

How to earn less from a spectrum auction and ensure slow mobile broadband speeds

A cautionary take from Bangladesh - will Thailand do better?

"We are not happy". This was how Shahjahan Mahmood, Chairman of the Bangladeshi Telecoms Regulator BTRC, assessed the outcome of the spectrum auction which concluded on the 13th of February 2018.

BTRC had put up for auction 36 MHz of 1800MHz, 50 MHz of 2100MHz, and 6.8 MHz of 900MHz spectrum. Having set a reserve price of US\$ 540 million for 1800MHz spectrum, US\$ 675 million for 2100MHz, and US\$ 102 million for 900MHz, BTRC expected to receive US\$ 1,317 million from operators. In the event Grameenphone bought 10MHz of 1800MHz spectrum and Banglalink 11.2MHz whereas Robi bought 10MHz of 2100MHz spectrum. The state owned operator TeleTalk did not even show up for the auction. Total auction receipts amounted to only US\$ 464 million, i.e. 65% below the BTRC's target, and 66% of the spectrum remained unsold. Not only is this a pitiful outcome in terms of raising revenue but it is also disastrous for mobile users in Bangladesh.

BTRC seems to be unable to understand that spectrum has no intrinsic value. Spectrum that is not used - in this case 61.6 MHz which was not sold - is no good to anyone. Value is only created if operators invest to make use of the spectrum. But who would make an investment if there is no possibility to earn a reasonable return on investment? The total reserve price of US\$1,317 million amounts to almost 3.5 times the annual cash flow generated by all mobile operators. On top of that there are hefty annual fees as well as the additional network investment to be made which means that operators might not receive payback on their investment for 6 years or more. Who in their right mind would invest under those circumstances?

The calculations are not particularly difficult to make and operators told BTRC that at those reserve prices there is no business case to acquire all of the spectrum.

It could have been very different. Coleago carried out a detailed valuation of the spectrum based on the operators' business case. Had the reserve price been set 60% lower it is highly likely that all of the spectrum would have been sold. BTRC would have generated up-front licence fees of US\$ 572 million, i.e. 14% more than they actually did. Furthermore, with all 92.8MHz of spectrum on offer sold instead of only 31.2MHz, the annual spectrum fees earned by BTRC would have been almost three times higher. In short, BTRC scored a financial own goal.

BTRC's failure to optimise revenue generation for the spectrum auction is compounded by the negative impact on consumers. Had operators acquired all the spectrum this would considerably improve network quality, for example mobile broadband speeds. And quality is an issue. Telecom Minister Mustafa Jabbar, who also attended the auction, requested that the operators improve their service quality: *"What the operators are now offering under the name of service is appalling. I cannot even make any calls sitting in my office, and call drops are frequent too."* Well of course mobile operators would want to improve quality but if the government prices spectrum unreasonably high compared to what Bangladesh mobile users can pay for their mobile service, then spectrum will remain unsold and quality will not improve. After all, why did Government owned TeleTalk not acquire any spectrum? Quite simply because it could not generate a sufficient amount of cash from its operations.

In Thailand reserve prices for the 1800MHz spectrum have been set at THB 12,486 million per 2x5MHz block. With nine blocks on offer the Government expects to receive at least THB 112,374 million. In 2017, the cash flow generated by the entire mobile industry in Thailand was around THB 31,632 million which means the spectrum fees the government expects to receive amount to 3.6 times annual industry cash flow. In Bangladesh the figure was slightly lower with just under 3.5 times annual industry cash flow and the auction was a resounding failure. It is not hard to see that if the proposed reserve prices in Thailand are maintained the auction is guaranteed to end in failure with less revenue earned that could have been the case and mobile users being unable to benefit from faster mobile broadband.

Failed spectrum auction in Bangladesh, February 2018

Band	MHz on offer	MHz Sold	Expected Revenue US\$ million	Actual Revenue US\$ million	Revenue Loss US\$ million
2100MHz	50.0	10.0	675	135	- 540
1800MHz	36.0	21.2	540	328.6	- 211
900MHz	6.8	0.0	102	0	- 102
Total	92.8	31.2	1317.0	463.6	- 853

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