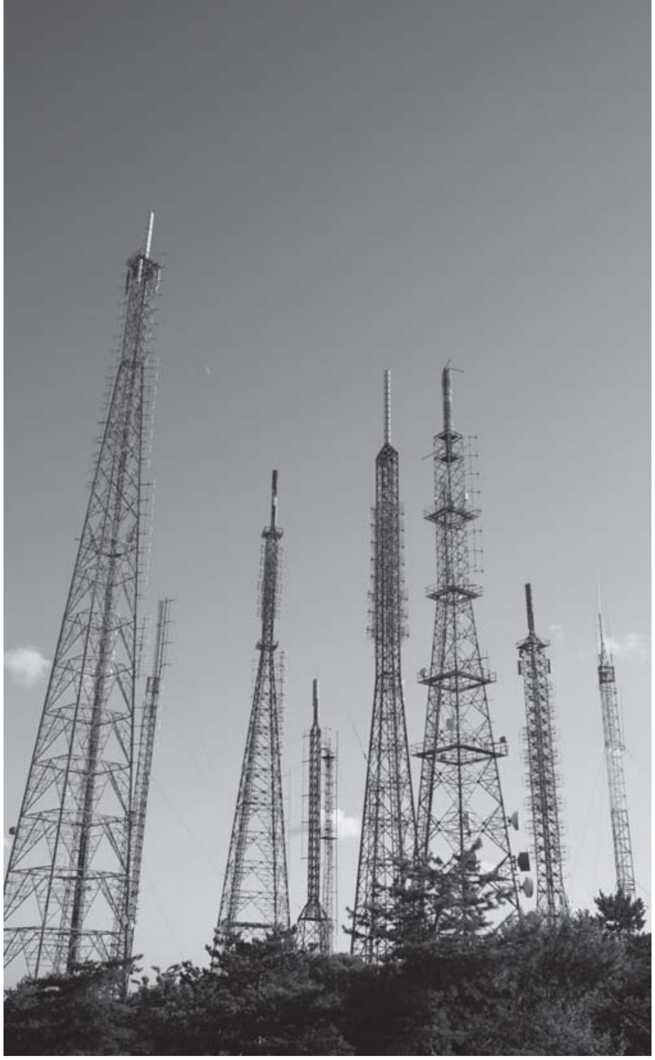

Global wireless companies can reduce costs if they follow three strategies from India's wireless playbook.

How global telcos can profit from India's wireless experience

By Bart Vogel and Sandeep Barasia

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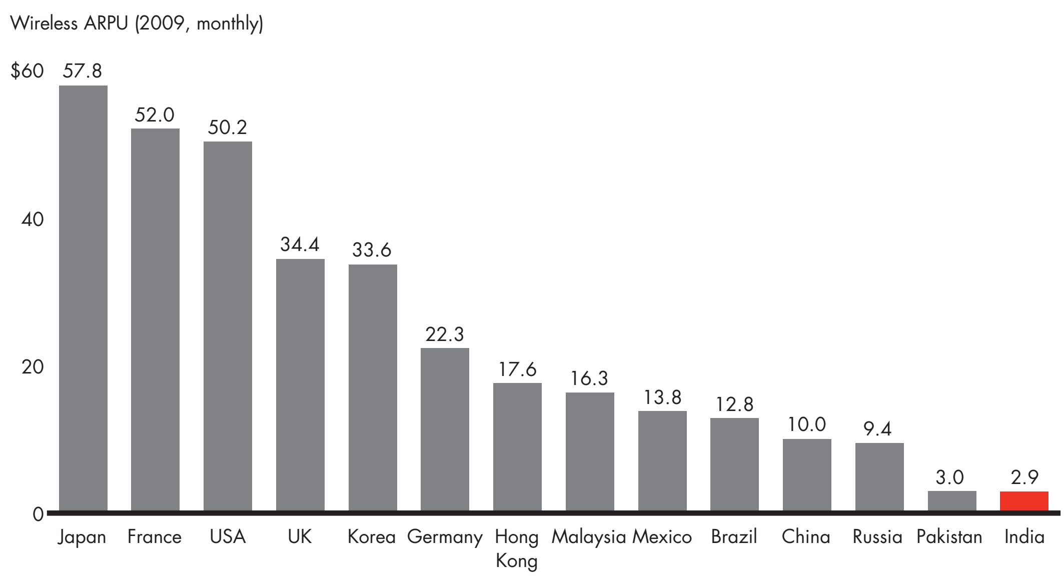
As many wireless telecommunications operators around the world reach saturation points in consumer penetration, they fear hitting a growth wall. These companies face mounting competition, declining average revenue per user (ARPU) and steeply rising costs. All these factors put tremendous pressure on their margins. Increasingly, wireless companies must hunt for ways to squeeze more from their business model—but where and how?

To find answers they might consider dialing the country code for India. Indian telcos continue to thrive despite serving users at bare minimum rates. Their ARPU is a fraction of comparable telcos in developed countries (see Figure 1). For example, in 2009, Indian wireless ARPU averaged just $2.90 a month. Compare that with about $50 a month in the US, a little over $22 a month in Germany and nearly $58 in Japan. Even in developing countries like Brazil and Mexico, ARPU averages close to $13 and $14 a month, respectively.

Yet, Indian wireless companies excel in eking substantial returns from thin soil. Leading Indian players like Reliance Communications and Bharti Airtel (Airtel) enjoy EBITDA (earnings before interest, taxes, depreciation and amortization) margins of more than 30 percent. These compare well with global competitors such as AT&T, Verizon, Deutsche Telekom, Vodafone Group and Telefónica, despite having ARPUs of one-tenth or less of these giants (see Figure 2). Only some of this wide variance can be explained by scale and the relatively lower wages of the Indian labor force. Much more hinges on a unique business model.

Figure 1: Indian wireless players have less than one-tenth the ARPU of telecom companies in developed countries



Note: APRU mentioned is overall APRU (divided by 12 for monthly ARPU)
Source: Ovum (mobile regional and country forecast pack: 2010–15, May 2010)

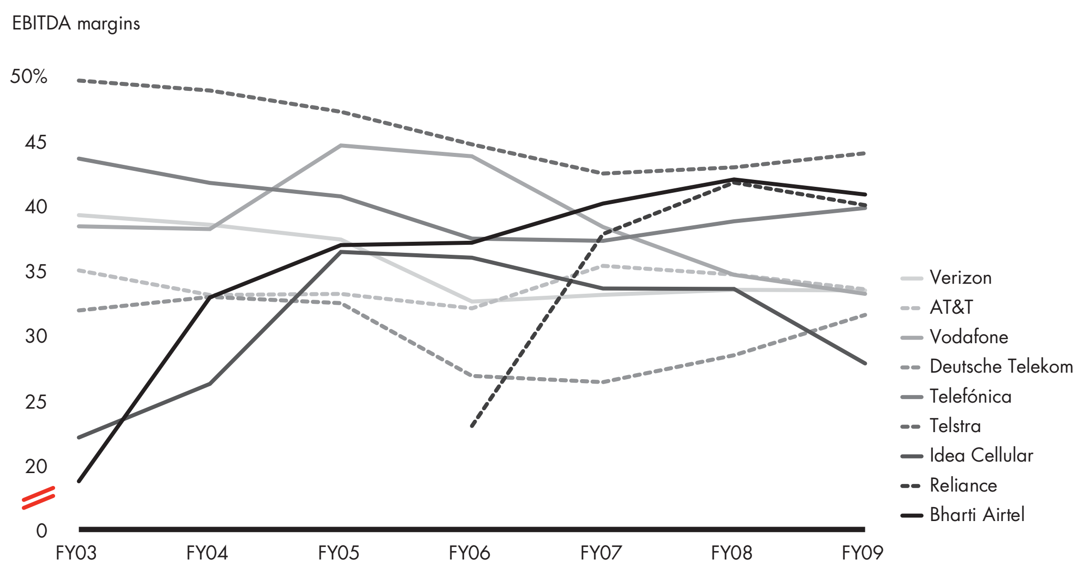
How do India's young telcos generate superior returns *and* make calls so inexpensive for consumers? The true secret of their success lies in a rock-bottom cost model that aims to achieve the most optimal economics at three levels: First, Indian providers have learned how to "manufacture" very low-cost minutes. Second, they continually strive for high levels of network utilization. All this amounts to a telecom breakthrough in achieving high minutes of use (MOU) rates while radically de-layering traditional telco operations. Third, they have a customer acquisition and distribution model that ignores the traditional norms created in more mature markets. Let's consider these factors in detail.

Manufacturing very low-cost minutes

India's mammoth population of 1.17 billion people creates a unique market, but it can provide universal lessons. Its telcos' huge scale of mobile operations and integrated networks help them achieve their high MOU totals. India has one of the largest mobile subscriber bases in the world. In 2010, the country had 752 million mobile subscribers, second only to China's 842 million—and more than double the 305 million subscribers in the US, whose total population is around 310 million.

India also has some of the highest minutes of use per connection globally (see Figure 3): nearly 4,000 MOU per year per connection compared with nearly 2,500 in China and just over 1,600 in Japan. India's total annual minutes of usage are also very high at 3,000 billion versus 1,450 billion MOUs for the US and 150 billion MOUs for Germany. One key reason for high mobile usage: the low penetration and lack of sophistication of fixed-line services in India when mobile phones first arrived. Consumers shifted their pent-up demand for communications to mobile phones. Culturally, Indian consumers enjoy communicating frequently, and at length, whether through conversations or texting. Lower prices further encouraged

Figure 2: Leading Indian wireless companies are as profitable as their European and US peers



Note: FY05 for Indian telecom players implies year ending March 2005
Source: CapIQ company reports; analyst reports

greater usage: as prices plummeted from an average of 16 cents a minute in 1998 to just 0.70 cents a minute 10 years later, more Indians consumed more mobile minutes.

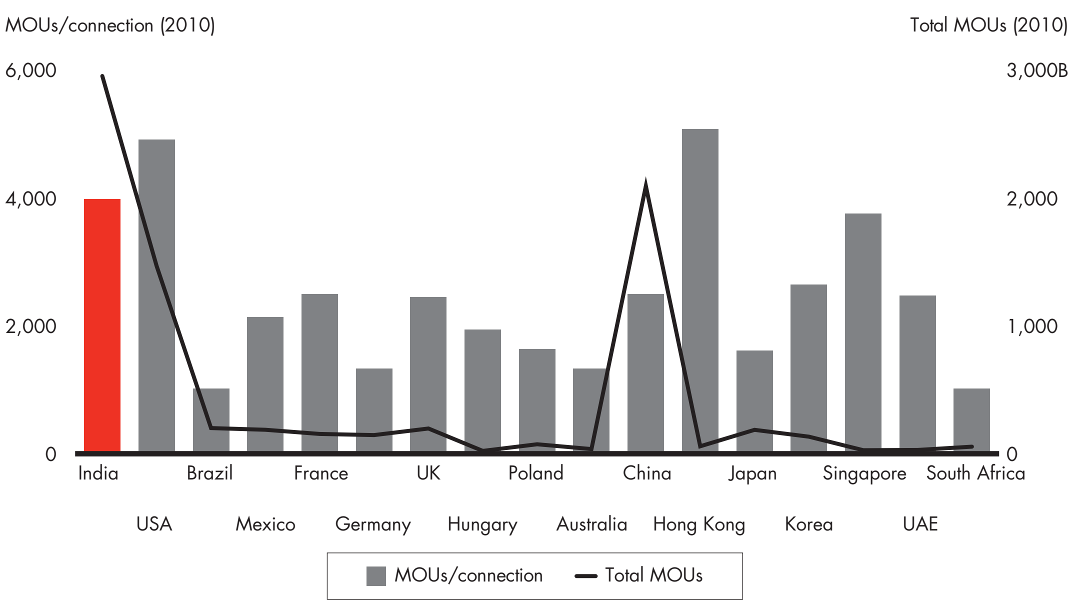
To enable this volume, Indian telecommunications companies maintain large, integrated networks. For instance, the top six wireless companies in India, measured by subscriber base, all operate across the breadth of the country, handling more than 50 million subscribers each.

Indian telcos do this very inexpensively by two means: sharing passive infrastructure such as the tower, shelter or generators and the wide use of outsourcing. That outsourcing reduces what in the rest of the world are the high fixed costs of such backbone items as networks, information technology (IT) maintenance and services, data transmission and certain areas of general and administrative expenses. That approach of sharing passive infrastructure helps amortize costs among a larger set of players. The savings then translate into lower billing rates that still deliver strong profits.

For instance, sharing or leasing towers can save as much as 25 percent of tower costs as tenancy increases from one operator to more. These savings will increase further when the telcos begin sharing active infrastructure like antennae, feeder cables, nodes and transmission systems, too. While active infrastructure sharing is still at a nascent stage—most companies are still testing possibilities through intra-circle roaming, whereby calls from one operator use the network of another operator—almost every telco in India is aggressively pursuing passive sharing.

Many have teamed to spin off their passive assets into separate entities. Tata Teleservices sold its towers to Viom Networks (the erstwhile Quippo WTTIL). Bharti Infratel (Airtel), Vodafone Essar and Aditya Birla Telecom Ltd. (Idea) came together to set up a joint venture, Indus Towers, to handle their passive assets.

Figure 3: India ranks high in minutes of use (MOU) compared with other global markets



Source: Ovum (Mobile Connections Forecast Pack, May 2010; mobile regional and country forecast pack: 2010–15, May 2010)

And Reliance Infratel and GTL Infrastructure came close to striking an $11 billion deal to create the world's largest independent telecom infrastructure company. The benefit: such initiatives not only free up capital for investments, they help reduce interest costs.

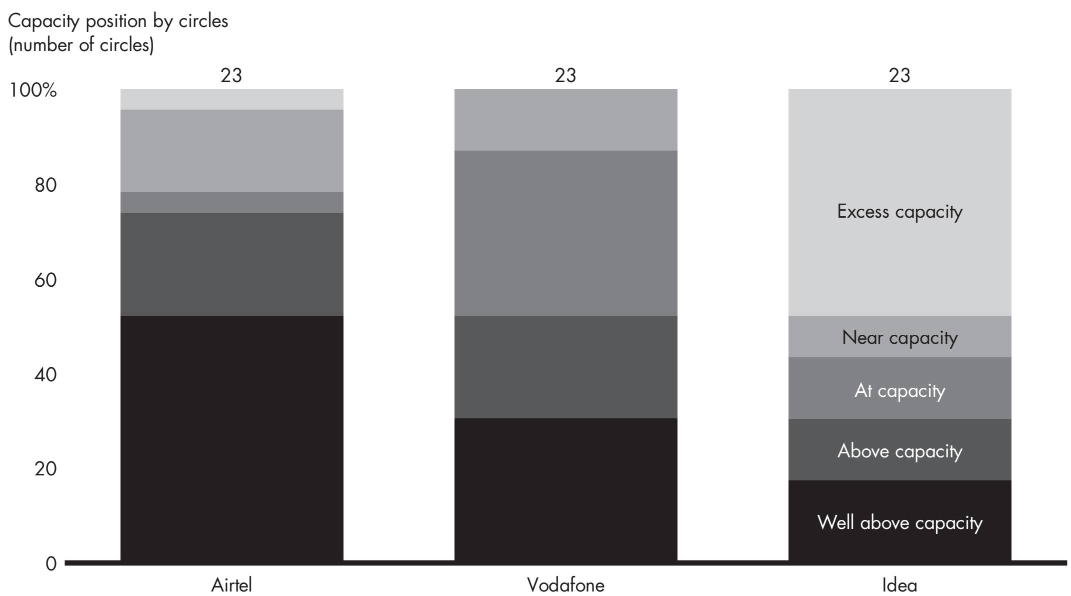
Beyond sharing passive infrastructure, Indian telcos improve operating efficiencies by extensively outsourcing network development, operations and maintenance. Airtel works with more than half a dozen partners—from IBM to Ericsson—for functions such as network planning, IT and call center operations. Reliance's joint venture partner, Alcatel-Lucent, manages the company's CDMA and GSM mobile phone networks. Vodafone partners with IBM and Nokia on back-office IT operations and network management. Indian telcos may have pioneered such pervasive outsourcing, but many global players are beginning to adopt this tactic, too. Recently Maxis, a leading player in Malaysia, announced a new network outsourcing deal with China's Huawei.

Thanks, too, to outsourcing, new products and services come to market at minimal costs—and roll out faster. Tata Teleservices, for example, recently signed a deal with Nokia Siemens Networks to support the launch of its network in India. In a deal worth $700 million, Airtel similarly partnered with Nokia Siemens Networks to roll out its networks in record time, as well as to manage its radio and core network and services in eight Indian telecom circles.

Pushing high levels of utilization

The success of Indian telcos hinges on matching these very low costs with very high utilization of networks (see Figure 4). The principle: serve more with less. India's companies typically operate their networks at full capacity levels not seen in most other telcos. The goal is to treat most expenses as variable costs and track them against a minute of use. Despite having limited spectrum compared with many of their global peers, Indian telcos serve much higher levels of subscribers and MOU. Indeed,

Figure 4: Indian telcos achieve very high levels of utilization, often operating well above capacity



Source: TRAI; COAI; TEC; analyst reports some of the nation's telcos are running 50 percent to 75 percent of their base transceiver station (BTS) facilities at above, or well above, capacity. While this approach can be ultra-efficient, it can also significantly affect call quality, especially for consumers at the top end of the market who demand superior service.

To serve their burgeoning population of customers, India's telcos work hard to expand capacity in high population centers through the building of infrastructure, a process called cell densification. Today, Airtel operates in 23 geographic circles that cover most of India. Of these, more than 75 percent are above capacity. Vodafone also operates in 23 circles. More than 50 percent are above capacity and another 35 percent are at capacity. Lower-frequency GSM spectrum will further allow some leading companies to lower costs by renting out excess capacity.

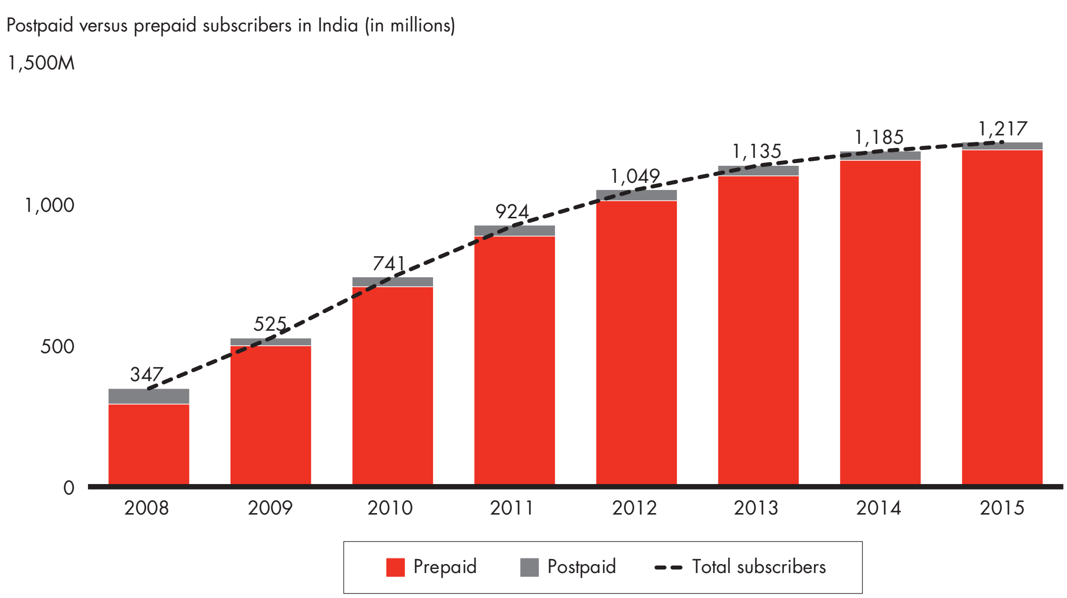
However, this cell densification is leading to a noticeable decline in call quality. Consumers are now more discerning about issues like call drops and network quality. Until recently, the lack of mobile number portability protected carriers from mass defections of customers to competitors offering better service—but that will change now. Mobile number portability rolled out across India in early 2011.

Building a low-cost customer acquisition and distribution model

Indian telcos bring thriftiness to their sales, marketing and customer service strategies as well. First, they focus predominantly on serving prepaid customers (see Figure 5). The prepaid business model creates substantial cost benefits. They include the creation of lower billing and collection expenses, and the critical ability to sell more phones to more low-income consumers. The last is essential to expanding scale.

To get phones into as many hands as possible at the lowest cost, telcos rely heavily on India's many mom-and-pop shops, which offer prepaid recharge coupons for several operators. Many

Figure 5: Prepaid subscribers dominate India's mobile market



Source: Ovum (Mobile Connections Forecast Pack, May 2010; mobile regional and country forecast pack: 2010–15, May 2010) of these outlets also sell SIM cards directly to customers and hence act as distributors for the operators. That approach stresses high volumes and low commissions to sales partners. For instance, Indian telcos typically pay 4 percent to 5 percent commissions to partners on prepaid recharges. Of that, a minuscule 1 percent to 1.5 percent goes to the distributor and the remaining 2.5 percent to 3.5 percent is paid to the retail outlet. To drive costs down even further, Indian telcos also promote self-service electronic recharging, rather than paper-based methods, for prepaid phones. Today, electronic recharges account for more than 80 percent of all sales.

The few telco-owned or franchised outlets in existence are maintained mostly for servicing. Vodafone Essar offers postpaid, prepaid, roaming and value-added services through 1.2 million retail outlets. But only a fraction of these, 1,150, are company owned and 6,500 consist of franchises and exclusive dealer arrangements. Indian telcos also team with unconventional partners. For example, Airtel entered into an alliance with IndianOil to gain access to 23,000 retail outlets at gas stations and cooking gas distribution outlets. Other major Indian telcos, such as Reliance Communications, also maintain a low ratio of owned outlets.

Another Indian telco practice is to keep subscriber acquisition costs at the barest possible minimum. Thus, most telcos have little stake in the new handset market. That allows them not only to maintain a very minimal device inventory, but it frees them from making large investments in the handset supply chain. Instead, a thriving open handset market has developed in India.

That is in direct contrast to those in developed markets, where wireless companies often bear the full burden of handset subsidies. These up-front, fixed expenses can comprise as much as one-third of subscriber acquisition costs. In Western Europe, for example, handset subsidies can total as much as 12 percent to 14 percent of sales, on average. For GSM wireless companies in India, handset subsidies are zero. For CDMA service providers, they amount to less than 3 percent of revenue.

Finally, to pump up user demand, India's telcos aggressively promote on-net and off-peak calling, meaning they provide lower prices for calls between customers within company networks and during evening and overnight hours. Not only do these policies redistribute and increase usage, they bring down interconnect and termination fees between telcos. Intra-circle roaming agreements also maximize network usage. How India's telcos manage these call reallocation efforts reveals some marketing ingenuity.

For instance, Vodafone offers 1,000 local minutes for a minimal cost to customers between the hours of 10 PM and 8 AM. MTS offers 150 on-net calls. Similarly, Airtel bills in-network calls at bargain rates compared with out-of-network calls. And Reliance lets customers make unlimited local and long-distance calls if the consumer takes a prepaid CDMA connection for Rs 599, or about $13.

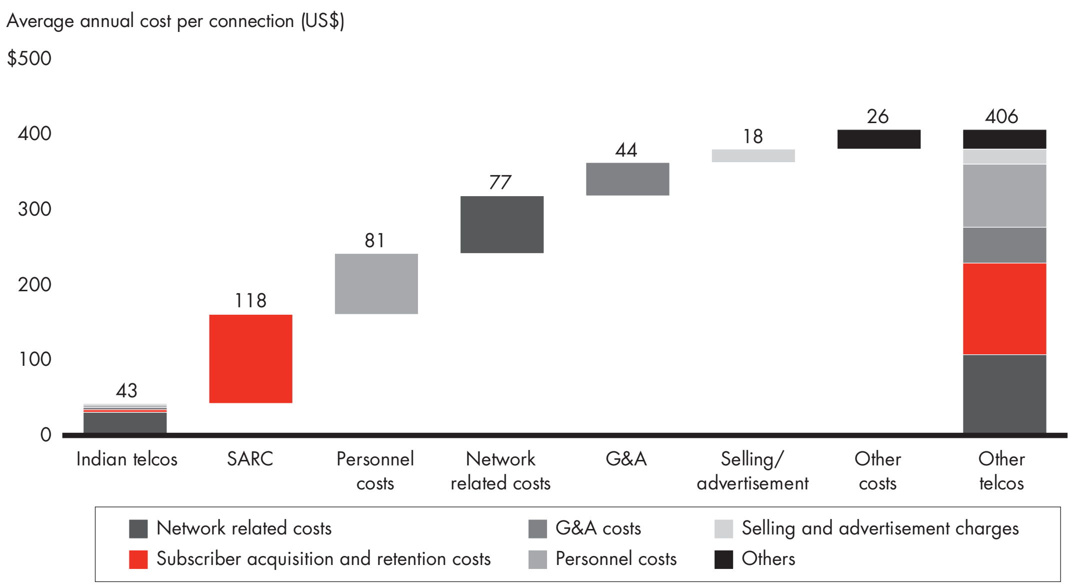
What can a global company learn from Indian wireless companies?

The business practices of Indian telcos are not necessarily directly translatable to companies elsewhere. But the principle of rigorously identifying and justifying costs is. The stark difference between the average annual cost per connection of Indian wireless companies ($43) and that of global peers ($406) is mostly explained by higher subscriber acquisition and retention costs, network-related costs and personnel costs (see Figure 6). Put another way, a telco must go deep enough within its operating model to understand what increases cost in its business model—and then figure out how to reduce them. As part of such an analysis, a company also needs to understand which costs must be controlled—and delivered in-house—as well as determine those costs that are variable with customers or with usage.

There are a lot of innovative ways to address this task and finding the right ones may take some trial and error. But Indian telcos' cost management expertise already provides most wireless companies with at least five focus areas to start controlling costs. Telcos everywhere can explore ways to:

- **Maximize the opportunity to share passive infrastructure in the short term and start looking for opportunities to share active infrastructure over time.** As the India experience shows, sharing infrastructure can lead to huge savings on capital and operating expenses, and also speed rollouts of new products and features to customers. In contrast, in many global markets, wireless companies pursued a more traditional model of asset ownership, and competitive pressures acted as cultural "deterrents" to sharing infrastructure assets.
- **Outsource network operations and maintenance services.** Obviously, providers must forge network outsourcing and infrastructure-sharing agreements with care. But the Indian experience shows that telcos don't have to own everything. Indeed, outsourcing can take advantage of a specialized partner's unique expertise and lower costs as that partner achieves greater economies of scale. That also allows telcos to focus on what will truly differentiate their service.
- **Outsource or offshore select customer care capabilities to global providers.** A wireless company can tap into the already developed world-class expertise in efficient, scale-delivery centers used by many of the world's leading telcos.

Figure 6: Global players stack up higher costs—especially for subscriber acquisition and retention



Note: Other telcos' data is average of Vodafone (UK and Germany), Telstra, AT&T and Verizon
Source: Analyst reports; Bain analysis

- **Lower customer acquisition costs.** Telcos can lower costs through sales strategies that target prepaid subscribers and by introducing self-service methods. The more customers can do for themselves, the less it costs a telco in staff services.

- **Explore lower-cost distribution channels.** Indian telcos' practices demonstrate that low-cost channels such as convenience stores can be just as good as company-owned outlets for the sales of low-cost, prepaid products. As part of this winnowing of fixed costs, telcos should also zero in on ways to simplify call plans and standardize on fewer handsets to reduce inventory costs.

Controlling costs is a critical element of business strategy. But the essential strategic task of any telco is to understand deeply the core of what truly differentiates its products and services—and then create ways to strengthen that offering. It takes a different infrastructure entirely to support a sophisticated smartphone or tablet than it does to sell prepaid devices. Most telcos are somewhere along a curve between the need for high-end support and self-service. Calibrating that point carefully, in order best to serve the changing needs of its customers, will remain an ongoing task for telcos on the path of greater profitability.

The evolving landscape

The success of Indian telcos will inevitably confront them with growth challenges. Several looming trends make this inevitable: today's cost-conscious Indian telcos are being forced to make significant payments for 3G licenses, and they will need to develop resources for the deployment of the technology's inherent value-added features. What's more, with mobile number portability now available in the market Indian companies will need to invest more in quality. In order to compete, they will find that differentiation on customer experience will increasingly become more important. Just as inexorably, the subscriber growth rate will begin to slow down as market saturation increases. Already, the massive growth of dual SIM phones and multiple SIM card ownership suggests that discrete subscriber growth is much lower than SIM card growth, and that subscriber ARPU may get fragmented.

For companies in the Indian telco market, these developments will represent wholly new opportunities. We can expect that, as leaders in cost-cutting innovations to serve a vast population of very modest means, they will continue what they do best: develop new methods for generating ever greater efficiencies and effectiveness, all on a tight budget. But in the interim, global players would do well to read up on the early chapters of India's wireless playbook. After all, any national telecom industry that can add more than 220 million phone connections, at such low ARPUs and with such solid returns, in one year (2010), must have made many right calls.

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