Management international
International Management
Gestiòn Internacional

Reverse Innovation Reconceptualised: Much Geo-Economic Ado about Primary Market Shift
L'innovation inverse reconceptualisée : Beaucoup de tapage géoéconomique autour du changement de marché primaire
La Innovación Inversa Reconceptualizada: Mucho bullicio geoeconómico generado con relación a los cambios producidos en el mercado primario

Nebojša Radojević

Aller au sommaire du numéro

Découvrir la revue

Résumé de l'article

Le concept actuel de l'innovation inverse incite les entreprises multinationales des pays développés à innover dans les marchés émergents, et à diffuser ensuite les résultats dans leurs pays d'origine. Le concept apparaît donc réservé exclusivement aux entreprises de taille ou d'origine particulières, et aux pays d'accueil ou aux niveaux de développement spécifiques. Cet article repositionne le concept relativement à la logique d'innovation dominante d'une entreprise, plutôt qu'à son environnement géoéconomique. L'innovation inverse devient alors un modèle adaptable à chaque entreprise innovant pour un nouveau marché primaire étranger, en ce qui concerne les distances exogènes, les distances endogènes, et la réponse managériale.

Reverse Innovation Reconceptualised: Much Geo-Economic Ado about Primary Market Shift

L'innovation inverse reconceptualisée : Beaucoup de tapage géoéconomique autour du changement de marché primaire

La Innovación Inversa Reconceptualizada: Mucho bullicio geoeconómico generado con relación a los cambios producidos en el mercado primario

NEBOJŠA RADOJEVIĆ
HEC Montréal, Canada

RÉSUMÉ

Le concept actuel de l'innovation inverse incite les entreprises multinationales des pays développés à innover dans les marchés émergents, et à diffuser ensuite les résultats dans leurs pays d'origine. Le concept apparaît donc réservé exclusivement aux entreprises de taille ou d'origine particulières, et aux pays d'accueil ou aux niveaux de développement spécifiques. Cet article repositionne le concept relativement à la logique d'innovation dominante d'une entreprise, plutôt qu'à son environnement géoéconomique. L'innovation inverse devient alors un modèle adaptable à chaque entreprise innovant pour un nouveau marché primaire étranger, en ce qui concerne les distances exogènes, les distances endogènes, et la réponse managériale.

Mots clés : Logique d'innovation dominante; marchés émergents; inversion de l'innovation

ABSTRACT

Present concept of reverse innovation urges multinational enterprises from developed countries to innovate for emerging markets, and to subsequently diffuse the outcome back to their home countries. The concept hence appears exclusively reserved for enterprises of particular size or origin, and for specific host countries or levels of development. This paper repositions the concept relatively to any enterprise's dominant innovation logic, rather than relatively to its geo-economic environment. Reverse innovation thus becomes a template that any enterprise innovating for a new primary market abroad may customise to its specific situation regarding exogenous distances, endogenous distances, and managerial response.

Keywords: Dominant innovation logic; emerging markets; reversal of innovation

RESUMEN

El concepto actual de la innovación inversa insta a las empresas multinacionales de los países desarrollados a innovar para los mercados emergentes y a difundir posteriormente el resultado de vuelta a sus países desarrollados originales. Por consiguiente, el concepto parece reservado exclusivamente para empresas de un tamaño u origen en particular y para determinados países receptores o niveles de desarrollo. En este trabajo se reposiciona el concepto con relación a la lógica dominante de innovación de cualquier empresa, en vez de hacerlo con relación a su entorno geoeconómico. La innovación inversa se convierte en una plantilla que, cualquier empresa innovadora para un nuevo mercado primario en el extranjero, puede personalizar conforme a su situación específica en relación con las distancias exógenas, con las distancias endógenas y con la respuesta directiva.

Palabras Claves: Lógica de innovación dominante; mercados emergentes; cambio de sentido de la innovación

Global consumption power has been shifting towards populous, less developed countries enjoying high rates of economic growth (Kose and Prasad, 2010; OECD, 2010; PWC, 2013). Present concept of reverse innovation hence urges multinational enterprises from developed countries (MNEs) to innovate specifically for emerging markets and to subsequently diffuse the outcome back "home", to developed markets. By doing so, MNEs would tap into opportunities further down the socio-economic pyramid in emerging markets and improve their competitive position in traditional ones.

In essence, reverse innovation connects innovation management and strategy in the context of the globally shifting consumption power. On the one hand, it addresses innovation in resource-poor environments i.e. in environments where affluent customers are scarce. By embracing this dimension of scarcity, an MNE may tap into

opportunities where competitors mainly see obstacles (Cunha et al, 2014). On the other hand, the concept pushes the balance within the global strategic mix (Bartlett and Ghoshal, 1989) towards local responsiveness, i.e. towards the strategic option of adaptation in a given host country (Ghemawat, 2007). Reverse innovation has been widely recognised for these contributions; for instance, a group of Harvard Business Review editors has ranked it among top management concepts of the decade (Kirby, 2010).

All recognition notwithstanding, the present concept is characterised by mutually reinforcing instability and detachment. On the one hand, it has been undergoing a certain evolvement, from a mere diffusion path from less to more developed countries (Immelt et al, 2009; Govindarajan and Ramamurti, 2011) to a strategic approach reserved for Western MNEs (Govindarajan and Trimble, 2012; Laperche and Lefebvre, 2012). On the other hand, the concept lacks academic maturity as it relies on pioneering yet atheoretically elaborated anecdotes (Corsi and Di Minin, 2014, Cunha et al, 2014). Although reverse innovation draws on established theories, it fails to clearly identify where the links do exist and where they do not. This induces incremental add-ons to the concept, which reinforce the issues of instability and detachment, and so on. In consequence, the present concept is limitedly actionable for practitioners and insufficiently robust to absorb further research. Presently studied cases of reverse innovation mainly depict large US MNEs developing new products for emerging Asia and subsequently diffusing them from there (Govindarajan and Trimble, 2012). The setting of these cases has been fallaciously echoed as the concept itself (Kamp, 2012; Laperche and Lefebvre, 2012), thus making reverse innovation appear exclusively reserved for enterprises of particular size or equity structure (large MNEs), from a particular origin (from the Triad, particularly the US), or with particular geographic focus (mainly China and India).

The primary aim of this paper is hence to propose a reconceptualization of reverse innovation actionable by any enterprise, irrespectively of its size, equity structure, origin, or country constellation in which it operates. In order to increase the actionability, the linkages between the repositioned concept and major streams of related managerial literature should be identified. Finally, the reconceptualization should be backward-compatible and largely accommodate extant literature on reverse innovation.

The approach towards this goal is reflected in the structure of the paper. Following section presents the evolvement of reverse innovation and identifies five roles subordinate to the concept (e.g. the acting enterprise) along with the evolvement of their present interpretations. For each interpretation, the paper poses one critical question, on which is then analytically reflected in a separate section. Each of these five sections separately re-interprets the respective role. Subsequently, all re-interpreted roles are synthesised

to propose understanding reverse innovation as a template applicable to any constellation consisting of a particular enterprise, its old and a new primary market for innovation. By customising this template, the enterprise needs to determine a managerial response aligned with its specific situation regarding exogenous and endogenous distances to the new primary market for innovation. Major implications of the repositioned concept are subsequently discussed in a separate section. The final section concludes by highlighting the main contributions of the paper and by suggesting future research avenues.

Evolvement of Reverse Innovation

Few years before the inception of contemporary reverse innovation, Brown and Hagel (2005) used the term "innovation blowback" to warn Western MNEs from disruptive management practices coming from Asia, which could diffuse to developed countries and threaten established value networks. Western MNEs should response by specifically targeting lower-income consumers in emerging markets, taking innovative products from emerging markets back home, and using them in new categories there. Similarly, Deloitte (2006) does not mention reverse innovation either, yet it reports on new products that eventually diffused from emerging to developed markets. One of these products is Renault's inexpensive Logan car, which was initially designed in Romania for Eastern European markets, but which finally became popular in Western Europe as well. Logan is the main theme of a book in French by Jullien et al. (2012), but these authors equally do not mention reverse innovation or its French counterpart ("l'innovation inverse").

The term "reverse innovation" and the phenomenon of innovations diffusing from less to more developed countries were first linked by Immelt et al. (2009) to collectively address disruptive medical devices by General Electric (GE) that were developed for China and India before eventually diffusing to the US. This conceptualisation has been drawn on by Govindarajan and Ramamurti (2011) to refer to cases "where an innovation is adopted first in poor (emerging) economies before 'trickling up' to rich countries" (p. 191). In these sources, reverse innovation is defined by the diffusion path from less to more developed countries embedded in *any* MNE; this initial interpretation we call *first generation concept*. Despite some variations regarding e.g. characteristics of innovation diffused, Hang et al. (2010), Fry et al. (2011), Kamp (2012) and Burger-Helmchen et al. (2013) may equally be assigned to this generation.

A different nuance has been introduced by Govindarajan and Trimble (2012) and Laperche and Lefebvre (2012). Reverse innovation is still defined by the path of diffusion, as "any innovation that is adopted first in the developing world" (Govindarajan and Trimble, 2012, p. 4). However, the concept assigns to this path of diffusion a strategic

approach for MNEs from developed countries. While developed markets are becoming saturated (Osenton, 2004), developing countries "are likely to account for at least two-thirds of world GDP growth for decades to come" (Govindarajan and Trimble, 2012, p. 8). In order to tap into this potential, Western MNEs need to consider local product environment and innovate specifically for emerging markets, rather than to modify existing products through de-featuring and substitution ("glocalisation"). Instead of selling aged technology, MNEs need to recombine the most novel technologies so as to offer 50% of performance at 15% of the price. Introducing these disruptive innovations to untapped market segments of developed markets would even multiply opportunities for Western MNEs. They may pursue reverse innovation for defensive reasons as well, to inhibit "emerging giants" (Khanna and Palepu, 2006), i.e. raising MNEs from emerging markets. Laperche and Lefebvre (2012) see this strategic approach to consequently include another stage of globalisation of R&D activities, which are performed upstream in developing countries. We call this *second generation concept*: the strategic importance of reverse innovation for particular enterprises is emphasised as compared to first generation concept.

That being said, the concept seems doomed to evolve further. Diffusion paths have become blurred in second generation concept; innovations diffusing from one to another developing country are considered reverse even though there is no certainty that they will come to developed countries one day (as in the case of Procter & Gamble's "Naturella"; Govindarajan and Trimble, 2012). Concomitantly, the strategic focus dilutes; a recent paper by von Zedtwitz et al. (2015) distinguishes 10 categories of reverse innovation, grouped in week and strong reverse innovation depending on which of four phases of the linear innovation process (concept; development; primary market diffusion; secondary market diffusion; Godin, 2006) take place in advanced respective developing economies.

At the first glance, the roles involved might nevertheless appear intuitively clear (Table 1). Given the environmental setting (dichotomy of levels of development and paces of growth), the actor is attracted by the stimulus, i.e. by emerging markets. Emerging markets become the target to actor's specific innovation and the origin of diffusion, which eventually reaches developed markets in general (first generation) or the actor's home in particular (second generation). However, subordinate roles and terms turn imprecise after a closer inspection, particularly so the geo-economic ones. For example, there is no consensual definition or enumeration of emerging markets, while the purported dichotomy of levels of development excludes most entities classified as middle-income economies (WBDI, 2013). Additionally, it is not clear why reverse innovation as a potential source of competitive advantage should be exclusively reserved for MNEs. Yet if reverse innovation is accessible to small and medium enterprises (SMEs) as well, it equally becomes unclear why particularly SMEs could not look for reasonable opportunities in emerging markets much smaller than India, China, or Mexico.

Unstable definitions, imprecise terminology and applicability restrictions make reverse innovation limitedly actionable to academics and practitioners alike. Admittedly, terminological issues largely apply to both innovation and international business, that is, to the fields at the intersection of which reverse innovation resides. Yet these fields lie on stable theoretical fundaments, so they are less sensitive to shakes by vague terms. In contrast, reverse innovation and the whole stream of related concepts – Gandhian innovation (Prahalad and Mashelkar, 2010), cost innovation (Williamson, 2010), jugaad innovation (Radjou et al, 2012) etc. – lack coherence and solid theoretical position (Cunha et al, 2014). In absence of robust theories, robust concepts are the more needed. As a frame enacting all subordinate roles, however, reverse innovation requires that these roles be firstly critically reflected on and robustly repositioned, for which we employ the respective question from Table 1. Unless otherwise noted, the point of reference to this analysis is the interpretation common to first and second generation concept.

What is International Business: MNE or International Management?

Reverse innovation is a phenomenon "at the intersection between innovation and international business" (von Zedtwitz et al, 2015, p. 12). Yet in international business, "the term business can be defined as a firm [i.e. as a structure] or as an activity. If the former, it is synonymous with multinational enterprise; if the latter, it is not" (Wilkins, 2009, p. 5). We use these terms as follows. For the structural perspective, the term *multinational enterprise (MNE)* is used. According to Dunning and Lundan (2008), multinational enterprises are defined as firms that establish foreign subsidiaries by engaging in foreign direct investment (FDI). In contrast, *international management* refers to border-spanning managerial activities of any enterprise. The term *international business* commonly refers to both perspectives.

The above is quite straightforward but of a great importance. Most documented cases of reverse innovation definitely come from international *business*. The pioneering case involved General Electric, a large US MNE, and its international innovation management spanning India, China and the US (Immelt et al, 2009). In seven out of eight cases listed, Govindarajan and Trimble (2012) classify the actors as US MNEs. However, it is not plausible that reverse innovation is exclusively reserved for MNEs, even though MNEs may be more prone to it given their international equity presence. Consequently, we propose understanding reverse innovation as a phenomenon pertinent to innovation and international *management* of any enterprise, be it an MNE or not. For instance, reverse innovation may be

TABLE 1

Evolving interpretations of the roles subordinate to reverse innovation

Role	Current interpretations	Critical question
Actor	*First generation:* MNEs from either developed or developing countries (Govindarajan and Ramamurti, 2011)	What is International Business: MNE or International Management?
	Second generation: MNEs from the Triad, particularly those from the US (Govindarajan and Trimble, 2012)	
	Both generations: Reverse innovation is being enacted at the intersection of innovation management and international business (von Zedtwitz et al, 2015).	
Stimulus to innovate and the origin of reverse innovation	Both generations: Emerging *markets* (Immelt et al, 2009) or *economies* (Corsi and Di Minin, 2014) stimulate the actor to innovate. As examples of emerging markets/economies serve *countries* with high rates of economic growth, particularly India and China.	What is emerging to an enterprise: Countries, economies or markets?
Final destination of reverse innovation	Both generations: Reverse innovation eventually diffuses to developed markets (Immelt et al, 2009; Govindarajan and Trimble, 2012).	What is home to an enterprise?
	Add-on second generation: Reverse innovation particularly diffuses to the "home" of the actor from a developed country.	
Stage (environment) to reverse innovation	Both generations: Emerging and developed markets represent a dichotomy; emerging markets are at a lower level of development but grow faster, which creates business opportunities to the actor and hence the stimulus to innovate. In order to tap into these opportunities, reverse innovation requires novel and/or recombined technological solutions (Govindarajan and Ramamurti, 2011).	What if not all markets are either developed or emerging?
	Add-on second generation: The actor largely draws on own technological base (Govindarajan and Trimble, 2012; Laperche and Lefebvre, 2012).	
Reversal of innovation	Both generations: Geographic paths of innovation diffusion are opposite to those underlying the IPLC theory (Immelt et al, 2009; Govindarajan and Trimble, 2012; Kamp, 2012)	What is reverse to whom?

pursued by so called "born globals" as well, that is by agile, innovative SMEs that pursue a global approach from their very inception (Madsen and Servais, 1997). SMEs may be even "born in reverse", i.e. they may pursue reverse innovation as a crucial part of their start-up business model right away.

What is Emerging to an Enterprise: Countries, Economies or Markets?

Extant literature heavily relies on geo-economic classifications so as to conceptualise reverse innovation. However, subtle issues arise due to the absence of authoritative definitions and inconsistency among major sources. For instance, the World Bank (WBDI, 2013) classifies *countries* and *economies* (the former politically independent)

accordingly to the income, whereas the United Nations (UNO, 2013) classifies *economies* by primarily considering their institutional development. As a consequence, for the United Nations, middle-income EU members Bulgaria and Romania are developed while high-income Arab Gulf states, Israel, Singapore and South Korea are developing; the World Bank classifies these countries exactly the other way round. *Emerging markets* are primarily listed by financial intermediaries such as Dow Jones (2014), IMF (2014), Morgan Stanley (2014) and Standard & Poor's (2014) to suggest "progress, uplift and dynamism" of *financial* marketplaces (The Economist, 2008). Unfortunately, only fractions of these lists intersect, while of those countries consensually considered emerging markets, some are simultaneously classified as developed economies by the United Nations (e.g. Hungary and Poland). Relying on imprecise geo-economic terms might have been a minor issue at early

lifecycle stages of the concept of reverse innovation, when its clarity was traded off for attracting academics' and managers' attention. Yet coupled with its popularity and theoretical detachment, the concept gradually reaches a critical stage as the terminological ambiguity diminishes its practical actionability and theoretical integration capability. Particular confusion arises with regard to the stimulus for (i.e. origin of) reverse innovation.

For example, Immelt et al. (2009) define reverse innovation as specifically developing products for emerging markets like China and India and then distributing them globally. The final destination of reverse innovation is defined as a developed country, with Europe, Japan and the US serving as examples. Consequently, innovations from South Korea diffusing to Bulgaria or Romania would be reverse in this notion, although South Korean GDP per capita is almost three times the Romanian or Bulgarian in nominal terms, and double at purchase power parity (PPP; WBDI, 2013). What is more, all these countries – India, China, South Korea, Bulgaria and Romania – are listed as emerging markets by the IMF.

Govindarajan and Ramamurti (2011) are only marginally more specific; they interchangeably use two groups of terms: industrialized, developed or rich countries as one group, and "emerging markets", "developing countries" or "poor countries" as the other. The former group includes the Triad of North America, Western Europe and Japan, while the latter includes all other countries. This implies that several countries among the world's top 30 richest would be poor, developing and emerging since they do not belong to the Triad, for example Australia, New Zealand and Singapore. Consequently, innovations diffusing e.g. from Singapore to Japan would be reverse, even though GDP per capita of Singapore is significantly higher than the Japanese in both nominal and purchase parity terms.

Finally, Govindarajan and Trimble (2012) use "emerging markets" as a synonym for "poor countries", and define the latter supposedly precisely, as countries with GDP per capita at PPP of USD 23,499 or less. However, Russia's GDP per capita at PPP was USD 23,589 in 2012 (WBDI, 2013), thus implying that the country is not an emerging market in the sense of reverse innovation, although consensually considered as one of emerging markets par excellence.

The key to a robust reconceptualization lies in recalling that the actor is a firm, so the stimulus for reverse innovation should also be understood from the firm-level perspective. Perspectives of major financial intermediaries are coarse-grained and may serve only as a rough proxy here; finally, in any given country, there is only one financial market. From the socio-economic perspective, however, the market in any given country is tiered. In the particular case of developing countries, the local markets are four-tiered (Prahalad and Lieberthal, 1998). Upper tiers of relatively wealthy customers (global and "glocal" tier; Khanna and Palepu, 2006) remain thin; exactly this lack of affluence

pushes the stimulus for reverse innovation further down the socio-economic pyramid, to the local tier of emerging middle class (OECD, 2010) or even to the poorest yet most populous tier (the "bottom of the pyramid"; Prahalad, 2005).

In sum, the actual stimulus for reverse innovation is any untapped foreign *market segment* that emerges to the enterprise in question. Raising middle class in populous countries like India or China will potentially yield high payouts for any enterprise, not only for MNEs from the Triad. Yet depending on the size of the enterprise and its value proposition, targeting untapped market segments in smaller countries may also represent a reasonable business opportunity. Note that the untapped market segment may also emerge in a country at a higher level of development by some measure, as in previously mentioned cases of South Korea and Romania, or Singapore and Japan.

What Is Home to an Enterprise?

To put it bluntly right away: Using development levels of geo-economic entities to categorise enterprises fairly oversimplifies the matter. Volkswagen is maybe intuitively a German MNE, but Volkswagen cannot be at home in all 36 developed countries (IMF, 2014) only because Germany is developed. Cultural, administrative, geographical and economic differences exist among developed countries as well (Ghemawat, 2007), so an enterprise may have different brandings and target different income groups even in countries with similar levels of development. Some of Volkswagen models are hence exclusively marketed to North America, while a majority of units sold there is assembled in Mexico anyway.

International equity relationships additionally challenge the notion of a level of development as the home to an enterprise. For example, Land Rover is headquartered in the United Kingdom, but owned by Tata Motors, which is in turn headquartered in India. Consequently, it is questionable to classify Land Rover as a "pure" MNE from a developed country, or Tata Motors as an MNE from a developing country. Each company is managerially embedded in both levels of economic development, even though certainly to a different extent.

Referring to a single country as the home of an enterprise does not capture the whole story either. The locations of headquarters are misleading, as they are selected depending on factors such as infrastructure, tax and wages level, and spatial industry concentration (Strauss-Kahn and Vives, 2009), or "in response to the demands of external stakeholders, in particular global financial markets" (Birkinshaw et al, 2006, p. 681). The geographical location of R&D activities is equally an unreliable indicator given the globalisation of R&D in general and the relocation to developing countries in particular (Asakawa and Som, 2008; Laperche and Lefebvre, 2012; UNCTAD,

2005). Similar issues apply to the geographic distribution of sales as a potential criterion. For example, Bombardier Aerospace is headquartered in Canada, but it traditionally derives the biggest share of its revenues in the US (Deloitte, 2010).

More generally, Rugman and Verbeke (2004) find that a majority of large MNEs have a regional rather than national or global character, as they derive revenues mainly from a particular geographic region. This insight may partly help, yet it still leaves some issues remaining given that geographic regions are not necessarily homogenous regarding the levels of economic and institutional development (e.g. Eastern Asia, East or South-East Europe).

In sum, usual approaches to define a home to an internationally operating enterprise in general and to an MNE in particular may raise as many questions as they manage to answer. The key for resolving this issue is to recall once more that reverse innovation is a phenomenon at intersection of international and innovation management. From the perspective of the latter, a home to an enterprise may be either a region, or a country, or an income group, or any other primary market for which the enterprise has been innovating by default. For example, from the perspective of Vernon's (1966) initial international product lifecycle (IPLC) theory, the default primary market for innovation by US enterprises have been the US itself. Updated IPLC theory (Vernon, 1979) extends this approach to Japanese and European enterprises, whose innovations primarily target Japanese (respectively a European) market or a segment thereof. In contrast, for many enterprises from smaller (developed) countries, primary markets for innovation have been abroad, in larger developed countries (Buckley and Ghauri, 2004).

That all being said: An outside assigning of the default primary market for innovation as a "home" to an enterprise is by far less important than managers of this enterprise appropriately assessing the matter. They need to answer the question for which market or market segment – defined socio-economically, geographically or otherwise – their enterprise used to traditionally innovate. In context of reverse innovation, that is home. Note however that the home in this sense will be likely disrupted – and gradually shifted – by the arrival of reverse innovations, which may attract over-served low-end consumers (low-end disruption; Christensen, 1997) or consumers for whom the non-consumption used to be the best previous option (new-market disruption; Christensen and Raynor, 2003).

What If Not All Markets Are either Developed or Emerging?

Extant literature on reverse innovation assumes two dichotomic categories of geo-economic entities, the one developed and the other developing or emerging. It is only very recently that von Zedtwitz et al. (2015) discuss possible inclusion of further categories in the concept, such as fast-follower, least developed, or newly industrialised countries. While this idea represents a notable depart from the dichotomic approach, a justification is missing why particularly these categories should be considered. This is by no means to advocate more, less or other enumerated country *categories* be included. Rather, we suggest opening the concept for *all countries*.

Any categorisation based on a given continuous property ignores the fact that the distribution of countries along this property will equally be continuous rather than discrete, with most countries being in the middle of the distribution rather than towards upper or lower bound. For instance, in terms of income per capita, the World Bank assigns 103 economies (or roughly a half) to the middle-income group, further subdivided in lower-middle and upper-middle. Literature on reverse innovation has studied very few cases from these economies, primarily from India (lower-middle income), China and Mexico (both upper-middle), while Brazil (upper-middle) is at least mentioned as a potential origin of reverse innovation. However, there is no plausible reason why remaining 99 middle-income economies should be excluded from the concept, nor why those included should always play the same role. For example, Chinese GDP per capita at purchase power parity is approximately a fifth of US American, but twice the Indian; Brazilian is almost a third of US American, but three times the Indian (WBDI, 2013). Even though such cases have not been studied so far, Brazil and China could hence be either or both the origin of innovations departing to the US and the destination of those arriving from India.

This insight has important implications on technological flows involved. Extant literature proposes that the actor applies novel technological solutions when pursuing reverse innovation. Existing technologies need to be recombined, adapted, and/or extended so as to fit into product environments in less developed host countries, and finally deployed so as to receive innovation in return. This is well in line with Fabrizio and Thomas (2012), who note that geographic paths of innovation and technology diffusion may differ. In presently documented cases of reverse innovation, these paths are exactly mirrored, as actors are MNEs from the Triad that leverage on ownership of technologies in same way. However, enterprises from middle-income economies may or may not possess technological advantages when pursuing reverse innovation at a slightly lower level of development; at a slightly higher one, they may but do not necessarily have to compensate for technological disadvantages. Even if they do not necessarily possess cutting-edge technologies, these enterprises may still possess the capacity to absorb them. Enterprises from middle-income economies could hence serve as technology brokers that insource technology from a higher level of development so as to absorb and finally pass it through in a customised form to a lower one, eventually receiving innovation in return. As a consequence, this may make

reverse innovation potentially resemble open innovation (Chesbrough, 2003).

In conclusion, the setting for reverse innovation may include countries of any level of development from a continuous distribution, various paths of technology diffusion, or actors drawing on either or both internal and external technologies. This makes the process of reverse innovation potentially much more diverse than what extant literature implies; the process may span more than one enterprise and virtually any number of total steps. However, reverse innovation conceptually remains a two-stage diffusion process, with the first stage taking place in the new primary market and the second stage targeting secondary markets. Note however that these two stages do not necessarily have to be linear and clear cut (Godin, 2006) as they may chronologically overlap.

What Is Reverse to Whom?

Conceptual inversions of innovation occurred long before the concept of reverse innovation as such. For example, demand-pull model of innovation (Schmookler, 1966) inverted the previous technology-push model by relocating the main stimulus downstream, from new technology input to existing market demand. In case of reverse innovation, the point of reference of the reversal is the international product life cycle (IPLC) theory (Vernon, 1966, 1979). There are at least two crucial issues with this inversion purported implicitly e.g. by Immelt et al. (2009) and Govindarajan and Trimble (2012), or explicitly by Kamp (2012).

First, the levels of analysis are incompatible, hence hardly contrastable. The IPLC theory takes an aggregated economic perspective so as to overcome the Leontief (1953) paradox, i.e. the inadequacy of previous theories of international trade and FDI flows. Quite differently, reverse innovation takes the managerial perspective of a single enterprise.

Second, there is hardly anything reverse per se in innovations diffusing from e.g. China or India as first generation concept implies. Historically, these countries used to be major economic powers, accounting for roughly a half of the world's GDP until early 19th century (Maddison, 2001). Even though much time has passed by since, impressive examples of ancient innovations that diffused from China have remained well known, such as silk, paper or gun powder. Certainly, contemporary innovations from less developed countries are usually considered less numerous or of a lower quality. In fact, it is quite straightforward that globally new technological innovations will more frequently occur at a higher level of development. However, innovation at the firm level does not need to be globally new (OECD, 2005). Taking the US trade deficit with China in manufactured goods as a proxy (USITC, 2013),

contemporary innovations at the firm level seem to flow in greater quantities from China to the US than vice versa.

Consequently, we object to the notion of first generation that any innovation flowing from less to more developed countries is reverse. Within Chinese innovations flowing to the US, only innovations by US (and not Chinese) firms should be seen as reverse. Attracted by business opportunities that could not have been tapped into with existing products, US enterprises innovated specifically for China and diffused the outcome in first instance locally. Subsequently, the outcome is diffused to the US as well. A previously secondary market for innovation (China) has become the new primary one, while the previously primary market (the US) has become secondary. The reversal of innovation hence actually means the switching of roles between the primary and a secondary market for innovation. Second generation concept indirectly implies a reversal in this sense for actors from the Triad; however, both generations fail short of explicitly recognising the relativity of actors' perspectives. Medical devices by GE and Tata's Nano car share the same diffusion path from India to developed countries, but this path is embedded in different managerial contexts. GE diffuses its new medical devices from a previously secondary market for innovation to the previously primary one. In contrast, Tata diffuses Nano from its default market for innovation to secondary ones; from Tata's point of view, there is hardly anything reverse in that. Emerging market for innovation and the traditional one are hence inseparable from the actor; what is reverse for GE is the business as usual for Tata and vice versa. As a consequence, managerial responses to challenges of reverse innovation will differ. US-American firms will be constrained by scarcity of affluent customers when pursuing reverse innovation in India, so they will likely respond with frugal innovation ("extreme efficiency to some essential need"; Cunha et al, 2014, p. 206). In contrast, Indian enterprises pursuing reverse innovation in the US will more likely suffer from a comparative scarcity of material resources and respond by bricolage ("making do what is at hand"; Baker and Nelson, 2005, p. 329).

Synthesis: The Play of Reverse Innovation Re-Interpreted

Put together in a play, re-interpreted roles subordinate to reverse innovation give the following plot template. The actor (any enterprise) is attracted by the stimulus, i.e. an untapped foreign market (segment) that emerges as a major source of business opportunity and growth from its perspective. The actor innovates specifically for that market, for which either or both, own and insourced technologies may be used. The previously emerging market hence becomes the new primary market for actor's innovation and the origin of further diffusion. Likely but not necessarily in an adapted form, reverse innovation eventually reaches the market for which the actor used to innovate by default

until it focused on the emerging, i.e. new primary market. The arrival of reverse innovation in the formerly primary market may cause either or both low-end and new-market disruption. In essence, the reversal underlying the plot template means that the primary and a secondary market for actor's innovation switch their roles. Note that this is a plot *template*, which every actor has to adapt to its specific situation. The level of analysis is the acting enterprise, but the unit of analysis is a new product or service contradicting the dominant innovation logic at the firm level. Within reverse innovation reconceptualised this way, second generation concept becomes a special case or a sub-template, in which the actor is a Western MNE, the stimuli are definable by geo-economic criteria, and the traditional primary market for the actor's innovation equals to a whole geographic or geo-economic entity (Table 2).

The process of marketing strategy development normally flows from segmentation via targeting to positioning (Kotler and Keller, 2007). However, marketing strategy development for reverse innovation goes through this process initially backwards and then forwards. The acting enterprise starts from its current positioning and identifies its old primary market for innovation. Subsequently, the enterprise needs to bring this insight into identifying the emerging market aimed at as the primary one in future, and to develop and carry out a new value proposition embedded in a new or altered business model (Osterwalder and Pigneur, 2010; Teece, 2010). Note that a simple assumption that the old primary market equals to a whole country, e.g. the country of actor's headquarters, will very likely be wrong. If GE in Immelt at al. (2009) had targeted the whole US market (and not only some segments thereof) before developing new medical devices for India and China, new devices could not eventually have been introduced back to the US.

When aiming at a new primary market abroad, enterprises have to overcome the liability of foreignness in general (Zaheer, 1995), and a set of distances (cultural, administrative, geographic, and economic; Ghemawat, 2007) or "gaps" (in consumer preferences, income levels, infrastructure and legal environments; Govindarajan and Trimble, 2012) in particular. These gaps or distances are *exogenous* to the constellation consisting of an enterprise, its old and a new primary market for innovation. Concomitantly, however, enterprises engaging in reverse innovation have to deal with *endogenous* gaps, the size of which is influenced by the exogenous ones:

Market knowledge gap: The actor usually lacks a deep understanding of required functionality and product environment in the new primary market. The further away – geographically, economically or otherwise – the new primary market is from the old one, the higher also the liability of ignorance about the consumers and their needs.

TABLE 2

Re-interpreted roles subordinate to reverse innovation in comparison

Role	First generation concept	Second generation concept	Re-interpretation of the role
Actor	An MNE	An MNE from the Triad	Any enterprise
Stimulus to innovate and the origin of reverse innovation	Emerging market in the sense of major financial intermediaries, i.e. a whole less developed geo-economic entity with high rates of economic growth.	Emerging market in the sense of major financial intermediaries, i.e. a whole less developed geo-economic entity with high rates of economic growth.	Any market (segment) that emerges to the actor as the new primary one for its innovation.
Final destination of reverse innovation	A geo-economic entity at a higher level of economic development.	The geo-economic entity "home" to the actor.	Any formerly primary market for which the actor used to innovate by default.
Stage (environment) to reverse innovation	A dichotomic geo-economic constellation including an emerging and a developed market.	A dichotomic geo-economic constellation including an emerging and a developed market; the actor leverages on own technology.	Any constellation of levels of development from a continuous distribution; the actor may draw on either or both internal and external technology.
Reversal of innovation	Geographic paths of innovation diffusion are in (supposed) contradiction to the IPLC theory.	Geographic paths of innovation diffusion are in (supposed) contradiction to the IPLC theory.	Switch of the roles between the primary and a secondary market for innovation i.e. innovating in contradiction to the primary market focus of the traditional innovation logic.

For Western enterprises, difficulties peak at the so called bottom of the pyramid in developing countries (Prahalad, 2005).

Business model gap: Innovating for a new primary market equals developing a new value proposition, which is the kernel of a business model including further blocks (i.e. key partners, activities, resources, distribution channels, cost and revenue streams; Osterwalder and Pigneur, 2010). A new value proposition necessarily requires updating the business model; the higher is the gap between the old and the new business model, the higher also incumbent inertia (Lieberman and Montgomery, 1988) and detrimental legacy of dominant managerial logic underlying innovation by default (Prahalad an Bettis, 1986).

Technology gap: Ownership and absorptive capacity of technologies are potential sources of competitive advantage, so the traditional market for innovation pushes the actor's technological roadmap in a certain direction, on which the actor builds its core capabilities. In a new primary market, however, technological core capabilities may turn a burden (Leonard-Barton, 1992), as the actor needs to address fundamentally different needs, or at least fundamentally different conditions. The higher the exogenous distances are, the higher the need to recombine, adapt or extend the actual or absorbable technological base.

All in all, reconceptualised reverse innovation is a template employable by any enterprise that responses to the shift in stimuli by switching its primary innovation effort to a foreign market or market segment emerging to the enterprise in question as the new primary one. Rather than offering one-size-fits-all prescriptions, reverse innovation always needs a customization to the specific constellation consisting of the enterprise in question, the old and a new primary market for innovation. By customising this template, the enterprise needs to determine a specific managerial response aligned with both exogenous and endogenous distances to the new primary market.

Discussion

Reconceptualised reverse innovation fundamentally objects to the first generation concept; a mere diffusion from less to more developed countries is neither sufficient nor necessary a criterion. As for second generation concept, our notion concurs with it inasmuch as both recognise strategic implications of switching primary markets for innovation. Yet reconceptualised reverse innovation becomes accessible by any enterprise, and robust to development levels and flows of technology. The actual reversal is reconceptualised relatively to the enterprise's prior innovation management, rather than relatively to its geo-economic environment. From the perspective of this paper, reverse innovation is hence a phenomenon at the level of a new product or service that contradicts the innovation by default at the firm level.
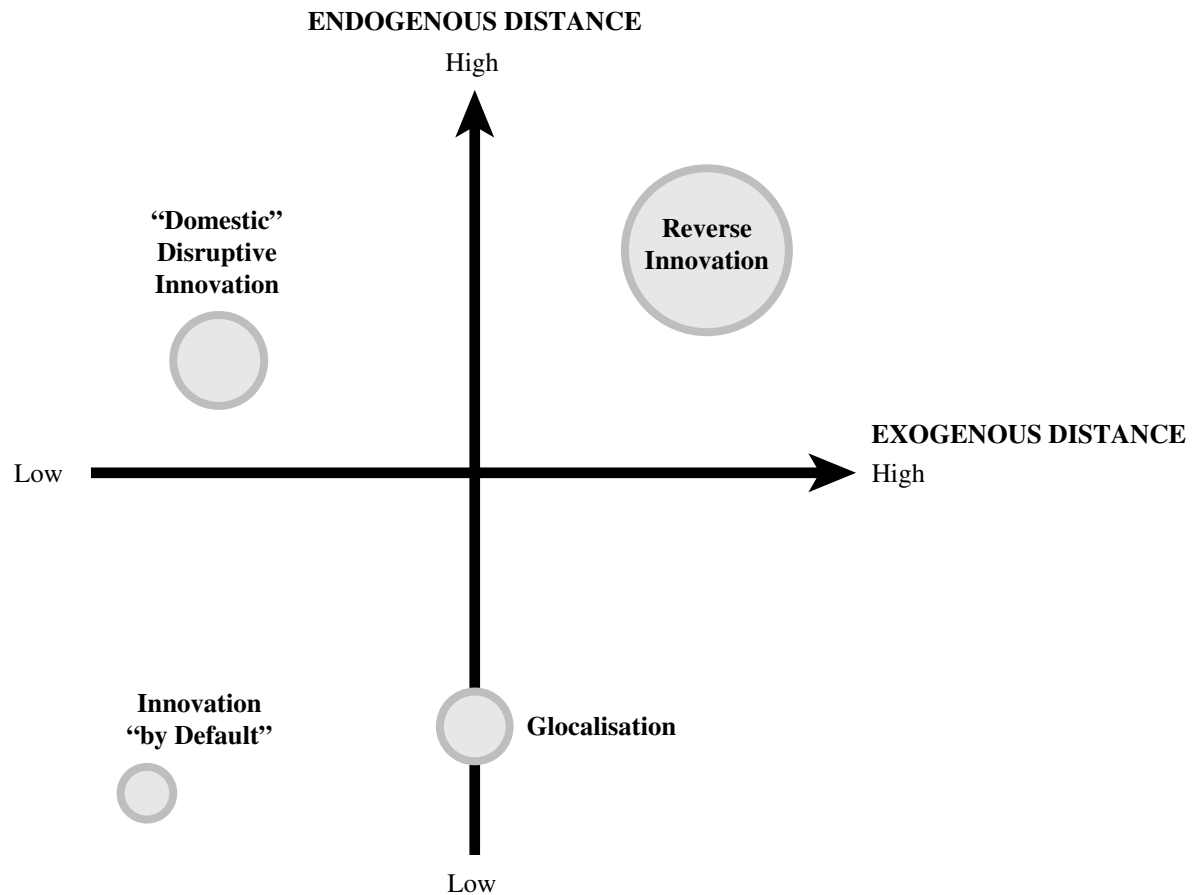
Challenges to reverse innovation are tough; it needs to overcome high exogenous and endogenous distances so as to tap into an emerging primary market. In contrast, enterprises' traditional innovation deals with comparatively low distances along each dimension (see Figure 1 for illustration). In this framework of total distance, we position glocalisation as a mode of innovation overcoming hardly any endogenous but some exogenous distance. While adaptations are undertaken in order to partly absorb some environmental changes, e.g. a portion of difference in income and consumption preferences, the actual value proposition underlying glocalisation essentially remains the same. Reverse innovation has to go far beyond glocalisation along each dimension of distance; this relative positioning corresponds to second generation literature.

In contrast to glocalisation, "domestic" disruptive innovation overcomes a good deal of endogenous but small to medium exogenous distance. Enterprises innovating in this mode target market segments bordering their traditional market for innovation, so they usually take little challenge regarding e.g. cultural preferences or legal environment. However, endogenous distances to overcome are considerable given that disruptive innovation targets market segments over-served or not served at all by the enterprise's dominant innovation logic (Christensen, 1997; Christensen and Raynor, 2003). Disruptive innovation hence requires familiarity with different customer needs, recombining technology, and changing of business models. Its relative positioning to reverse innovation is in line e.g. with Corsi and Di Minin (2014), for whom reverse innovation essentially equals disruptive innovation with a geographical dimension added.

Generally, the bigger is the market stimulus to innovate the higher also the total distance that the stimulus will overcome. As a consequence, critical stimulus sizes needed to induce the actor's innovation (illustrated by the bubble size in Figure 1) increase from innovation by default over glocalisation and disruptive innovation to reverse innovation. This explains e.g. why GE developed its low-end medical devices for India and China and diffused them from there to low-end market segments in the US (Immelt et al, 2009), although it could theoretically have gone the other way round. The stimulus from the low-end market in the US was not big enough for domestic disruption, but the stimulus from India and China was above the critical threshold for reverse innovation.

Extant literature largely fails to reconcile reverse innovation with established theories and frameworks (Cunha et al, 2014; Corsi and Di Minin, 2014); this applies most regretfully to the "fathers" of the concept (Immelt et al, 2009; Govindarajan and Trimble, 2012). The following identification of linkages between the re-positioned concept and major streams of management literature will hence support the objective of making reverse innovation more actionable.

FIGURE 1

Illustrative positioning of reverse innovation in the total distance framework

ENDOGENOUS DISTANCE

High

"Domestic"
Disruptive
Innovation

Reverse
Innovation

EXOGENOUS DISTANCE

Low

High

Innovation
"by Default"

Glocalisation

Low

Bubbles sizes illustrate the critical stimulus size needed to induce the actor's innova-tion

To start with, reverse innovation draws on global strategies in general and suggests a shift towards local responsiveness within the transnational model in particular (Bartlett and Ghoshal, 1989). In an emerging foreign market bearing the stimulus to innovate, this eventually promotes the strategic option of adaptation (Ghemawat, 2007). Our notion of reverse innovation as a customisable template draws on Ghemawat's managerial framework, which urges that internationalisation strategies generally be tailored to a particular constellation including an enterprise, its home and the targeted host country. However, Ghemawat considers exogenous (administrative, cultural, economic and geographic) distances only. Our concept extends this idea by adding the dimension of endogenous distances, which in turn draws on resource based view and the double-edged sword of core capabilities. These may turn "core rigidities" (Leonard-Barton, 1992), with the normative core being manifested in the dominant managerial logic underlying innovation by default (Prahalad and Bettis, 1986). In fact, innovation by default itself may be seen as both, a valuable top-level capability and a detrimental rigidity, the latter of which the actor attempts to overcome by pursuing reverse innovation.

Our definition of the home to an enterprise, coupled with its deliberate self-disruption by the eventual arrival of reverse innovation, clearly connects reverse and disruptive innovation (Christensen and Raynor, 2003). Additionally, this indicates that the enterprise rearranges its activities in response to the shifting stimulus to innovate, which refers to the dynamic capability approach and the mechanisms of sensing, seizing and reconfiguring of resources (Eisenhardt and Martin, 2000; Teece, 2007), with multi-project lineage management as a model to reconfigure the actor's innovation activity and shape its future technological trajectory (Maniak and Midler, 2014).

Linking reverse innovation and the literature on innovation under scarcity, Cunha et al. (2014) see reverse innovation as a mode of innovating in environments where affluent customers are scarce. Repositioned concept concurs with this notion only as long as the acting enterprise is a large Western MNE and the stimulus in markets at a

substantially lower level of development. Yet MNEs from less developed countries will rather suffer from a lack of resources when pursuing reverse innovation. SMEs from middle-income economies innovating e.g. for India will even likely be sandwiched by two dimension of scarcity: own lack of resources and environmental lack of affluent customers.

Finally, note that previous concepts take for granted that the entire process of reverse innovation remains within a single firm. In contrast, this paper allows for the process to span more than one enterprise, e.g. by insourcing technology (open innovation; Chesbrough, 2003).

Conclusion

Current research recognises that innovation may occur everywhere, and not only in the developed world (Vives et al, 2010). The concept of reverse innovation doubtlessly deserves credit for its contributions to this change of perception. However, previous conceptualisations position reverse innovation primarily in relation to the shift of consumption power towards less developed countries. This distracts from the actual reversal, which resides at the level of a new product or service being innovated in contradiction to the primary market focus of traditional innovation logic at the firm level. As a consequence, reverse innovation has been at risk of becoming limitedly applicable to both theory and practice.

Our paper makes three major contributions in this context. Firstly and most importantly, the reconceptualised reverse innovation consistently takes the firm-level perspective and becomes a customisable template employable by any enterprise. Secondly, linkages to major streams of related management literature are identified, thus mitigating the concept's current segregation and increasing its practical applicability. A practical focus notwithstanding, these linkages also indicate bridgeheads from which to progress in federating reverse innovation with previously established theoretical findings. Thirdly, extant literature on reverse innovation is smoothly integrated, with second generation concept as a sub-template including large Western MNEs as actors and the stimuli to innovate definable by geographic or geo-economic market segmentation.

Mentioned contributions notwithstanding, some implications of our reconceptualization need to be shed more light on. First, it calls for research on more diverse constellations, for instance on cases enacting SMEs and involving emerging markets in smaller middle-income economies, or at a higher level of development. However, at a given point of time, not every enterprise will have a primary and secondary market for innovation. Thus, future research may equally wish to address positioning of start-ups and "born globals" (Madsen and Servais, 1997) vis-à-vis reverse innovation. Relatedly, academic discussion on comparative advantages and disadvantages of different actors is invited

(Burger-Helmchen et al, 2013). For example, while the legacy of innovation by default will more likely constrain large MNEs, major obstacles to SMEs could be more attributable to their comparatively tight financial resources (Knight and Cavusgil, 2004; OECD, 2013). Additionally, the links between reverse and open innovation (Chesbrough, 2003) and more generally the models of processes underlying reverse innovation need further researchers' attention. Last but not least, while reverse innovation may in best case create a "blue ocean" of uncontested market space for the actor (Kim and Mauborgne, 2004), comprehensive assessments of induced business performance that consider both growth achieved and opportunity cost incurred are yet to come.

Bibliography

Asakawa, K.; Som, A. (2008). Internationalization of R&D in China and India: Conventional Wisdom Versus Reality. *Asia Pacific Journal of Management*, *25*(3), 375 – 394.

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

Bartlett, C. A.; Ghoshal, S. (1989). *Managing Across Borders: The Transnational Solution*. Boston: Harvard Business School Press.

Birkinshaw, J.; Braunerhjelm, P.; Holm, U.; Terjesen, S. (2006). Why do some multinational corporations relocate their headquarters overseas? *Strategic Management Journal*, *27*(7), 681–700.

Brown, J. S.; Hagel III, J. (2005). Innovation blowback: Disruptive management practices from Asia. *McKinsey Quarterly*, (1), 35–45.

Buckley, P. J.; Ghauri, P. N. (2004). Globalisation, economic geography and the strategy of multinational enterprises. *Journal of International Business Studies*, *35*(2), 81–98.

Burger-Helmchen, T.; Cohendet, P.; Radojevic, N. (2013). L'innovation inverse: un retournement du principe de diffusion internationale des innovations? In U. Mayrhofer & P. Very (Eds.), *Le management international à l'écoute du local*. Paris: Gualino.

Chesbrough, H. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Cambridge, MA: Harvard Business School Publishing.

Christensen, C. (1997). *The Innovator's Dilemma*. Boston: Harvard Business Review Press.

Christensen, C.; Raynor, M. (2003). *The Innovator's Solution*. Boston: Harvard Business Review Press.

Corsi, S.; Di Minin, A. (2014). Disruptive Innovation… in Reverse: Adding a Geographical Dimension to Disruptive Innovation Theory. *Creativity and Innovation Management*, *23*(1), 76–90.

Cunha, M. P. e, Rego, A.; Oliveira, P.; Rosado, P.; Habib, N. (2014). Product Innovation in Resource-Poor Environments: Three Research Streams. *Journal of Product Innovation Management*, *31*(2), 202–210.

Deloitte (2006). *Innovation in Emerging Markets: Strategies for Achieving Commercial Success*. Deloitte Touche Tohmatsu.

Deloitte (2010). *Profile of the Canadian Aerospace Industry*. Deloitte & Touche LLP and affiliated entities.

Dow Jones (2014). Dow Jones Total Stock Market Indexes. Accessed June 18, 2014, at http: //www.djindexes.com

Dunning, J.; Lundan, S. M. (2008). *Multinational Enterprises and the Global Economy* (2nd ed.). Cheltenham, UK: Edward Elgar.

Eisenhardt, K. M.; Martin, J. A. (2000). Dynamic Capabilities: What Are They? *Strategic Management Journal*, *21*(10/11), 1105–1121.

Fabrizio, K. R.; Thomas, L. G. (2012). The Impact of Local Demand on Innovation in a Global Industry. *Strategic Management Journal*, *33*(1), 42–64.

Fry, C. V.; Marjanovic, S.; Yaqub, O.; Chataway, J. (2011). *Health Innovation Transfer from South to North*. Oxford: RAND Corporation Europe.

Ghemawat, P. (2007). *Redefining Global Strategy: Crossing Borders in a World Where Differences Still Matter*. Boston: Harvard Business School Press.

Godin, B. (2006). The Linear Model of Innovation. The Historical Construction of an Analytical Framework. *Science, Technology & Human Values*, *31*(6), 639–667.

Govindarajan, V.; Ramamurti, R. (2011). Reverse Innovation, Emerging Markets, and Global Strategy. *Global Strategy Journal*, *1*(3-4), 191–205.

Govindarajan, V.; Trimble, C. (2012). *Reverse Innovation: Create Far From Home, Win Everywhere*. Boston: Harvard Business Press Books.

Hang, C.-C.; Chen, J.; Subramian, A. M. (2010). Developing Disruptive Products for Emerging Economies: Lessons from Asian Cases. *Research Technology Management*, *53*(4), 21–26.

IMF (2014). *World Economic Outlook*. Washington DC: International Monetary Fund.

Immelt, J. R.; Govindarajan, V.; Trimble, C. (2009). How GE is Disrupting Itself. *Harvard Business Review*, *87*(10), 56–65.

Jullien, B.; Lung, Y.; Midler, C. (2012). *L'Épopée Logan: Nouvelles trajectoires pour l'innovation*. Paris: Dunod.

Kamp, B. (2012). Reverse Innovation: Inversing the International Product Life Cycle Model and Lead Market Theory. *Boletín de Estudios Económicos*, *67*(207), 481–504.

Khanna, T.; Palepu, K. (2006). Emerging Giants: Building World-Class Companies in Developing Countries. *Harvard Business Review*, *84*(10), 60–69.

Kim, W. C.; Mauborgne, R. (2004). Blue Ocean Strategy. *Harvard Business Review*, *82*(10), 76–84.

Kirby, J. (2010, January 1). The Decade in Management Ideas. Accessed October 23, 2013, at https: //hbr.org/2010/01/the-decade-in-management-ideas/

Knight, G. A.; Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. *Journal of International Business Studies*, *35*(2), 124–141.

Kose, M. A.; Prasad, E. (2010). *Emerging Markets: Resilience and Growth Amid Global Turmoil*. Washington DC: Brookings Institution Press.

Kotler, P.; Keller, K. L. (2007). *A Framework for Marketing Management* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

Laperche, B.; Lefebvre, G. (2012). The Globalization of Research & Development in Industrial Corporations: Towards "Reverse Innovation"? *Journal of Innovation Economics*, *10*(2), 53–79.

Leonard-Barton, D. (1992). Core Capabilities and Core Rigidities: A Paradox in Managing New Product Development. *Strategic Management Journal*, *13*(S1), 111–125.

Leontief, W. (1953). Domestic Production and Foreign Trade: The American Capital Position Re-Examined. *Proceedings of the American Philosophical Society*, *97*(4), 332–349.

Lieberman, M. B.; Montgomery, D. B. (1988). First-Mover Advantages. *Strategic Management Journal*, *9*(S1), 41–58.

Maddison, A. (2001). *The World Economy: A Millennial Perspective*. Paris: OECD Publications.

Madsen, T. K.; Servais, P. (1997). The Internationalization of Born Globals: An Evolutionary Process? *International Business Review*, *6*(6), 561–583.

Maniak, R.; Midler, C. (2014). Multiproject lineage management: Bridging project management and design-based innovation strategy. *International Journal of Project Management*, *32*(7), 1146–1156.

Morgan Stanley (2014). MSCI Global Equity Indexes. Accessed June 18, 2014, at http: //www.msci.com/products/indexes/

OECD (2005). *Oslo Manual. The Measurement of Scientific and Technological Activities*. European Commission and Eurostat.

OECD (2010). *The Emerging Middle Class in Developing Countries*. OECD Development Centre.

OECD (2013). *Financing SMEs and Entrepreneurs 2013*. OECD Publishing.

Osenton, T. (2004). *The Death of Demand: Finding Growth in a Saturated Global Economy*. Upper Saddle River, NJ: Financial Times Prentice Hall.

Osterwalder, A.; Pigneur, Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Hoboken, NJ: John Wiley & Sons.

Prahalad, C. K. (2005). *The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits* (5th ed. 2009). Upper Saddle River, NJ: Prentice Hall.

Prahalad, C. K.; Bettis, R. A. (1986). The Dominant Logic: A New Linkage between Diversity and Performance. *Strategic Management Journal*, *7*(6), 485–501.

Prahalad, C. K.; Lieberthal, K. (1998). The End of Corporate Imperialism. *Harvard Business Review*, *76*(4), 109–117.

Prahalad, C. K.; Mashelkar, R. A. (2010). Innovation's Holy Grail. *Harvard Business Review*, *88*(7/8), 132–141.

PWC (2013). World in 2050. *The BRICs and Beyond: Prospects, Challenges and Opportunities*. PricewaterhouseCoopers LLP.

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

RUGMAN, A. M.; VERBEKE, A. (2004). A Perspective on Regional and Global Strategies of Multinational Enterprises. *Journal of International Business Studies*, *35*(1), 3–18.

SCHMOOKLER, J. (1966). *Invention and Economic Growth*. Cambridge, MA: Harvard University Press.

Standard & Poor's. (2014). Country Classification Consultation Results. Accessed June 18, 2014 at http: //www.spindices. com/

STRAUSS-KAHN, V.; VIVES, X. (2009). Why and where do Headquarters Move? *Regional Science and Urban Economics*, *39*(2), 168–186.

TEECE, D. J. (2007). Explicating Dynamic Capabilities: The Nature and Microfoundations of (Sustainable) Enterprise Performance. *Strategic Management Journal*, *28*(13), 1319–1350.

TEECE, D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, *43*(2-3), 172–194.

The Economist. (2008, September 18). Acronyms BRIC out all over. Accessed June 18, 2014 at http: //www.economist.com/ node/12080703

UNCTAD (2005). *Globalization of R&D and Developing Countries*. Proceedings of the Expert Meeting, Geneva, Switzerland.

UNO (2013). *World Economic Situation and Prospects*. New York: UN Publication.

USITC (2013). United States International Trade Commission DataWeb. Accessed August 2, 2013, at http: //dataweb.usitc. gov

VERNON, R. (1966). International Investment and International Trade in the Product Life Cycle. *Quarterly Journal of Economics*, *80*(2), 190–207.

VERNON, R. (1979). The Product Cycle Hypothesis in a New International Environment. *Oxford Bulletin of Economics and Statistics*, *41*(4), 255–267.

VIVES, L.; ASAKAWA, K.; SVEJENOVA, S. (2010). Innovation and the Multinational Enterprise. *Advances in International Management*, *23*, 497–523.

VON ZEDTWITZ, M.; CORSI, S.; SØBERG, P. V.; FREGA, R. (2015). A Typology of Reverse Innovation. *Journal of Product Innovation Management*, *32*(1), 1–17.

WBDI (2013). World Bank Development Indicators database. Accessed December 11, 2013, at http: //data.worldbank.org

WILKINS, M. (2009). The History of the Multinational Enterprise. In A. Rugman (Ed.), *The Oxford Handbook of International Business* (2nd ed.). Oxford: Oxford University Press.

WILLIAMSON, P. J. (2010). Cost Innovation: Preparing for a "Value-for-Money" Revolution. *Long Range Planning*, *43*(2-3), 343–353.

ZAHEER, S. (1995). Overcoming the Liability of Foreignness. *Academy of Management Journal*, *38*(2), 341–363.