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REVERSE INNOVATION – HOW IT WORKS

Abstract:

Innovation is nowadays one of the most important factors of modernity and competitive position of business units and the entire economy. To continue developing and maintaining an advantage in the market enterprises will increasingly need to focus on radical innovation. This undoubtedly is reversed innovation. The concept of reverse innovation bases on research on innovation implemented in poor, developing countries, what generates incomparably lower costs than in the case of laboratories held in developed countries. The main idea of the concept is final transfer of the product and its adaptation, then its use and distribution on highly developed markets. This is the opposite of the traditional approach to innovation, which is used in knowledge-based economies in the developed world. It is expected that emerging markets will be in greater extent used as a cheap production resources on a larger scale than at present – both for research and development. The concept of reverse innovation, that is the production of ideas on emerging market and then their "upstreaming" to Western markets, is however a big challenge for the organization. It involves elimination of existing organizational structures and creation of new ones, modernization of research, development and production methods, as well as reorientation of awareness of employees and executives. The paper presents the theoretical aspects of reverse innovation, its role in building the company's strategy and the impact on the development of emerging economies.

Keywords:

Frugal Innovation, Reverse Innovation, Good-enough Innovation, Gandhian Innovation, Jugaad Innovation, BOP Market, Emerging Markets

JEL Classification: M21, O00, O31

1 Introduction

It is an old cliché to say that currently the enterprises' development and competitive positions are determined by innovation. The importance of innovation in corporate management is a result of changes in corporate environment, as well as of preferences and changing needs of customers.

Innovation is linked to concepts such as novelty, rationalization, improvement, upgrade, invention. In lexical approach the term „innovation" is derived from Latin word *innovatio*, which means „to renew", and in the economy it is related to the implementation of new technologies, organizations, and institutions (Encyklopedia PWN). The precursor of innovation in economic sciences was J.A. Schumpeter (1934), according to whom innovation and the creative destruction activities are common practice, which allows to overcome the obstacles emerging in the cyclical development of the economy. The concept of creative destruction consists of the continuous destruction of old structures and creation of new ones, ever more effective. In classic Schumpeter approach innovation that equal development can be classified into following five cases:
  - introducing a new or modified product on the market,
  - using a new production method or sale technique,
  - entering a new market,
  - using a new source of raw materials or semi-finished products,
  - introducing a new organization of some industry.
The approach proposed by Schumpeter primarily emphasizes innovation as market experiments and large, wide-range changes, that alters in a fundamental way the structure of whole sectors and markets.

The perception of innovation evolved over the years, which was caused by changes emerging in the worldwide economy, ia. through the liberalization of trade, opening the borders for free movement of goods, services, and capital, development of technologies, as well as the change in enterprises' operation models. Among many definitions of innovation that emerged in the literature of the subject, it is worth to quote for Drucker (1985) that „an innovation is a specific tool for entrepreneurs, using which they make a change an opportunity to start a new business activity or providing new services". However the most popular and used in practice is the definition presented in Oslo Manual (2005, p. 46), according to which „an innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organisation or external relations". This definition allows to distinguish following four types of innovation:
 1. product innovation, related to the introduction on the market of new or significantly improved products or services;
 2. process innovation, consisting of the introduction of new or improved technology processes, machinery, equipment, software, methods of creating and providing services, etc.;
 3. marketing innovation, aimed at the introduction of new marketing methods and strategies related to the product, packaging, positioning, promotion, and pricing policy;
 4. organisation innovation, related to the introduction of new organisation methods, including the organisation of workplace, or relations with suppliers and distributors.

Innovation is the result of human ingenuity, ability to discover and formulate laws, principles, rules, concepts, solutions and ideas as well as to realize and popularize them (Duraj & Papiernik-Wojdera, 2010).

The scientific discourse conducted in the literature is not limited only to presenting definitions and types of innovation, but also highlights new possibilities arising from modern market conditions. An enterprise, in order to achieve market success and keep the competitive position among other entities, has to be innovative continually (Jabłoński, 2013). The innovativeness is usually associated with enterprises (multinational corporations) operating in developed countries. It is those corporations with access to capital, and thus knowledge, that build R&G departments, cooperate with technology centres, and in result create innovation. And the formation of global market gave them the opportunity to develop from the local scale activity to global scale activity. However the changes in world economies questioned the approach that the described above way of innovation development is the only one.
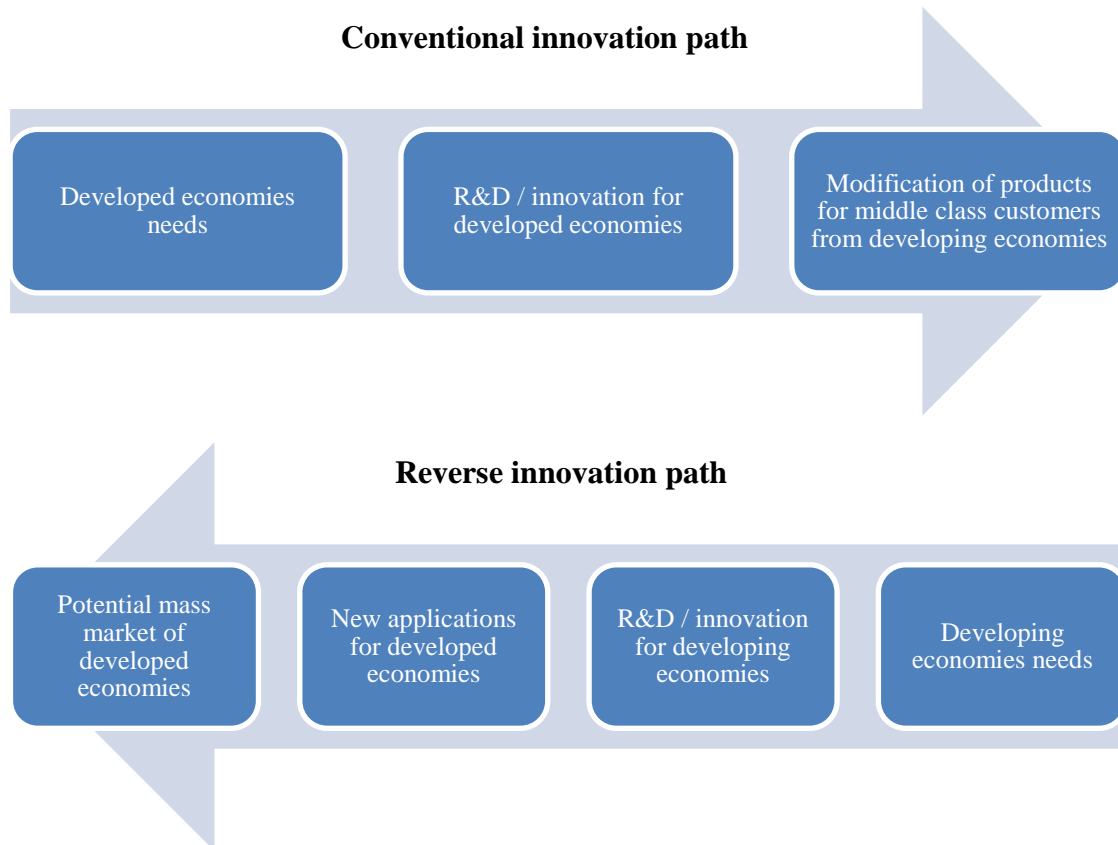
2 Innovativeness – a new look in the global world

So far the activities of enterprises, related to innovativeness are built on two assumptions: wealth and abundance. Also some changes in customers' behaviour can be observed: eg. in the United States they expect not expensive, yet valuable products (Prahalad & Mashelkar, 2010). Young people both from developing and developed countries nowadays require products and services that are environment friendly, durable, and at reasonable price. This means that enterprises should look at the innovation process in a completely different way. The price premium is not a determinant of innovativeness anymore. Prahalad and Mashelkar (2010) propose that enterprises answer this challenge with a change of their innovation strategy, consisting of manufacturing more products from less resources and offering them at lower price. Such approach to the strategy requires the pursuit for lower production costs, and sources of talent, and this in the result increases the cross-border interdependencies among countries, creates the chain of supplies, and develops knowledge.

In the modern world it is a novelty, that innovation is not only limited to developed countries' economies. Currently, the enterprises of developing countries' economies are also focused on the innovativeness and want to be leaders in that domain. This way the concept of reverse innovation has been recently established in the literature of the subject. This concept brings about numerous questions: what is reverse innovation? what factors caused these changes in the approach to the innovativeness issues? and what are the consequences of these changes? Moreover, the reverse innovation is related to many other, also new, concepts of innovativeness in developing countries' economies. Brief historical background for those changes can be cited for Govindarajan (2009). The first phase in the evolution of innovation development, called the globalization, is associated with the access of multinational corporations to global markets. Innovative products or services were created in the home countries of multinational corporations and sold without any modifications to markets around the world. The second phase is related to the globalization. The enterprises manufacturing innovative products or services, in the pursuit for being more competitive on the market, try to adapt to customer needs. Such approach requires the adaptation of manufactured products to the needs of local customers, what usually means the products of worse properties / parameters and also at lower price. The multinational corporations often moved a part of R&D centres activities to

developing countries, thus lowering their operational costs and at the same time attracting highly qualified personnel. Such activities allowed for a smooth transition to the third phase, related to local innovation. Local enterprises were creating innovative products or services for local markets, using the resources of multinational corporations.

Figure 1: Innovation paths – conventional and reversed approach

Conventional innovation path

| Developed economies needs | R&D / innovation for developed economies | Modification of products for middle class customers from developing economies |

Reverse innovation path

| Potential mass market of developed economies | New applications for developed economies | R&D / innovation for developing economies | Developing economies needs |

Source: Hang & Garnsey (2011).

The fourth phase of the evolution consists in reverse innovation. Products and services designed for developing countries' markets are offered on developed markets. Thus it can be stated that the innovation process changed its direction. Multinational corporations design innovation in developing countries to satisfy the needs of local customers, and then offer the same products in developed countries. Such approach to innovation assumes different than so far role of developing countries. They are not only the market for consuming innovative products, but the market where new, innovative products are created, and technology solutions are developed. Emerging markets will offer many possibilities for technology innovation, which is important from the point of view of entrepreneurship development, as there is a high demand for good quality products / services at affordable price (Hang & Garnsey 2011). Hence, many multinational corporations consider entering the market of emerging economies not only as goods and services exporters but also as beneficiaries of innovation developed on that market. Differences in the approach to innovation in the globalization phase (conventional innovation path) and in the reverse innovation phase (reverse innovation path) are presented in Figure 1.

A new environment for innovation was presented by Prahalad (2004, 2012). In his publications the author identified innovation possibilities for markets being at the

bottom of the economic development pyramid (BOP). According to presented data he noticed, that the BOP amounts for 4 billion people, living on less than USD 2 a day, coming from different cultures, ethnic groups, with diverse needs and abilities. Multinational corporations have not perceived this market as a target consumer market so far. The research of the World Resources Institute (2007) indicated that this market accounts for about USD 5 billion of purchasing power parity. The main challenge here is to adapt products to the needs of this market. The task is not easy, as the market is not homogeneous, but unorganized, divided into numerous segments, and fragmented. It can be stated that BOP market means many niche markets. Due to highly diverse groups of customers it is impossible to create a product that satisfies the needs of every customer. According to Prahalad multinational corporations focused on manufacturing products for the top of pyramid markets, which have already been diagnosed in terms of customers, and easy to address with marketing channels. The BOP markets require completely different approach from the enterprises. Such approach has to be diverse, as the customers on this market are. Prahalad (2012) believes that in order to be competitive and reach the BOP market customers the enterprises should focus on 4 A:

1. Awareness – creating products and services awareness for the BOP market in such a way, that consumers and producers know what is available in the offer and how to use it;
2. Access – customers, even in remote locations, should have the access to products / services provided;
3. Affordability – ensuring that a product or service is affordable. The enterprises should guarantee a good quality product at a low price;
4. Availability – building trust and loyalty on the BOP market has to be associated with the provision of continuous supply of products and services.

3 Concept of innovation in developing countries

The literature of the subject has just recently started to deal with the aspect of reverse innovation and still lacks the solid theoretical framework. Govindarajan should be regarded as the precursor of reverse innovation. It is worth noticing that reverse innovation cannot be considered in isolation from other concepts of innovation, implemented on emerging markets. The authors studying this problem also focus on various aspects of the concept being discussed. The researchers who should be mentioned here are ia. Christensen (1997), Christensen and Hart (2002), who study disruptive innovation, Prahalad (2004), who analyses innovation at the bottom of pyramid (BOP), Zeng and Williamson (2007), who consider cost innovation, Zeschky, Widenmayer and Gassman (2011), who concentrate on frugal innovation, and finally Immelt, Govindarajan and Trimble (2009), who deal exactly with reverse innovation. Recently the focus of corporate management and numerous researches were aimed at innovativeness in developing countries. It is vital to present different approaches to developing countries innovativeness that can be found in the literature of the subject, as it allows to understand the essence of reverse innovation. Table 1 presents different concepts of innovativeness that originates from developing countries.

Table 1: Definitions for concepts of innovation in developing countries

INNOVATION TYPE	DEFINITION	RESEARCHERS
Disruptive innovation	Processes of replacing older technologies with technologies that change the course of development	Christensen, Hart
Cost innovation	The use of cost advantage of developing economies in order to develop innovativeness at much lower cost	Zeng, Williamson
Reverse innovation	The development of ideas on emerging markets and then the export of this knowledge and innovation to developed economies	Govindarajan, Ramamurti, Trimble, Immelt
Gandhian innovation	Innovation developed for the Indian market, corresponding to the two Gandhi assumptions: affordability and sustainable development	Prahalad, Mashelkar
Jugaad innovation	Innovation based on ingenious solutions, consisting of overcoming limitations (eg. the lack of funds) and finding effective, often improvised solutions with limited resources	Radjou, Prabhu, Ahuja
Frugal innovation	Innovation with great cost advantage, and in some cases of inferior performance in comparison to available solutions, resource-constrained	Zeschky, Widenmayer, Gassmann
Good-enough innovation	Innovation associated with functionality and features designed in a way that they meet specific needs of customers with limited environment resources	Zeschky, Widenmayer, Gassmann

Source: own elaboration.

Disruptive innovation was introduced to the literature of the subject by Christensen (1997), who identified them as new technologies that change the previous course of enterprises' development. The answer to the question why certain well-managed enterprises fail on the market allowed the author to distinguish two types of innovation: continuation and radical. The development of continuation innovation is an easy task for well-managed enterprises, as through the observation of their customers they invest in technologies allowing them to properly adapt products to their needs. However such activities not always result in the expected value for the enterprise in long term and do not guarantee to maintain the market position. A completely different perspective on existing products, highlighting those features that were previously of little interest for customers, can contribute to radical product changes. This results in the break of development continuity, and at the same time triggers changes in the whole product architecture, as well as in the complete value chain. The author cites the evolution of the hard disk drive as an example. Key customers always insisted on improving two features of the drive: total capacity and recording density. The efforts of the entire industry focused on changes proposed by major drive buyers. The twist occurred when developing countries customers started to report a need for other kinds of improvement, such as eg. drive size. This need was mainly met by small enterprises that were not involved with mainstream customers. The concept of disruptive innovation was not started by ideas and thoughts emerged in developing economies but in developed economies. However, according to Hang & Garnsey (2011), disruptive innovation change the competition conditions, are meant to reach new customers, to disrupt enterprises present on the market, or to open for new

markets. It is possible, as their offer is a new value proposition, more affordable, more convenient that offers previously available. Hence disruptive innovation is not reserved only for developed markets, but can be considered from the developing markets perspective. In his book The Innovator's Dilemma, Christensen (1997) states that technologies that disrupt the development continuity introduce a completely new perspective on the value issues to the market. New products based on those technologies are not as effective as products with a established market position. They usually meet the needs of small number of customers (new, niche market segment), but are cheaper and often more convenient in use. Hart and Christensen (2002) claim that developing countries are ideal target markets for disruptive technologies for at least two reasons. First, business models designed in the low income markets are suitable for transport, which means they can be applied in many other places than models developed in the high income markets. The second reason is the possibility to offer the product or service to people, who were previously completely ignored or the offered products were not adapted to them. Hence offering them something less impressive, yet specially „for them" results in the increase, especially for new companies, with unestablished market position, which find it hard to reach experienced customers in developed markets. Therefore it can be stated that it starts the changes and innovation found on emerging markets are a kind of disruptive innovation.

Considerations presented later in this paper are intended to confirm the validity of the above thesis.

Williamson (2010) states that the innovation is traditionally related to the development of new products and services or their modernisation through adding more features. However the market competition makes the huge funds spent for high technology and research development not sufficient. Some enterprises saw opportunities in offering their products / services in developing countries, but it involves offering less complex products at lower prices. Price reduction results in lower revenues, which may cause the decrease in expenditures for innovation. First enterprises offering lower price products on emerging markets focused on cheaper production of products, lowering mainly the workforce costs. Subsequently the enterprises searched for opportunities to lower the cost of manufacturing innovative products. Strong enterprises from emerging markets developed the possibility to implement cost innovation in one of three ways (Williamson, 2010):

- sale of modern products at mass market prices – it is a strategy of destroying the conventional thinking, that high technology should be limited to high class products and high price segment; its purpose is to break the traditional approach based on profit maximization by enterprises and slow product migration (related to the life cycle of this product) from the high price segment to the mass market;
- offer of products adapted for customer needs – abandoning the strategy where customers who want a change and an adaptation of the product to their needs have to pay a high price premium; the availability of a large number of workers in developing countries makes it possible to adapt products to specific customer needs at the same price and with standard production;
- introduction of market niches to the mass market, which undermines the validity of focus strategies; employing low costs brings the break-even point down, making it possible to offer local products at significantly lower prices and thus unlock the hidden demand.

Enterprises introducing cost innovation based on emerging economies can offer the customers products adapted to their needs at much lower prices in a completely new way. Clearly, the starting point for that innovation is the lower labour costs of qualified workers, but it is not their only strength in building competitive advantage. Williamson (2010) notices that we should rather talk about a change in the business model, that allows enterprises to supply large markets with low margins, instead of focusing on high class markets and expecting benefits from high margins.

The concept of frugal innovation is related to innovation for cheaper and simpler products offered by developing economies. Frugal innovation focus on domestic processes of product development and inevitable transfer of knowledge from developed countries to emerging markets (Kumar, 2008, Moore, 2011). The development of frugal innovation is associated with limited resources, which is typical for developing economies. Thus we can state that frugal innovation is a certain philosophy, hence they are not focused on lowering the costs, but on sensible management of available resources by avoiding their unnecessary waste. These are inexpensive products which meet customer needs and emphasize the functionality at the same time (Zeschky, Widenmayer & Gassmann, 2011, Agarwal & Brem, 2012).

There are some difficulties to classify three types of innovation: frugal, Gandhian, and jugaad. The novelty of this problem makes the literature lack a solid taxonomy for those three types of innovation. Some authors claim that jugaad is another name for frugal innovation (Saraf, 2009), and jugaad innovation is the same as Gandhian innovation. In addition it is stressed that Gandhian and jugaad innovation relate to the nature of Indian market where they were developed. According to Lacy (2011) frugal innovation emerged from jugaad innovation. Presented above three types of innovation all aim at creating a simple product of high performance and low costs for poor people (Saraf, 2009). However there are differences between them, which Brem and Wolfram (2014) decided to identify. The concept of frugal innovation itself does not mean re-designed solutions, but the use of limited resources available in given environment for originally designed products and services (Zeschky, Winterhalter & Gassmann, 2014). They are often based on a new product architecture, which brings about new features, allowing for destructive application, eg. by changing previously stationary products into portable products. Gupta (2011) states that "frugal innovation is a new management philosophy, which integrates specific needs of the BOP markets as a starting point and works backward to develop appropriate solutions that may be significantly different from existing solutions designed to address needs of upmarket segments". What is important in frugal innovation – it is not aimed only at using cheap workforce, but at the reconstruction, modernisation of products and processes in such a way that it does not create unnecessary costs (Woolridge, 2010). As Zeschky, Winterhalter and Gassmann (2014) suggest, frugal product innovation is new and innovative, both from technological and market points of view – they are not only cheaper but also re-designed.

Jugaad innovation is the transformation of waste into an useful product. Creative and ingenious ideas of slum dwellers contributed to the development of small enterprises in India (Brem & Wolfram, 2014). Radjou, Prabhu & Ahuja (2012, p.4) define jugaad innovation as „an innovative fix; an improvised solution born from ingenuity and cleverness". The postulate „more for less" in case of jugaad innovation is met, but is viewed from the perspective of art, culture, mentality, and not a process or result. On one hand those enterprises use improvised approaches to solve problems and quickly satisfy the needs at low cost, but on the other hand the whole activity lacks discipline

and systematics (Lacy, 2011; Brem & Wolfram, 2014). In case of jugaad innovation Prahalad and Mashelkar (2010) clearly state that this is radical innovation. That innovation consists in searching for alternative solutions and improvisations, which overcome the lack of resources, and are able to solve seemingly insoluble problems. The authors also stress that this term, not directly by its definition, is associated with poor quality of solutions being used. Proposed innovative and radical solutions for problems are mainly based on simple assumptions, aimed at the provision of uncomplicated products at low costs that give large benefits. These products are offered to the people from the bottom of pyramid, making the jugaad innovation a result of poverty and the urgent need.

The radical problem solving is also associated with Gandhian innovation. This term was proposed in the literature of the subject by Prahalad and Mashelkar (2010). The authors suggest that this type of innovation is similar to jugaad innovation but based on different motivation. The core of Gandhian innovation consists of Mahatma assumptions, which read: "I would prize every invention of science made for the benefit of all" and "Earth provides enough to satisfy every man's need, but not every man's greed". Hence Gandhian innovation focus not only on the price, but also on sustainable development and affordability. Gandhian innovation concentrate on the bottom of pyramid (BOP), aim at simplicity and economy of offered product, but also put more pressure on the creation and modification of internal and external features through technology (Brem & Wolfram, 2014). Prahalad and Mashelkar (2010), studying Indian enterprises, distinguished three types of Gandhian innovation:

- creation of new business models based on Western technologies,
- modification of the enterprise's organizational abilities, eg. by skills in the design and quick implementation of resources on a large scale,
- creation or acquisition of new possibilities by combining external technologies with internal process approach in order to obtain standard products at lower production cost that require advanced technology.

Table 2: The main characteristics of the new concepts of innovation

	Disruptive innovation (DI)	Cost innovation (CI)	Gandhian innovation (GnI)	Jugaad innovation (JI)	Frugal innovation (FI)	Good-enough innovation (GI)	Reverse innovation (RI)
Orientation	Market value	Process	Social claim	Problem oriented	Product and process	Product and process	Product solution oriented
Aim	Technologies changing the course of development	Improved processes	Improved process, products, establish new business model	Radical changes in product	Improved processes, engineered product features, new applications	Improved processes and engineered product features	Other geographic market or market segment with resource-constrained needs
Description	The elimination of older technologies and introduction of new technological models	Cost-engineered emerging market solution	Engineering based on technology to solve problems in emerging markets	Engineering based on a new application of existing solutions	Application-engineered emerging market solution	Value-engineered emerging market solution	Cost-, value- or application-engineered global market solution
Innovative strategy	Technologies and new products created for new markets	Cost cutting Cheaper, existing solution	Knowledge and technology transfer Cheaper, specialist new solutions	CI + innovation in products Cheaper, new and improvised solutions	GI + application innovation Cheap, specialized new solution	CI + feature optimization Cheaper, specialized existing solution	CI, GI, or FI + global rollout Cheap, good-enough or frugal solution for Western markets
Specificity	Simpler and cheaper products, initially with worse operating parameters Lower margin Commercialization of emerging or marginal markets	Cost-effective raw materials Local sourcing Local production Standard components, commodities Smaller package sizes	Raw materials for cost-effectiveness local sourcing local production Standard components, raw materials Caring for the community Adapted to environments with low infrastructure	Inventive problem-solving Frugal approach Low taxonomy and discipline Short time, rapidness	Cost-effective raw materials Local sourcing Local production Standard components, commodities Reduction of size New applications (e.g., portability) Tailored for environments with poor infrastructures	Cost-effective raw materials Local sourcing Local production Standard components, commodities Limitation to core features Less automation High robustness High ease of use	Cost, good-enough, or frugal innovation characteristics
Examples	Hard disk drive; digital photography; mobile phone	BYD—batteries Huawei—phones and infrastructure Nokia—cell phones ZPMC—cranes Haier—wine coolers Godrej—soap HUL—detergent	Tata Nano car Computer literacy program Limbs prosthesis - Jaipur foot	YES Bank - mobile money	GE—Logiq Book Qiagen—careHPV Safaricom—M-Pesa	MT—weighing scale Logitech—M215 Saurer—Focus	Logitech—M215 MT—Weighing scale Saurer—Focus GE—Logiq Book

Source: Own elaboration based on Christensen (1997), Zeschky, Winterhalter, & Gassmann (2014), Brem & Wolfram (2014), Prahalad & Mashelkar (2010).

Source: Own elaboration based on Christensen (1997), Zeschky, Winterhalter, & Gassmann (2014), Brem & Wolfram (2014), Prahalad & Mashelkar (2010).

The challenge for Indian enterprises is to divert the perception of their products, from cheap and low performance to cheap and high performance. An important aspect of that innovation is the use of technology solutions and the knowledge of developed countries. This is a point where Gandhian innovation contribute.

Good-enough innovation is innovation focused not only on low price, but also on greater functionality of offered products. Similarly as price innovation, good-enough innovation try to keep the profitability level low, but use better local conditions of supply. It allows to adapt products or re-design them in such a way they match specific customer needs from low income segment (Zeschky, Widenmayer & Gassmann, 2014). Good-enough innovation usually require a certain level of novelty in offered products. The product is often created as a result of focusing on basic features, is more durable, easy to use, but has no automated processing. The target of this product offer were at first the price-sensitive customers from emerging markets, but there are also examples of Western companies that modernize products resulting from good-enough innovation.
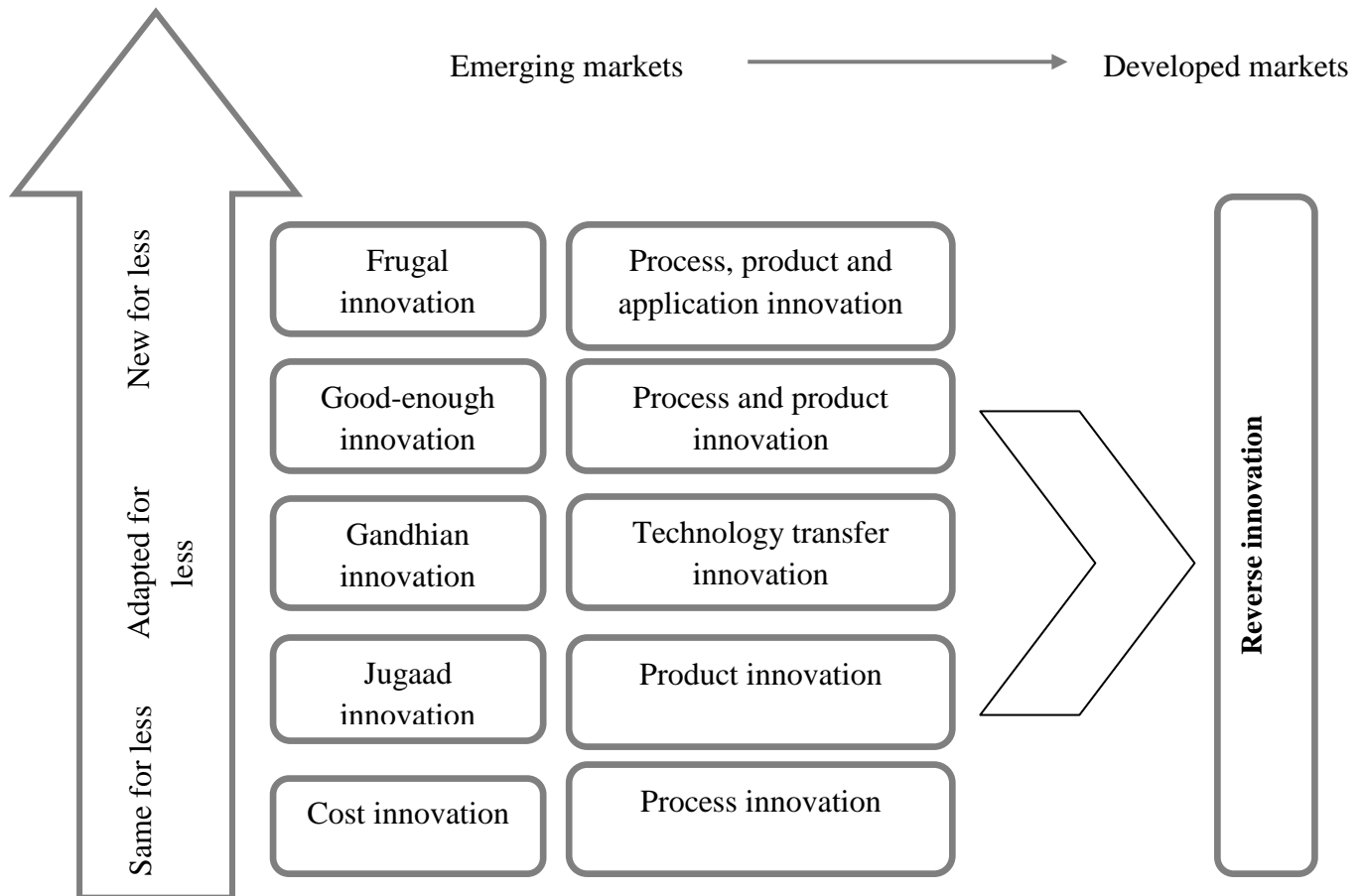
The definition of reverse innovation was presented by Immelt, Govindarajan & Trimble (2009). According to those authors, reverse innovativeness consists in developing ideas on emerging markets, and then introducing them on developed countries' markets. Simply saying it is "towing against the current". The important feature of reverse innovation is not only the focus on the product price, but also on its quality. In the result the manufactured product is not only cheaper but also of high quality. Reverse innovation is the result of various types of innovation emerged on developing markets, in particular of frugal innovation (see Figure 2). Frugal innovation provide for low income customers in developing countries. On the other hand reverse innovation are created by transferring frugal innovation to developed countries, allowing for altered propositions (Hossain, 2013). Trimble (2012) defines reverse innovation as follows: "a reverse innovation is any innovation that is adopted first in the developing world. To be clear: What makes an innovation a reverse innovation has nothing to do with where the innovators are, and it has nothing to do with where the companies are. It has only to do with where the customers are".

The above description of given types of innovation allows to identify differences between them, which are particularly clear in such areas as: the direction of orientation and activities, innovation strategy, nature. Table 2 presents the differences for the concepts discussed above, as well as examples of enterprises and products related to specific types of innovation.

Govindarajan and Trimble (2012) believe that reverse innovation will soon affect the mainstream market, and enterprises that overlook that process will no longer be leaders on global market. The chance has already been recognized by such enterprises as General Electric (GE), P&G, PepsiCo, which are pioneers but also beneficiaries of reverse innovation. For example PepsiCo created new snack food, based not on corn (predominant in developed countries) but on lentils, not very popular eg. among the US citizens. Another good example of reverse innovation implementation is GE Healthcare. GE Healthcare was one of the leaders on developed markets, but its results on developing markets, eg. in China were not satisfactory. The breakthrough in GE activities occurred, when the company realized that preferences of customers from developing countries are quite different from developed countries customers. Developed markets valued performance and functionality, while developing markets were driven by the price and simplicity of use. GE Healthcare products for hospitals in developed countries were first of all too expensive for customers in developing countries, and also suitable only for bigger cities. Even after the limitation of the features the products were too modern for technological solutions available in those countries. Therefore GE decided to radically change the approach to innovation and created ia. a pocket electrocardiograph to perform

heart examinations in its laboratory in India. Simple, easy to use, and lowering the cost of the examination, this product created originally to meet the needs of emerging market, now sells all over the world (more on this subject see Immelt, Govindarajan & Trimble 2009).

Figure 2: Market position and hierarchy of innovation

Emerging markets ────────────► Developed markets

New for less	Frugal innovation	Process, product and application innovation
Adapted for less	Good-enough innovation	Process and product innovation
	Gandhian innovation	Technology transfer innovation
Same for less	Jugaad innovation	Product innovation
	Cost innovation	Process innovation

Reverse innovation

Source: own elaboration based on Zeschky, Winterhalter & Gassmann (2014).

Figure 2 classifies the types of innovation according to their ability to introduce changes and the market where they are offered. Reverse innovation is the result of innovation on emerging markets. It is not a stand-alone phenomenon, but a result of innovative activities in developing economies. The possibilities to use the new BOP market are a chance for the development for many enterprises. Thus many enterprises make successful attempts to introduce new solutions, in products, processes, and applications, in order to reach completely new customers. Moreover, and very important, those innovation does not happen on developed markets. They employ the knowledge, people, and resources of emerging markets. This gives an opportunity to create completely new things, often from scratch. The creation of new solutions for products and processes and their implementation on emerging markets is the first stage for reverse innovation. Thereafter come the modernization and testing the products / processes on developed markets and in the final stage they are offered on global market.

4 Conclusions

The above discourse on reverse innovation indicates new directions for the development of enterprises and emphasizes that being innovative these days does not have to involve considerable expenditures for research and development. Previous enterprises research on innovativeness have been conducted from the point of view of expenditures and with an assumption, that more expenditures mean the more innovative enterprise. The innovation types presented above disproves this thesis. Many examples from global literature of the subject suggest that the innovativeness does not have to rely on high costs, but on idea, ingenuity, and sometimes even improvisation. Innovation related to emerging markets, are the potential for disruptive innovation. It is time for a new creative destruction. Enterprises that want to stay competitive on the market have to be innovative, but the innovativeness does not have to be locked in the laboratory. A new, fresh perspective on customer needs is important, not the focus on product „excellence".

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