

# Jugaad Innovation

## A Breakthrough Growth Strategy

by Mobius Innovation Expert Simone Ahuja,  
and Navi Radjou and Jaideep Prabhu

**J**ugaad is a colloquial Hindi word that roughly translates as “an innovative fix; an improvised solution born from ingenuity and cleverness.” Jugaad is, quite simply, a unique way of thinking and acting in response to challenges; it is the gutsy art of spotting opportunities in the most adverse circumstances and resourcefully improvising solutions using simple means. Jugaad is about *doing more with less*. (We feature articles and videos on jugaad on our companion website, [jugaadinnovation.com](http://jugaadinnovation.com).)

Jugaad is practiced by almost all Indians in their daily lives to make the most of what they have. Jugaad applications include finding new uses for everyday objects—Indian kitchens are replete with empty Coke or Pepsi bottles reused as ad-hoc containers for dried legumes or condiments—or inventing new utilitarian tools using everyday objects, like a makeshift truck cobbled together with a diesel engine slapped onto a cart (interestingly, the origin of the word jugaad, in Punjabi, literally describes such makeshift vehicles).

The word jugaad is also applied to any use of an ingenious way to “game the system.” For instance, millions of cellphone users in India rely on “missed calls” to communicate messages to each other using a prearranged protocol between the caller and receiver: think of this as *free textless* text messaging. For example, your carpooling partner may give you a “missed call” in the morning indicating he has just left his house and is on his way to pick you up. Hence, the word jugaad carries a slightly negative connotation for some. But by and large, the entrepreneurial spirit of jugaad is practiced by millions in India simply to improvise clever—and completely legitimate—solutions to everyday problems.

In this book, we delve into the frugal and flexible mindset of thousands of ingenious entrepreneurs and enterprises practicing jugaad to creatively address criti-

cal socioeconomic issues in their communities. Jugaad innovators like Mansukh Prajapati

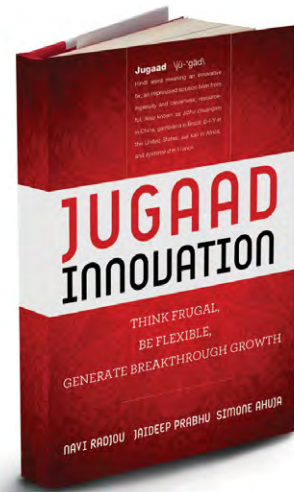
view severe constraints, such as a lack of electricity, not as a debilitating challenge but as an opportunity to innovate and overcome these very constraints.

The entrepreneurial spirit of jugaad is not limited to India. It is widely practiced in other emerging economies such as China and Brazil, where entrepreneurs are also pursuing growth in difficult circumstances. Brazilians have their own word for this approach: *gambiarra*. The Chinese call it *zizhu chuangxin*. The Kenyans refer to it as *jua kali*. The French have a term too—*Système D*. Throughout this book we profile jugaad entrepreneurs from Argentina, Brazil, China, Costa Rica, India, Kenya, Mexico, the Philippines, and elsewhere who have created simple yet effective solutions to address vexing problems that their fellow citizens face. We hope to shed light on how these jugaad innovators think and act—and identify the valuable lessons we in the West can learn from them.

### Principle Two - Do More with Less

Gustavo Grobocopatel is a fourth-generation Argentinian farmer of Russian-Jewish extraction. For three generations his family pursued a small-scale, subsistence model of farming in Argentina. Grobocopatel’s dream was to break out of this mold and do something more ambitious. But his vision was hindered by scarcity from the very start.

First, Grobocopatel had difficulty accessing large tracts of land. Although Argentina is a vast country, endowed



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**“If I had one dollar to spend, I would invest in solving the biggest problem today—the economics of scarcity.”**

Jeffrey Immelt, Chairman and CEO, General Electric

with rich soil and a favorable climate, farmland is actually hard to come by. Only 10 percent of the land is arable—and much of the arable land is controlled by a few owners who are reluctant to part with it.

Next, Grobocopatel faced a shortage of the skilled labor needed to scale up his business. Farming is labor intensive, as people are needed to fertilize, sow, tend, and harvest crops. In Argentina such labor is in limited supply, is not formally organized, is spread out across the country and can be costly to hire, especially during peak harvest seasons.

Third, Grobocopatel didn't have the capital to buy the farm equipment he needed to achieve scale without using labor. Funding opportunities to bootstrap new businesses are very limited for entrepreneurs in Argentina.

Instead of giving in to these challenges, Grobocopatel conceived and then implemented an ingenious business model. He overcame the scarcity of land by leasing it rather than acquiring it. He dealt with the scarcity of labor by *subcontracting* every aspect of farm work to a network of specialized service providers, giving him access to “freelance” laborers he hires only when they are needed. And he overcame the cost of owning equipment and the lack of access to capital by *renting* the equipment needed from networks of small local companies.

By cleverly leveraging a grassroots network of 3,800 small and medium-size agricultural suppliers, Grobocopatel's company, Los Grobo, operates as an *asset-light* company, and in this way is able to *do more with less*. Overcoming the skepticism of his peers, this jugaad entrepreneur has proven the value of his “more with less” model. In 2010, Los Grobo became the second largest grain producer in Latin America, farming over three hundred thousand hectares, trading three million tons of grain per year, and generating US\$750 million in revenue—all without owning land or a single tractor or

harvester. Having succeeded in Argentina, Los Grobo is now exporting its “frugal farming” model to Brazil, Uruguay, and Paraguay, and helping farmers there produce more with less in their local contexts.

Emerging markets are teeming with innovators like Grobocopatel. Faced with scarcity across the board, these jugaad innovators have mastered the art of doing more with less. In this chapter, we get inside the minds of jugaad innovators and the enterprises they run to better understand how they create more value with fewer resources. Although many factors hinder Western companies from adopting a “more with less” approach, doing so is increasingly imperative—as the American and European economies stagnate and face growing resource constraints. Indeed, Western firms that succeed in adopting frugal innovation methods to create affordable offerings are very likely to gain a significant competitive advantage over their peers in the tough economic times ahead.

### **Scarcity Is the Mother of Invention**

To even a casual observer, the most striking thing about jugaad innovators in emerging markets is their frugal mindset. These entrepreneurs and managers—whether they come from Argentina, Brazil, China, India, Kenya, Mexico, or the Philippines—are constantly looking for new ways to do more with less and deliver greater value to customers at a lower cost. What makes this mindset so fundamental to jugaad innovators, and why are they so good at getting “more for less”? We believe that such a mindset is a rational response to the pervasive scarcity in their environment. For jugaad entrepreneurs, being frugal is not a luxury—it's the key to survival.

While Silicon Valley entrepreneurs typically operate in a resource-rich environment, jugaad entrepreneurs face scarcity of every possible kind. First, they must contend with the scarcity of capital. Quite simply, the



**Dr. Simone Ahuja, Founder/Principal of Blood Orange with Carlos Ghosn, CEO of Renault-Nissan, at the Asia Society in New York City where they held a panel discussion last year titled, "Jugaad Innovation: Reigniting American Ingenuity". Ghosn is a strong advocate of applying this frugal, flexible and inclusive approach to innovation. He sent international teams to India to learn this approach in order to apply them in European markets with great success, as well as in India where Nissan's resurrected Datsun brand was recently unveiled under USD \$7,000. "When we were discussing with our Indian competitors how much they spent to develop a product, we thought they were missing a zero or two in the numbers."**

availability of financial resources in emerging markets is limited. Banks are conservative, and venture capital and angel investor networks underdeveloped. For instance, 80 percent of South African entrepreneurs report difficulties in accessing funding. Thus, jugaad innovators cannot afford to invest in capital-intensive R&D equipment. This partly explains why a country like India spends only 0.8 percent of its GDP on R&D (compared with 3 percent in developed countries), and why the private sector's share of this spending is only 20 percent.

Second, jugaad innovators must deal with the scarcity of natural resources. Raw materials in emerging markets—from water to electricity—are expensive and hard to obtain reliably. This makes setting up and running new businesses—especially in the manufacturing sector—costly and difficult.

Third, jugaad entrepreneurs face a scarcity of qualified talent. Emerging markets like India, Brazil, and China have huge populations. But only a small percentage of these populations are qualified professionals who can use or deploy the offerings of emerging market entrepreneurs. According to a survey conducted by ManpowerGroup, 67 percent of enterprises in India and 57 percent of those in Brazil have difficulty finding qualified technicians, sales representatives, engineers, and IT staff. As a result, it is hard to sell complex medical devices in rural areas with few qualified doctors. Or to sell PCs to village schools where teachers lack computer literacy.

Finally, jugaad innovators face a scarcity of quality infrastructure. The poor roads and limited transportation options in emerging markets make it difficult to get goods and services to far-flung places in a timely fashion. Moreover, the cost of doing so becomes a huge challenge, limiting the reach of markets in emerging economies.

In addition to pervasive scarcity, jugaad innovators also have to contend with a frugal and demanding consumer base. This consumer base has low disposable income. For instance, three hundred million Indians earn less than \$1 a day. Many of these people either go without or are very careful about what they buy. This forces jugaad innovators to radically rethink price points. Their offerings have to be extremely affordable, not just barely so.

These consumers are also very value conscious. They may be low earners, but they also are high "yearners." Given their high aspirations, these consumers reject new offerings that do not deliver significantly higher value than existing offerings do. This puts a lot of pressure on jugaad innovators to develop higher value offerings at a lower price.

Finally, the consumer base in emerging markets is huge and diverse. Markets like China, Brazil, and India have millions of consumers. But these consumers are not homogeneous. To deliver higher value to a large and diverse base, jugaad innovators have to find clever ways of deriving both economies of scale and scope in whatever they do.

The pervasive scarcity and the demanding nature of the consumer



base make jugaad innovators masters of frugality. Let's consider some of the ways in which they manage to do more with less.

### **Being Resourceful in a Resource-Scarce Environment**

Jugaad innovators are able to get more from less by applying frugality to every activity they perform at every step along the value chain. They are frugal in how they design products, how they build them, how they deliver them, and how they perform after-sales maintenance. Their frugality shows up not only in their parsimonious use of capital and natural resources but also in how they maximize their limited time and energy: rather than doing everything themselves, they rely extensively on partners to perform various operations, thus saving time and energy. The following are some frugal approaches employed by jugaad innovators to gain more from less.

### **They Reuse and Recombine**

Rather than creating something entirely new, from scratch, jugaad innovators are more likely to reuse or seek new combinations of existing technologies or resources both to come up with new solutions and to commercialize them in markets. For instance, Zhongxing Medical, a Chinese medical device maker, borrowed Digital Direct X-ray (DDX) equipment technology from its parent company (Beijing Aerospace)—which wasn't using it effectively—and reengineered DDX for use in everyday applications like chest X-rays. As a result, its X-ray machines cost just \$20,000 to build, compared to \$150,000 for the equivalent GE and Philips models (which use DDX only for high-end applications). By creating low-cost, mass-market applications out of an underused technology, Zhongxing cornered 50 percent of the Chinese X-ray machine market—forcing rival GE to cut its prices by 50 percent while Philips, unable to compete, withdrew from this segment altogether.







**“This mental balancing act – exploring the new while exploiting what’s working – does not come naturally. Companies with a winning strategy tend to refine their current operations and offerings, not explore radical shifts in what they offer. But those companies that can both exploit and explore, research finds, are ‘ambidextrous’: they separate each strategy in separate units, with very different ways of operating and cultures. At the same time they have a tightly knit team of senior leaders who keep an eye on the balance of inner, outer, and other focus.**

**What works at the organizational level parallels the individual mind. The mind’s executive, the arbiter of where our focus goes, manages both the concentration exploitation requires and the open focus exploration demands.”**

—Charles O’Reilly III and Michael Tushman, “The Ambidextrous Organization,” *The Harvard Business Review*, April, 2004

Similarly, jugaad innovators in African countries are leveraging existing cellphone networks to devise frugal business models that make services like health care and banking affordable to more people. In Kenya, for instance, only 10 percent of the population has access to banking services. Yet mobile penetration is over 50 percent. Sensing an opportunity, Safaricom, a local telecoms service provider, 40 percent owned by UK-based Vodafone, launched a service called M-PESA in 2007. M-PESA is an SMS-based (text message) system that enables people to spend, save, and transfer money using their cellphones at a fraction of the cost of money transfer services like Western Union—and *without* having a bank account. Users of M-PESA can convert cash into electronic money that is stored on their cellphones at any one of hundreds of M-PESA outlets, including village mom-and-pop shops that act as M-PESA agents. On receiving an M-PESA user’s cash, the agent texts the equivalent amount in electronic money (e-money) to the user’s phone. The user can then text a part or all of this e-money to either an M-PESA agent or to another M-PESA user. All the e-money in circulation is backed up by real money in a bank account owned and managed by Safaricom. This safeguards the system against fraud while obviating the need for users to have their own bank accounts. As of this writing, over fourteen million Kenyans—or 68 percent of the country’s adult population—have subscribed to M-PESA. This is much more than the number of people who have bank accounts! Migrant workers in Kenyan cities now routinely use M-PESA to safely and cost-effectively transfer earnings to their families who live in remote villages.

### **They Remain Asset-Light**

A second strategy that jugaad innovators use to get more from less is to leverage the

capital assets of others to scale up their business model. This is precisely what Gustavo Grobocopatel did in Argentina. But Grobocopatel is hardly an exception. Many jugaad entrepreneurs in emerging markets choose to operate an “asset-light” business model with as few fixed assets as possible on their balance sheet. Thus, instead of owning physical assets, they rent or share them. This approach not only makes their cost structures lean but also allows them to quickly scale operations up or down to meet shifts in demand without investing in additional assets.

For instance, Indian cellphone companies like Bharti Airtel used this frugal strategy not only to get started but also to turn their industry into one of the largest and most competitive in the world. In the early 2000s, as the mobile revolution was taking off in India, Airtel was short of both the capital and the technology it needed to scale up its business. Undeterred, Airtel’s chairman Sunil Mittal used a jugaad approach to getting more with less: he boldly decided to outsource all but key marketing and branding activities to partner companies that had capital, technology, or both. Today, IBM manages Airtel’s IT infrastructure while Ericsson and Nokia Siemens Network (NSN) manage its network infrastructure. (This might just be one of the first examples of Indian companies outsourcing to Western ones, with both benefiting hugely from the process.) Today Airtel—which boasts over 170 million subscribers—is the world’s largest “asset-free” telecom service provider. It is also the first mobile carrier that dared to outsource all its core network in-

frastructure; most telecom operators prefer to own and manage this in-house given its strategic nature. Its frugal operating model enables it to deliver better value to its customers at less cost. By transforming fixed technology costs into variable costs, Airtel not only succeeded in getting more for less, it also did so at breakneck speed—at times signing up as many as ten million subscribers per month.

### They Leverage Existing Networks for Distribution

A third “more with less” strategy that jugaad innovators use is focused on solving the “last mile” problem—that is, the difficulty of reaching far-flung customers in an economical way. Rather than investing in expensive logistics networks, jugaad entrepreneurs leverage existing networks to cost-effectively deliver their products and services to people in hard-to-reach markets. In particular, they rely on grassroots partners in local communities to reach more customers and personalize their offerings for them. These grassroots distribution partners are often micro-entrepreneurs themselves. By building on already developed and trusted social networks in emerging markets, jugaad innovators can compensate for the poor state of the physical infrastructure there. More important, by enrolling grassroots entrepreneurs as their channel partners, jugaad innovators drive their own financial sustainability while also creating new economic opportunities in local communities. ■



Photo by Dan Terpstra

**Dr. Simone Ahuja** is the founder of Blood Orange, a marketing and strategy advisory boutique with a focus on innovation and emerging markets. Simone serves as part of the Mobius team of Innovation experts. Headquartered in Minneapolis, with partners around the globe, Blood Orange shares and practices innovation principles learned through extensive work in India, including jugaad – a frugal, flexible and inclusive approach to innovation inspired by emerging markets. She regularly conducts ethnographic, background, and academic research on innovation occurring at the grassroots level in emerging markets with social entrepreneurs, to that of US-based multinationals. Simone is the co-author of *Jugaad Innovation: Think Frugal, Be Flexible, Generate Breakthrough Growth* (Jossey-Bass, 2012). *Jugaad Innovation* has been published in the US, Brazil, Holland, France and India, where it is a #1 business bestseller, and has been called “the most comprehensive book yet on the subject” of frugal innovation by the Economist.

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