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An Example of Open Innovation: P&G

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Abstract

Open innovation, also known as crowdsourcing or co-creation, is a way for companies to utilize the ideas and strength of the people outside their organization to make improvements in the internal processes or products. Many companies seek input from those people outside their organization for solving some of their trickiest problems. Open innovation help them to drive employee productivity, customer loyalty and better innovation. Open innovation process consists of three main steps. These are concept phase, development phase and implementation phase. In the concept phase, research activities are carried out. In the development phase, skills are defined and projects are developed. In the implementation phase projects are implemented and exchange of information is accelerated.

P&G leads the companies who applied concept of open innovation successfully in the world. Procter & Gamble Co. as the world's 40th biggest and 84th innovative company created the web site for this propose which is known Connect + Develop to encourage open innovation to help them to drive employee productivity. P&G's open innovation strategy has enabled to establish more than 2,000 successful agreements with innovation partners around the world. C+D already has delivered strategic value all across the company, and a series of game-changing consumer innovations. In 2012, P&G invested more than \$2 billion in innovation. As a result, P&G was this year's big winner for the 2013 New Product Pacesetters list, launching seven of the top 10 most successful none-food products of the year. This paper firstly aims to describe the open innovation concept and innovation process in the example of P&G and reasons for the necessity of innovation.

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1. Introduction

Today, increasing globalization and increasing competition does not allow non-innovative companies to create sustainable competitive advantage. In order to stand, the companies require to have both knowledge-based assets and to restructure those assets according to the changing conditions of the day. For innovation, ensuring information from internal and external sources have a significant role to be increased innovative capacity (Linton & Walsh, 2004). That's why companies are needed to develop constantly new products, services, business models, technology and know-how.

Companies in developed countries, have managed to be innovative by using its R & D resources for many years. But because of the changing market conditions and, because the R & D studies are only produced patents and technology without turning into salable products and services in the market, the phenomenon of open innovation emerged.

Open innovation is an innovation method of approach used for many years in developed countries. Joint R & D collaborations and university technology transfer agreements are somehow widely applied in developed countries since the 1980s. In this study, the open innovation concept will be defined will focus on projects developed by P & G (which is one of the world's largest open innovation practitioners), in this area.

2. What is the Open Innovation?

Open Innovation, although is a concept put forward by Henry Chesbrough, the basic idea underlying it can be summarized as following: in a world completely surrounded by information the companies not only to depend on their own research activities and are being forced to move directly to external sources instead (Chesbrough, Henry, 2003). The concept of open innovation is a general term covering all the different ways, tools and platforms that allow companies to use resources outside of their organization. Therefore, it includes different applications like joint R & D, technology transfer, licensing, open source software, and mass sources (crowdsourcing) that provide outbound and inbound flow of information. Chesbrough has called the concept of ordinary innovation as "closed innovation" and has defined the principles of transition from the closed to open innovation. He has also revealed the need to develop organizational climate appropriate for innovation and open business models.

Ulrich Lichtenthaler and Holger Ernst (Lichtenthaler, Ulrich & Holger Ernst, 2009) have stated that the concept of open innovation is emerged with technology transfers and have revealed that open innovation is mainly applied in the companies regarding the technological elements. They have stated that the emphasis on technological innovation directed the companies to open innovation and they have developed the definition of "technological aggression".

Open innovation; although used extensively technology companies in the period in which it arises, started to be applied in other sectors and has become widespread over time. With the development of the concept of open innovation, it passed beyond to be only technology transfer become a process needs to be applied systematically. This process can be investigated in three basic phases (Van der Meer, Han, 2007);

- *The concept phase*

Identification of strategies in order to establish the organizational climate appropriate for open innovation, inspiration of the organization members and conduction of the research activities. This stage can be defined as a preliminary study and preparation for constructing the open innovation infrastructure in order to provide accurate inbound and outbound information flow in the company.

- *The development phase*

Application tools are created, competencies are identified and projects are developed. The mechanisms constructed based on the organizational climate and infrastructure created in the previous phase, and made ready for implementation.

- *The implementation phase*

The system started to work in accordance with the plans established; the information exchange between the company and its stakeholders accelerated. By execution of implementation and control mechanisms, the innovation activities enabled to go outside of borders of the company.

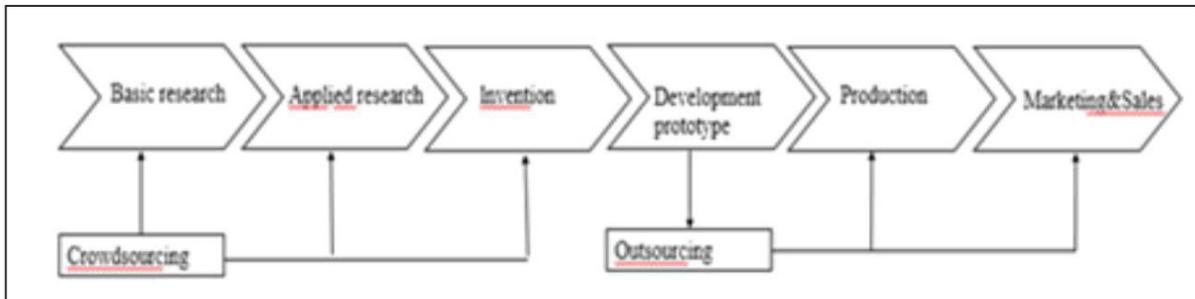


Fig.1. Open Innovation Process

Source: Adapted from Rahman, Hakikur & Ramos, Isabel, 2010

In order for innovation efforts go beyond the company to transit to open innovation, primarily the existing processes or applications should be considered from the customer or supplier outlooks. This is important in terms of missing or defective parts to be noticed in advance, by allowing Stakeholders to explore the applications or initiatives of non-strategic for the company, external information flow should be ensured. If the intellectual property rights (like patents and licenses which are not directly convertible to income but provide gain indirectly) continuously developed but do not provide any benefit, they should be to convert into continuous value by sharing and developing with the stakeholders. In addition, even if the company can't create development itself or development remains limited, should improve its environmental conditions. By increasing the number of the stakeholders, the environmental conditions can be developed in favor of the company. Open spaces should be constructed in order to decrease the costs and to increase the participation.

Companies should make a high level effort regarding both data communication and social communication to implement of open innovation successfully. Within this scope, to implementation of open innovation have been developed various methods and has tried to put into practice (P. Talaga, 2009). When all these methods are analyzed, it is seen that all of them based on three main approaches (Albors, J., Ramos, J.C, Hervas, J.L.,2008) These can be listed as; working with experts inside and outside the company, target users (customers) to include more innovation process, to organize innovation competition based on the reward system, to gather ideas and project.

3. From 'Research and Development' to 'Connect and Develop' with P&G

As a result of the challenges of the global competition and rising R&D costs, companies no longer can sustain their own research and development (R&D) efforts. They need to look for new and more modes of open innovation. That means, they need to shift from research and development (R&D) to connect and develop (C&D) with Open Innovation. On the other side, companies' innovation activities are increasingly becoming international. They

mostly generate strategies of collaboration, instead of competition. Most of the successful Open Innovation entrepreneurs are collaborating with external partners, (suppliers, customers or universities) in order to sustain the game and get new products or services to the market before their competitors.

In 2006, as stated by Huston & Sakkab (Huston, Larry & Sakkab, Nabil, 2006) that, two senior executives from Procter & Gamble have studied outside sources of innovation. They argue that there were 200 scientists or engineers elsewhere in the world (around a total of 1.5 million people) who were just as good as every P&G researcher. But the creative thinking of potential inventors and others would require great operational changes. Therefore, they needed to change the company's attitude from resistance to innovations to enthusiasm with the outside innovations. That is they needed to replace the sense of "not invented here" to "proudly found elsewhere". They needed to change their R&D organization from 7,500 people inside to 7,500 plus 1.5 million outside, with a transparent boundary between them.

Also, more than 35 percent of P&G's new products in market had elements that originated from outside P&G. It was about 15 percent in 2000. And 45 percent of the initiatives in their product development portfolio had key elements that were discovered externally. With connect and develop strategy, P&G's R&D productivity has increased by nearly 60 percent. Their innovation success rate has been raised to more than %100. At the same period the cost of innovation has fallen. R&D investment as a percentage of sales was down from 4.8 percent in 2000 to 3.4 percent in 2006. And, during 2004-2006, they launched more than 100 new products for which some aspect of execution came from outside the company. Furthermore, in 2000, they doubled their share price.

4. Open Innovation with P&G

P&G is developed its C&D substructure's to finding good ideas and bringing them in to enhance and capitalize on internal capabilities. Among the most successful products are brought to market through connect and develop are Olay Regenerist, Swiffer Dusters, and the Crest SpinBrush. P&G just opened their front door even wider to open innovation collaboration. Also, aiming to speed and simplify external innovation connections P&G's Connect + Develop program is launched a new website (pgconnectdevelop.com) in 2013, linking innovators directly to top Company needs, and P&G business leaders directly to external innovation submissions. As a result, Procter & Gamble was this year's big winner for the 2013 New Product Pacesetters list, launching seven of the top 10 most successful non-food products of the year. P&G innovations making the list were Tide Pods, ZzzQuil, Vidal Sassoon Pro Series, Downy Infusions, Always/Tampax Radiant, Secret Outlast and Puffs Basic.

In the spirit of C+D, the web site was developed in collaboration with several external partners, which brought new innovative technology to the back-end of the site, enabling user submissions to directly feed into the business category leaders. This will allow P&G to review needs more quickly and more efficiently for strategic fit or scalability across the business. Today, P&G's open innovation strategy has enabled us to establish more than 2,000 successful agreements with innovation partners around the world. Also, the website has served as P&G's "open front door to the world," allowing any innovator anywhere to share their innovations with the Company. The site, which includes translations in Chinese, Japanese, Spanish and Portuguese, receives about 20 submissions every weekday – or more than 4,000 a year - from all over the world. It will grow our portfolio of innovations with new products being launched in 2014. P&G recently announced the Tide Plus collection and Tide Ultra Stain Release, Tide Simply Clean & Gentle, Old Spice Hair Care & Styling, Gain Flings and Secret Clinical, Strength Collection. There will be more to come over the next several months. Also, the recent some study regarding Open Innovation was performed by P&G as follows;

- *Academia Partnership*

In P&G's Connect + Develop program, University partnerships have played an important role. For example; The University of Leeds and Procter & Gamble (P&G) have agreed to establish a strategic relationship. The aim was to

direct academic researches to develop new high-tech products. An innovative P&G Simulation Centre, based on the University's campus, recruits final-year PhD students from a variety of disciplines to work on 20-hours-a-week, six-month contracts on projects. Students are recruited because of their relevant expertise specifically required for a specific project. They are often not working with P&G in their full-time research.

P&G has also built relationships with research institutions and universities in different countries. For example, Durham University in the UK, Fraunhofer in Germany, and CSIR in India. Working with these institutions gives P&G the opportunity to tap experts in a wide range of disciplines, and identify technologies that will like consumers.

- *JV's-Joint Venture*

Clearblue: A partnership between P&G and Inverness Medical. This attempt resulted in the formation of a new company: Swiss Precision Diagnostics GmbH as a 50/50 joint venture. That formation provided P&G to enter in the consumer health-care business which was a new growth area in that period. This combination gave the town (Inverness) exposure to global scale, marketing and consumer understanding expertise. The new products were Clearblue and PERSONA. P&G still searches for opportunities in the consumer health care area.

Glad ForceFlex and Glad Pressn'Seal: During their study on diapers, P&G researchers developed new technologies to provide non-tear and adhesive properties for trash bags and food wrap (ForceFlex and Pressn'Seal).

- *TML-Trademark Licensing*

CoverGirl Eyewear: CoverGirl launched a new line of glasses and sunglasses in partnership with Marcolin. In the first year, this partnership resulted for them to reach the #1 position among key retailers. By introducing new products every 2-3 months, it continued to grow and become one of the top women's brands for eyewear.

Downy Wrinkle Releaser: Downy Wrinkle Releaser is a popular line extension for Downy, but too small to win needed brand attention. It wasn't growing as it could or should. A partnership with onecare meant that the Georgia Company would manufacture and sell Downy Wrinkle Releaser. The company grew 17% of its sales.

Disney and Oral-B Stages: P&G partnered with Disney in 2000 with an in-licensing agreement. It gave Oral-B a new way to reach children: characters kids love to brush with.

Honeywell Febreze Freshness Cool & Refresh Fan: The new Honeywell with Febreze Freshnes Cool & Refresh Fan combines 2 devices into one for convenient odor elimination and home climate control. The fan provides effective cooling and quiet operation as well. In addition; it uses Febreze Set&Refresh scent cartridges which is developed by another P&G partner, for odor elimination and freshening.

- *In-Out Licensing*

Bounce Fabric Softener: While working from his home, an independent inventor developed an innovative fabric-care solution in order to deliver fabric softener for clothes in the dryer. P&G licensed his patented product, combined it with existing P&G R&D work and bring it to market as Bounce.

Dunkin Donuts Retail Coffee: Dunkin' Donuts coffee was a competitive market leader in franchise coffee sales. But it was not sold as a packaged product directly to consumers. P&G R&D developed a roast that delivered the same, good taste of a brewed cup of Dunkin' Donuts coffee at a value price point. Then, P&G distributed the new product in stores across North America.

- *Other Case Studies*

Partnering to Revolutionize the Laundry Category: Tide Pods : MonoSol and P&G made a new laundry invention by partnering to develop a patented film technology that wraps cleaning fluids in a clear casing that's enough to hold up against wet hands, but dissolves readily also in cold water. After many years of collaboration, a highly complex technology and manufacturing process, delivered.

Olay Regenerist: P&G Skin Care was looking for anti-wrinkle technology. At the same time, Sederma was working with a new peptide to repair wounds and burns. It seem that it also works for wrinkles.

Pantene Nature Fusion: The Brazilian company Braskem offered to collaborate on a renewable, sustainable, sugarcane-derived plastic for use in P&G packaging.

Mr. Clean Magic Erasers: In Japan, a C+D scout discovered a multi-purpose sponge in the grocery store. The sponge turned out to be a melamine resin foam made by BASF of Germany for construction soundproofing and insulation. The foam became a strong cleaning tool when it is wet, P&G negotiated purchase of the foam from BASF with terms for further collaboration. Mr. Clean Magic Eraser is sold globally; the line includes a variety of cleaning sponges. The launched floor mop, which is now the #1 in North America in selling mop.

Swiffer Dusters: As C+D teams came with a hand-held product being sold in Japan; P&G engineers were working on a dusting tool to expand the Swiffer mop line. They liked the sleekness and user-friendly nature of that Japanese dusting tool. The consumers in market was also in the same idea when they tested the product. Unicharm, the manufacturer of the product, did not have the capacity, distribution or marketing ability to take their product into global markets. After the partnership, P&G was able to promote this Japanese innovation to be a global product under P&G's brand Swiffer. Today, Swiffer Dusters are sold in 18 global markets and it is a market leader.

5. Conclusion

The importance of innovation is being emphasized in all over the world. With the spread of information and communication technologies, the concept of open innovation began to be more popular as a subtitle of innovation. Hence, studies and projects on this issue have gained . Open innovation practices are attempted to be performed by different techniques and approaches in different sectors, but there are still no standards or commonality established in this area. Although some companies can successfully use open innovation without relying too much on their internal R&D to achieve technological progress, the methods and tools are not well-defined yet. In addition, research shows that the managers and practitioners in companies who are practically using the open innovation techniques and approaches are not very well aware of the open innovation concept itself. Since the amount of knowledge has increased drastically and also knowledge can be accessed from practically anywhere, taking advantage of open innovation has become a necessity for companies. The validation of the required knowledge and the decisions of how and where to use the knowledge can be supported by effective open innovation tools. Companies can improve their competitiveness with the use of the open innovation web portals as an effective open innovation tool. Open innovation web portals are one of open innovation tools that bring together companies and innovators on Web 2.0 platforms to reach the goal of innovation-based results.

Connect + Develop is one of the successful example of Web 2.0 platform which is led by P&G. Also, more than 35 percent of P&G's new products in market had elements that originated from outside P&G. It was about 15 percent in 2000. And 45 percent of the initiatives in their product development portfolio had key elements that were discovered externally. With connect and develop strategy, P&G's R&D productivity has increased by nearly 60 percent. These figures show that furthermore a suite of new technologies for data mining, simulation, prototyping and visual representation, what we call 'innovation technology', help to support open innovation in Procter and Gamble.

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