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Entrepreneurship and Innovations in Developing Countries

van Beers, Cees

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Entrepreneurship and Innovations in Developing Countries

Centre for
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in Africa

Cees van Beers

Delft University of Technology
Department Technology, Policy and Management,
Section Economics of Technology and Innovation
Centre for Frugal Innovations in Africa



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Contents

1. Entrepreneurship: academic observations
2. Innovations for and in developing countries
3. Entrepreneurship in developing countries as business model
4. Entrepreneurship in developing countries: inclusiveness

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Entrepreneurship: academic observations

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Not much attention for entrepreneurship in economic theory:



- Kirzner: entrepreneurs are equilibrium restoring
Kirzner, Israel M. Competition and Entrepreneurship. 1973

- Schumpeter: disequilibrium through creative
destructions with new combinations
Schumpeter, Joseph A. The Theory of Economic Development. 1911
(German) 1934 (English).

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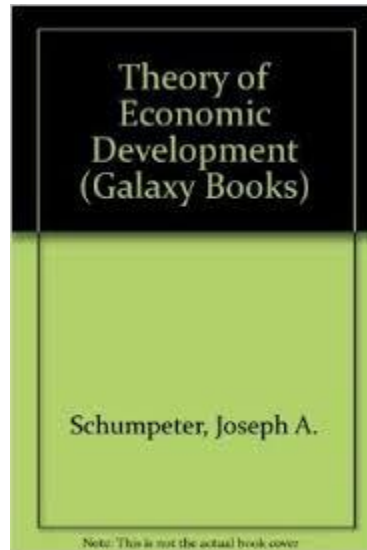


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Entrepreneurship: academic observations

Innovation is a dominant force in economic transformation
(Schumpeter, 1911)



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Entrepreneurship: academic observations

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Baumol explained the success of a capitalist economy out of entrepreneurs creating wealth producing activities.

It is about entrepreneurial behavior:

- can take place in start-ups, existing (large) firms) and governments
- wealth generation most in countries with rule of law and economic freedom
- wealth destruction in lobbying activities in societies with large governments

Baumol, William J. “Entrepreneurship: Productive, Unproductive and Destructive.” *Journal of Political Economy* 98, no. 5 (1990): 893–921.

Baumol, William J. *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism*. Princeton: Princeton University Press, 2002.



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Technological innovations in developing country context: technology transfer

- 1960s: Multinationals rich countries as transfer mechanism
- 1970s: Appropriate Technology (small is beautiful, Schumacher)
- Now: High Technology solutions lead to low technology applications through frugal innovations
 - ICT- and Nanotechnology: less need of scale economies
 - demand for new business models: role of entrepreneurship?



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Structural economic changes in business environment 1990-now:

- Liberalization of international trade and capital flows
- High economic growth (GDP), particularly in developing countries: strongly visible since crisis of 2008:
 - rising middle class
 - Bottom-of Pyramid
(those living from \$ 2,- a day maximum)



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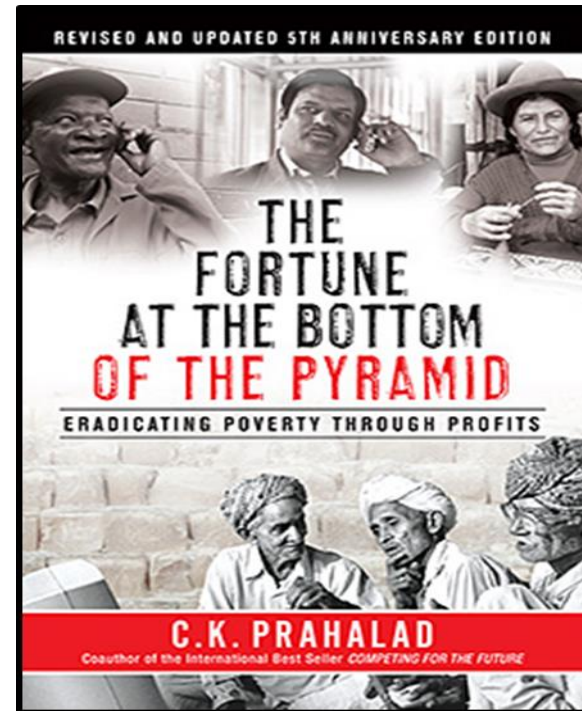
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Bottom of Pyramid important though
neglected market

Prahalad, C.K. and A. Hammond, 2002.
Serving the World's Poor Profitably,
Harvard Business Review, 80(9): 48-57.

Prahalad, C.K. 2012, *The Fortune
at the Bottom of the Pyramid*, Pearson
Education Publishers.



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Frugal Innovations:

- Dramatically lowering costs
- Designed & engineered specifically to target Bottom of Pyramid consumers and lower middle class segment's preferences while taking into account local constraints (example: TAHMO).
- User value for money and technological sophistication



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- **Leiden:** medical anthropology, Africa know-how, history, law (IPR)
- **Delft:** engineering, design, innovation management/ entrepreneurship, ethics
- **Erasmus:** inclusive business models, local economic development



Case Study Frugal Thermometer:

- Robust, easy to use,
- Fits in local health system,
- Reduces pressure on health system

Next step: is there a business model?



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- Portable electrocardiogram for rural areas in India
- Sold at 10% of price for electrocardiograms developed for the US market

*General Electric, Portable
electrocardiogram (ECG)*



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But there is more
below the surface



Schumacher meets Schumpeter: Kaplinsky
(2011), *Research Policy*

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Technology very important but there is more..... :

Requires two elements:

- Business models: private firms are the new actors, both MNCs and SMEs
- Elements of inclusive or responsible innovation through:
 - Maintaining quality (standards)
 - Value-sensitive design (BoP and emerging middle class)



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Different kind of business models

- a) Multinational enterprises: Phillips, General Electric, Unilever, Tata: MNEs most dominant business model
- b) Small and medium entrepreneurs
- c) Hubs: Start up (**local**) entrepreneurs
- d) **Polycentric innovation: combination of a) with b) or c)? (global value chains, global diffusion of capabilities)**



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Small and Medium Entrepreneurs

Kaplinsky (2011): Innovations below the radar

- SMEs are key providers of tailor made products and services for low income consumers
- Role of informal sector
- Mechanism to migrate from informal to formal sector



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Start ups (local) entrepreneurs

- Innovation, Tech and Business Hubs are widely spread across (regions of) Africa
- Large Digital Dividend
- High failure rate

Contribution ICT to GDP:

Kenya: 8% - 12%	Rwanda: 4% - 8%
Senegal: 11%	South Africa: 8% - 10%
Nigeria: 9% - 10%	Uganda: 7%



Source: www.africahubs.crowdmap.com



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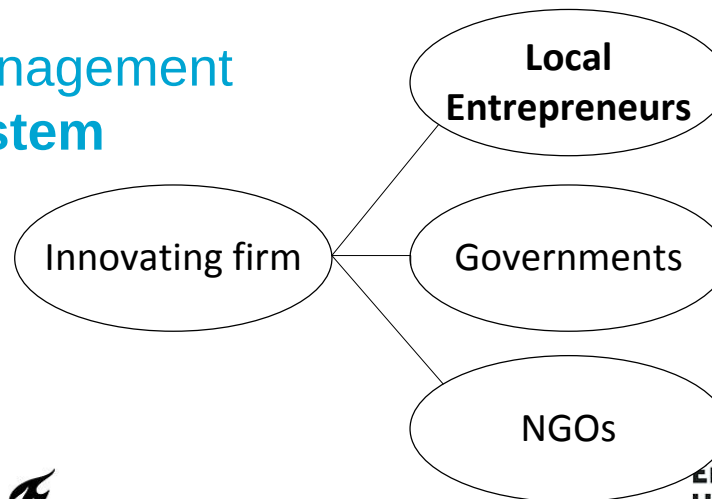
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Polycentric innovations

- Inclusive business models: **link between profits and local economic development**
- From traditional product management to a **new business eco-system leading to inclusive frugal innovations**



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1. Low-income customers demand new products, services and systems addressing specific constraints in local economy (M-Pesa)
2. Local (female) entrepreneurs contribution to global value chains be improved by frugal innovations that reduce unreliability and instability of existing technological and institutional infrastructures



Example: frugal weather stations provide data that can be communicated to farmers by cell phone improving decision making.



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How to bring in inclusiveness?

1. Local Economic conditions included

by means of

2. Local Entrepreneurship



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Advantages Local Entrepreneurship in Polycentric business models

1. Distribution channel rolling out innovations to local communities, particularly relevant in remote areas.
2. Important sources on local user values but and hence important as (co-) innovators providing new ideas and values in Innovation process.



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Some conclusions

1. Much Kirzner kind of entrepreneurship in LDCs but Schumpeter's entrepreneurship more desired to bring disruptive change through technological innovations
2. Frugal Innovations are important for supplying BoP markets with affordable and inclusive goods, services or systems.
3. Entrepreneurship is a business model helping frugal innovations to become suitable for BoP customers
4. Local entrepreneurship can contribute to inclusiveness of frugal innovations.



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