Innovation for development and poverty reduction: an integrative literature review

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Abstract

Purpose
This paper develops a critical analysis of the innovation discourse, arguing that a more contextualised understanding of the challenges of innovation for development and poverty reduction in low income economies will help us to unravel new development opportunities and provide alternatives to conventional capitalist paths to innovation.

Design/methodology/approach
We offer an integrative review of the literatures addressing the topic of innovation emerging from within developing countries. We argue that a literature review that offers an initial conceptualisation and synthesis of the literature to date on the theme of innovation from within developing countries provides for a more valuable contribution than a reconceptualization of existing models.

Findings
The article highlights different narratives of innovation, their emergence their implications.

Originality/value
This article shows that the recent evolution of the discourse of development is increasingly intertwined with elements that originated in other discursive worlds. The last three decades of innovation research have been characterised by a 'cross-pollination' between different disciplines: development studies, science and technology studies (STS), business management and organization studies.

Keywords: innovation, development, emerging economies, sustainability, literature review.

Introduction – The challenge of innovation for development

This paper develops a critical analysis of the innovation discourse, arguing that a more contextualised understanding of the challenges of innovation for development and

poverty reduction in low income economies will help us to unravel new development opportunities and provide alternatives to conventional capitalist paths to innovation. There is no shortage of scholarship arguing that innovation stemming from scientific and technological excellence, and often driven by firms, is critical to the sustainable development of our societies. The bulk of this literature has tended to focus on innovation practices in the context of industrialised countries in North America, Europe and Japan. In this literature, hope for change is still mainly embodied in the idea of scientific and technological progress. Science and technology are argued to lay the foundations for widespread wellbeing at the beginning of the twentieth century, and there is no conspicuous reason to think that they will not deliver increasing benefits in the future. However, the features of socio-technical innovation and development that prevail in the standardised setting of industrialised countries can become fuzzy and elusive in the context of less developed regions, where exacerbated social and environmental problems call for a better alignment of our innovation models. Innovation in this scenario hardly fits the traditional label of a *'creative process of novelty'*. It contests the very teleology of innovation by supporting the idea that innovation underpins a purpose, a goal that is not just novelty for the sake of novelty (or for the sake of profit). We posit that the purpose that leads us to innovate and change our social lives or the tools we use in our daily lives is not exclusively linked to the progress of science and technology but also to the fundamental political questions: why do we want to change? Why do we need to change? How are we going to change? Who will win or lose after the change?

In this article, we offer an integrative review of the literatures addressing the emerging topic of innovation emerging from within developing countries. Because existing innovation models are generally presented in ways that reflect practices and thought patterns inherent to the industrialised world, a literature review that offers an initial conceptualisation and synthesis of the literature to date on the theme of innovation from within developing countries provides for a more valuable contribution than a reconceptualization of existing models. The paper is organised as follows. We first describe the methods that we used to review the literature. Than we maps the narratives of innovation for development identified in the extant literature. Finally, we critically discuss these narratives.

Methods: selection and classification of literature sources

At the end of the decade of the 1990s the topics of development and poverty, once dominated by development economists, had gone largely under the radar of

management, organization and innovation scholars (Pansera, 2013). Intriguing and provocative concepts such as '*frugal innovation*', '*reverse innovation*', '*Jugaad innovation*', '*BOP[1] innovation*', '*Gandhian innovation*', '*empathetic innovation*' and '*pro-poor vs. from-the-poor*', '*long tail and long tailoring*' innovation, '*below-the-radar innovation*' and '*inclusive innovation*' have begun to appear in the work of innovation business and organization scholars. These forms of innovation are characterised by conditions of material, financial, and human resource scarcity, resource insecurity and concerns regarding environmental sustainability.

In order to explore the evolution of the extant academic literature and identify notable emerging discourses linking innovation and development we carried out two keywords searches in Scopus and Web of Knowledge. Based on the above reasoning, for the database queries, 12 keywords were selected: *"frugal innovation", "bottom of the pyramid[2]", "bottom of the pyramid innovation", "inclusive innovation", "jugaad", "gandhian innovation", "pro-poor innovation", "below the radar innovation", "resource constrained innovation", "Inclusive growth", "inclusive development", "grassroots innovation".* The bibliometrics analysis shows that the first paper appeared in 2005 and that the literature production exhibited a strong increase from 2010. From the two keywords searches we gathered a database of 218 papers. The final database contained 230 publications.

In order to understand the proliferation and use of the above mentioned concepts within the academic community we planned a network analysis of the keywords selected. The idea behind this analysis was to explore the academic communities that are using the keywords and understand the concepts that are used in conjunction with such buzzwords. Such an analysis potentially reveals the diffusion of certain notions among different fields and communities of scholars. We thus performed a network analysis with the help of the free open-source software Gephi[3]. Gephi is an interactive visualization platform that allows the analysis of complex networks and complex systems. We used the database to create a network of keywords and their relations (Figure 1). Each node of the network represents a keyword and each link between 2 nodes indicates that the 2 keywords appear in the same paper. The thickness of the link is proportional to the number of times the 2 keywords appear in the same paper. In order to make the visualization of the 517 keywords present in our database possible, we grouped the

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[1] The notion 'Bottom of the Pyramid (BOP)' is usually indicates those living on less than 2 US dollars a month (Prahalad, 2010).

[2] The keyword "Bottom of the Pyramid" was also searched in its following variations: "Base of the pyramid" and "Base of economic pyramid".

[3] Gephi is freely available at: https://gephi.org/

keywords in macro groups. For example, we grouped all the keywords related to the concept of inclusion in the macro group 'Inclusive growth', and all the possible formulations of 'Bottom of the pyramid' in the macro group BOP. Finally, we applied a Louvain algorithm to discover the communities' structure of our network. The algorithm is designed to detect '*big aggregators*' i.e., those nodes that are more connected than the others (Blondel et al., 2008). The algorithm detected four major communities: Inclusive growth, BOP, (Resource - constrained Innovation and Sustainability. Surprisingly enough, the keyword sustainability was not initially included in the 12 original keywords. A more accurate manual analysis reveals that in each community there are at least a couple of sub-communities. The dominant aggregate is grouped around the concept of '*inclusive growth'* that contains the concepts of inclusive development, growth and social inclusion. Related to this concept we find two subgroups. One is composed of the literature that deals with the use of traditional knowledge in development, the other deals with the topic of inequality. The second dominant aggregate is the BOP. The community is situated between the concepts of inclusivity and innovation. Particularly important seems to be the presence of a sub-community of scholars that focus on microfinance. A relevant concept related to the BOP is also ICT technology, especially mobile technology. The third community in size is composed of two major aggregates: sustainability and grassroots. Particularly interesting is the presence of a sub-community focused on non-mainstream economics that publishes on topics such as '*de-growth and new economics'*. Finally there is the community of innovation that contains concepts like '*frugal innovation, reverse innovation or affordable innovation*'. Within this community there is a sub-community that focuses on legislative issues. A quite distinct and relevant sub-community within the innovation community is the '*India'* community. This contains concepts like '*Jugaad, poor consumers'* and fancy words like '*Indovation or Hindolence'*.

In the following sections we describe in detail the four macro-communities that emerge from the network analysis: (resource-constrained) innovation (RCI), BOP, grassroots innovation and the notion of Inclusive growth.
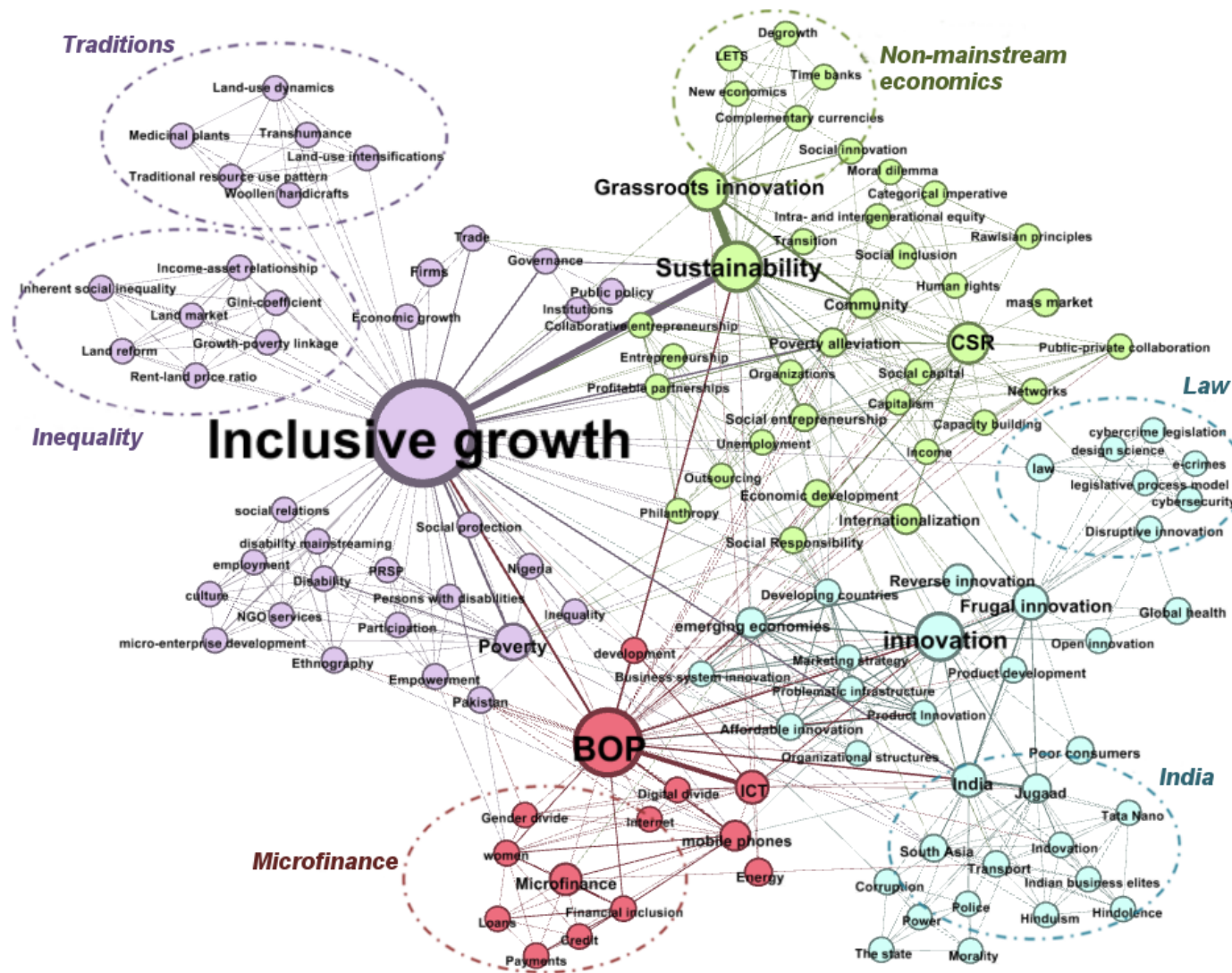
Traditions

Land-use dynamics
Medicinal plants
Transhumance
Land-use intensifications
Traditional resource use pattern
Woollen handicrafts

Non-mainstream economics

Degrowth
LETS
Time banks
New economics
Complementary currencies
Social innovation
Moral dilemma
Categorical imperative
Intra- and intergenerational equity
Rawlsian principles

Grassroots innovation
Sustainability
Transition
Social inclusion
Human rights
mass market
Community
CSR
Public-private collaboration

Inequality

Income-asset relationship
Inherent social inequality
Gini-coefficient
Land market
Growth-poverty linkage
Land reform
Rent-land price ratio

Trade
Governance
Firms
Economic growth
Public policy
Institutions
Collaborative entrepreneurship
Poverty alleviation
Entrepreneurship
Organizations
Social capital
Networks
Profitable partnerships
Capitalism
Capacity building

Inclusive growth

Social entrepreneurship
Unemployment
Income
Outsourcing
Economic development
Internationalization
Philanthropy

Law

cybercrime legislation
design science
e-crimes
law
legislative process model
cybersecurity
Disruptive innovation

social relations
disability mainstreaming
employment
PRSP
Disability
Nigeria
Social protection
culture
NGO services
Participation
Persons with disabilities
Inequality
micro-enterprise development
Ethnography
Poverty
Empowerment
Pakistan
Social Responsibility
development

Reverse innovation
Developing countries
Frugal innovation
Global health
emerging economies
innovation
Open innovation
Marketing strategy
Product development
Business system innovation
Problematic infrastructure
Product Innovation
Affordable innovation
Product innovation

BOP

Organizational structures
Poor consumers
India
Jugaad

India

Tata Nano
Innovation
Indian business elites
Hindolence
Hinduism
Transport
South Asia
Corruption
Police
Power
The state
Morality

Microfinance

Gender divide
Digital divide
ICT
Internet
mobile phones
women
Energy
Microfinance
Financial inclusion
Loans
Credit
Payments

Figure 1 Systematic literature review network analysis

Findings: Narratives of innovation for development

Resource-Constrained Innovation (RCI): Bricolage, Frugality and Jugaad

An attempt to theorise RCI, or '*scarcity-induced innovation'*, lies in the work of Srinivas and Sutz (2008). They argue that in the academic literature there has been a misguiding quest for *innovation uniformity* (i.e. the idea that the conditions needed to innovate are the same in any given context) that has side-lined the study of the capabilities needed to innovate in conditions of scarcity. The mainstream of innovation studies focuses on those innovations that occur in efficient innovation systems, while RCI usually takes place in a huge variety of different contexts and cannot be analysed using the same intellectual arsenal. Even more importantly, the innovation process in resource-constrained environments is not necessarily an earlier stage or the precursor of a fully-fledged innovation system. A more organization-centred approach is presented in the *bricolage* literature. The notion of *bricolage* introduced by the anthropologist Levy-Strauss has been recently rediscovered to describe the condition of resources scarcity within organizations. According to Levy-Strauss, the *bricoleur* "*is […] someone who works with his hands and uses devious means compared to that of the craftsman […] is adept at performing a large number of diverse tasks*" (Lévi-Strauss, 1966, pp 16-18). The concept was introduced in the business literature at the beginning of the 21st century by Baker et al. (2003) and Garud & Karnøe (2003). The *bricoleur* firms "*refuse to conceive scarcity as a limit*" (Baker & Nelson, 2005) and develop a number of strategies to cope with it.

A number of examples document the *bricolage* activity of MNCs in emerging countries such as India and China (Immelt, Govindarajan, & Trimble, 2009; Prathap, 2014). In this body of literature the concept of *bricolage* is usually replaced by the concept of *frugality* (Bhatti, 2013). Bricolage and frugality have vernacular equivalents in many languages. In India, for instance, frugal innovations are indicated by the Hindi world '*Jugaad'*. *Jugaad* colloquially means a creative idea or a quick workaround to get through commercial, logistic or law issues (Radjou, Prabhu, Ahuja, & Roberts, 2012; Sharma & Iyer, 2012). The word *gambiarra* in Brazil and *chapuza* in Spain indicate shoddy work carried out with minimal means. The terms *zizhu, chuangxin* or *shanzai* in China indicate the low-cost counterfeiting manufacturing. Solution D in France, *jua kali* in Africa, *DIY* in the US and the art of *arrangiarsi* in Italian, all indicate bricolage attitudes. Those solutions share some very basic features (Rao, 2013) : They must be i) robust to deal with infrastructure shortcomings such as voltage fluctuation; ii) fault

resistant to cope with unsophisticated or even illiterate users; iii) affordable for larger sections of the society.

Evolution of the Bottom of the pyramid (BOP) discourse

One well known and influential literature is the so-called 'BOP literature'. The notion of BOP was introduced by Prahalad in 2005 in his book '*The fortune at the bottom of the pyramid: eradicating poverty through profits*' (Prahalad, 2010): We will introduce this as 'BOP1'. The main argument posited by Prahalad's work is that the poor are un-served consumers who represent an immense unexploited market. In a nutshell: *'doing more with less and for more people*' (Prahalad & Mashelkar, 2010; Prahalad, 2010, 2012). According to these scholars, those institutions that would be best placed to implement such a strategy are MNCs (Kanter, 2008; Rosenbloom & Althaus, 2007). The underlying philosophy of the BOP approach is that the quest for profit can *simultaneously* generate economic growth and deliver social value: '*making money by doing good'* (Agnihotri, 2013; Bardy, Drew, & Kennedy, 2012; Chakravarti, 2007; Faulconbridge, 2013; Seelos & Mair, 2007).

In a review of the BOP literature, Kolk et al. (2013) analysed 104 articles published in journals or proceedings over a 10-year period (2000-2009) and concluded that the BOP concept had drastically evolved following Prahalad's original call to MNCs. This first formulation of the BOP perspective (following (Arora & Romijn, 2011) and which I have referred to as 'BOP 1') has been further elaborated to overcome the lack of institutional perspective inherent within Prahalad's original work. In the BOP 1, the actors are depicted as isolated, without any attempt to describe the institutional, cultural and even historical settings that are at the base of poverty. The following literature identified by Kolk et al., that we will call BOP2, updates the '*poor-as-consumers'* perspective by analysing the criticisms levelled at the BOP1 perspective. In the book '*Next Generation Business Strategies for the Base of the Pyramid*' (London & Hart, 2011), Hart and London revisited the BOP1 perspective, introducing the concept of '*co-creation with the poor'*. This new framing still however emphasises a central role for MNCs in eradicating poverty in which the *co-production of economic profit and social value* underpinned by a free market economy, innovation and western style democracy is still key (London & Hart, 2004; London, 2009).

Critics of the BOP approach

From the literature review, the BOP1/2 narratives emerge as dominant frames in the business and management literature. Despite its hegemonic position within the business community,

the BOP narratives have been the subject of increasing criticism (Arora & Romijn, 2011; Kolk et al., 2013; Landrum, 2007). Right from the first appearance of Prahalad's book, the BOP approach as a way to alleviate poverty has been questioned (Walsh, Kress, & Beyerchen, 2005). According to those authors, the BOP approach fails to understand the effects of MNCs strategy on socio-economic development in the developing world. Many feminist NGOs for example strongly criticised the case of Unilever's advertisement of skin whitening products that allegedly promoted racist messages among disadvantaged women in rural India (Karnani, 2007). Moreover, the environmental perspective, Pitta et al. (2008) argue, is almost untouched. Selling shampoo in smaller packaging, as Prahalad suggests and Procter & Gamble is already doing in India, will actually increase waste with minimum impact on the poor's welfare.

Appropriate technology and grassroots innovations

The consumption-based perspectives described above have been opposed by social movements, grassroots movements and many Non-Governmental Organisations (NGO) (Smith, Fressoli, & Thomas, 2014). Social and grassroots movements have been more concerned with empowering local communities and enhancing the indigenous potential to innovate (Seyfang & Haxeltine, 2012). Moreover grassroots perspectives acknowledge technology and innovation are neither socially nor politically neutral, nor sufficient to overcome the problems of poverty and social exclusion and global justice within a capitalist setting.

A first attempt to develop a bottom-up approach to innovation and technology was the seminal work of Schumacher in the 1970s that ignited the debate on the notion of '*intermediate or appropriate technology*'. Schumacher's approach privileges people over markets when he explicitly states: "*Instead of mass production, we need production of the masses*" (Schumacher, 1973). According to Schumacher, the quest of developing countries to catch up with industrialized countries by making a technological leap would increase inequality and poverty. By the end of the 1970s, organizations active in appropriate technology were present in about 90 different countries, some of which enjoyed financial support from the state (Smith et al., 2014; Smith, 2005). Despite its diffusion, the movement quickly lost its momentum in the early 1980s. However, the neoliberal turn embodied in the agenda of Structural Adjustments promoted by the World Bank shifted innovation policy towards the model of technological catch up, seeking to replicate the successful experience of the East Asian countries (Kaplinsky, 2011). Furthermore, according to Smith et al. (2014), the movement failed to fulfil its promises of delivering community empowerment and promoting local ingenuity.

The principles of the appropriate technology movement nowadays have been revisited by *grassroots innovation movements.* A. Smith et al. (2014) identify at least three major grassroots groups in developing countries: the People's Science Movement and the Honey Bee Network in India and the technologies for social inclusion movement in Latin America. This phenomenon is present in low-income countries (Gupta et al., 2003) but it has also diffused in industrialized countries as several scholars (Seyfang & Smith, 2007), especially in the UK, have proved. Other aspects of grassroots innovation have been analysed by those scholars interested in user-led innovations. Low-cost innovation niches, for instance, are highly diffused among lead users in developed countries in different fields, serving to decrease the innovation cost with respect to formal R&D activities (Von Hippel, 2005). The rising phenomenon of the DIY culture of the *makers' movement* is another example of grassroots innovation (Honey & Kanter, 2012; The-economist, 2011).

An emerging overarching discourse: Inclusive growth and inclusive innovation

More recently both top-down, consumption based and bottom-up, grassroots perspectives have been combined within concepts that include 'inclusive growth', 'inclusive development', 'inclusive innovation', 'Inclusive innovation systems' and 'Inclusive Business Models' (George, McGahan, Prabhu, & Macgahan, 2012). Although vague and heterogeneous, the concept of inclusiveness in these three formulations (i.e., development, growth and innovation) advocates for a more equal and fair distribution of the economic benefits of innovation, development and economic growth, evoking concepts of social justice and equity. One reason for this lack of specificity may lie in the fact that the concept of inclusiveness is a buzzword that encloses a huge number of notions, meanings and frameworks. The underling perspective of inclusivity, although elaborated by several authors with distinct perspectives, is very straightforward: the process of development, while it has created richness for a few people, has excluded a vast portion of humanity. The question as to what type of innovation can produce inclusive development (and how) remains one on which the academic community is divided. As we showed earlier, at least in the business and economic community the BOP perspective appears to be highly influential or even dominant when compared to the grassroots perspective. The main argument of the BOP1/2 supporters is that organizations (i.e., MNCs) can and must engage in social innovation activities to empower disadvantaged groups and foster social and economic growth. Similar to the BOP1/2 approach, inclusive innovation promotes the development of innovative capability to produce low-cost, reasonable quality products or business models in developing countries which are then exported to other low-income countries. According to George et al (2012), inclusive innovation is the

"*development and implementation of new ideas which aspire to create opportunities that enhance social and economic well-being for disenfranchised members of society*".

Discussion

We argue that the debate about technical change, poverty and development is alive and kicking. The business and management communities have now joined their colleagues in development studies to contribute to this debate, re-shaping the way academia understands and frames crucial concepts such as development, poverty and well-being, through narratives of e.g. innovation and inclusive business models. This cross-pollination has created diverse and heterogeneous frames (**Error! Reference source not found.** is a non-exhaustive summary of the narratives identified). It is virtually impossible to classify the literature analysed into a set of clearly defined and fixed categories. Any taxonomy will degrade the complexity of each approach and would not take into account the fact that ideas, meanings and principles overlap and are dynamic in practically all the works considered.

Table 1 Innovation and development narratives

	Main actors	Overarching Narrative	Purpose / Motivations	Key authors
BOP 1	MNCs	MNCs have to transform the poor into consumers by providing affordable products	Opening underserved markets. Fighting poverty with a profit based approach	(Prahalad, 2010)
BOP 2	Synergies between MNCs, small firms, NGOs, communities	Adapts BOP1 in that MNCs can serve better the BOP by creating alliances with local agents	Opening underserved markets by fostering global-local cooperation	(Hart & Christensen, 2002; Ted London & Hart, 2004; Prahalad & Mashelkar, 2010)
Bricolage, Frugality, Jugaad	Any firm or individual	"*Doing more with less*" for necessity as an individual, for growth as a firm	Reduce resource use and/or create competitive advantages	(Baker & Nelson, 2005)
Grassroots innovation, Appropriate technology	Common people and communities	Ingenuity of the poor is huge and must be promoted by public institutions to create affordable and inclusive solutions	Empowerment of local communities. Meeting basic needs endogenously.	(Gupta, 2012; Seyfang & Haxeltine, 2012; Smith et al., 2014)
Inclusive growth	Any	Economic development/growth alone is not sufficient to distribute equally its benefits	To extend the benefits of economic development/growth to those who have been excluded Equality, wellbeing improvement, empowerment.	(George et al., 2012; I. Sachs, 2004)

Innovation as a battle field of competing narratives

The literature analysed, nevertheless, presents at least three major trends: *Business-as-usual, reform and transformation*. The first trend tends to transfer *laissez faire*, neo-liberal principles into the development field and, as a consequence, considers development-oriented technological change/innovation as something compatible with and achievable within free market dynamics. This trend is clearly visible in the early BOP literature. The poor are conceived as 'recipients of innovation' and *consumers*. In the more recent BOP literature this trend has being modified by adding complexity to the way scholars look at the field. They realised that turning the poor into consumers of products designed elsewhere did not even scratch the surface of the complex phenomenon of poverty and underdevelopment. As a consequence they developed a number of refined formulations of this perspective to overcome the narrow view of the pure market-driven innovations. The BOP2 narrative considers the poor *as co-producers*, *intermediaries* and in some cases even *entrepreneurs.* The business-as-usual perspective is replaced by a scenario open to *alliances* and collaborations between stakeholders with very different backgrounds and motivations (i.e., NGOs, local communities, small and big firms).

The second trend (i.e., 'reform') that emerges from the review remains only marginally influential in the academic arena. This trend is advocated by those who focus on the countervailing movements at the margin of the dominant discourse of neo-liberal expansion. This trend looks at the poor, but more generally at 'common people', as potential self-organised producers and entrepreneurs. This is, of course, a hugely variegated group that include a few scholars and also activists, practitioners and even indigenous groups. The underling discourse that shines through this heterogeneous and scant literature is a call to reform the current, locked - in development paradigm based on the mono-culture of market mechanisms. They also stress the idea that '*technological innovation is a contextual process whose relevance should be assessed depending on the socio-economic condition it is embedded in'* (Srinivas & Sutz, 2008: 129).

Finally, the network analysis shows that the area of grassroots innovation is connected to a number of 'non-mainstream' approaches to management and economics. These publications are not directly related to the topics of innovation for development and poverty reduction, thus, for the sake of brevity we do not treat it here in details. It is enough to say here, that this very small minority (i.e., the 'transformation' group) openly question the model of development that has been promoted in the post-WWII era (Fournier, 2008; Kallis, 2011; van Griethuysen, 2010). This community questions the basis of the notion of development and progress: i.e. the

fact that history is a linear evolution of never-ending progress where technological and economic growth is always inevitable and necessary.
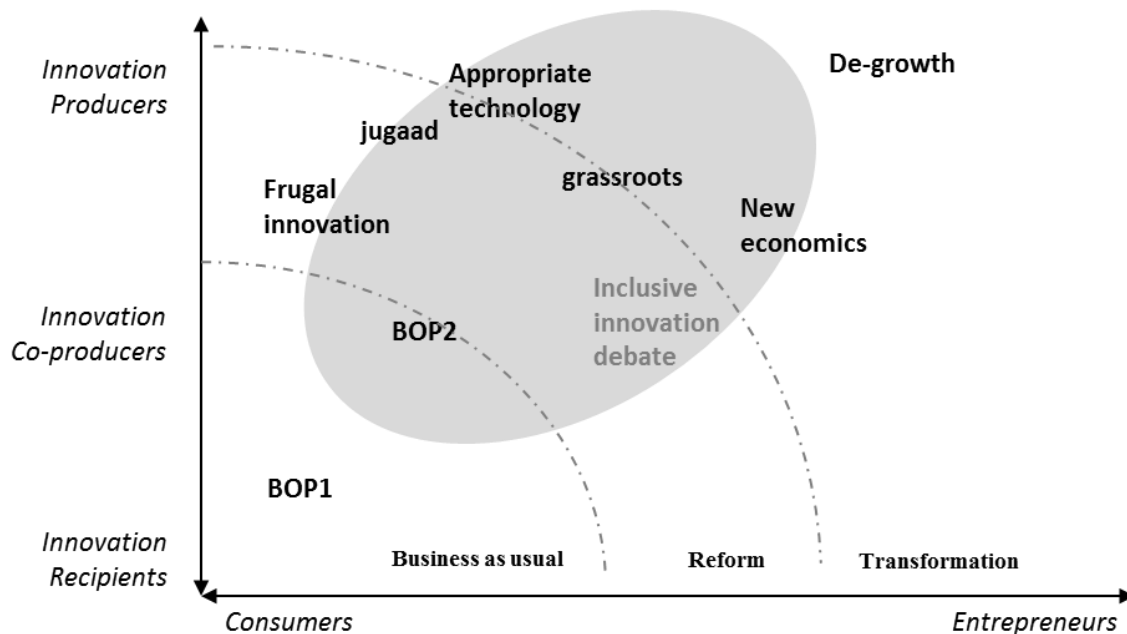

Figure 2 Framing innovation for development

Conclusions

The word *innovation* – and all its variants such as frugal, grassroots, BOP, inclusive, blow-back, reverse, gandhian, jugaad or resource constrain innovation – might be suitably welcome in the family of what Cornwall (2007) calls the *development's buzzwords.* In this sense the article shows that the recent evolution of the discourse of development is increasingly intertwined with elements that originated in other discursive worlds (e.g. 'innovation', 'technical change', 'inclusiveness'). The focus on technological change and in particular on its neoliberal formulation framed in terms of innovation and competitiveness has become central in the development practice. The original mission of 'development cooperation' turned into the 'development of competition'. The examples illustrated by the new trend of business studies focused on Frugal, Inclusive or Jugaad innovation show that in the so-called developing word this task in the practice is conducted through a slow transformation of the pre-existing social practices. This change is supported by powerful narratives that legitimise the new practices and present them as inevitable. If they want to survive, poor must be more productive, more competitive, more organised, more educated, more innovative; they must use more energy, they must consume more market products and services. Nevertheless, those narratives are often contested, sometime rejected. The same happens to those buzzwords that constitute

the backbones of those narratives. Words like innovation and technology are twisted and forced to serve different meanings that emerges only when one focuses on the localised practices in the field. At the same time, the silent opposition to this project remembers us that there are indeed possible and viable alternatives. As some has proposed (Stirling, 2008), we argue in favour of new research directions that aim at preserving and protecting the variegated forms of survival, subsistence and autonomy typical of non-western societies because they represent a unique pool of diversity. In a world of 9 billion people under the threat of climate change and ecological collapse, in our opinion, such a diversity of narratives might prove vital.

References

Abrol, D. (2003). People Technology Inititatives: Embedding technology in community-based production systems. In A. J. Hall, B. Yoganand, R. V Sulaiman, & N. G. Clark (Eds.), *Post-harvest innovations in innovation: reflections on partnership and learning* (Vol. 4). Patancheru, India & Aylesford, UK: DFID Crop Post-Harvest Programme South Asia and Natural Resources International Limited.

Abrol, D. (2014). Pro-poor Innovation-making , knowledge production and technology implementation for rural areas : Lessons from the Indian Experience. In S. Ramani (Ed.), *Innovation in India: Melting Economic Growth with Inclusive Development*. Delhi: Cambridge University Press.

Agnihotri, A. (2013). Doing good and doing business at the bottom of the pyramid. *Business Horizons*, *56*(5), 591–599.

Arora, S., & Romijn, H. (2011). The empty rhetoric of poverty reduction at the base of the pyramid. *Organization*, *19*(4), 481–505.

Baker, T., Miner, A. S., & Eesley, D. T. (2003). Improvising firms : bricolage , account giving and improvisational competencies in the founding process. *Research Policy*, *32*(2), 255–276.

Baker, T., & Nelson, R. E. (2005). Creating Something from Nothing: Resource Construction through Entrepreneurial Bricolage. *Administrative Science Quarterly*, *50*(3), 329–366.

Banerjee, S. B. (2012). Corporate Social Responsibility: The Good, the Bad and the Ugly. *Critical Sociology*, *34*(1), 51–79.

Bardy, R., Drew, S., & Kennedy, T. F. (2012). Foreign Investment and Ethics: How to Contribute to Social Responsibility by Doing Business in Less-Developed Countries. *Journal of Business Ethics*, *106*(3), 267–282.

Bhatti, Y. (2013). Jugaad Innovation: Think Frugal, Be Flexible, Generate Breakthrough Growth. *South Asian Journal of Global Business Research*, *2*(2), 279–282.

Blondel, V. D., Guillaume, J.-L., Lambiotte, R., & Lefebvre, E. (2008). Fast unfolding of communities in large networks. *Journal of Statistical Mechanics: Theory and Experiment*, (10), P10008.

Chakravarti, D. (2007). The fortune at the bottom of the pyramid: Eradicating poverty through profits. *Journal of Public Policy & Marketing*, *26*(1), 152–156.

Cornwall, A. (2007). Buzzwords and fuzzwords: deconstructing development discourse. *Development in Practice*, *17*(4-5), 471–484.

Cozzens, S. (2007). Distributive Justice in Science and Technology Policy. *Science and Public*

Policy, *34*(2), 85–94.

Cozzens, S. (2008). Innovation and Inequality. In R. E. Smits, S. Kuhlmann, & P. Shapira (Eds.), *The Theory and Practice of innovation Policy. An International Research Handbook* (pp. 134–145). Cheltenham (UK) and Northampton, MA (USA): Edward Elgar Publishing.

Cozzens, S., & Kaplinsky, R. (2009). Innovation, poverty and inequality: cause, coincidence, or co-evolution? In B.-A. Lundvall (Ed.), *Handbook of Innovation System and Developing Countries* (pp. 57–82). Cheltenham, Uk: Edward Elgar.

Cozzens, S., & Sutz, J. (2012). Innovation in Informal Settings: A Research Agenda. Ottawa: , Discussion paper for the GRIID Network International Development Research Centre. Retrieved from http://www.idrc.ca/EN/Lists/Publications/Attachments/1130/IID Framework July 29.pdf

Easterly, W., & Sachs, J. (2006). The Big Push Déjà Vu: A Review of Jeffrey Sachs's "The End of Poverty: Economic Possibilities for Our Time." *Journal of Economic Literature*, *44*(1), 96–105.

Faulconbridge, J. R. (2013). Situated bottom of the pyramid markets and the multinational corporation. *Marketing Theory*, *13*(3), 393–396.

Foster, C., & Heeks, R. (2013). Conceptualising Inclusive Innovation: Modifying Systems of Innovation Frameworks to Understand Diffusion of New Technology to Low-Income Consumers. *European Journal of Development Research*, *25*(3), 333–355.

Fournier, V. (2008). Escaping from the economy: the politics of degrowth. *International Journal of Sociology and Social Policy*, *28*(11-12), 528–545.

Garud, R., & Karnøe, P. (2003). Bricolage versus breakthrough: distributed and embedded agency in technology entrepreneurship. *Research Policy*, *32*(2), 277–300.

George, G., McGahan, A. M., Prabhu, J., & Macgahan, A. (2012). Innovation for inclusive growth: towards a theoretical framework and a research agenda. *Journal of Management Studies*, *49*(4), 662–683.

Gupta, A. (2010). Grass green innovations for inclusive, sustainable development. In A. Lopez-Claros (Ed.), *The innovation for development report* (pp. 137–146). New York: Palgrave Macmillan.

Gupta, A. (2012). Innovations for the poor by the poor. *International Journal of Technological Learning, Innovation and Development*, *5*(1-2), 28–39.

Gupta, A., Sinha, R., Koradia, D., Patel, R., Parmar, M., Rohit, P., … Vivekanandan, P. (2003). Mobilizing grassroots' technological innovations and traditional knowledge, values and institutions: articulating social and ethical capital. *Futures*, *35*(9), 975–987.

Guth, M. (2005). Innovation, social inclusion and coherent regional development: a new diamond for a socially inclusive innovation policy in regions. *European Planning Studies*, *13*(2), 333–349.

Hart, S., & Christensen, C. (2002). The great leap. Driving innovation from the Base of the Pyramid. *MIT Sloan Management Review*, *44*(1), 51–56.

Honey, M., & Kanter, D. E. (2012). *Design-Make-Play: Growing the Next Generation of Science Innovators*. New York: New York Hall of Science.

Immelt, J. R., Govindarajan, V., & Trimble, C. (2009). How GE Is Disrupting Itself. *Harvard Business Review*, *87*(10), 56–66.

Jackson, T. (2009). *Prosperity without growth? The transition to a sustainable economy. Sustainable Development*. London: Sustainable Development Commission.

Kallis, G. (2011). In defence of degrowth. *Ecological Economics*, *70*(5), 873–880.

Kanbur, R., & Rauniyar, G. (2010). Conceptualizing inclusive development: with applications to rural infrastructure and development assistance. *Journal of the Asia Pacific Economy*, *15*(4), 437–454.

Kandachar, P., & Halme, M. (2007). An exploratory journey towards the reseach and practice of the "Base of the Pyramid." *Greener Management International*, (51), 3–17.

Kanter, R. M. (2008). Transforming giants. *Harvard Business Review*, *86*(1), 43–52, 136.

Kaplinsky, R. (2011). Schumacher meets Schumpeter: Appropriate technology below the radar. *Research Policy*, *40*(2), 193–203.

Karnani, A. (2007). The Mirage of Marketing to the Bottom of the Pyramid: How the Private Sector can help Alleviate Poverty. *California Management Review*, *49*(4), 90–112.

Kolk, A., Rivera-Santos, M., & Rufin, C. (2013). Reviewing a Decade of Research on the "Base/Bottom of the Pyramid" (BOP) Concept. *Business & Society*, *20*(10).

Krause, U. (2013). Innovation: The new Big Push or the Post-Development alternative? *Development*, *56*(2), 223–226.

Landrum, N. E. (2007). Advancing the "Base of the Pyramid" Debate. *Strategic Management Review*, *1*(1), 2012.

Leach, M., & Scoones, I. (2006). *The Slow Race Making technology work for the poor*. London: Demos. Retrieved from http://www.demos.co.uk/files/The Slow Race.pdf

Leach, M., Sumner, A., & Waldman, L. (2008). Discourses, dynamics and disquiet: Multiple knowledges in science, society and development. *Journal of International Development*, *20*(6), 727–738.

Lévi-Strauss, C. (1966). *The savage mind*. Chicago: University of Chicago Press.

London, T. (2009). Making Better Investments at the Base of the Pyramid. *Harvard Business Review*, *87*(5), 106–113.

London, T., & Hart, S. (Eds.). (2011). *Next Generation Business Strategies for the Base of the Pyramid. New Approaches for Building Mutual Value*. Upper Saddle River, New Jersey: Pearson Education.

London, T., & Hart, S. L. (2004). Reinventing strategies for emerging markets: beyond the transnational model. *Journal of International Business Studies*, *35*(5), 350–370.

Martinez-Alier, J. (2008). Inequality, cooperation, and environmental sustainability. *Ecological Economics*, *64*(4), 912–913.

Martinez-Alier, J. (2009). Herman Daly Festschrift: Socially Sustainable Economic Degrowth. In C. J. Cleveland (Ed.), *Encyclopedia of Earth*. Washington, D.C.: Environmental Information Coalition, National Council for Science and the Environment.

Pansera, M. (2013). Frugality, Grassroots and Inclusiveness : New Challenges for Mainstream Innovation Theories. *African Journal of Science, Technology, Innovation and Development*, *5*(6), 469–478.

Papaioannou, T. (2011). Technological innovation, global justice and politics of development. *Progress in Development Studies*, *11*(4), 321–338.

Pitta, D. A., Guesalaga, R., & Marshall, P. (2008). The quest for the fortune at the bottom of the pyramid: potential and challenges. *Journal of Consumer Marketing*, *25*(7), 393–401.

Prahalad, C. K. (2010). *The fortune at the bottom of the pyramid: eradicating poverty through profits* (2nd ed.). Upper Saddle River, New Jersey: Pearson Education.

Prahalad, C. K. (2012). Bottom of the Pyramid as a Source of Breakthrough Innovations. *Journal of Product Innovation Management*, *29*(1), 6–12.

Prahalad, C. K., & Mashelkar, R. A. (2010). Innovation's Holy Grail. *Harvard Business Review*,

July-Augus.

Prathap, G. (2014). The myth of frugal innovation in India. *Current Science*, *106*(3), 374–377.

Radjou, N., Prabhu, J., Ahuja, S., & Roberts, K. (2012). *Jugaad Innovation: Think Frugal, Be Flexible, Generate Breakthrough Growth*. San Francisco: Jossey-Bass.

Rand, A. (1964). *The Virtue of Selfishness: A New Concept of Egoism*. New York: Signet.

Rao, B. C. (2013). How disruptive is frugal? *Technology in Society*, *35*(1), 65–73.

Rauniyar, G., & Kanbur, R. (2010). Inclusive growth and inclusive development: a review and synthesis of Asian Development Bank literature. *Journal of the Asia Pacific Economy*, *15*(4), 455–469.

Rosenbloom, A., & Althaus, R. (2007). Reducing global poverty: Building the business case. *International Journal of Interdisciplinary Social Sciences*, *2*(1), 417–423.

Sachs, I. (2004). Inclusive development and decent work for all. *International Labour Review*, *143*(1-2), 161–173.

Sachs, W. (1990). The Archeology of the Development Idea. *Interculture*, *23*(4), 2–33.

Schumacher, E. F. (1973). *Small is Beautiful*. New York: Harper & Row.

Seelos, C., & Mair, J. (2007). Profitable business models and market creation in the context of deep poverty: A strategic view. *Academy of Management Perspectives*, *21*(4), 49–63.

Sengupta, A. (2010). Inclusive growth as rights-based development. *Journal of Asian Public Policy*, *3*(3), 215–222.

Seyfang, G., & Haxeltine, A. (2012). Growing grassroots innovations: exploring the role of community-based initiatives in governing sustainable energy transitions. *Environment and Planning C: Governing and Policy*, *30*(3), 381–400.

Seyfang, G., & Longhurst, N. (2013a). Desperately seeking niches: Grassroots innovations and niche development in the community currency field. *Global Environmental Change*, *23*(5), 881–891.

Seyfang, G., & Longhurst, N. (2013b). Growing green money? Mapping community currencies for sustainable development. *Ecological Economics*, *86*, 65–77.

Seyfang, G., & Smith, A. (2007). Grassroots innovations for sustainable development: Towards a new research and policy agenda. *Environmental Politics*, *16*(4), 584–603.

Sharma, A., & Iyer, G. R. (2012). Resource-constrained product development: Implications for green marketing and green supply chains. *Industrial Marketing Management*, *41*(4), 599–608.

Smith, A. (2005). The Alternative Technology Movement: An Analysis of its Framing and Negotiation of Technology Development. *Human Ecology*, *12*(2), 106–119.

Smith, A., Fressoli, M., & Thomas, H. (2014). Grassroots innovation movements: challenges and contributions. *Journal of Cleaner Production*, *63*, 114–124.

Srinivas, S., & Sutz, J. (2008). Developing countries and innovation: Searching for a new analytical approach. *Technology in Society*, *30*(2), 129–140.

Stirling, A. (2008). "Opening Up" and "Closing Down": Power, Participation, and Pluralism in the Social Appraisal of Technology. *Science, Technology & Human Values*, *33*(2), 262–294.

The-economist. (2011). More than just digital quilting. *The Economist*.

Thomson, B. (2011). Pachakuti: Indigenous perspectives, buen vivir, sumaq kawsay and degrowth. *Development*, *54*(4), 448–454.

van Griethuysen, P. (2010). Why are we growth-addicted? The hard way towards degrowth in the involutionary western development path. *Journal of Cleaner Production*, *18*(6), 590–

595.

Von Hippel, E. (2005). *Democratizing Innovation*. (E. Von Hippel, Ed.). Cambridge, Mass.: MIT Press.

Walsh, J. P., Kress, J. C., & Beyerchen, K. W. (2005). Book review essay: Promises and perils at the bottom of the pyramid. *Administrative Science Quarterly*, *50*(3), 473–482.

Willmott, H. (2008). Critical management and global justice. *Organization*, *15*(6), 927–931.

Wilson, G. (2007). Knowledge, innovation and re-inventing technical assistance for development. *Progress in Development Studies*, *7*(3), 183–199.