There's an old joke about a lost traveler seeking directions from a local yokel who tells him: "If I were going there, I wouldn't start from here." Now, apply that advice to business. You're a big farm machinery manufacturer trying to break into the burgeoning Indian agri-market. You already make great tractors; you just need to trim off a few of the fancy doo-dads we Westerners love, shave the price and you're in business, right?

Wrong. It's just not that simple. "Glocalized" products - global products amended for local markets - are not the solution in developing economies. For example, Indian farmers, who have pocket-handkerchief-sized plots of land, need a much tighter tractor turning circle. And their tractor is often their only mode of transport so it must be versatile enough to accommodate or pull a trailer with the whole family on board. And it has to be so cheap that manufacturers need a whole new range of components and materials to achieve price targets.

In other words, if you were John Deere and you wanted to go there, you wouldn't start from here. That is the powerful message from Vijay Govindarajan and Chris Trimble in this eye-opening book: as home markets mature and reach saturation point, manufacturers eyeing developing countries for strategic expansion opportunities need to adopt a whole new approach to those markets. That is best achieved by setting up independent teams in those countries to build solutions from scratch.

And it's not just about building cheap or lower spec'd products; it's also about creating revolutionary new technologies that, in the fullness of time, can be exported back to the developed world. If these products subsequently turn out to be not only cheaper but also better, displacing established high-margin items here, so be it. If big business in North America doesn't do this, then upstart companies from India and China will, and steal the market anyway.
In fact, this is already happening. An Indian company has broken into the US tractor market in a big way with those very tractors we just talked about. By contrast, one of the biggest companies in the world, GE, is introducing health care products it developed on the ground in China into its US home market, undercutting its own high-end prices but still prospering through higher volume.

The authors have all the right "been there, done that" credentials for this book. Govindarajan started his career with a chartered accountancy degree in India and after studying at Harvard, became a researcher, teacher and consultant, eventually working at The Tuck School of Business at Dartmouth where he encountered coauthor Trimble. The pair have built a 10-year innovation-focused writing and consulting partnership and co-wrote two earlier books - Ten Rules for Strategic Innovators and The Other Side of Innovation, both of which helped lay the foundation for this latest work.

Govindarajan also spent two years as GE's first professor in residence and chief innovation consultant, but it was Trimble who came up with the term "reverse innovation" to capture the idea that creating novel products and services inside developing countries is the new route to global business success. The pair say that it was their work at GE that inspired them to write the book.

Start There, Not Here

Everyone knows of the popular energy drink Gatorade® but who knew the concept was born in Bangladesh? Although it was formulated by a football coach in Gainesville, Florida, he built the recipe on research into liquids used for rapid rehydration for cholera victims in the Indian sub-continent.

This, in its simplest form, is reverse innovation in action, defined by the authors as a process that is adopted first in the developing world and then possibly defying gravity to flow "uphill," that is finding application in the developed world. By contrast "glocalization posits that the work of innovation has already occurred," the authors explain. "Firms can tap emerging markets simply by exporting lightly modified versions of global products."

But, as we have seen, glocalization doesn't always work because customers' needs are often radically different to those in the parent company's country. For example, in South and
Central America, Wal-Mart has had to establish small stores because the big warehouse concept doesn't work everywhere and PepsiCo had to create snack foods from scratch in Asia using popular foods like chickpeas and lentils because Western snacks didn’t suit local palates. These are now catching on in Europe.

In the meantime, India has begun to export a radical, homegrown concept in critical healthcare. There, the need for low-cost medical services on a massive scale has led to the development of a "production-line" style of treatment for open-heart surgery, with the establishment of a specialist, heart-surgery-only hospitals of a type never seen in the West. Not surprisingly, with such a concentration of specialists, throughput is speeded up, costs fall and success rates are high - significantly higher even than those in the US. The company that developed the concept is now building a 2,000 bed facility in the Cayman Islands to treat Americans more cheaply and reliably than they could be at home.

In their wake, Asian brand names like Tata (autos), Mahindra & Mahindra (tractors - US ad slogan: "Deere John, I have found something new"), Reliance (energy and raw materials), Lenovo (computers) and Haier (domestic appliances) have developed bridgeheads into the West based on their own groundbreaking technologies.

Clearly, we have something to learn.

Paths to Reverse Innovation

It's tough and even counter-intuitive but the critical starting point for reverse innovation is, at least metaphorically, to forget everything you already knew. Don’t bring all your baggage, your ideas about the way to do things or even your organizational structure with you to Central and South America, India or China. Start instead, say the authors, with humility and curiosity. Don't make assumptions about similarity and needs. Be prepared to learn.

In particular, be aware of five exploitable features that distinguish emerging markets from those in the developed world:

First, there's a Performance Gap - consumers do not demand or even expect the extreme performance we’re used to. But they don't expect quality or performance to be cut by the same amount as price. For example, a product that costs 50% less than its equivalent in the developed world would be expected to have only a modest reduction in performance or quality, perhaps in
the order of 15%. You're unlikely to be able to achieve that equation with your existing product line. You'll have to innovate - like Nokia did when it reimagined the cell phone for the Indian market, replacing phone hardware with cheaper software and adding a flashlight in a nation accustomed to unreliable electricity supply.

Second, there's an **Infrastructure Gap** – land-based accessibility is not easy in some countries, emphasizing the need for portable and wireless products. GE, for instance, created a low-cost, highly portable electrocardiogram for use in remote areas of China and India (which they have now redeveloped for the US market.)

Next, there is a **Sustainability Gap**, characterized by clashes between economic activity and environmental concerns, notably pollution problems. Hence, emerging economies are far more interested in fuel-efficient and electric cars. This, in turn, has prompted a search for new battery technology, led by Chinese company BYD, in which Warren Buffett has taken a $230m stake.

Fourth, a **Regulatory Gap** between developed and developing countries means the latter are not encumbered by what the authors describe as "needless barriers to innovation" - time consuming and bureaucratic regulations and review processes that hamper innovation and favor the vested interests of established industries. Thus, a US company called Diagnostics For All, which developed a cheap paper-based test for bodily fluids to replace expensive equipment, launched it in the developing world to avoid the lengthy FDA approvals process and frantic lobbying efforts of home-based equipment manufacturers. That's not to say the product won't be launched in the US - just that the company couldn’t afford to wait.

Finally, there's a **Preference Gap** - a simple divergence of taste that is down to culture and the way of life. For example, consumer products group Proctor & Gamble was perplexed when its best-selling feminine hygiene product bombed in Mexico, only to discover that what they thought was a universal need for women of a certain age was totally different in Mexico than it was in the US because of factors like the length of time the product had to be worn, lack of privacy for changing, and even a preference for natural rather than synthetic materials.

Global companies that fail to spot and respond to these gaps are now severely disadvantaged. There are no better examples that automakers who missed the chance spotted by Tata to build and sell a $2,000 car or financial institutions who overlooked the micro-banking
revolution initiated by Grameen in Pakistan, which has so far loaned more than $9 billion to budding entrepreneurs. Even as they write, the authors warn, these revolutionary concepts are on their way here.

**Facing Up to Change**

Even when global companies in the developed world acknowledge the distinctions between the old and the new and even spot the opportunities, they remain trapped by the mind sets on which their past successes were built - what the authors label their **dominant logic**. "(T)he prison of the past is the single greatest obstacle to mastering the discipline of reverse innovation," they declare.

The most dangerous, flawed assumption is that emerging markets are somehow playing a sort of catch-up game with the developed world - that one day they will want and be able to afford the things that we have. Hence, glocalization is the main source of revenue for international businesses.

"Glocalization is a product-out mind-set," Govindarajan and Trimble argue. "How do I take the products I have and reach as great a market as possible? Reverse innovation requires a market-back approach. You start with the distinctive needs of customers in the developing world, and work back to the necessary solution."

Dominant logic leads to three thinking traps:

- First, that because people in poor countries have a low income their needs can be met with goods based on old technology. Taken to its logical conclusion, that would mean people living in say, rural India, can’t wait to get their hands on black-and-white TV sets or out-of-print text books. Not true. They want technology to deliver modest quality at extremely competitive price points. So, for example, publisher McGraw Hill and Indian IT outfit Wipro have partnered to deliver remote learning via mobile technology.

- The second trap is that reverse innovation is always about aiming for the lowest-possible price. Sometimes, there are higher priorities - like environmental concerns in China that are driving the search for clean technology.
• And third is the mistaken idea that reverse innovation is purely about product innovation. It's also about changing business models and organizational structure, such as creating new partnerships or developing pricing structures that can be scaled up or down according to volume.

There are also, the authors tell us, three common fears about reverse innovation – first, that margins will be too low (not true if a product or service can be redesigned with an ultra-low cost base); second, that it will put the developers' existing premium brand at risk (an unavoidable but manageable risk – if you don't do it, someone else will); and third that a company's technological supremacy is incompatible with developing a low-cost approach (wrong, as countless computer and software manufacturers have demonstrated.)

These traps and fears merely serve to emphasize how daunting the challenge is for any business to move into reverse innovation mode. Yet, as the authors warn: "When rich-world multinationals ignore reverse innovation, they empower and enable the growth of the emerging giants – the new generation of global corporations with roots in the developing world."

**Building a Reverse Innovation Enterprise**

So, how to make the change?

First, you have to shift the center of gravity of your business, moving people, power, money and attention to these new locations. This means physically transferring critical decision makers into these new markets. Networking giant Cisco has done this, moving 20 percent of its corporate officers to Bangalore during the past 10 years. General Electric has set up a separate P&L division for India and appointed a senior VP to head up the unit. Many more companies – Nestle, PepsiCo, Whirlpool, Cadbury and Coca-Cola are examples – have separate R&D teams in emerging economies, and a couple of years ago Xerox established an innovation hub in Chennai.

These new centers should be encouraged to conduct low cost experiments to identify the best innovation opportunities. This is a guiding principle with retailer Best Buy, which has recently set up a division purely for Asia.

Another important step is the development of knowledge and expertise within emerging markets. Some ways the authors suggest this can be done include:
• Adding leaders from, or with deep knowledge of, those markets to the board. IBM did this in 2011 when it appointed Lorenzo Zambrano of the Mexican company Cemex to its main board.

• Sending key personnel on assignment in developing countries. “Expat experience is by far, the most powerful accelerant for individual learning about the possibilities that exist in other markets” the authors tell us.

• Co-opting members of a team in one country onto a similar team in another country – to share experience and expertise.

• Holding board meetings and other key gatherings, as well as executive education programs, in developing countries.

If all of these activities serve to steer the corporate mind-set towards reverse innovation, what actually has to take place on the ground to implement it?

The first step is setting up independent organizations, physically located in these markets. These groups are what the authors call local growth teams (LGTs). They are "clean-slate" organizations, without preconceived ideas of how to operate or develop products. Their mission is to solve a problem or a challenge, not to create a predefined product or service.

Critically, there should be a very short reporting chain to the very top of the parent's organization, to minimize the impact of conflict and rivalries with other business units, which is common. "Developing healthy partnerships between the LGTs and the rest of the corporation is challenging," the authors acknowledge. "Reverse innovation and glocalization are an awkward combination."

But they stress that the aim is not to replace existing glocalization operations. The objective is to expand market presence. At the same time, the LGT must be able to gain competitive advantage against other players in its marketplace by leveraging the resources and technology of the entire organization. An LGT is not the same as a raw start-up.

Team membership must be based on identified skills needs, not on who happens to be available in the wider organization, and there is definite value in outside hires who may have the experience and cultural knowledge required to kick-start the innovation process. Plus, as the authors put it, "They help reset LGTs to a true zero point." For instance, when tackling the challenge of developing a portable ultrasound device for the Chinese market, GE set up an LGT
in Wuxi by recruiting locally and seeking experts in miniaturization and low power consumption, which are skills needed for developing this specialized product.

Once established, an LGT must go through a process of developing a deep understanding of the intended market, answering questions about its potential size, the price points that will unlock it, the extent to which customers are prepared to take a risk by buying a new or unfamiliar product, and the activity of competitors. Then there are the really big questions: Can we design the right product at the right price? Since you probably don't know the answers to these questions without actually making and testing a product, the best approach is to produce, test-market and tweak several different prototypes or variations to establish if you can produce an item with a feature set that people want at the kind of price that gives you a reasonable profit margin.

The LGT must be an agile organization, capable of changing direction, rapidly increasing knowledge and understanding of the marketplace. Leaders should be held accountable for learning, not for results against plan, say the authors.

All of this is merely a start down the road to reverse innovation. Having developed and successfully tested a product in the market, it has to be rolled out, production escalated and eventually, the opportunity to exploit it globally must be explored, starting perhaps with other developing countries. There are 150 of these, of which the 10 biggest represent 60% of the population – Brazil, China, India, Indonesia, Mexico, Nigeria, Russia, South Africa, Turkey and Vietnam.

Ultimately, if the product is right, there may be an opportunity to establish it in the developed world. And if you have gone about it the right way, you will be first there with the solution.

More Reverse Innovation in Action

The second part of the book is devoted to more detailed analysis of some reverse innovation experiences and the lessons learned from them. Here are a couple of examples.

The mouse and keyboard manufacturer Logitech learned the hard way that Chinese computer users were a radically different market than their Western counterparts. It wasn’t just
that they couldn’t afford the $50-plus premium price for a Logitech mouse – the device simply didn’t meet their needs.

Many Chinese users hook their computers up to their TVs and watch downloaded and streaming programs that way. Cable and satellite TV are not well-established. Users wanted to be able to use a mouse like a remote control from the comfort of the couch and the basic Logitech product didn’t have the range.

Furthermore, the close proximity of neighboring users living in densely-packed apartment buildings meant devices needed additional internal shielding not available in the glocalized Logitech mouse.

A local company in China developed a mouse that exactly met market needs and sold it for $15, prompting Logitech to re-evaluate its approach, setting up a local team that ultimately developed a better wireless chip that provided the range and shielding at an even lower price point.

Upscale audio and infotainment equipment manufacturer Harman developed a project called SARAS (Sanskrit for "adaptable" and "flexible") to break into the fast-growing auto market in India.

With cars costing just a couple of thousand dollars and a mobile population heavily dependent on motorcycles, it just wasn't feasible to produce a simplified version of its existing product range at the right price points while maintaining the company's reputation for quality.

Against fierce resistance from other parts of the company, notably its software engineering division in Germany, the company set about reinventing a quality infotainment system at a low price but still at a premium to inferior products in the Indian market.

It set up an LGT and separate business in India but prudently recruited experienced personnel from across the entire Harman global group (including those skeptical software engineers from Germany), setting them the challenge of creating a system with close to high-end functionality at one third of the cost.

This was achieved by clean-slate thinking, like using free open-source software instead of proprietary code, reducing the number of features (most end users in the developed world use only a fraction of their system's potential), and employing standard, off-the-shelf chips (instead of custom-designed.) In fact, as part of their research, the LGT discovered that new, mass-
produced smartphone chips had similar functionally to those of infotainment systems, and used them instead.

The result: A high-end system, with 75% of the functionality of the advanced equivalent for about 20% of the price.

Conclusion

Backed by their experience and the results of detailed research, Vijay Govindarajan and Chris Trimble are convinced that survival of even the biggest companies in our developed world could be imperiled by new technologies being forged in emerging economies in the white heat of industrialization.

These emerging economies offer the biggest growth opportunities in comparison to our matured and saturated markets but if we think they are just waiting to follow in our footsteps, we are misreading them. Glocalization, the process of simply amending existing products, has only a limited success in these markets.

The needs of the local populations are radically different to ours and the only way we can truly meet them is to physically establish full-blown operations (not merely outposts) in these developing countries and start from scratch to develop solutions. In the ensuing process, we might also develop products and processes that can be "exported" back to our own developed countries. This is reverse innovation.

"Reverse innovation is night-and-day different from glocalization," the authors say. "It is not about improving an existing business model; it is about creating new business models. It is not about winning market share, but is about creating robust new markets."

If we fail to recognize and accept the challenge, we run the risk that emerging giants in developing nations, who are innovating in their own economies, will become exporters of products and ideas themselves, displacing their established developed world counterparts.

Their stark warning is that this is already happening. There is no time to lose.