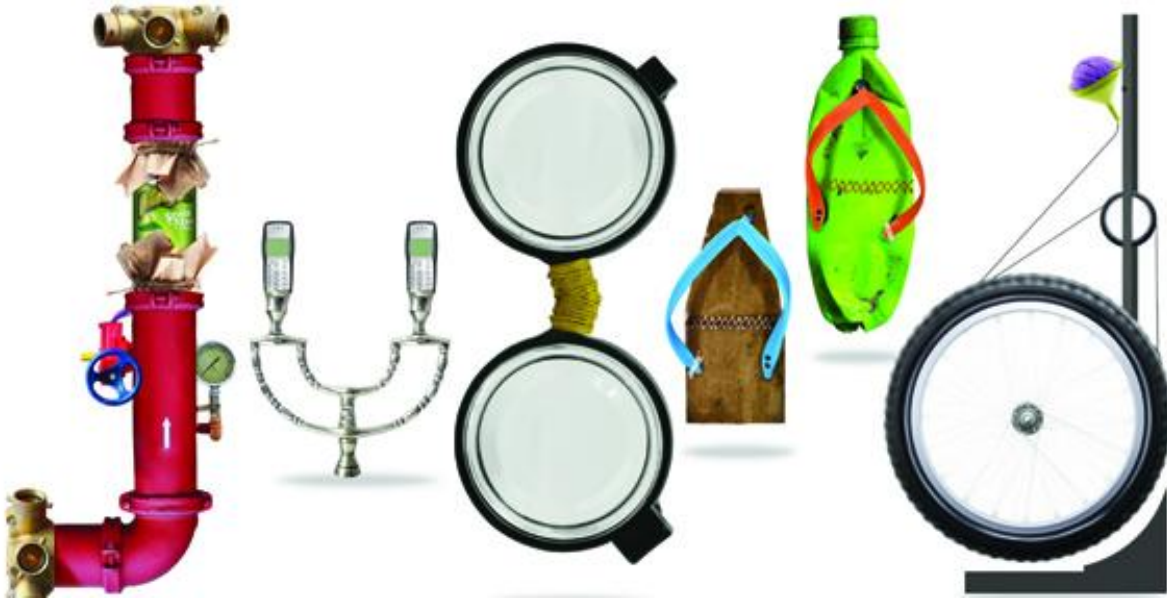


# A touch of frugal genius

October 15 2015

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Detail from the cover of *Jugaad Innovation* by Navi Radjou, Jaideep Prabhu and Simone Ahuja Credit: Penguin Random House

A "gutsy" Indian approach to innovation is being echoed worldwide by multinational companies adopting "frugal" approaches that help them do business faster, better and cheaper.

Indian languages have no word for innovation. But India has jugaad. It means finding practical solutions, being enterprising with resources, and learning from the principles of [flexibility](#) and [frugality](#). Jugaad is bigger than a word. It's a mind-set.

To explain, Professor Jaideep Prabhu, co-author of *Frugal Innovation: How to do Better with Less* published in 2015, points to a small clay box in the corner of his office. "It's an ingenious invention! It consumes no electricity, is 100% biodegradable and produces zero waste."

The MittiCool fridge is the brainchild of Mansukh Prajapati, a potter by trade. Water in an upper chamber of the clay box seeps through the walls of a lower chamber, cooling it through evaporation. In a country where 500 million people live without reliable electricity, Prajapati realised that his clay fridge could provide huge health benefits by keeping food cool without the need for electricity and at an affordable price; he trained a local workforce and started mass production. *Forbes* magazine has since named him among the most influential rural Indian entrepreneurs.

"Emerging markets like India, China, Brazil and Kenya are a breeding ground for ideas like the MittiCool that transform scarcity into opportunity and do more with less," explains Prabhu, the Jawaharlal Nehru Professor of Indian Business at Cambridge Judge Business School.

"Jugaad innovation is one reason why, despite a scarcity of food, water and energy, and limited healthcare and education, India has one of the fastest growing economies in the world."

And now, in a world that is increasingly described as 'VUCA' – volatile, uncertain, complex and ambiguous – the 'winds of frugal innovation are blowing west', as some of the world's top companies are embracing business models that look for simple solutions and then deliver them quickly and at less cost.

Prabhu explains that it is a need-based, bottom-up approach to innovation that has largely not been seen in Western economies since the

early days of the Industrial Revolution. "The more usual pathway today is to channel innovation through large-scale R&D efforts, often with crippling levels of costs, control and time. Take the pharma industry for example: R&D spending rose from \$15 billion in 1995 to \$45 billion in 2009, yet the number of new drugs launched annually dropped 44%."

He adds: "Jugaad is gutsy and different. It's rather like comparing the freedom and improvisation of a jazz band with the set of rules and structures followed in a classical piece of music."

To research the principles of jugaad, Prabhu and co-authors Navi Radjou and Simone Ahuja spent four years talking to rural entrepreneurs and leading Indian and Western companies. The result was their 2012 book *Jugaad Innovation* – the first 'recipe' for how jugaad works and why businesses are adopting its principles in their own innovation programmes.

He gives GE Healthcare as an example. Like other multinationals, GE has set up a large R&D facility in India to tap into India's massive pool of scientists and engineers at reduced costs. "Although they went there initially for labour arbitrage, what they have stayed for is the potential of the local market, and they are innovating for that market in a jugaad way."

Realising that access to expensive medical devices like electrocardiography (ECG) machines was a problem for many thousands of people in rural areas, they developed a low-cost machine that could be carried by doctors from the city to the countryside. "The innovation," explains Prabhu, "was in asking what was the ideal product needed for the purpose, and then reusing off-the-shelf components developed for other applications, in this case bus ticket printers and telephone keypads.

"With the jugaad approach, instead of doing everything yourself, you

look around you and see what's available and you combine them – you join the dots." To date, more than 10,000 of these low-cost ECG units have been sold. Being able to act flexibly is key, Prabhu explains. "Ratan Tata, Chairman of Tata Group, conceived of the Nano car as an affordable, safe alternative to the perilous two wheelers that often carry whole families in India. When sales flagged, they had to re-think their marketing and customer financing, and even the formality of their rural showrooms."

His research in the past three years has charted how what has been the norm for Indian innovators is turning into a global trend as companies across sectors – American Express, Ford, Marks & Spencer and Siemens among them – are becoming part of the frugal innovation revolution.

Marks & Spencer, for instance, unveiled its Plan A 2020 last year ("because there is no plan B"), which set out an environmentally frugal business model to reduce waste, increase energy efficiency and source sustainably.

Post economic crisis, Ford has launched innovation initiatives to become more agile in a future crisis. One of these is a partnership with TechShop that offers access to 3D printers and laser and machine tools – a playground for Ford engineers and members of the public to tinker and bring their ideas to life. Within a year, the tinkerers had helped Ford more than double their output of patentable ideas.

But it's still early days in the revolution. Prabhu and Radjou, co-authors of Frugal Innovation, estimate that around 5% of companies in developed economies are advanced in their frugal innovation journey, 15% have adopted some aspects and 80% have yet to formulate a strategy: "Implementing a frugal innovation strategy in any organisation can be daunting. There is no magic formula." Radjou and Prabhu are not suggesting that traditional innovation pathways involving structured and

rigorous R&D should be abandoned. They see each approach as complementary and part of an 'innovation toolkit' to be used by businesses in developed and emerging markets alike.

"The developed world needs the liveliness and the growth of the emerging markets," says Prabhu.

On the other hand, says Tata, "Indian business needs to integrate the structured Western R&D model of innovation with their free-flowing jugaad model to create a dynamic balance between both approaches in their organisations."

Prabhu concludes: "It's symbiotic – one feeds from the other. Jugaad teaches the West to innovate in ways that are different. But equally, emerging markets must learn about what makes the West the West – the technology, the processes."

"Ultimately, frugal innovation is about people," says Prabhu. "It is human ingenuity that drives innovation – just like Mansukh Prajapati and his clay fridge – seeking opportunity in adversity, doing more with less, being flexible and simple, and following your heart."

Provided by University of Cambridge

Citation: A touch of frugal genius (2015, October 15) retrieved 14 August 2024 from <https://phys.org/news/2015-10-frugal-genius.html>

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