices and better services for the consumer. Finally, subject to other constraints, the mechanism should yield as close to the fair value of the resource as possible. The last criteria hinges on the notion that the public's money should not be left on the table.

Based on prior practice in a host of countries, it is reasonable to claim that choice is between an auction and a so-called "beauty contest." In the latter, firms submit business plans and the government identifies which companies are the best. In contrast, in the case of auctions, firms are forced to put their money where their mouth is. To gain a better understanding of the comparison of the two approaches, let us examine the source of the value from 3G. The expected value of the 3G technology, a future technology, to any firm is going to depend on the na-

ture, of applications and services it provides, the perceived value to the consumer of its offering relative to that of the closest competitor and the slice of the Indian mobile market (of roughly 320 by 2010) million, it can capture. Nobody knows what future 3G services will be offered, by what firms and at what price. The information asymmetry is grossly in the favour of the firms, with their deep pockets and a battery of strategic consultants they can hire.

THE regulator has to design a mechanism that seeks this information to the extent it can, and making sure that the signals it receives are credible. One sure way to achieve this information elicitation in a fair and transparent manner, and protect the consumers' interests, is to carefully design an auction that facilitates price discovery (firms will come in with their initial valuation estimates and the mechanism should allow them to observe others' signals and revise), determines an efficient allocation and which culminates in a lump-sum payment by the winning bidders to the government.

I will argue that an equivalent, fair and transparent beauty contest cannot be designed, simply on the virtue of the fact that it is almost impossible to hold anyone accountable to the business plans they present. Not only is the establishment of an objective evaluation criteria onerous, it is the enforcement of the resultant allocation decision that cannot pass the muster of the common man. A firm promising today to offer the lowest price, if allocated tomorrow, could, on the basis of our over-burdened legal system, pretty much do what it wants three to five years from now.

There are other technical auction design issues that the authority will do well to seek expertise on. First, it may not be obvious why high auction prices paid by companies for the spectrum will not be passed onto the consumer. As long as the auction design ensures that there is significant (four to five players) competition in the market, prices for future (and largely uncertain) 3G services in India will depend on what the market forces determine. Secondly, it may not be obvious why a bid cannot be made on the level of royalty that a company is willing to share with the government, as in the case of say airport upgradation. The answer to this lies in the underlying uncertainty of the value of the future services that 3G operators will bring to the market and the objective of determining an efficient allocation at the present time.

A lump-sum sunk cost is the only fool-proof way to prevent strategic high bidding by some operator, who can then renege and renegotiate based on, say, political clout in a different political climate. In this regard it should also be mentioned that any pre-emptive unilateral signals (there is an offer on the table for Rs 1,500 crore for 5 MHz) should at best be treated as distractory and at worst as posturing. Let everyone come to the dance floor and let the music begin!

(The author is the Executive Director of the Centre for IT and the Networked Economy (CITNE) at the Indian School Of Business, Hyderabad. Views are personal.)