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Masterclass

India: MNC strategies for growth and innovation

Brian Leavy

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If we don’t figure out how to win in India, we could end up losing in a lot of other geographies around the world. Conversely, if we can win in India, we can win everywhere (Stephen Elop, CEO of Nokia)[1].

To the skeptics’ question, ‘Where are the Indian Googles, iPods, and Viagras?’ our retort is that it is the wrong question. Much of Indian innovation is invisible (Nirmalya Kumar and Phanish Puranam)[2].

Developing economies are different. They are not just a little bit different; they are night-and-day different (Vijay Govindarajan and Chris Trimble)[3].

It is now widely recognized that all companies with global ambitions need to pay close attention to China and India. Yet, corporate leaders still have much to learn about how these two economic powerhouses are likely to develop in the coming decades and what strategy and innovation plays are most likely to be successful.

This “Masterclass” examines strategy and innovation in emerging markets, with the primary focus on India, the world’s largest democracy[4]. Not that China is less important, however, when it comes to learning to succeed in emerging markets, but India may be the more representative case. As Ravi Venkatesan, emerging market veteran, argues, the military acronym VUCA (volatility, uncertainty, complexity, ambiguity) “describes well the business environment in India,” and he believes most other emerging markets, “especially in Africa, Latin America, and Asia,” tend to “resemble chaotic India far more than they do centrally directed and efficient China.” While most of today’s multinational CEOs see pursuing market leadership in China as a “no-brainer,” rising, or failing to rise, to the challenge of India, with at least as much urgency and commitment, may turn out to be their most “defining” strategic legacy.

Three important recent books from Harvard Business Review Press all have something valuable to offer in addressing this challenge:

- In Conquering the Chaos (2013), Ravi Venkatesan, former Chairman of Cummins India and Microsoft India, offers unique insight into the challenging Indian business context and identifies the leadership blueprint for creating most value in this and similar emerging “VUCCA” markets[5].

- India also represents vast and growing new pools of talent on the supply side that many Western strategists have looked to leverage primarily through business process outsourcing. However, in India Inside (2012), London Business School professors Nirmalya Kumar and Phanish Puranam, set out to reveal a more significant opportunity and challenge – India’s rapid emergence as a global hub of innovation.
In *Reverse Innovation* (2012), two well-known innovation gurus at Dartmouth College’s Tuck Business School, Professor Vijay Govindarajan and Chris Trimble, present an alternative strategy to “glocalization” as a more promising way to drive global growth, using emerging markets like India as the innovation platform.

**Winning in India and the implications for global leadership**

China and India are well on course to be economic powerhouses of the twenty-first century. However, so far only 25 to 30 of the more than 1,300 major multinationals currently operating in India have made it into the “high-growth trajectory, market leadership” category within that country. Why is this? What does it take to win in India? Why should MNCs risk India’s perilous markets? These are questions that Ravi Venkatesan sets out to examine in *Conquering the Chaos*.

Venkatesan’s inquiry is firmly rooted in his direct experience. From 1996 to 2004, he was CEO of Cummins India and from 2004 to 2011, CEO of Microsoft India. During these two tenures, he helped to build $1B-plus businesses in India for each of these multinationals. What intrigued him, however, was the contrast in their ambitions and approach. India is a growth engine for Cummins, contributing more than 10 percent of the company’s global revenues, and even more to its profits and future growth, and the country now represents a global center of excellence, with strong local market leadership in diesel engines and generating sets. In contrast, India contributes just around 2 percent of Microsoft’s overall revenues. So India “matters deeply to Cummins but not as much to Microsoft”[6].

Venkatesan found this pattern repeated across the multinational spectrum. Some MNCs, like Cummins, have clearly come to view India as a strategic driver of future corporate growth and have committed themselves accordingly. Among the most cases striking are JCB, UK-based producer of earth-moving equipment, Volvo in commercial vehicles, McDonald’s in fast-food restaurants, Walmart in mass-retailing, Vodafone in telecoms, and General Electric in a range of industry sectors. The majority of multinationals in India, however, tend to be less committed, like Microsoft[7].

This matters because industries in India tend to exhibit very high levels of concentration, with the top three competitors often sharing more than 90 percent of the market, and first-mover advantage is particularly significant in many sectors, given the country’s current stage of development. This is why late movers like Caterpillar and Komatsu are finding it so difficult to gain traction in a marketplace already dominated by JCB (formerly known as J.C. Bamford Excavators Ltd.) which understands and embraces India like an insider. Perhaps the most striking example of the most committed is McDonald’s, which has so localized its business model for India that it has recently opened its first all-vegetarian outlet in the land where the cow is still sacred, and beef remains a minuscule element of the total national diet.

So why are most still so cautious? Cracking the code for India is not easy. As Venkatesan puts it, “doing business in most emerging markets is tough” – that is “why they are called emerging markets.” India still poses many challenges, most notably “corrupt and incompetent government at all levels of the nation.” In addition, the “ineptness of the government in driving essential policy reforms” is “legendary,” acquiring land and obtaining environmental clearance “can take years,” critical infrastructure projects tend to be held up indefinitely, and corporate tax policy can be notoriously “capricious.” Yet, such challenges are common to many emerging economies[8].

On the other hand, India offers many significant attractions for multinationals. The most obvious is demographic. As Venkatesan points out, “no country except China has the same medium- and long-term potential as India” and “by 2030, the country will have the largest middle-class population and share of middle-class consumption in the world.” A related attraction is the country’s large talent pool, which makes it “one of the most important places in the world to do knowledge work”[9]. There are other advantages[10], but perhaps the most important is the “irreversible awakening of the aspirations of a billion people.” In short,
India is a “bottom up” story, where, as author Gurucharan Das so colorfully puts it, the economy “grows at night” when “the government sleeps”.[11].

So how should “real success” in India look to those that want to be strategic about it? Venkatesan believes that firms should be aiming to fulfill at least the following three conditions:

1. Market leadership – among the top three and gaining share.
2. India is delivering 10 to 20 percent of the MNC’s new growth in global revenues and profits (even if China is expected to deliver more).
3. The company is using India as a hub to win in other emerging markets.[12]

While this may seem like a high bar, the more ambitious multinationals in the Indian market have already vaulted over it. While they cover a wide range of sectors from food to telecoms, banking to industrial equipment, their approaches to India have several features in common. The “winning formula” typically involves:

- Participating in multiple tiers of the market pyramid and developing “products tailored to India that span different price points.”
- Creating “a localized business model, including a supply chain” that can generate profit “even at aggressive price points” – like the McDonald’s 25-rupee hamburger.
- Taking a “long term view” of the investment challenge and focusing primarily on the “potential” in the market rather than the problems.
- Managing India as “a geographic profit center, empowering the local organization to grow the business,” with the freedom to make all but the most significant investments locally.

As Conquering the Chaos points out, this formula is already well recognized[13]. So why are not more companies following it? One of the biggest obstacles is what the author has come to call the “midway trap” (see Conquering the Chaos, Figure 2-1).

**Escaping the midway trap**

Most multinationals entering the Indian market tend to target first the tier that Steve Ballmer of Microsoft liked to call the “Australia at the top of the market,” India’s 20 million “richest” consumers. Here, companies can typically generate significant year-on-year growth initially with what Venkatesan calls a “low commitment, low risk” approach involving little change to corporate strategy and organization. However, not too far into its Indian adventure, the company starts to “sink into the midway trap,” and will risk consigning itself indefinitely to the “1 percent club” unless it can muster up the courage, commitment and imagination to expand its footprint ambitiously into the lower market tiers, he believes[14]. “Even well-managed companies like Caterpillar, Volvo, Microsoft, Procter & Gamble, Nestle, Dell and GE have experienced some version of this trap in India.”

For Venkatesan, the “mindset change” required for breaking out of this trap has a number of key elements. By far the most important is the commitment of the corporate CEO to India being pivotal to global leadership. Such CEOs characteristically make the time and effort to develop a “visceral” feel for India’s potential and challenges rather than relying on learning about them second-hand[15]. This commitment is essential because the other main elements needed to escape the midway trap require significant departures from the conventional transnational management model, developments that are unlikely to happen without fully involved corporate leadership.

The most important of these is the willingness to set up India as a major business in its own right, with its own operating model and all of the key functions reporting to an India general manager. A good example is GE. In 2009, CEO Jeff Immelt saw the potential to quadruple revenues in India by 2015, but also recognized the need for a step-change in approach. So he consolidated all of GE’s business activities in India under John Flannery, a senior GE
veteran with extensive general management experience. As Immelt explained to *Forbes India*: “For GE, winning in India requires a new business model, one in which we are ‘local’ in every sense of the word”.[16].

In Venkatesan’s view, the key attributes that group CEOs should look out for in choosing their general managers for India are courage, entrepreneurship and higher ambition. “Courage,” he sees as the “ability to think through complex situations” and “do what is right rather than what is expedient.” This approach requires the willingness to “take calculated risks,” especially in situations where time lost conferring with HQ could be strategically costly. Also vital is a “keen sense for market opportunities” and the ability to “entrepreneurially build profitable businesses by leveraging the company’s global assets.”

The kind of “higher ambition” that Venketesan has in mind is an “off-the-scale” passion to create something in India that is “much bigger than oneself”[17]. This is central to being able to recruit, retain and inspire India’s young talent, as well as to generate the intensity of focus needed to build a business in India that aims to make a game-changing, market leadership impact on India’s living standards and become globally relevant.

**India as a global innovation hub: innovating for India and the world**

The other two mindset changes needed to be successful in India are the willingness to shift the HQ/Indian-business-unit relationship from one of global control with local adaptability towards empowerment with accountability, giving the country general manager the freedom to build from the ground up the business and operating model most suitable for India[18], and to view India as an innovation laboratory with the potential for both global and local impact.

While India, over the past two decades, has clearly established itself as a global hub for software development and business process outsourcing, many in the corporate world still find it difficult to see it becoming a major force for global innovation anytime soon. Are they right? This is the issue that London Business School professors, Nirmalya Kumar and Phanish Puranam set out to examine in their recent book *India Inside: The Emerging Innovation Challenge to the West*. 
India’s “invisible” global innovation

One of the reasons that many underestimate the speed with which India is already becoming a global hub of innovation is that they tend to equate innovation too narrowly with branded products and services (see India Inside Figure 1-1). Kumar and Puranam highlight a number of major sources of invisible innovation in which India already has a growing presence, including globally segmented innovation, outsourcing innovation and process innovation.

The skeptics who ask “where are the Indian iPods or Viagras?” virtually ignore “B2B space and how new-product development is currently conducted in MNCs,” suggest Kumar and Puranam. Over the last two decades, MNCs have set up more than 750 R&D centers in India, employing over four hundred thousand highly skilled professionals, many of them with advanced degrees, and they found that most of these units are working on global products for global markets rather than on localizing products developed elsewhere for the Indian market[19].

What helps to make India an “unavoidable” location for such global innovation activity today is talent in growing numbers. As Guillermo Wille, former head of GE’s John F. Welch Technology Center at Bangalore explained: “The engine behind GE’s double-digit annual organic growth is talent,” and this growth rate “wouldn’t have been possible” if GE’s global R&D activity had “stayed only in the US and Europe”[20].

The growing influence of India on global innovation is not confined to captive R&D activity. The same trends in innovation segmentation have also helped to fuel the growth in R&D outsourcing, with many Indian firms involved as supplier-partners. For example, in the recent development by Boeing of the new 787 “Dreamliner,” the company outsourced the design of “two mission critical systems” to HCL Technologies, and the “level of sophistication” that aircraft manufacturer found in India was a crucial factor in deciding where to place this work[21].

Figure 1-1 Visible and invisible innovation

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<tr>
<th>VISIBLE INNOVATION</th>
<th>New products/services for end users</th>
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<td>INVISIBLE INNOVATION</td>
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<td>4. Management Innovation - The global service delivery model</td>
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Note: © India Inside: The Emerging Innovation Challenge to the West with permission of Harvard Business Review Press
In the area of process innovation, Kumar and Puranam see India already making a global impact through the fresh “injection of intelligence” into what others consider to be more or less commodity business activities. A “unique feature” of India at its current stage of development is “the ability of certain sectors to attract talent with qualifications vastly superior to the qualifications of those employed in the same sectors in Western countries.” This represents a very valuable innovation resource for companies that know how to tap it, allowing firms like 24/7 Customer to turn a call center operation into a value-added services activity through leveraging proprietary analytics and its “over-qualified” service center operative talent.

Global innovation in India of a more “visible” kind

Though India Inside is primarily aimed at highlighting that nation’s main “invisible” contributions to global innovation, India is already making its own more visible impact on new product and service development, particularly in the area known as “frugal” innovation. It is India that has given the world its first commercially viable $2,000 automobile of the modern era, first one-cent-per-minute phone call, first $30 cataract surgery, and its largest and most efficient emergency management service to date (see box, “Gandhian innovation”)

One of the most exciting conceptualizations of this new genre is “reverse innovation,” an idea originated by Dartmouth College professors Vijay Govindarajan and Chris Trimble, in partnership with Jeffrey Immelt and General Electric, and more fully developed in their recent book, Reverse Innovation: Create far from Home, Win Everywhere. “Reverse innovation” is the opposite to “glocalization.” Where glocalization refers to the strategy of developing products initially in rich countries and then adapting them for sale in poorer countries, reverse innovation aims to do the opposite, develop products in emerging markets for emerging market needs but with the potential to find new applications back in the more advanced economies.

Over the last four years, many global companies across a range of sectors have been putting this strategy to very effective use, including Pepsico, Proctor and Gamble, John Deere, Harman International and EMC. One of the early examples is a basic $1,000 handheld ECG machine that GE developed in India from the ground up to extend the provision of cardiac care to village communities, a device that has opened up a new market opportunity back in the US in applications such as ambulances and emergency rooms, where portability and ease of use are more valuable than over-sophistication.

“Reverse innovation” is not a new idea. What is new is its conceptualization, which aims to practice it as a deliberate innovation strategy. The first requirement is “clean slate” thinking and design. “India will not follow the same path of economic development followed by the rich nations” because India will have “the potent advantage of being able to tackle old problems with new technology,” Govindarajan and Trimble believe. Furthermore, even where basic needs are found to be similar, they will still need to be addressed “under distinct conditions – different infrastructures, geographies, cultures, languages, governments, and so forth.” They advise that one of the first requirements for success and biggest challenges is the ability to “let go of the dominant logic” that has “served you well in rich countries” and adopt the “humility and curiosity” needed to “use today’s science and technology to address unmet needs in the developing world.”

Govindarajan and Trimble identify five main needs gaps between the rich and poor worlds that are most likely to provide the basis for reverse innovation opportunity. The most familiar is the performance gap, where the primary barrier to mass consumption is affordability, and the innovation and technology challenge is to develop solutions that can deliver “decent performance at an ultralow cost.” This usually requires a zero-based approach, which is what Nokia did in mobile phones for Indian consumers and John Deere did in tractors. The other four challenges include the infrastructure gap, the sustainability gap, the regulatory gap and the preferences gap, and Reverse Innovation deals with each in some detail.
The most basic message from Govindarajan and Trimble is that there are “huge opportunities in the developing world,” but developing nations are “different – not just a little, but very different,” and only clean-slate innovating rather than exporting and adapting, will win. The message goes further. Failure to reverse innovate may lead not only to losing out “on an opportunity abroad” but also “to an even bigger loss at home” because many such innovations have the potential “to migrate from poor countries to rich countries” in the form of classic disruptive innovations with major implications for the leading incumbents.

How is the “reverse” effect likely to play out? And what will determine how disruptive it will be? Govindarajan and Trimble believe there are two main migration paths, “marginalized markets today” and “mainstream markets tomorrow.” Some reverse innovations will create new market opportunities in rich world countries in areas that have been ignored up to now, because the potential commercial benefits have not been seen as attractive enough in their own right to attract attention and investment, like “micro-finance” lending, which was first developed in Bangladesh, but is currently practiced in the poorer neighborhoods of New York and other first world cities.

Many of these new reverse-innovation applications seem likely to remain outside of rich-world mainstream markets, but not all of them. “A 50 percent solution at a 15 percent price” may not have much appeal to most rich world consumers on the day that the

“Gandhian” innovation

For a “poor” country that has just announced its intention to send a space probe to Mars, the roots of India’s unique capabilities in the area of “frugal innovation” are to be found in what the late C.K. Prahalad once identified as the primary impetus for most innovation, the gap between aspiration and resources and the challenge to man’s ingenuity that closing it presents. In their 2010 Harvard Business Review article, “Innovation’s Holy Grail” C.K. Prahalad and R.A. Mashelkar point out that most innovation programs have been “built on the assumption of affluence and abundance,” but warn that this kind of traditional innovation “is heading for obsolescence – because the parameters have completely changed – and it will take unsuspecting organizations with it.” For them it is “affordability and sustainability” that must now drive much innovation in the future, and emerging countries, India in particular, are providing many of the pioneering efforts in this area. “Learning to do more with less” should now be more and more “the innovator’s dream,” and a “new genre of innovation” is being “ignited” by a “potent combination of constraints and ambitions,” of the kind that is most notably reflected in India’s modern reawakening. Some see this new genre of frugal innovation as an outgrowth of the Indian tradition of “jugaad” or make-do improvisation, but the term that Prahalad and Mashelkar prefer is “Gandhian innovation.” This is because two of the Mahatma’s tenets lie at the core of this new type of innovation:

- “I would prize every invention of science made for the benefit of all.”
- “Earth provides enough to satisfy every man’s need but not every man’s greed.”

Clearly, “affordability and sustainability” were “Gandhi’s touchstones six decades ago” and “Indian companies have recently discovered their power.”

However, this kind of innovation is not just for Indian companies. It is India’s potential gift to global innovators and CEOs everywhere as long as they are willing to modify “the philosophical underpinnings of their innovation processes.” Based on their study of the most successful exemplars, Prahalad and Mashelkar offer five “cardinal principles” that leaders should embrace and endorse:

1. “My goal is inclusive growth.”
2. “My vision should be unambiguous.”
3. “I must set stretch targets.”
4. “We must learn to innovate even when faced with constraints.”
5. “Our focus should be on people.”

The emphasis on inclusive growth “challenges executives to push price-performance envelopes to ensure affordability,” and while the innovation projects have to contribute to profitability and shareholder wealth, the primary route to securing such outcomes is to focus on people first, more specifically on customers as “people,” suppliers as “partners” and employees as “innovators.”
innovation is introduced. However, “new technologies always improve – often rapidly and ruthlessly” and when the level of improvement starts to approach a 70 or 80 percent solution, even at a 40 to 50 percent price, mainstream customers in the rich world can suddenly become “very, very interested” and the market then becomes ripe for disruption. So every company with global ambitions would now be well advised to make the “dynamics” of reverse innovation part of its “strategic dialogue,” and even better, to make innovation in India central to its own ambitions, so that it might become one of the global disruptors of the future not one of the victims.

Notes
4. Wood, M. (2007), The Story of India, London: BBC Books. The current histories of both China and India are stories of the restoration of once-great powers and the reawakening of progressive civilizations. As Wood points out, by the time of the great Mughal leader Akbar’s death (1542-1605), he had “established India as one of the great powers,” with one of the largest GDPs in the world, substantial manufacturing as well as agricultural activity, and a major city Agra with almost four times the population of London. Moreover, “no Renaissance leader in Europe, not even the brilliant Elizabeth I” had “tried so consistently to bring in the rule of reason.”
5. Venkatesan suggests that India might even be more accurately described as a VUCCA market, with an extra “C” for “corruption.”
6. All quotes in this Masterclass are taken from the featured readings, unless otherwise stated and cited.
7. Venkatesan highlights a recent McKinsey, Inc. analysis which showed that the twenty-five largest publicly listed multinational companies in India contributed just 2 percent of their parent’s global revenues and profits in 2011, which he adds is “telling, especially since many of them have been operating in India for some time.”
8. As Venkatesan points out in Conquering the Chaos, recent comparisons by the Global Competitiveness Network and the World Bank place India at number 132 in terms of the easiest places to do business in, 59th in terms of global competitiveness, and in terms of corruption, India comes out somewhere in the middle of the major emerging markets pack.
9. In a 2012 TED presentation, Nirmalya Kumar, co-author of India Inside estimated “from various sources” that IBM’s headcount in India was by then up to 50,000 larger than in the US (IBM stopped publishing the number of employees by major geography in 2010). See www.youtube.com/watch?v=JQywioqHW48
10. For example, the country’s underlying growth remains intrinsically strong, and it continues to make sustained economic and social progress in spite of the weakness of national government and policy making, with the “demographic dividend” of a youthful population, a “healthy” savings rate, ongoing “significant improvements” in literacy and education, its “culture of entrepreneurship and improvisation,” “reasonably sound” banking system and capital markets, and “fair and activist” Supreme Court all helping in this regard.
12. As Venkatasan points out, “India’s strategic importance is not only because it is a large market” but more importantly because “it is a laboratory or Petri dish for developing products, business models, talent, capabilities, and operating models that will help companies succeed in a host of challenging markets,” and in “the global corporation’s architecture” India “is one of the key hubs for supporting those markets.”
13. The information is readily available through the websites of McKinsey, BCG and many of the leading strategy consultancies advising on emerging markets.

14. Currently, the Indian market pyramid can be roughly divided into four main population tiers in terms of average income as follows; 20 million “rich,” 200 million “middle class,” 400 million “aspirers” and 700 million “deprived” (though the average incomes in all these tiers are much lower than advanced economy counterparts).

15. For example, Sam Allen, CEO of Deere, recently spent a week and a half in a village in Rajasthan doing community service alongside 20 of his executives, learning hands-on about the working lives of Indian farmers, while Jean-Pascal Tricoire, CEO of French company Schneider Electric, rode a motorcycle across small towns in India trying to get a close-in sense of how retail works there and what consumers are looking for in those environments.

16. Immelt went on to explain: “That means migrating P&L responsibility and major business functions (like R&D, manufacturing and marketing) from a centralized headquarters to an experienced in-country team [. . .] Shifting power to where the growth is [. . .] makes good business sense. This new One GE in India approach will speed progress [. . .] It gives us entirely new opportunities to develop more products at more price points. This will help open up access to large, underserved markets in India, China, Brazil, and Africa, while also fueling innovation that opens a door into new markets in the more developed regions of the world.”

17. Venkatesan’s draws on the work of Michael Beer and his co-authors in his use of the term “higher ambition.” For more on what this means, see M. Beer, R. Eisenstat, N. Foote, T. Friedberg and F. Norrgren (2011), Higher Ambition: How Great Leaders Create Economic and Social Value, Harvard Business Review Press.

18. For example, McDonald’s India has taken nearly five years to get its business and operating models for India right, but in the process it has managed to build up an almost unassailable early lead in India’s rapidly growing fast-food sector.

19. For example, engineers at the Intel India Development Centre (IIDC) recently developed “the world’s first experimental chip that is capable of one trillion operations per second (or one teraflop)”, while at GE’s John F. Welch Technology Center in Bangalore, engineers have “helped” to develop a “string of technological marvels” including a transparent roof made of a special polycarbonate that can span a Shanghai railway station without the need for central supports, a car bumper that self-destructs on impact, and other advances in aircraft engine, wind turbine and medical imaging technologies for global applications. The emphasis here on “helped” merely reflects the fact that in the new world of modularized, segmented global innovation, no country unit within GE’s global R&D network tends to have sole responsibility any longer for such new developments, regardless of the center’s location.

20. Wille goes on to point out that: “Today, we have just over fifty-four hundred engineers and scientists in India” and “about one in six engineers works out of India;” which will soon be “one in four.” He chooses the phrase “works out of India” carefully here because as more and more of these captive R&D hubs become global centers of excellence in key technologies and capabilities, they also become more attractive as places to work to some of the best engineering talent in these disciplines from anywhere in the world.

21. Both were concerned with aircraft safety, one to help “avert airborne collisions” and the other to “enable landing in zero visibility.”

22. 24/7 Customer is a Silicon Valley start-up that has since grown to become a major global player in the call-center space, currently dealing with over 10 million customer contacts per month on behalf of major global players in the retailing, financial services, mobile phone service provider and hospitality industries. In 2000, the company established a 100-seat call center in Bangalore, and quickly grew the business in a conventional “add seats, add revenue” way and until it had reached over 7,000 operatives by mid-decade. Its 24/7 Customer iLabs division came up with a set of proprietary predictive modeling tools that enable “a knowledge-driven intervention in real time (through chat or voice), which results in high-quality assistance to the right prospect, at the right time, with the right offer.” Central to reaping the full benefits from these tools was having ready access to a higher level of talent in both the analytics unit and in the service center operations than is customary in the industry to be able to fully leverage this “injection of intelligence” into the customer contact interface, lifting the value added to another level. India provides that kind of access.
23. This concept of “reverse innovation” was first presented in J.R. Immelt, V. Govindarajan and C. Trimble (2009), “How GE is disrupting itself”, Harvard Business Review, October, pp. 56-65. The concept is rooted in Clayton Christensen’s theory of disruptive innovation, which aims to bring non-consumers into the market through shifting the basis of innovation and competition from functionality to affordability, simplicity and convenience – designing solutions that offer 50 percent of rich-world features at 15 percent of the price. The idea of “reverse innovation” as a basis for global innovation strategy took shape over 2008-10 when Govindarajan was invited to become professor-in-residence and chief innovation consultant at GE to help the corporate management to develop a more effective innovation strategy for winning in India and China.

24. Each of these examples is covered in some detail in V. Govindarajan and C. Trimble, Reverse Innovation, already cited.

25. When it comes to infrastructure, opportunities for reverse innovation may come from two opposite directions. The most obvious one is innovations designed to overcome the accessibility barrier posed by poor roads or the lack of basic amenities like water and electricity. GE’s handheld ECG machine was developed initially to overcome the accessibility constraint.

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