3G Technology Adoption in India

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Indians love to talk. Or at least this is what the telecom firms had in their mind when they bet Rs. 102.7 Crores for the recently concluded 3G and BWA (Broadband Wireless Access) auctions. The Indian telecom market has seen an average growth rate of 30% for the past many years, and today the number of mobile phone subscribers in the country stands at almost 600 million, or nearly half the population of the country subscribes to cellular services. Will the growth of the services in the 3G spectrum match that of the 2G spectrum is the big question.

What is 3G? Amongst other technicalities of signalling and switching, a 'generation' of mobile services is defined in terms of data transfer speeds. In 3G, the data transfer speeds would reach upto 2 mbps, thereby promising to revolutionise the way we communicate.

Will the bet payoff? The popular view is that being one of the largest and fastest growing international markets, India will wholeheartedly adopt the leap in technology. The successful launch of 3G services in China last year and the encouraging profits of Chinese telecoms within the first year of operations are heart-warming for the fiercely competitive Indian telecom market. CRISIL Research estimates that 3G mobile subscribers in India will reach 90 million and the annual 3G device sales will reach 81.3 million by 2013. Further, as 3G adoption accelerates, the 3G operators, handset manufacturers, infrastructure equipment makers, and 3G application providers will stand to gain. Also, increasing penetration of 3G services will see the convergence in the field of telecommunications, mobile entertainment, software, and data services. 3G services also carry the hopes for improving the internet penetration in India, which contributes to the country's GDP.

What services will be on offer? Subscribers can look forward to a plethora of value added services (VAS), which will increase proportionately to the diffusion of adoption of these services. It is expected that content driven applications like m-commerce, gaming, GPS, music, video streamlining and downloading, etc and other services like remote home monitoring systems would be commonplace in a few years after the launch of 3G services. The possibilities of the VAS on 3G are enormous. People could hold video conferences on the move, and watch live TV. The overall public access would increase immensely as people can be reached on a multi media mode. There is also tremendous scope in the field of inclusive banking, as MPESA has shown in Kenya, should the banking regulations in India relax somewhat. Further, the pending mobile number portability (MNP), will also add to the applications of 3G services.

This market will grow along with the subscriber penetration and the increasing number of handsets being sold. There are already a substantial number of new entrants in the handset market.

Brands like Micromax, Karbonn, Fly, etc are growing increasingly popular, especially in the rural parts and they have made their foray the strongholds of the established brands.

Other factors: In the recent auctions, apart from the 3G services, the Broadband Wireless Access (BWA) licenses were also auctioned. Although no operator has obtained both BWA and 3G licences for all the 22 circles in the country, bigger players like Bharti Airtel, Tata Telecom, and Idea have picked up a few circles in each category, depending on their strongholds and business models. It is very likely that they would look to combine the broadband and the 2G-3G services in these circles and study the adoption rates and user behaviour. The combined services and applications offer considerable potentials for an improved life quality. In terms of technology, the present Wi-fi enabled networks will be replaced by WiMAx (worldwide interoperability for microwave access) and TD-LTE (Time Division- Long Term Evolution). This would mean investment on the part of subscribers and hence be a growth delaying factor. At present, a WiMAx router costs anywhere between Rs. 500 to Rs. 2000.

Further, these auctions also result also saw the return of Reliance Industries Limited (RIL) into the telecom sector when it acquired 95% stake in Infotel, a relatively little known company which emerged as the only winner of BWA auction in all 22 circles. We can expect some more action in terms of mergers and acquisitions as RIL looks to increase its footprint this field in the coming year.

Challenges: The Indian cellular industry has been stagnating in terms of profitability due to overcapacity, lower entry barriers, tariff wars and unsubstantial product differentiation. This also leads to high churn rates, as subscribers have very little to choose from. For operators, the Average Revenue per User (ARPU) has been steadily declining, and network congestion has been increasing. According to technology firm Gartner, Japan has reached about 85% 3G penetration in 10 years, and almost half of the ARPU is generated from data services. Similar comparison with USA shows that with about 40% 3G penetration, 30% ARPU is accounted for by data services. Therefore, there is good reason to believe that the 3G services will provide the mobile operators the opportunity to compliment the voice services with data services and increase their revenues. However, here we hit the road with caution. The Chinese 3G success story is driven by the adoption in smaller cities and semi rural areas. In India, this might be a challenge due to the limited infrastructure to support 3G networks in rural areas. Most of the rural India is served by the stated owned BSNL which had launched its 3G services in January 2009, which has not been met with much success. It is the metros and tier 2 and 3 cities of the country that the telecom companies have their hopes pinned on.

Another technical challenge will be the roll out of recommendations for the 4G services. According to TRAI Chairman, J S Sarma, these recommendations will be rolled out by the year end. RIL has already announced its plans to enter the 4G market whenever the opportunity arises. Moreover, as 3G will inherit the legacy in terms of infrastructure and subscribers from 2G, it will take a very long time to evolve, and it is quite possible that the core 3G platform is never fully developed.

If 4G gains momentum faster, then given the superior data speeds and connectivity, it could overtake the 3G.

Conclusion: As a result of the large payouts in the 3G/ BWA auctions, the telecoms will suffer low revenues and leverage in the medium term due to the fact that these companies will be paying the amounts they have bid in the auction immediately, whereas the 3G services can only begin around October 2010. However, given the record growth in the Indian telecom sector over the past decade, we can safely hope for the best, and at the end of the day, the common subscriber, and the country's economy stands to gain.