

Getting the 3G policy right

The infrastructure for 3G services should be subsidised and the magnitude should be explicitly tied to the winning bids in the spectrum auction, and to an infrastructure rollout timeline, says **Ravi Bapna & Arun Sundararajan**

A BROADBAND wireless network capable of carrying voice and data at reasonable rates to vast portions of India is our only hope of creating a national information infrastructure. In contrast with Europe and North America, 3G is not a luxury for India but a necessity, plagued as it is with limited physical and digital infrastructures. There is still less than one internet connection per 100 people, and last-mile economics preclude the widespread deployment of traditional "wireline" infrastructure, especially if a viable wireless alternative exists. For millions of people in our tier-II cities, tier-III cities and rural areas, 3G will be the only available ramp onto the information superhighway.

However, the excitement surrounding the impending 3G spectrum auctions might lead one to imagine that once the spectrum is allocated to the right provider, the information infrastructure will magically emerge. This is not the case. Spectrum is only one part of the mobile commerce ecosystem. Value creation will occur only if the supporting network infrastructure — thousands of base stations and massive backhaul transmission networks — are rolled out rapidly. Also required is the rapid adoption of 3G-capable mobile devices, and the creation of content and applications that can be delivered over the infrastructure to the devices. Delays in any of these aspects can slow down and possibly impede process, since each layer — content, infrastructure, devices — requires the others to create value for end-user consumers and businesses.

This is a natural scenario for government intervention, perhaps in the form of a subsidy to companies in one or more of the three layers of the ecosystem. Our position is that it is the infrastructure layer that should be subsidised. Further, the magnitude of the subsidies should be explicitly tied to the winning bids in the spectrum auction, and to an infrastructure rollout timeline. Such government telecom subsidies, like the Universal Service Fund in the US for service provision in high cost telephony areas, have strong precedents.



SASIKUMMAR

An infrastructure rollout-based subsidy has a number of attractive economic properties in the Indian context. Most importantly, it makes the bids of the service providers in the spectrum auction also act like commitments of hard cash to subsequent accelerated deployment of the supporting networking infrastructure. This will end up inflating bidding in the spectrum auction. However part of the increased amount the winning service providers pay the government will flow back to them. But only if they actually build out India's high-speed wireless infrastructure.

In other words, the winners in the auctions are incentivised to deliver on the promise under which custody of spectrum — a national asset — has been entrusted to them. These subsidies will also give a bidding advantage to those providers whose deployment capability is actually superior, relative to those providers who simply have larger existing customer bases or greater access to financial resources. Thus, the responsibility of building the country's internet infrastructure is more likely to be in the hands of the most capa-

ble companies if the Trai makes this subsidy structure part of 3G spectrum policy. While not the magic bullet for widespread wireless internet, spectrum is an 'essential asset' in the mobile commerce ecosystem. This becomes important when assessing whether to allow foreign non-incumbent providers to participate in the auctions.

THE incumbent firms have deep local expertise and rapidly growing domestic user bases. Foreign operators like NTTDoCoMo, on the other hand, have substantial technological expertise in deploying/running 3G networks, and in supporting the development of content and commerce that makes the infrastructure valuable and the adoption of 3G services more likely. These competencies — local market expertise on the one hand and technological expertise and experience on the other — are complementary. India's internet future is therefore best served if the 3G infrastructure is rolled out by entities representing joint ventures between domestic/incumbent and successful foreign providers.

However, here is where spectrum being

an essential asset starts to matter. The domestic-foreign partnerships need to be formed in advance of the allocation of spectrum. Having partnerships form after one party has the essential asset makes it hard for the parties to negotiate business terms ex-post in an equitable way. This in turn makes such joint ventures less likely, and limits their value creation, since the weaker partner is less motivated to invest in the venture. Thus, government policy that encourages the partnerships to form before the auctions, and that induces (perhaps even favouring) bids from domestic-foreign joint ventures of specific kinds is critical. This way, the division of future value that the partnership creates happens before ownership of the essential spectrum asset causes an imbalance in relative negotiating power. While this imbalance may be mitigated by competition for foreign partnerships between multiple domestic providers who own spectrum, it certainly suggests that allowing unfettered entry is risky. Instead, allow the foreign technological and provision expertise to enter, but mediated by synergistic partnerships with domestic providers. Given the economies of scale that wireless infrastructure deployment has, excess competition in this industry can be detrimental.

If the layers of the mobile commerce ecosystem come together rapidly, the wireless internet will change India's business infrastructure and open up tremendous new opportunity for growth that creates value across the economy. A large majority of this growth will be driven by domestic demand, in contrast with the export-oriented growth we have witnessed in the software industry.

We are at a critical juncture today. We need strong and forthright leadership from the very top to sober the cocktail of vested interests, posturing and inter-ministry in-fighting that plays out on a daily basis. The future of our national information infrastructure depends on it.

(Ravi Bapna and Arun Sundararajan are faculty members at the Indian School of Business and New York University's Stern School of Business respectively)