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Can India lead the mobile-Internet revolution?

The country could become the world's first truly mobile digital society. But grasping the opportunity requires unprecedented cooperation between the private and public sectors.

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Almost 1,500 years ago, Indian mathematicians, including Aryabhata, Brahmagupta, and Pingala, transformed mathematics by conceiving the rules of the binary numeral system. While those rules today lie at the heart of the code powering the Internet, India has relatively few Internet users: just 7 percent of its population is connected to the Web, compared with 32 percent in China and 77 percent in the United States.

Yet India has an opportunity to lead the world once again by becoming the first truly mobile digital society. All the elements are in place: the cost of network access and handsets is going down, wireless networks are going up, and Indian consumers already display an insatiable appetite for digital services. In addition, bypassing the personal computer—moving straight to widespread mobile access—simply makes sense. It would sidestep a host of hurdles associated with delivering affordable Internet services to a population that is geographically dispersed and relatively poor, in a country where infrastructure development can be problematic.

Can India actually transform itself from an Internet laggard into a world leader? The trail the country would blaze could serve as a model for other developing markets. But much depends on whether India can rediscover its revolutionary spirit and garner unprecedented cooperation and commitment from both the private and public sectors.

The Indian digital consumer

India's base of 81 million Internet users is the world's fourth largest.[1] Yet this figure is a function of sheer population, not deep adoption: just 20 percent of India's urban citizens are connected to the Internet, compared with 60 percent in China. And while China has 233 million mobile-Internet users, or 18 percent of its total population, India has just 17 million, or less than 1 percent.

Even though typical Indian consumers have no Internet access, they have a remarkable appetite for digital content. In fact, they consume an average of 4.5 hours of it daily across offline channels such as television, DVDs, and CDs. And while they use mobile phones predominantly for voice services, a whole segment of business has grown around retailers essentially operating as physical iTunes stores, charging fees to load music and other content onto mobile devices. The net result is that while India is a relatively poor country, more than 70 percent of its urban consumers already spend about $1 a month on content and services through offline, unorganized retail channels—a market estimated to be worth more than $4 billion annually.

The mobile Internet could deliver the personalized entertainment that Indian consumers crave. If India's latent demand is unleashed, McKinsey research forecasts that the total

[1]China ranks first, with 420 million users, followed by the United States, with 240 million, and Japan, with 99 million. Source: Internet World Stats, 2010.

number of Internet users will increase more than fivefold, to 450 million, by 2015 (exhibit). Total digital-content consumption will double, to as much as $9.5 billion. Including access charges, revenues from total digital consumption could rise fourfold, to $20 billion—twice the expected growth rate of China.

Development roadblocks

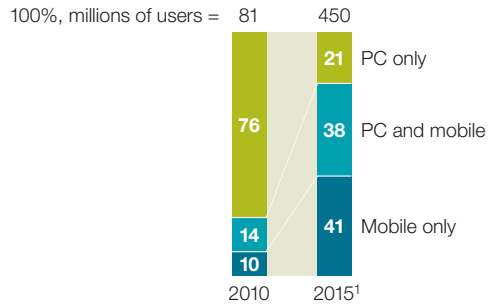
Realizing India's potential won't be easy. The country faces well-known challenges: the cost and ease of access to Internet services, infrastructure development, and the availability of relevant and local-language content. However, these challenges are less worrisome than commonly thought—particularly since the leap to mobile connectivity would allow India to sidestep some of them.

There's enough development in devices, networks, operating systems, and operator strategies to suggest that India is on track to resolving the challenge of affordable, easy Internet access. The average price of smart phones that deliver much richer content, including video, is falling rapidly—already nearing $125, significantly less than the cost of PCs. Mobile devices also are inherently easier to operate than PCs, and the ability to access Web sites with a single touch or a voice command (critical given India's high illiteracy rate) is becoming a reality. Finally, Indian operators are starting to offer innovative rate plans for mobile data use, addressing criticisms of the prices of data plans and their perceived opaqueness. Cheaper, easier access for all is on the cards.

Exhibit

India's Internet users will increase fivefold by 2015, and more than three-quarters of them will choose mobile access.

Share of Internet use by channel in India, %



	2010	2015[1]
Penetration, % of total population	7	35

[1] Projected.

Source: 2010 McKinsey digital consumer survey; McKinsey analysis

It's no secret that infrastructure development in India is a real challenge. McKinsey research on the country's 11th five-year economic plan[2] suggests that while the government has spent what it intended to, infrastructure (such as electricity connections and road building) is significantly behind schedule. More troubling is the reason: beyond the frequently mentioned issue of land ownership, delays in building "hard" infrastructure often stem from a lack of "soft" infrastructure, such as educated, skilled workers with project-management capabilities. These delays should encourage the leap to mobile-Internet access, perhaps delivered by the private sector. Mobile operators are aggressively rolling out networks across the country, including an impending 3G network, following recent auctions in which companies spent almost $30 billion acquiring telecommunications spectrum.

The government also is making large investments to overcome other hurdles. In particular, it is sponsoring efforts to give citizens unique identification numbers that will, for instance, allow identities to be authenticated with mobile devices. That will facilitate wireless banking and other services, such as e-health care. In addition, the ability to identify all citizens means that subsidies and incentives can be delivered to them efficiently. The National Rural Employment Guarantee Authority, for example, is supposed to distribute $8.5 billion to citizens in 2011. In the past, significant portions of such funds have failed to reach the recipients. The digital opportunity may substantially eliminate this problem, and citizens spurred by the prospect of finally getting what's due to them should make the leap to mobile-Internet services such as e-commerce. Additionally, our research on e-payments has uncovered significant opportunities to drive down costs.

Embracing the digital opportunity

The most formidable hurdle to the realization of India's digital promise is finding a sustainable way to deliver attractive returns for content companies at affordable prices for consumers. India differs from other Asian mobile-Internet leaders, such as Japan and even China, where access charges generate enough revenue for operators to finance the ongoing creation of value-added services. India's telecom industry structure and poorer population are putting pressure on access revenue, and it's unclear whether telecommunications companies will be able to extract sufficient profits from their mobile value-added services and entertainment or from their nascent local-advertising-driven networks to warrant continued large investments. To overcome this issue, private and public companies, as well as India's government, must address two priorities.

Mobile content and services

The first step toward generating more profits from content and services is the creation of offerings that are compelling and easy to access and use, much like iPhone applications.

[2] India's Planning Commission develops, executes, and monitors five-year plans for the country's economic development. The 11th such plan covers the period from 2007 to 2012.

Related thinking

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That will require companies to raise their game in editing, visual merchandising, and marketing. More local-language content also is required, and it should be presented in new ways: voice and single-touch mobile-Internet access are essential, particularly to overcome illiteracy and a lack of familiarity with the Internet.

Making money from content

Financial institutions and regulators must promote the next phase of payment systems, a critical enabler that will affect the pace of development of revenue streams beyond consumer access and services. Selling regional and local advertising on mobile devices is essential: it's the fastest-growing form of advertising in India, and there's a desperate need for local content, given the country's 23 official languages. Meanwhile, content providers should think about new ways of making money from the Internet—for example, by balancing free and priced material to reflect the value of content delivered in real time and in specific contexts, such as shopping coupons received by mobile devices as consumers pass certain stores.

All participants—public and private—have a role in unleashing the digital revolution's true potential. Governments can promote access, undertake thoughtful regulation and oversight, and deliver public services such as information, health care, subsidies, and incentives. Banks and financial-services companies can enhance their online presence to build real-time, personalized relationships with customers. Insurance companies can address their high-cost, multilayered business systems and examine opportunities—for example, using the Internet to deliver product information and training more effectively. Advertising agencies can adopt new approaches to developing concepts, pricing, and measurements of effectiveness. And marketers can better address the way consumers now make purchasing decisions, finding new analytical approaches to the allocation of spending and the management of "buzz" and word of mouth.

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Binary mathematics lies behind the technology that underpins the Internet. After more than 1,500 years, India could again lead the world in a technological revolution. The consumer demand exists. The opportunity is real. Is India up to the challenge?

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