
Building rural telecoms, one rupee at a time

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Telecom industry analysts are obsessed with a four letter word: ARPU. The great and the good are forever pontificating over how to arrest the decline of average revenue per user. In India's mobile telecoms sector – with ARPU at US\$2, on average, or at US\$1, for new users¹ – the numbers could hardly get smaller.

Industry executives in India worry less about ARPU and more about usage. They realise that there are limits to what they can do to influence upwards the price of what they sell, and that there's more they can do to encourage consumption. But what does that mean when looking at rural expansion? We believe more can be done to nurture a profitable rural telecom business, firstly, from within the industry's current business model and, secondly, through new business models.

Here, using India as an example from which others might learn, we look at how operators can find opportunities in rural markets.

¹ Quarterly Indicators Report, June 2011, Telecom Regulatory Authority of India.

Viewing the business opportunity in particular through the lenses of price and usage is making rural customers in India look less and less appealing. Rural users – according to common perceptions – are likely to spend less money, not be interested in data services, receive more incoming calls than they make outgoing calls and cost more than urban users to acquire, connect and serve.

In line with such perceptions are the insights we gained from one of the major Indian operators: the subscriber acquisition cost for a rural customer in a remote area can be as much as 50% higher than for an urban acquisition, due to higher distribution payouts; and on average the monthly servicing cost for a rural user is around 25% higher than for an urban one. Coupled with lower ARPU, at US\$1.70 for rural versus US\$2.10 for urban, these numbers indicate adverse economics (see Figure 2).

According to a survey undertaken by one of the operators in India in 2010, 65% of rural users don't know what a data service is. But of those who know, as many as two-thirds regularly use one.

When it comes to rural India, there certainly are some significant challenges:

- **74% literacy rate.** The lack of literacy dilutes campaign effectiveness in many media.

- **Only 15% English literacy.** The low preference for English limits the adoption of most services, since they're not available in other languages.
- **Linguistic fragmentation.** India has no national language. Hindi and English both are relatively widely spoken, but 30 other languages are each spoken by more than a million citizens².
- **Lack of infrastructure.** All-weather roads and electricity connections aren't yet a common feature of many Indian villages, and the outlook for improvement remains bleak. India spends only around USD 110 per capita on infrastructure, compared to USD 394 per capita in China³.

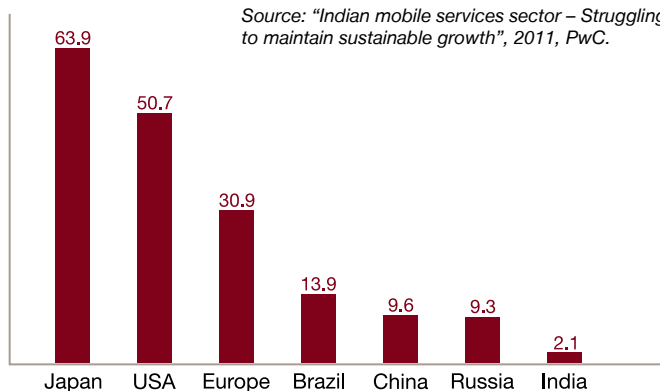
Yet the rural opportunity cannot be ignored and potentially is very significant. About 60% of the Indian population still lives in rural areas and contributes approximately 20% of the gross domestic product. In rural areas, 27m households today count as middle class, with annual income in the range of US\$1,000 to \$4,000. With the low-tier user base – those who use basic voice and text-capable phones – being relatively large, a modest 5% increase in low-tier adoption and usage could generate as

much value as a 20% increase in adoption by smartphone users would. Contrary to perception, though, outgoing minutes of use between urban and rural users are roughly the same. So rural users appear to be generating as much revenue from outgoing calls as urban users do.

Although some of what operators perceive about the profitability of rural users is grounded in truth, the reticence to do more in rural areas is more about operator constraints than lack of opportunity. More can be done to nurture a profitable rural telecoms business, firstly, from within the industry's current business model and, secondly, through new business models. Operators will need to take three steps, discussed below:

- Understand the breadth of the customer base in rural areas better.
- Address users' needs for services to be micro-local and in their language of comfort.
- Develop service models fit for a varied user base.

Figure 1: Examples of ARPU levels around the world (ARPU US\$)



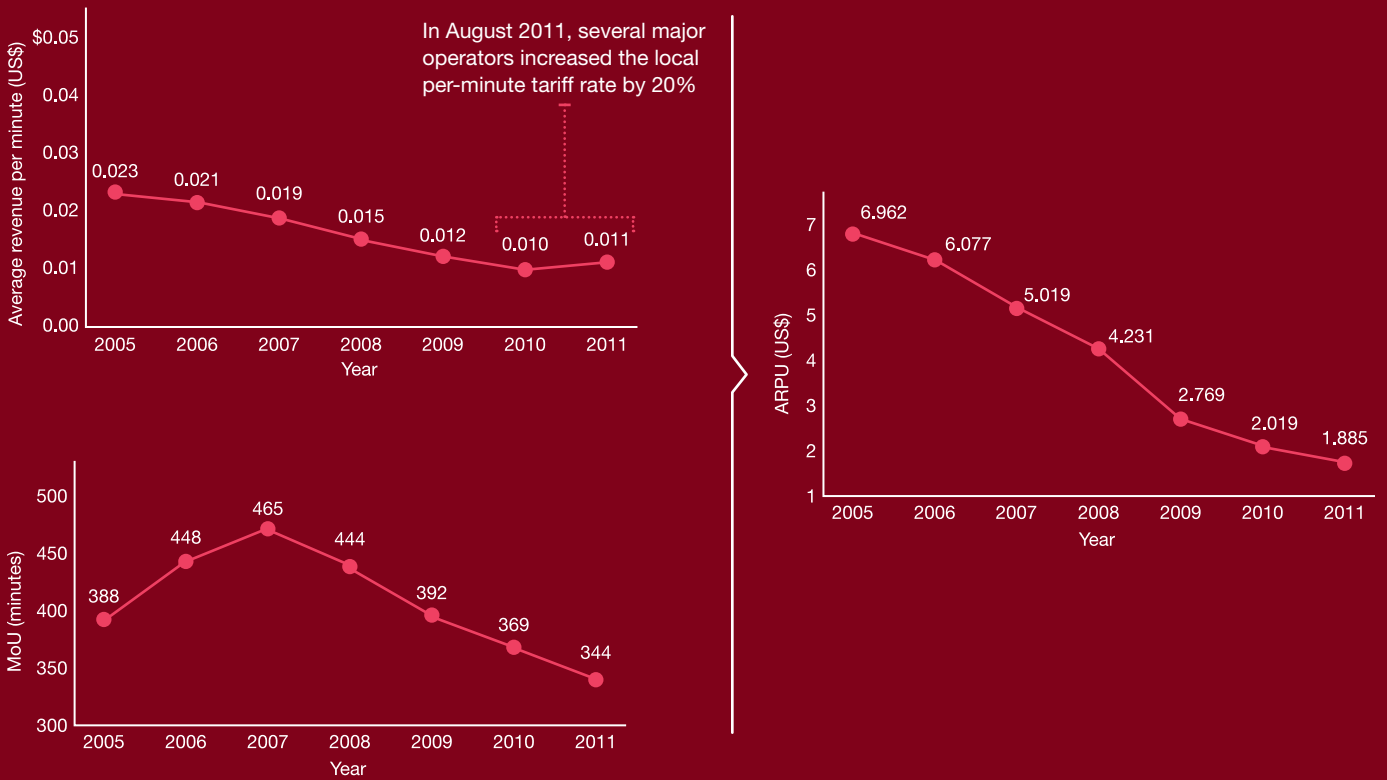
Source: "Indian mobile services sector – Struggling to maintain sustainable growth", 2011, PwC.

² Government of India Census 2001, NGO and expert estimates for English literacy rate.

³ Secretariat for Infrastructure, India, 2011: "Investment in Infrastructure during the Eleventh Five Year Plan"; United Nations University, 2009: "Economic Reforms and Infrastructure Spending: Evidence from China and India."

Figure 2: Historical overview of mobile key performance indicators in India, 2005-2011

Source: Quarterly Indicators Report, June 2011, Telecom Regulatory Authority of India.



Rural users commonly depend more on mobile communications to stay connected and have a greater need for channels to deliver them all manner of services and goods.

Better understand the breadth of the customer base in rural areas

Usage is the major marketing focus in India, but in rural areas, adoption is in fact the bigger problem. Consider data services: while the majority of smartphone users in urban areas access a data service from their handsets at least once a month, for sub-US\$3 spenders using basic phones the figure is closer to 20%. According to a survey done by one of the operators in 2010, only 36% of low-ARPU users are aware of non-voice and non-SMS services being available as well as know how to use them. As mentioned above, considering such low awareness, 20% adoption looks pretty good.

So the first problem is awareness, not usage. While some operators understand this, none has yet developed a solution for increasing awareness of data services.

The first challenge to doing so is the problem of the free rider: “If I spend millions of rupees educating the base, then what if half the customers leave and use the services offered by another operator?” Understandably, marketing officers in mobile operators see that as a risk. Distribution channels may hold the answer since they generally cut across operators at the rural level. They could start offering people who pop into their shops education in data services – for a fee that they would charge the operators – to be administered by a third party and charged back in a fair way. Millions could benefit as well as the operators.

If such a multi-operator mechanism were to prove too difficult to set up, though, the Department of Telecommunications could draw on the Universal Service Obligation Fund to fill in for this ‘market failure’. It’s likely that more public/private partnerships will have to play a role in championing Internet access in rural areas.

One example is the possibility of making more use of the postal service. In India, the postal service already gives access to mobile services. But the paradigm of that partnership could be shifted if post offices and delivery workers could be trained and deployed as a mobile sales force to encourage users to adopt new types of services.

Rural segments are as varied as urban ones are: they’re not only a generally poorer base but also more multilingual and more spatially dispersed, and they have differing social and professional needs and communication patterns. According to the National Census of 2001, 90% of the population of Kerala is literate, but in Bihar, only 44%; and 48% of the population of Orissa is below the poverty line, yet in Punjab, only 6%⁴.

Another misconception that arises is that rural Indian consumers won’t become active content buyers. Recently a leading TV channel recorded that in the state of Andhra Pradesh, as much as 25% of interactive TV responses came from rural areas. That figure indicates that non-urban consumers already form a sizable segment of engaged, interactive audiences. With ARPU below US\$2 a month, mobile services remain well within individuals’ affordability. And those services look even more affordable

when household budgets are considered, given that rural households have some 2.2 earners each.

Compared to urban users, rural users commonly depend more on mobile communications to stay connected and have a greater need for channels to deliver them all manner of services and goods partly because of their remoteness. Operators have terabytes of customer-usage data that could help them untangle the rural mass into usefully understood and targeted segments. Yet they remain unable to use this information flexibly enough to generate distinctions between different customers with similar spending profiles.

That isn’t simply a failure to know one’s customer. The inability results from the complexity of harnessing legacy information technology systems across various circles that can’t generate uniform, analysable customer data. Most multi-circle operators of scale in India have grown through a mixture of acquisition and organic expansion, and now systems harmonization has to take greater priority. To date, harmonising systems has proven all the more difficult because of the growth pattern. Now that the major players have achieved circle-level expansion for example, Vodafone started as a metro based operator but is now present across India -, consolidation has to take greater priority.

Address users' needs for services to be micro-local and in their language of comfort

Trying to attract developers to create applications for use in rural India hasn't worked and, given the current revenue-sharing arrangements, is unlikely to work. According to the latest Internet Mobile Association of India report on mobile value-added services, 75% of developers are motivated to write applications for a large market penetration. That explains their preference for creating applications for the iOS and Android platforms, to be used across multiple geographies. Convincing developers to write for multilingual local users, whose usage is unproven and whose handsets have multiple operating systems, is no easy sell.

The good news is that the Indian mass user market may not need 200,000 applications, which the iOS and Android platforms can boast. Perhaps more like five to ten 'hero services' with content that can be micro-localised and translated and that address specific, understood needs. Rather than trying to run developer stimulation programmes, operators can gather more insight about local areas, work out exactly what people want and offer a small number of services on a trial basis in a circle or two. To avoid having to pick the winners, let the best services pick themselves. In India, the operator that searches diligently for hero services may well find a handful of services that do have the potential to win over millions of users.

The vast majority of services available today are in English only, and only a very few can claim to be truly localised. Many

services claim to be more local than they are, which disappoints users and leads to high dropout rates. Within a few years, technology will address the language problem when we get voice-based search in any language. I'll be able to ask my phone in Bengali for the theatre where I can see a certain film tonight, and it will give me the results from Google. If localisation has been harnessed by then, the film will be showing at my local theatre and not 30km away in another part of my city, as is often the case with current offerings.

Some operators in emerging markets around the world are translating local service requirements into revenue streams that have encouraging prospects:

- ***Chandamama*** (Uncle Moon) is a children's magazine that began publication in July 1947, just one month before Indian Independence. The magazine has started its own application with a US\$1 monthly subscription. Currently available in nine languages, the application has reached 3,000 subscribers in the first few months since its release.
- ***Kisan Raja*** (Farmer King) is a GSM-based irrigation controller that sells for

about US\$100 in the southern states of India. It allows farmers to check and control their irrigation pumps from their houses by using either a landline or a mobile phone. Extensive guidance on an interactive voice response system in local languages is helping to extend the reach of Kisan Raja into various regions.

- In Cairo, Egypt, a live traffic-alert service has become very popular. Commuters generate the content daily, using their handsets to type the traffic news as they travel to and from work. The content is in Arabic, and the information is highly localised.
- ***Janala*** is a language-tutoring service that an operator in Bangladesh offers to people interested in learning English on their mobile phones. It's targeted at those who can't afford college or other classroom tutoring, and adoption has been high.

Develop service models fit for a

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varied user base

With such a variety of market segments to serve, India's mobile operators are heroic in achieving what they do in rural areas – through operations that were designed to support growth in the metropolitan areas. Those areas now boast 140%+ levels of penetration, and operators have stretched the operating model too far. It's time to think of better, more detailed ways of acquiring, retaining and serving customers in the rural market.

Just as in the late 1980s and 1990s the airline industry spawned a successful, no-frills segment to cater specifically to the business and leisure travel of lower-income groups⁵, we believe the mobile industry should develop a tiered service model. The industry might create, as an example, 'VillageCo' – a business designed to:

- Deploy networks more cheaply, possibly by using off-grid network solutions
- Differentiate service levels and components to pre- and post-paid users, depending on the user type and spending (similar to airlines' frequent flyer categories), and thereby reduce service redundancies and cut the average cost to serve
- Spend less, specifically on sophisticated customer service and care, possibly by offering more care through retail outlets and orienting staff to both solve problems and up-sell at the same time
- Brand more in local languages and localised themes, for example, by creating a sub-brand of an existing one or even an altogether new one
- Offer handsets that are customised

⁵ Between 1996 and 2005, in the UK-EU while full service air traffic grew from 42m passengers to 47m, 'no frills' traffic grew from 3m to 51m. The proportion of all business travellers who were from lower to middle income groups rose from 36% to 47%. Source: UK CAA, report CAP 770, November 2006.

to the village users' preferences, such as more phones with torch lights and loudspeakers for playing music

- Offer a concentrated set of micro-localised services, and collaborate with other operators to offer common platforms, toolkits and programmes so as to create a larger market opportunity for developers.

When VillageCo is established, the CEO should demand a high-growth, no-frills business that delivers 35%+ margins. The company should breathe new air into reaching the mass base in rural areas, where penetration is still less than 40%.

The mobile operator's own resources and systems will go only so far. More partnerships at the local level are needed to enable better services and further-reaching distribution and sales. New collaboration models are needed as well, and the possibilities are significant.

In regions where existing distribution channels have limited reach, new local channels could go further. In Bangladesh, BRAC, the world's largest non-governmental organisation (by beneficiaries covered), is embracing mobile in providing healthcare. BRAC's workers are having the effect of creating mobile diffusion in places that retail couldn't reach economically. While few national non-governmental providers can eliminate the need to set up rural retail points. Instead, they can gain inroads



into rural markets by identifying a select group of village residents and supporting them through appropriate training.

Hindustan Unilever, the Indian arm of FMCG major Unilever, employed a team of women to sell its products, including soaps and detergents. The initiative was successful, making sales in remote areas without high capital expenditure. In Egypt, one of the leading mobile service providers used direct rural selling as part of an initiative. The company's immediately recognisable corporate branding helped this service provider set up a hub-and-spoke model for distributing cards and recharges.

To overcome electricity shortages, Uninor, a 2008 entrant in India's mobile market, collaborated with The Energy and Resources Institute in training women to run solar lanterns and charging stations. The off-grid solution encouraged people to use mobile services in areas with either no or an interrupted power supply. To date, more than 200,000 people have received services in 650 villages in 16 of India's states.

Over the next few years we expect to see the refinement of the telecoms operating model at the rural level. The rural model will truly expand the reach of the mobile revolution into remote, and often low-income, segments of the population – and will dispel current notions by doing so profitably.

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