Jugaad Innovation:
A Frugal, Flexible, and Inclusive Way to Grow

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Frontiers of Research on Global Innovation
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Unique Features of Indian Innovators & Innovations

Frugal

Flexible

Inclusive
Thinking Outside the (Ice) Box

Source: http://www.mitticoool.in

Source: http://gizmodo.com
Thinking Outside the (Hot) Box
Thinking Outside the (Hot) Box
Jugaad Innovation

The art of overcoming harsh constraints by improvising an effective solution using limited resources

Gambiarras or jeitinhos in Brazil

Kanju in Africa

Jiejian Chuangxin in China

DIY in the US

Systeme D in France
Why Does India Need Jugaad?

Upwards of 40% of Indians:

- Are unbanked
- Are off the electricity grid
- Have limited access to healthcare and education
The Indian consumer base isn’t homogenous but is divided into five distinct classes:

- "The very rich" (6,000,000)
- "The consuming class" (150,000,000)
- "The climbers" (275,000,000)
- "The aspirants" (275,000,000)
- "The destitute" (210,000,000)

Why Does India Need Jugaad?

Low EARNERS—but high YEARNERS
Why Does the World Need Jugaad?

The World Economic Pyramid

- **Individual daily income (in Purchasing Power Parity)**
  - > USD 55
  - USD 9 - 55
  - < USD 9

- **Population**
  - 0.5 billion
  - 2 billion
  - 4 billion

Source: World Resources Institute
Why Does the World Need Jugaad?

BOP market—$5 trillion
TOTAL BY INCOME SEGMENT

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Why Does the West Need Jugaad?

The West must learn to do « better with less »!
Higher R & D Spending...
Social Entrepreneurs
Mansukh Bhai and the MittiCool Fridge

Miticool – Village Fridge
Innovator: Mansukh Prajapati, Gujarat

It is a fridge made from special clay. It has three chambers, one just for cooling water. It requires no electricity and is a perfect solution for rural areas.
Dr Mohan’s Mobile Diabetes Clinic

Source: http://www.drvmohan.com/

Source: http://www.worlddiabetesfoundation.org/composite-2731.htm
SELCO SOLAR

Posted On: April 16, 2009
Posted In:

SELCO Solar Pvt. Ltd, a social enterprise established in 1995, provides sustainable energy solutions and services to under-served households and businesses. It was conceived in an effort to dispel three myths associated with sustainable technology and the rural sector as a target customer base:

1) Poor people cannot afford sustainable technologies;
2) Poor people cannot maintain sustainable technologies;
3) Social ventures cannot be run as commercial entities.

SELCO aims to empower its customer by providing a complete package of product, service and consumer financing through grameena banks, cooperative societies, commercial banks and micro-finance institutions.
Embrace Baby Warmer
(Winner of the Economist Social Innovation Award 2013)
Envirofit’s Compact Stoves
Large Indian Organisations
Tata and the Nano

Tata “Swach” Water Filter
Aakash Tablet

$35 TABLET FROM INDIA
Multinationals in India
GE and Affordable Innovation

ECG machine designed specifically for India’s rural markets

Portable, light, battery operated, reliable, cheap

Launched in China, and now in the US after having got FDA approval
Siemens: Foetal Heart Monitor
Siemens’ SMART Products

Simple, maintenance free, affordable, reliable, timely to market

Micro-processor cameras for Indian industrial markets

Processing lines in food industry or engine parts

Sees each biscuit in terms of colour and thickness
The Nokia 1100

Specifically for emerging markets:

- Dustproof keypad and front face
- Built-in flashlight

Over 200 million sold since late 2003

World's best selling handset and consumer electronics device
The Proposition Is Simple

Cash In Cash Out
Person 2 Person Transfer
Airtime Top-Up
Merchant Payment
Bill Payment
ATM Withdrawals
Social Payments
International Transfer
M Kopa Solar Lighting Solution
(Uses M Pesa as a Payment Tool)
Jugaad in the West?
Design for America and Swipe Sense

To solve problems in health care, education, and energy in the US

Hospital acquired infections: 2 million people
100,000 deaths each year
$2-4 billion dollars in costs to the healthcare industry
Ebon Upton and the Raspberry Pi

“Design intended to inspire schoolchildren and adults to program sees overwhelming demand as first versions go on sale”

“Demand for Raspberry Pi, the British £22 computer, crashes website”
Barclay’s PingIt

Barclays’ P2P money transfer app

Passes 500,000 downloads in 3 months after launch
Mr. Immelt said he expected health-care products developed in India to be exported to the rest of the world. "Some of these models and products have applicability in Europe and the U.S.," he said.
Implications for Research and Practice
Mindsets and Behaviour

Supply side issues

Demand side issues

Joint supply and demand side issues
Supply Side Issues: Large Firms

Focus more on low income consumers

Shift from technology push to market back

Shift business model from more for more for less to more for less for more
Supply Side Issues: Small Firms

Focus more on achieving scale

Escape fatalistic/subsistence mindset

Leverage partnerships
Demand Side Issues

The affordable versus aspirational tradeoff

Traditional contexts versus modern technologies
Joint Supply-Demand Issues

Get the business model right to ensure business viability as well as consumer uptake and impact

Get the design right

Get the appeal right
Joint Supply-Demand Issues

The importance of continuous experimentation and validation

Pilots, RCTs and measurement
Conclusion

The emerging world needs frugal, flexible, and inclusive innovation

The West can gain by engaging with counterparts in emerging countries

Together we can improve lives everywhere
Thank you!