

CAN REVERSE INNOVATION ACCELERATE THE GROWTH OF GLOBAL COMPANIES?

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Abstract:

The purpose of this paper is to explain the importance of reverse innovation for the growth of global companies. According to literature review, reverse innovation affects the growth of global companies both in developing and developed countries. Thus, it is suggested that global companies should open R&D centers in developing countries to conduct researches to tailor new products for their needs. When these products succeed, they can offer them to other developing and developed countries to continue to grow in the long run. They can fill out market niches which represent unmet demands of price sensitive and not wealthy customers in developing countries. It can be concluded that reverse innovation can accelerate the growth of global companies.

Keywords: *Reverse Innovation, Global Company, R&D*

1. Introduction

The purpose of this paper is to explain the importance of reverse innovation for the growth of global companies. The literature review related to reverse innovation concept will be explained first. Then, reverse innovation process in global companies will be acknowledged. Conclusion will summarize the benefits of reverse innovation for global companies. Reverse innovation is still considered as a new concept in the innovation literature. It leads global companies to establish R&D centers in developing countries to tailor new products for their needs. After global companies have accomplished new achievements in designing and offering new products in developing countries, they could also offer them to other developing countries and even they could launch these new products in developed countries and their home countries.

2. Reverse Innovation Concept

Reverse innovation is still a new and a popular concept. Although, global companies originated in developed countries have applied reverse innovation worldwide for a while, global companies originated in developing countries have started the process. Reverse innovation can be considered as a triggering factor which accelerates the growth of global companies.

Reverse innovation is the process to define and foster a successful innovation in a developing country which highlights unmet needs in a developed country, adapt and spread the innovation from a developing country to a developed country. It focuses on learning from and investing in developing countries to tackle problems in developed countries which requires unusual solutions (DePasse and Lee, 2013, pp. 1-2).

The reverse innovation term was popularized by Harvard Business Review article (2009) describing the development of GE's handheld electrocardiogram machine (Immelt, Govindarajan, and Trimble 2009), but the concept was inspired by earlier work on global knowledge flows (Frost and Zhou 2005) and innovation in emerging economies (Prahalad 2004). Research on reverse innovation is prominent in consumer packaged goods (Corsi, Di Minin, and Piccaluga 2014) and healthcare sectors (Bottles, 2012; Bhattacharyya et al., 2017). Academic research has focused on defining prerequisites for successful reverse innovation, as well as its organizational and managerial attributes in global companies (Zeschky, Widenmayer, and Gassmann, 2014; Borini et al., 2012). According to the current literature review on 350 publications, 60 companies have been practicing reverse innovation (Hadengue et al., 2017, p. 41).

A reverse innovation is an innovation which is adopted first in developing countries and then transferred to developed countries. Global companies first tailor products in developing countries and then distribute them globally (Sinha, 2013, p. 71).

The idea of reverse innovation is applying frugal innovations in a developed country where there are already existing customers who prefer not to pay for extra features. The reverse innovation concept was first developed by Immelt et al. (2009, pp. 56-65) who explain that reverse innovation is low-cost innovation which diffuses from developing countries into developed countries. Govindarajan and Ramamurti (2011, pp. 191-205) believe that reverse innovation indicates cases where innovations are adopted in low-income developing countries before they 'trickle up' to developed countries. According to Lindegaard (2001, pp. 160-163), whether products are developed in developing countries by companies of the developed countries or companies of developing countries and eventually come to developed countries, these low-price products will disrupt price structures that companies of developed countries have enjoyed. Govindarajan and Trimble (2013) acknowledge that the reverse innovation focuses on low-price innovations from developing countries to potential markets among developed countries. They (2013) add that reverse innovation is required for developed countries to serve rich customers for different reasons (Simula, Hossain and Halme, 2015, p. 1569).

Immelt et al. (2009) acknowledge that reverse innovation develops market-oriented products in and for developing countries through globalized innovation teams to sell in the World from the beginning. Singhal (2011) states that reverse innovation is the challenge for Western global companies because R&D is important in developing countries whereas competition takes place worldwide (Brem and Björn Ivens, 2013, pp. 36-37).

3. Reverse Innovation Applications of Global Companies

Reverse innovation applications provide growth opportunities to global companies both in developing and developed countries. Nowadays, R&D centers and subsidiaries of global companies in developing countries, tailor products for their own countries and then launch these products there. When these products succeed, they spread them in other developing and developed countries.

Nowadays, global companies invest more in developing countries than in developed countries (UNCTAD 2015) and many of them build R&D centers in developing countries. These centers have provided local-for-local innovation, some of them have become lead centers for certain applications and technologies as they have matured. Also, some of them have sent their technology back to their home countries. As market growth has slowed down in some of the developing countries, they have searched growth opportunities in other countries including their home countries. On the other hand, growing subsidiaries are looking for global expansion opportunities. They are attracted by higher price margins in developed countries, use their increased innovation capability and quality to attack developed countries (Hadengue et al., 2017, p. 40).

Brown and Hagel (2005) used "innovation blowback" term to warn global companies in developed countries about disruptive management practices flowing from Asia which could diffuse to developed countries and harm current value networks. Global companies can target lower-income customers in developing countries and take innovative products from there to home to use them in new categories. Immelt (2009) coined reverse innovation term to explain disruptive medical devices of GE which were developed for India and China before they were diffused to the US. Govindarajan and Ramamurti (2011, p. 191) explained cases "where an innovation is adopted first in poor economies before 'trickling up' to rich countries". Reverse innovation is the diffusion path from less to more developed countries conducted by global companies. Govindarajan and Trimble (2012, p. 4) define reverse innovation which is a path of diffusion as "any innovation that is adopted first in the developing world" (Radojevic, 2015, p. 71).

Most of the global companies target the top of the pyramid (wealthiest top 10% of the customers). However, as Prahalad (2006) suggests in his book “Fortune at the Bottom of the Pyramid”, there is a market potential for the rest of the customers (90%). Prahalad acknowledges that poor countries incubate new business models and innovative technology to transform the competitive landscape of global industries in the next decade. Govindarajan explains that a reverse innovation is an innovation adopted in the developing countries for the first time. Global companies can develop products by focusing on the constraints of developing countries instead of developing high-end products at home and adapting them for developing countries. They need to deliver high value products at an affordable price. Govindarajan adds that reverse innovation leads to a radical thinking shift when it starts with different ground rules (Sinha, 2013, p. 71).

The classical value creation approach of global companies turns upside down, with a high competitive future competition level. Economist (2010) acknowledges that reverse innovation is not redesigning current products, but it is rethinking the product development process from the scratch for a global company (Brem and Björn Ivens, 2013, pp. 36-37).

Global companies traditionally empower headquarters to innovate at home and send their products abroad. They should decentralize power and resources in developing countries for reverse innovation. Developing countries are attractive with large number of customers. However, they ask for products which require out-of-box thinking, reverse reengineering and abandoning current practices. Reverse innovation can initiate double digit growth rate for a global company. If a global company of a developed country does not venture in developing countries, it may not survive in the long run (Sinha, 2013, pp. 71-72).

Reverse innovation causes a change in classical studies’ direction on technology transfer. Two ideas emerge: (1) Reverse innovation means that Western global companies in developing countries may learn from local businesses; (2) Reverse innovation implies that old global companies can learn from new global companies from developing countries. Reverse technology transfer happens as Govindarajan and Ramamurti (2011) described: There is an opportunity for Western global companies in developing countries to gather knowledge, learn new management practices, adapt technologies and business models from their local stakeholders. Most studies have a similar assumption that technology transfer occurs from the north to the south because technology and productivity levels are higher in the north. Unfortunately, it reflects that northern companies can’t learn anything from the south (Govindarajan and Ramamurti, 2011). The reverse innovation concept, R&D capacity building by global companies and collaborations between local companies and global companies in developing countries changed this belief. South-north spillovers occur through observation and the recruitment of qualified employees who work in global companies in developing countries. They can be generated by the provision of new technologies, knowledge, management techniques and processes, marketing through partnerships and collaborations (Hadengue, de Marcellis-Warin and Warin, 2015, p. 52).

Reverse innovation which is the opposite of the traditional innovation challenges the common belief that innovation is originated from developed countries and flow to developing countries in a stripped-down version. Developing countries are not innovation recipients from developed countries. Companies in developing countries make innovations for their needs with low costs. These innovations are diffused into neighbor countries which have similar socio-economic levels before they flow to similar markets in faraway countries. Developed countries adopt some of these innovations since they meet certain customers’ needs (Zeschky, Widenmayer, and Gassmann, 2014, pp. 255-275). Collaboration between headquarters and subsidiaries is required for Western global companies to succeed in reverse innovation (Corsi, Di Minin, and Piccaluga, 2014, pp. 28-34) (Simula, Hossain and Halme, 2015, pp. 1569-1570).

Reverse innovation can be considered as a strategic approach for global companies in developed countries when their markets are saturated (Osenton, 2004); besides, developing countries constitute two-thirds of GDP growth of the World (Govindarajan and Trimble, 2012, p. 8). Therefore, global companies in developed countries should innovate for developing countries by considering their product environment instead of substituting and de-featuring products. Global companies should recombine the most novel technologies to offer products with %15 of price but %50 of performance (Khanna and Palepu, 2006). Laperche and Lefebvre (2012) consider this strategic approach to include a new stage of globalization of R&D activities performed in developing countries (Radojevic, 2015, pp. 71-72).

Companies which offer quality at low costs need to change their business models (Govindarajan and Ramamurti, 2011; Govindarajan and Trimble, 2012; Prahalad and Hart, 2002). Prahalad and Mashelkar (2010, p. 134) believe that they should learn to do more with less for more customers. Prahalad and Hart (2002) state that companies which want to serve low and middle income customers should develop new business models (Bezerra, Borini, McLennan, 2015, p. 3).

Global companies of developed countries have established innovation and R&D centers since 2000 in developing countries (Jaruzelski and Dehoff, 2008; UNCTAD, 2005) (Von Zedtwitz et al., 2015, p. 16).

Developing countries have become key innovation centers consistent with a global trend in R&D internationalization. When global companies establish R&D centers in developing countries, they conduct reverse innovation and reverse technology transfer by collaborating with local companies to get the advantage of their knowledge. R&D employees should be located in developing countries and have local skills to tailor products for the needs of these countries. According to Immelt, Govindarajan, and Trimble (2009) and Govindarajan and Ramamurti (2011) reverse innovation concept is the extension of reverse technology transfer. Global companies make a new strategic move by establishing R&D centers in developing countries as reverse innovation and reverse technology transfer concepts. According to Immelt, Govindarajan, and Trimble (2009), reverse innovation is in opposition to glocalization. Govindarajan and Trimble (2012) propose management techniques to promote reverse innovation: (1) giving power to local teams to act as new companies in their innovation searches; (2) enabling local teams to take advantage of local partnerships to enhance company resources; (3) managing reverse innovation initiatives as willing disciplined experiments to find solutions to critical issues at low costs (Hadengue, de Marcellis-Warin and Warin, 2015, pp. 50-52).

Immelt, Govindarajan and Trimble (2009) show how GE benefits being in developing countries to develop breakthrough innovations that are introduced in developing countries for the first time and developed countries after succeeding. They show GE Healthcare's products in China (Immelt, Govindarajan and Trimble, 2009) and India (Govindarajan and Trimble, 2012) as examples. These products are sold in China and India first and then they are sold in developed countries. They highlight local growth teams' importance as independent new units formed in developing countries. These units develop and commercialize new products by leveraging headquarters' technology for local market requirements. i.e.:Esaote's R&D laboratory in Shenzhen develop product ideas for global markets (Corsi and Di Minin, 2014, p. 82).

Several US based global companies innovated for China, diffused the outcome in China first and then in US. China which was the secondary market for innovation has become the primary market whereas US which was the primary market for innovation has become the secondary market. The reverse innovation is switching of roles between the primary and the secondary innovation markets. GE's medical devices and Tata's Nano car are examples of diffused paths from India to developed countries. Managerial applications for reverse innovation can be different. GE diffuses medical devices from a previously secondary market for innovation to the previously primary market whereas Tata diffuses Nano from its primary market to its secondary market (Cunha et al, 2014, p. 206). Traditional

assumption that the old primary market is a whole country has turned into a falsifiable idea. Global companies can seize niche market opportunities and make innovation for these market niches. Then, the previously developing market becomes the new primary market for global company's innovation and the origin of further diffusion. The reverse innovation means that the primary and the secondary markets of a global company switch their roles (Radojevic, 2015, pp. 76-77).

4. Conclusion

This paper has tried to highlight the importance of reverse innovation as a new growth approach for global companies. It is expected that it will make a contribution to the literature. Global companies traditionally target high or middle-class customers in developed countries. However, the number of customers don't increase in these countries. Most of the customers are rich and aging so global companies can't grow further with their standardized product lines. They can't benefit from market niches which have price sensitive customers. However, reverse innovation can open paths for global companies to continue to expand in the World. It accelerates their growth both in developing and developed countries. Global companies can learn new skills and gain new experiences by tailoring new products for developing countries. Then, they can offer successful products tailored for developing countries to developed countries. They can fill out market niches which are not filled before. They can lengthen life cycles of their products; increase their sales, profits, market shares and competitive advantages. Thus, they can get the advantage of growth opportunities both in developing and developed countries.

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