

MANAGEMENT FACTORS INFLUENCING OPEN INNOVATION INTEGRATION AND APPROPRIATION OF RETURNS

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Abstract

With innovation becoming the source of growth for major businesses, there has been a strong debate among the academic and the industrial fraternity relating to managing different channels of innovation. This thesis attempts to recognize the different managerial factors associated with realizing the benefits from open innovation. The research focuses on the different strategies of handling open innovation process in different organizations, trying to gain profits from innovation. A broad qualitative study has been attempted to understand the different factors playing a role in this regard and finally a set of guidelines are proposed to improve/maximize the returns from utilizing open innovation.

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CONTENTS

Abstract	ii
Acknowledgements.....	iii
Table of contents	iv
List of tables & Figures.....	vi
1. Introduction	1
1.1. Background	1
1.2. Problem Description	2
2. Research Question	4
3. Research Methodology	6
4. Literature Review	9
4.1. Open Innovation Conceptualizations	10
4.2. Reference Framework	12
4.2.1. PFI Framework	12
4.2.2. Appropriability Regimes	12
4.2.3. Complementary Assets	13
4.2.4. Dominant Design Paradigm	14
4.2.5. Knowledge Management for Innovation	16
4.2.6. PFI & Intellectual Property Revolution	17
5. Empirical Analysis	19
6. Synthesis	24
7. Conclusions	29

8. Further Research	31
9. References	32
10. Appendix	36

LIST OF TABLES & FIGURES

Title	Page No.
Table 1. Contrasting principles of closed and open innovation	8
Figure 1. Abernathy & Utterback product and process innovation model	15
Figure 2. The open innovation paradigm for managing industrial R&D	19
Figure 3. Factors necessary for realizing value from open innovation	22

1. INTRODUCTION

This chapter provides an introduction about open innovation, followed by the problem discussion, the aim and the limitations of this thesis.

1.1 BACKGROUND

Open Innovation concept has been coined based on the principle that “the firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology” (Chesbrough, 2003). As the name implies, it demands an open mindset to view beyond the considered organizational boundaries. Though the currently most popular widely practiced closed innovation model has a different set of rules, they exist in practice in most of the companies and still payoff for their efforts. But the reason for entrepreneurs, small and large corporations to be attracted towards open innovation, lies with the changing market conditions and the implied rules of closed innovation which are causing stagnation to the growth of the companies. Also in the current competitive market, the innovations are quickly imitated leaving very less advantage for the innovator to benefit and gain returns from those innovations (Tidd, Bessant & Pavitt, 2009). The very short life cycle of the products, for example the life span of mobile phones in telecommunications industry cannot justify the need for huge R&D investments. Moreover one of the rules of closed innovation model states that “The Company that gets an innovation to the market first will usually win” (Chesbrough, 2003) is becoming more and more obsolete. There are so many classical examples to explain this rule. Though pioneer in introducing the wireless communication through mobile telephony, Ericsson is no longer involved in the business of manufacturing mobile phones, while Lycos and Excite, the first real search engines lost their business to Yahoo and now Yahoo has lost their business to Google (Pisano, 2006).

In this economically challenging business environment, even large organizations are reluctant to make huge investments in their internal R&D, because the results of the innovations

made are not successful as expected or the results achieved from the R&D are quite different from that forecasted. This unexpected research result scenario can be clearly explained from the case of Xerox Corporation's PARC (Palo Alto Research Center), from where most of the results such as Graphical User Interface (GUI), Mouse etc. have been utilized and benefitted by other companies such as Apple, Microsoft etc (Pisano, 2006). But Xerox felt that these research outcomes were unsuitable for their business and most importantly, there had been no clear knowledge about the way in which these research results can be used. On the other hand, the protection provided by the Intellectual Property Rights (IPs) is not as strong as mentioned in theories. Hence there is a need to find an alternative model which can avoid the risk of huge investments in internal R&D, thereby protecting the companies. The need is to understand the foundational open innovation principle that 'the first mover advantage is no longer beneficial for the companies, unless it has the capabilities to retain and sustain the competitive advantage in this competitive market.'

Open innovation concept has been so popular nowadays and most of the companies are aware of the open innovation statement that "Not all the smart people work for us" (Chesbrough, 2003). But as with any conceptual model, the theoretical implications on open innovation has been extensively studied by Henry Chesbrough (Chesbrough and Crowther, 2006; Chesbrough et al., 2006) and other authors such as Maula, 2006; West and Gallagher, 2006; Perkmann and Walsh, 2007 (Davide Chiaroni, Vittorio Chiesa and Federico Frattini, 2010). These extensive studies on the theoretical implications have left the practical implementation studies of open innovation and the understanding of how to benefit from open innovation remain under-researched.

1.2 PROBLEM DESCRIPTION

Most of the companies, even today believe that Intellectual Property rights (IPs) is the primary source for realizing returns from the investment made for innovations. It is still true but

open innovation concept has the difficulty in maintaining the IPs, because of its collaborative nature and the inability to find the real owner of the innovation. To be clearer, consider the examples of open innovation platforms such as Yet2.com, Innocentive and NineSigma, in which, the companies will post their problems which will be solved by the knowledgeable users from all around the world. In this case, the creation of advantage through IPs is highly difficult for the companies using these innovations, as the idea has been developed by both internal and external researchers. Hence the realization potential of the companies from these innovations reduces drastically. There is no clear understanding of how to realize benefits from open innovation and measure the profitability of such processes. Also historically there has been scarce attention given to the managerial implications of open innovation (Chiaroni, Chiesa, & Frattini, 2009a), the adoption of open innovation practices into the process of Research and development (Ili, Albers, & Miller, 2010), which leads to the insufficient understanding of how to realize returns from open innovation practices. It is of high need to adopt the open innovation practices into R&D since the high investment R&D hubs and innovation centers demonstrated the insufficiency to develop ideas for the rapidly changing competitive environment. Hence the companies are keen to adopt open innovation practices into R&D and understand the realization of returns from open innovation without generating any internal conflicts. Hence in this context we define appropriability as the ability of a company to successfully integrate the open innovation processes and closed internal processes thereby realizing returns from open innovation.

2. RESEARCH QUESTION

The objective of this paper is to identify the factors associated with the integration of open innovation and closed internal process that affect appropriation of returns from the investment made on open innovation. The process of open innovation has to be clearly understood to synthesize the factors that can affect and favor the realization of returns. Moreover the process of implementing open innovation has problems with the intellectual property rights, managing external resources and the processes that will integrate the open innovation and closed internal practices. While some factors are vital for new knowledge sourcing and generation, some other factors are keys for appropriating returns from open innovation. Hence a clear understanding of the need for appropriating from open innovation, sustaining the innovation and thereby enhancing the returns from it is necessary.

Though open innovation is a concept dealing with the use of resources from outside the organization for the internal benefit, most of the times there is a high risk that the incorporation of these ideas into the organization may cause conflicts. There is a possibility that the Not Invented Here (NIH) syndrome may happen within the internal R&D department leading to the repulsion of ideas that originated from outside the organization. Hence there is a demand for the organizations to develop processes that will integrate the open innovation processes with the closed internal processes so as to maximize the acceptance and thereby benefits. But the integration of open innovation practices and closed internal processes and its managerial implications will demand understanding of the internal processes of the company.

To be specific, the paper aims to answer the following research question:

“How the factors associated with the integration of open innovation and closed internal processes influence firms on appropriating returns from open innovation?”

Limitations

A company cannot survive only with bringing ideas into the business but needs to find business for the internal resources. In other words, the companies cannot rely always on the

knowledge from the outside resources to develop competitive advantage but they have to develop the competencies within the organization to identify, develop and appropriate from the external ideas. Therefore the process of developing the internal competencies with the help of external knowledge is not in the scope of this thesis. However we will discuss the knowledge aspect involved in the open innovation integration process which is primarily related to the understanding of the needs or requirements of an organization and is not related to the internal competency development. Also the understanding the appropriation capability of various firms in different industries and how these organizations appropriate benefits is not the primary scope of this paper. But the common mode in which most companies appropriate innovation benefits, which is the intellectual property rights is discussed as a factor affecting appropriability of returns. However we will discuss how the integration process will have an effect on the appropriation of returns from open innovation. Hence the research topic analyses the factors that will affect open innovation returns from investment and how the processes should be improved to realize the returns from the investments made in open innovation.

3. RESEARCH METHODOLOGY

This paper uses the inductive reasoning approach as the research methodology. Since we are moving from the empirical observations to identify a pattern and generalizing the theoretical concepts, we believe that we followed an inductive approach (Trochim, 2006). This approach can also be called as bottom-up approach while in the deductive reasoning approach, the theories are confirmed with the empirical data (top-down approach). But in this case we collected the empirical data, analyzed the pattern and generalized it with the theoretical frameworks. Both qualitative and quantitative methodology can be appropriately used with any research paradigm, but the need to be cautious and accurate with the choice is very important to reach genuine results. Hence, the approach is concerned with generating theoretical concepts for the factors that leads to realize returns from open innovation.

The research concentrates on qualitative analysis of a small sample of organizations, across different industries, which are deemed to be innovative by the realms of the paradigm set by us. The qualitative approach is the suitable method for inductive approach, since the observations are the prime source for inductive research methodology. Moreover the open ended questions, which is the characteristic of qualitative method aids in obtaining the process oriented answers rather than outcome oriented (Trochim, 2006). The study considers each interviewee to be an individual and unique and interested in obtaining a depth of data. The paper does not aim to generalize the findings from the analysis to a larger group; hence the qualitative analysis proves to be an effective method for this study.

Since we have chosen the qualitative analysis as the research approach, we have adopted the narrative description style as the primary type of analysis along with constant comparisons. Purposive sampling has been used for selecting the interviewees. Since the analysis needs to identify factors from different perspectives, we have chosen three interviewees from three different roles, industries and positions. Since the service industries are playing an important role

in today's economy, we have selected two interviewees involved with product and process innovations, one involved with service innovation and other having an experience with a wide range of industries, both product and service. The name and details of the persons involved with product and process innovations has not been disclosed to maintain confidentiality. Magnus Lindkvist is the founder of Pattern-recognition, involved with service innovations and Donnie Lygonis is the Technology Transfer Manager at KTH Innovation, who has experience with innovation in a wide range of industries. Both of them are true entrepreneurs and inspirational speakers. The interviewees are key persons in implementing or directing or guiding open innovation practices such as new product development team members, business development coach for various industries and a trend spotter, who provides trend spotting service. Data collected are through the semi structured, direct and telephonic interviews. The data have been collected through primarily interviews and secondary data collection sources such as annual report, media reports and websites etc.

The interview has been semi-structured and mostly had open ended questions to get the broadest perspective possible with the study. In order to have a bird's eye view of open innovation, we have interviewed persons who have worked with a wide range of industries to get a panoramic view of the subject.

The definition of returns with respect to this thesis is of prime importance to understand the analysis of the data collected from the interviews. The term realizing returns in this case refers not only to obtaining sufficient profits from the open innovation, which can be implied as:

1. Achieving gain or profit from the investment made on open innovation
2. Sustaining the innovator capability to realize continuous returns
3. Surviving the market competitions and followers

Since we have the aim of understanding how the interviewees feel, understand and their attitudes about the realization of returns from open innovation, we preferred to have open ended questions. Also we felt that the advantage of open ended questions is their potential to obtain

maximum information from the respondents, it can be analysed secondarily by future researchers. Finally and most importantly, we have used open ended questions since the respondents do not have to answer the questions without understanding them or without raising an additional related issue to the realization of returns from open innovation. There is a possible lack of understanding of the open ended questions by the interviewee and the answers interpreted by the interviewers (Wimmer and Dominick, 1997). Despite the disadvantages, open ended questions have been used and the semi structured interview method has been adopted to enable interviewees to talk freely. Also open ended questions allowed the interviewer to probe deeper into the initial responses to gain more detailed answers for the questions (Wimmer and Dominick, 1997).

4. LITERATURE REVIEW

Open Innovation is a disruptive innovation in itself that has a serious impact on the way people have been dealing with innovation, perhaps for decades (Schumpeter, 1942). John Seely Brown, Director of Xerox Palo Alto Research Center in his foreword of Chesbrough's book states that the open innovation is a kind of innovating innovation. But open innovation has been practiced well before the period of Chesbrough but without the knowledge about open innovation. Japanese car manufacturers have used their suppliers and external small scale industries for their development projects, which is obviously a kind of open innovation. Hence the introduction of the term by Chesbrough in his book has given a strategic importance for the organizations which are aimed at growing with the rapidly evolving technologies.

Our idea is that the disease has to be understood well before finding or offering a medicine for it. Similarly we need to understand the closed innovation model before analyzing about open innovation. Closed innovation model has an implied understanding that innovation needs control. Closed innovation focuses on utilizing the internal resources to create ideas, develop them into innovative products, produce, market, deliver and service them (Chesbrough, 2003). It has a primarily closed view of utilizing only the resources within the company over the innovation process and believes in the principle of first mover benefits the maximum (Chesbrough, 2003, p. XX). Open innovation is a model that brings a broader view that "Not all the smart people work for us. We need to work with smart people inside and outside of the company" (Chesbrough, 2003, p. XXIV). The below shown table from Chesbrough's book will give a comparison of the open and closed innovation.

Closed Innovation	Open Innovation
The smart people in our field work for us	Not <i>all</i> smart people work for us. We need to work with smart people inside <i>and</i> outside the company
To profit from R&D, we must discover it, develop it and ship it ourselves	External R&D can create significant value. Internal R&D is needed to claim some portion of that value
The company that gets innovation to market first will win	Building a better <i>business model</i> is more important than getting to market first
We should control our IP, so that our competitors cannot profit from it	We should profit from other's use of our IPs (license out) and we should license in other's IP whenever it advances our business model
We will <i>own</i> all results from contract research with universities	We will partner with universities to create knowledge and encourage use outside our field

Table 1: Contrasting principles of closed and open innovation. From Henry William Chesbrough's book "Open Innovation: The New Imperative for Creating and Profiting from Technology", Boston, 2003, p. xxvi

Based on these views of open innovation, most of the firms consider that extending the external networking relationships of the organization as open innovation. But Chesbrough clarifies that open innovation needs an effective business model to measure the effectiveness of the innovations, implement and track them (Davide Chiaroni, Vittorio Chiesa and Federico Frattini, 2010). Open innovation has often been confused with the word "open Source". Wikipedia is an example of open source platform, where information, knowledge are shared and made available to the public. Hence open source can be considered as a subset of open innovation.

4.1 OPEN INNOVATION CONCEPTUALIZATIONS

In this modern era, knowledge is widespread around us. This causes the need for identification of right ideas from outside the organization for the internal development. There is a trend that the companies realize that they can benefit from open innovation. But understanding

the intricate details of the process of transformation from closed to open innovation is an important criterion for the successful implementation of the open innovation within an organization. Christensen studied the industrial dynamics of the open innovation by means of a case study about the amplifier industry (Christensen et al., 2005). According to Christensen, Cohen and Levinthal's concept of absorptive capacity addresses the competencies that a company's internal R&D should develop, not only to manage the internal innovation but also to identify the right ideas that are from outside the organization. The cross disciplinary approach, collaboration with various sources such as institutions, companies and suppliers outside the organization has also been mentioned in the earlier literatures of Rosenberg (1982), Lundvall (1992), Pavitt (1998) and von Hippel (1988).

The most important question with the present day adoption of open innovation within the firms is the tradeoffs that should be done between the benefits and the potential problems that may result from open innovation. Almirall and Masanell (2010) discussed these issues and analyzed when the open innovation is better than the closed innovation. Also open innovation favors innovation in the direction that cannot be achieved only with the internal resources, reduces risk with suppliers and finally improves the value created. On the other hand, open innovation leads to the reduced intellectual property protection and thereby reducing the capability of the developer to realize returns from the innovations. This in turn affects the interest to invest in new technologies due to the least amount of benefits that can be captured by the developer (David & Greenstein, 1990). Though the tradeoffs happened to be an obstacle for the use of open innovation, the openness fosters collaboration with large pool of talents, suppliers and complementary resources. But Greenstein (1990) states that the involvement of large number of resources incurs an increase in the coordination costs. Also the management of network of relations between these sources of knowledge and information is becoming complex.

Almirall and Masanell (2010) argue that open innovation is not always considered superior than closed innovation, unless otherwise the complexity is less. They have demonstrated

with some of the examples that the closed innovation is still the preferred option for most of the companies when they are involved in the creation of new dominant design. For example, Apple used the closed innovation method for its iPad and Nintendo used the closed model of innovation for its Wii. Wii is considered to be a better product than the Microsoft Xbox and Sony Playstation3 (Almirall & Masanell, 2010).

Depending on these conceptualizations, there should be a balance between the ability of the innovation developer to realize returns from the innovation and the complexity, which includes the management of networks and relationships with the coordinated resources. Also there is a need to understand the criteria under which the open innovation can prove to be beneficial. For example, most of the complex mobile phone development projects are still performed through closed innovation. We restate that our thesis aims at understanding the processes that will benefit the innovation developer and the circumstances that favors it.

4.2. REFERENCE FRAMEWORK

4.2.1 PFI FRAMEWORK

David.J.Teece wrote an article about the “Profiting from Innovation” in June 1986, shortly known as PFI framework. Since that time, it is one of the most quoted literatures in the field of innovation. We have used this framework to have a basis for the understanding about realization of returns from open innovation. According to Teece, profiting from innovation depends on three most important factors such as appropriability regimes, complementary assets and dominant design paradigm.

4.2.2 APPROPRIABILITY REGIMES

Appropriability regimes refer to the external environmental conditions, excluding the firm and market structures. It has been since long time, patents are believed to provide benefits for the innovations, but however most of the patents can be invented around at a comparatively low cost. These appropriability regimes can be classified in to tight regimes, in which the

technology is relatively easy to protect and weak regimes, in which the technology is almost impossible to protect (Teece, 1986 & 1996). An example for the tight appropriability regime would be the Coca Cola syrup, which has been protected for several decades. There are many examples for weak regime such as software programs, algorithms and electronics.

PFI answered one of the most important questions of the period “Why early innovators fail?” Even after 20 years of PFI publication, there are still many examples to confirm this theory. For example, the early PC manufacturer IBM has went out of the business; they recently sold their PC business to the Chinese manufacturer Lenovo. Apple was the early innovator of PDA with the introduction of Newton, but Palm took over. From these examples, it can be very easy to say that the above examples explain the Schumpeterian principle of Creative destruction. The imitators are said to be having better innovations that they replace the early innovations. But there are also examples for the survival of the early innovators, such as Dell, an early innovator in its business model of integrating its supply chain still remains as the market leader as a supplier of computers (Pisano, 2006). Hence there is an important concept that has to be understood apart from the appropriability regimes, which determines the sustainability of the innovators and the protection against rapid imitators. The concept of appropriability regimes has still been considered important but the methods of establishing the appropriability varies between industries as well as the companies.

4.2.3 COMPLEMENTARY ASSETS

Consider the example of Intel, which is still the leading supplier of the microprocessor chips for the computers. During the periods of early 80s, Intel were the market leader in the DRAM technology but they lost their market to their Japanese competitors due to the lack of complementary assets for manufacturing and lack of the capability to show process development. Hence then they invented the microprocessor, which has been tightly protected by their intellectual property rights and the complementary assets. Hence Intel developed the manufacturing capabilities and the specialized, difficult to imitate process developments. As a

result of these complementary assets development, even though AMD imitated the microprocessor design, Intel continued to maintain its market leader position with strong manufacturing abilities and faster to market capabilities (Pisano, 2006). This insight provided by Teece has a powerful message for the established as well as early innovators to the market. The innovation is not a mere technological improvement but it has been strongly related to the strategic direction of the firm.

Innovation has been considered the central picture until Porter in his theory of five forces (Porter, 1980) mentioned the implication of strategic positioning and competitive choices. Industrial organization economics is one of the theories that provided the link between R&D, innovation and strategy. This work itself can be classified into two categories such as Neo-Classical microeconomics and Evolutionary economics (Nelson & Winter, 1982). Neo Classical theory has been primarily focused on the optimization and is not related to strategy. But the evolutionary theory has a profound view on the strategy of the organization and articulated the approach to innovation. Till that time it has been seen that the patents are the most prominent forms of appropriability. But an interesting survey by Klevorick, Levin, Nelson and Winter (1995), provided a different perspective that companies has different options to choose in protecting the innovation from would-be imitators and the competitors. This provided the basis for the Teece's work, in which he related the important concepts of innovation, strategy and intellectual property.

4.2.4 DOMINANT DESIGN PARADIGM

The final element to consider from the Teece framework is the Dominant design paradigm. This component of the theory is based on the Utterback and Abernathy's innovation life cycle model shown below.

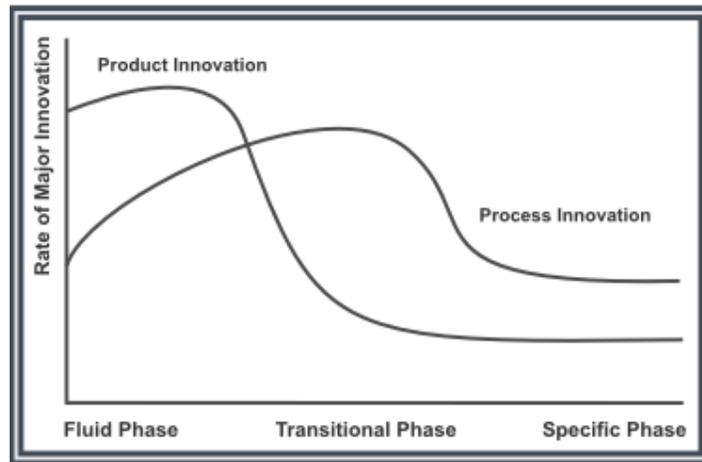


Fig.1. Abernathy-Utterback Product & Process Innovation Model. From “Mastering the dynamics of innovation” by J.M Utterback, Boston, 1994, p. xvii

In the initial stages of the innovation, the product designs are increasingly fluid and the competition between the firms will be primarily based on the design features of the product. This stage is called as preparadigmatic stage of an industry by Teece and as the fluid phase by Utterback and Abernathy. The second stage is the transitional phase in which one of the designs emerge as the dominant design and have a more promising future. In this stage the design is no longer an important factor for competition. The companies will try to optimize the cost and build economies of scale, thereby reducing the price to the market. An example for this dominant design can be seen from the mobile phone industry. Earlier most of the phones seem to have antennas for transmitting and receiving signals; but as soon as Nokia entered the market without antennas and bigger screens they became the dominant design of the industry.

4.2.5 KNOWLEDGE MANAGEMENT FOR INNOVATION

Knowledge is one the most important aspect in the process of innovation management. While knowledge can take many different forms (tacit or explicit), what is important is to realize the mechanism in which knowledge affects innovation. At the firm level, there are three important dimensions of knowledge for innovation, viz., Knowledge accessibility, Opportunity, and Knowledge cumulateness. (Malerba, 2002)

Knowledge accessibility defines the varying degree of opportunities to gain external knowledge which is/may be available. With greater accessibility, the industrial concentration is decreased resulting in a lower appropriability for the organization. Opportunity on the other hand depends upon the technological and scientific breakthrough in universities and research institutes. If the knowledge which is available presents an opportunity for transformation, and is exposed to different newcomers, the appropriability is very low leaving the door open for an opportunistic behavior. The knowledge accessibility and opportunity are in turn related to the third dimension of knowledge cumulateness, i.e., the idea that new knowledge generation is dependent upon the current knowledge. A high level of cumulateness in knowledge supports the implicit mechanism of the established organizations and thus leads to a high degree of appropriability (Malerba, 2002).

The relevant mechanisms available for the possible achievement of a greater role of knowledge in innovation have been classified by Coombs & Hull (1997) as accumulation mechanisms, interface mechanism and deployment mechanism. While accumulation mechanism governs the storage of knowledge and is quite similar to what we discussed earlier, the interface mechanisms balance the different sources of knowledge (internal & external) and the deployment mechanism determines the way the stock of knowledge is utilized to initiate innovative changes. These mechanisms and the different ways they are utilized by different organizations, sets the tone for variations in innovation culture in organizations.

4.2.6 PFI & INTELLECTUAL PROPERTY REVOLUTION

Gary Pisano has discussed about the recent impacts of the PFI framework with the changes in the usage of the intellectual property rights (Pisano, 2006) in this modern industrial world. He mainly discusses about the appropriability regimes, which are assumed to be taken as granted depending on the legal, economic and other environmental factors of the company. Pisano emphasizes this concept of appropriability regimes as not given but decided by the strategic initiative of the firms. A “tight” appropriability regime is always required for the appropriation of benefits from an innovation has been extensively argued and he emphasizes that some of the companies deliberately weaken their appropriability regimes to realize maximum returns.

Pisano’s argument about the appropriability regimes differ from that of Teece in the aspect that the regimes are decided and not taken as given. According to Teece, the appropriability regimes are decided by the legal and economic environmental conditions, while Pisano argues that the appropriability regimes are decided by the strategy and the behavior of the firms. Teece emphasizes on the principle of choosing the complementary assets as the strategic decision of the firm since the appropriability regimes are exogenously determined. But the argument from Pisano provides some examples, in which the companies strategically decide the appropriability regimes; provided the appropriability regimes are taken as given.

Pisano mentioned a few examples to indicate the companies that are still benefitting without tight appropriability regimes but with strong downstream marketing and distribution. A classic example would be the leading PC manufacturer, Dell. The prime components of the computer, which are integrated circuit chips have been strongly protected by patents from Intel, AMD etc. Hence Dell has surely a weak appropriability regime in that space, but it survived with high margins and profits because of its difficult to imitate direct sales distribution system. Hence in this case, Dell voluntarily weakens their upstream appropriability regime and strengthened their downstream marketing and distribution to realize maximum

benefits. According to Pisano, in this case appropriability regimes are decided endogenously by the strategy and the behavior of the firm. Hence the co-specialized distribution and marketing channel has been considered given in this case.

The recent revolution in the area of intellectual property rights and the complex web of relationships established between companies modifies the PFI framework. But the framework still holds well by providing the companies, a systematic approach for developing the needed assets for profiting from innovations. The usage of intellectual property rights in the case of open source software, pharmaceutical companies' etc throws light on the ways in which the companies have to focus the strategy of their firms. Hence appropriability regimes are not taken for granted in these days and can be actively modified to the favor of the company.

5. EMPIRICAL ANALYSIS

Open Innovation concept is one of the most widely mentioned topics that attracted the attention of many companies and scholars. The attractiveness of definition of “utilizing the resources all around the world to work for us” sounds really fascinating for most of the companies. But the proper understanding of the open innovation concept and successful implementation is not widely seen among the companies. A very few companies have successfully adapted the technique and benefitted from it; Procter and Gamble is one such example. But most of the companies fascinated by the term have failed to realize the returns from open innovation, thereby burning money. So in order to discuss about open innovation and realization of returns from it, we probed questions such as “How do companies understand and benefit from open innovation?” and “What are the ways companies handling to realize returns from open innovation investment?”

The interviewees provided various views about the factors that lead to open innovation. The needs that demand open innovation have been listed below.

- I. The companies always try to trial and test, new methods and approaches to enhance their efficiency and thereby profit. It is also the psychological aspect since most of the companies are trying to use it, the rest of the companies also tries it. Open innovation has been defined as the need for the future companies and quoted in most recent literatures and journals.
- II. The increased pressure on the R&D investments made by the companies is considered to be one of the main reasons for open innovation. The returns gained from the innovative ideas developed internally are not sufficient to justify the percentage of sales turnover directed towards R&D.
- III. The reduction of the cycle time from the idea phase to the concept and then to the product phase makes most of the companies react faster. But in most of the cases, this need of faster reaction is not attainable with only the available internal resources.

We have identified many factors from the interviews which are considered to be important in various aspects for the company to realize returns from open innovation. In this section, we will provide the important concepts that we got from the interviews and the documents relevant to the scope of the thesis.

Most of our interviewees emphasized that the most important factor in realizing the benefits from open innovation is the open innovation readiness. There are some important characters that an innovation recipient should have, such as the ability to understand what the information really means rather than what it appears to be. For example, as an open innovation initiative, a mobile telephone company asks the customer for ideas about the next generation phone. In this exercise the company should have the capability to understand the needs that consumer is mentioning rather than focusing on what he is telling. One of our interviewee, Donnie Lygonis rightly mentioned that when a customer is giving his comments about a cup (where cup is the product of the company), the comments may be related to the cup or to the system in which it is a component. There are some other components in the system that needs to be modified instead of the modification of the cup to address the problems mentioned. Therefore the recipient should be capable of understanding the underlying message that has been mentioned. Hence the recipient is the most important person who decides whether the open innovation can be made effective or not. Many companies thinking of getting innovative solutions, post their problems in the open innovation platforms. But most of the ideas received are not useful or not used by the companies. In either way it is not successful, since the ideas are not useful to any of the parties. It is because of the lack of the quality to step backward and see a bigger picture; most of the companies miss the opportunity of transforming to the needs of the ever changing world because they don't see beyond their boundaries. Companies are not prepared to accept a solution for their supply chain when looking a solution for their production processes.

The most common and the most widely spoken concept of seeking the top management consent and strategic alignment of the open innovation approach is also an important factor for an organization stepping into open innovation. The interviewees repeatedly emphasized that there are different needs for every company entering the open innovation, but some companies try them just for the reason that other companies do. This kind of moving with the crowd attitude cannot be justified for the growth of the company through open innovation. As each company is unique and their strategies are different in dealing with the same problems, there is a high need for the companies to develop a strategy to implement and benefit from open innovation in their own way. We got an interesting quote during the interview, which is: “The companies don’t fail because they failed to identify the trends but they fail because they failed to transform”. Moreover interviewees mentioned that the company should develop complementary capabilities to achieve and sustain the benefits from the innovation. In one of the interviews, it has been mentioned that a company that acquire the startups, is not just for the patents, but to bring in the assets that would benefit the company to retain and benefit from the value of innovation. The assets can be defined as the equipments, capabilities or the human resources needed to implement and sustain the open innovation ideas. This strategic need of developing or maintaining the necessary complementary or co-specialized assets should be clearly understood before the companies deciding on implementing open innovation. Apart from developing the assets, companies should understand what their key assets are. Production has been believed to be the key asset at the cost of under-developing the real downstream operations like distribution and marketing. On the contrary, production is not the key differentiator for most of the companies. Hence the strategy that has been based on the right assets will be of true value to the company.

The most common factor to be considered with respect to open innovation is the unclear understanding of the needs and their own values. There is often a pre assumed result that will be expected with respect to most of the innovation problems. Above all these, the companies should

be capable of explaining the needs for which they are seeking solutions. To do that, they should clearly know the requirement for which they are seeking solutions. This dilemma can also be related to the above mentioned wrong image of the key assets. The random innovations may prove beneficial for some of the lucky companies, whose intentions are different with respect to the innovations. These accidents will not always happen in favor of the innovator, and hence a structured demonstration of the need is essential. As heard from the interviews, there are many examples of companies such as Nike; VitaminWater etc. which had an unclear understanding and overestimated the potential of the solutions that are offered through open innovation. They predicted that the open innovation is the future of the company but the ideas turned out to be capable of serving only a niche market.

The preconceived image of the solution in the minds of the people in the company results in a great danger of avoiding or rejecting potential solutions readily. For example, assume that a product manufacturer is looking for a solution to the joints, to be used in its products. The mechanical engineer who is searching for ideas from outside or inside the organization will have a pre-conceived idea that the screws or any other mechanical joints will serve the purpose. He will have very minimum opening to consider the chemical view for solutions such as glue. The radical solutions are often very difficult to understand and analyze since the structured knowledge gained over the years will hinder the acceptance of those solutions. But this result is often a consequence from the previous pitfall of unclear understanding of the needs. It is one of the most important reasons for companies to seek solutions within the ideas available rather than going out for more ideas, since it will only make the situation more complex.

The most discussed and not yet clearly defined concept with open innovation is about the intellectual property rights in the open innovation context. Some of our interviewees mentioned that the immune system of the organization greatly affects the open innovation approaches that in contrast demands great degree of openness. Some of the companies go a step forward to acquire the companies in search of patents that create breakthrough technologies. But the need

for this approach has been clearly explained during our interview, that the companies do not want to expose themselves in the weak appropriability regime markets. The company that we interviewed is involved with product innovation, in which the products are rapidly imitated and the patents provide minimum returns for the innovator. Hence they prefer to maintain secrets and even disguise themselves by awarding unusual names for their new projects. The environment which is the important factor in deciding the appropriability regimes as mentioned in PFI framework plays an important role in this industry. This company suggests that the Intellectual property rights used in open source code and FMCG industries are totally different and cannot be applied directly to the manufacturing industries.

Finally most of the companies estimate the value of innovations based on the returns in terms of monetary value. In other words, if a company gets more profits than the investment made for developing an innovation, then it is said to be a successful innovation. However some of our interviewees whom we have interviewed to get a panoramic view consider that the value gained from the innovation is lot more than that of simple monetary benefits. Magnus Lindkvist mentioned that the companies generally learn by trial and error and try new methods to improve the efficiency. The profits by shaving off the excessive resources will in turn aid to the increase of profits. Donnie Lygonis mentioned that the companies are afraid of forming new businesses but they do not realize the fact that forming new businesses will make them money instead of trying to get the last dollar from the old things.

6. SYNTHESIS

The reflections on the reference frameworks and conceptualizations will be based on the empirical analysis. As discussed in the PFI framework, for an innovation to be successful in appropriating the value of an innovation, we need to consider three important factors. Though these factors are more common for most of the innovation types, there are certain aspects particular to open innovation, which has not been discussed in the theories. We have provided some insights about these under researched aspects to clearly understand open innovation.

The first factor in PFI framework is the appropriability regimes. The appropriability regimes as mentioned by Teece and Pisano, though contradict applies to different industries. The company that we interviewed being a manufacturing company is in the weak appropriability regime. But according to Teece, for the innovation to be successful a tight appropriability regime is desired. Hence we have brought in Pisano's theory in which he mentions that the companies can strategically weaken their appropriability regime to realize the benefits that cannot be achieved with the tight appropriability regimes. Hence the strategy of the organization decides whether the company should have a tight or weak appropriability regime. But the level up to which the companies can pro-actively manages the appropriability regimes needs additional research. Since intellectual property rights still play a major role in deciding the appropriation of the value of open innovation, the level up to which the companies can manage appropriability regimes depends on the specific company and the industry. The strategy of the company should define the approach of the company, in approaching open innovation.

The second factor is the complementary assets. Though the companies view open innovation in different ways and calls it by different names, the common understanding is the need for complementary assets. It has been well mentioned that the companies grow in the direction the strategy of the organization drives it. The specialized asset needs of the organization to realize the value from open innovation is the cause for the large number of acquisitions by the large corporations. For example, consider Google which is performing acquisitions at a greater rate to

enhance their capabilities to support innovative businesses. The innovative ideas are worthless if there are no complementary or co-specialized assets to support them. Hence the companies which try to bring in innovative ideas into the organizations, should acquire these complementary assets to utilize the ideas as well as the “good to bring in” kind of resources to have a radical different view which they cannot foresee themselves. This answers the question of why most of the open innovation practices have been utilized by high tech large companies. The available lot of resources helps them to affect the trend as well as provide the capability to create one of their own. Thus open innovation is not impossible with small companies but much easier with large companies, as Donnie Lygonis said. Another interviewee, Magnus mentioned that the companies will always be looking for new cash cows and tries to identify, develop and bring them into the company, which is obviously the strategy needed.

The third factor, dominant design is one of the least connected factors with the open innovation concept. Since it has been introduced only in early 2003, we consider open innovation as an innovation and it is still in fluid phase. The dominant design has not yet evolved and there is no clear definition of the applicability to the open innovation concept. When this dominant design paradigm applied to companies’ behavior, it can be seen that the companies use open innovation platforms for developing the already emerged design. But when there is a need for the companies to create a new design then they prefer to close the doors and windows of the organization to maintain secrets, such as Apple did for iPhone. But many other companies are becoming aware of the open innovation principle and utilizing it as used with Android platform.

Apart from these factors mentioned in the framework, we feel that some other factors not mentioned in theories are also important in understanding the realization of the value from open innovation.

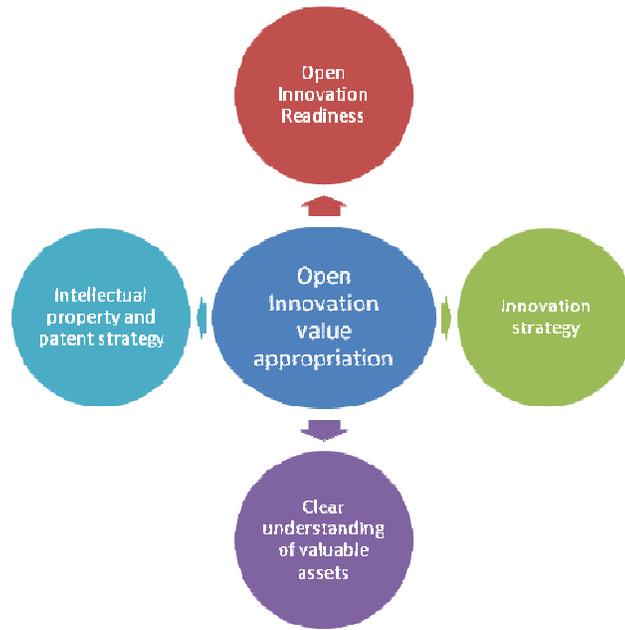


Fig 3. Factors necessary for realizing value from open innovation

The primary factor that we found as important for the open innovation success is the recipient attitude towards open innovation. The recipient company should be capable of selecting, implementing and defining what the company needs from it. The company should be aware and ready to accept ideas that are outside the domain of their business. If a disruptively different idea emerges from open innovation practices, the company should understand the significance and try to utilize them. If the company rejects most of the potential ideas for the reason that it does not fit into their business, then the company will be in the position of losing money that may have originated through new business opportunities. Also timing to the market is one of the prime factor related the recipient's attitude towards selecting the right ideas. The idea that proved insignificant earlier before may be beneficial if implemented now. Also the clear understanding of the key assets and the real value of them to the company is mandatory. Hence companies should have or at least develop a broad perceptive to look at the ideas before thinking of implementing open innovation into their company.

The next important factor is the innovation strategy specifically developed keeping in mind the differences between traditional innovation practices and open innovation. From our interview with the product innovation company, we realized that the company prefers to have a closed

structure not because of the lack of interest in open innovation but because of the knowledge involved. In most of these kinds of companies, the tacit knowledge is the most important factor. When searching for solutions from outside the organization, it will be very difficult to explain the problem completely and clearly. Even though the resources outside the company are more smart and knowledgeable, there is always a question of choosing the right idea, because the manufacturing will benefit the most when the ideas are synchronized with their manufacturing capabilities. Hence this tacit knowledge makes the open innovation in most of the manufacturing companies difficult. The case is totally different in the FMCG and IT companies. Procter and Gamble is successful with the open innovation concept because of the nature of the industry which it has been in and the industry demands a close relationship with the customers. The views can be analyzed and developed into new products without much difficulty but it is not the case with many other industries. But these kinds of product and process innovation companies employ a different strategy of acquiring startups and bringing the knowledge into the company. Though it can be practiced only by the large corporations with huge cash backup, it depends largely on the strategy of the company. Hence we suggest that the manufacturing companies thinking of utilizing the idea of open innovation should develop the capability of expressing the needs which is the foundation for the results achieved and should be clever to identify the right ideas that fit in their manufacturing process that most of the companies prefer not to change.

Another important insight that we have got from this study is that the open innovation is not a one way process. The company should look for ideas, solutions and technologies from the resources external to the organization but also have to get business for their internal resources. Failing to do this will result in the failure of the organization since it is not possible for an organization to just utilize the ideas from outside and flourish. Most importantly the companies should understand the true value of their assets and the segment of the resources that will be critically a differentiating factor when compared with other companies in the industry. It is not possible achieve high performance in all the segments of the business.

Hence the company should carefully analyze their key assets and adopt a strategy that will put them at the greatest advantage possible. The selection of the right innovative idea with the proper understanding of the best potential asset is the best possible return a company can get.

Finally the most discussed and analyzed part of the open innovation is the intellectual property rights. The companies should have a clear strategy to materialize the ideas generated from outside the organization as well should allow ideas to flow out of the organization that are not used by them. Most of the companies that hold a large number of patents such as IBM, Intel are giving their patents with an idea that they can get some useful ideas in return. There is a misconception that the companies giving out their patents are risking the loss of profits. On the other hand, it is their IP strategy that they are giving away only the patents that are not interesting or have no idea of developing within the company further. However they will develop an image that they are opening the way to other companies to actively collaborate with their innovations whereas in turn these companies can gain from their patents (Rivette & Kline, 2000). The IP strategy can be very helpful when negotiating the cross licenses with other firms and can provide an advantage since most of the companies nowadays are dealing with intangible assets. But in this digital world, open innovation has favored the collaboration between even competitors, thereby enhancing the value to the customers.

Last but not least, the innovation strategies can be combined; such as open innovation for a particular project and closed approach for others. Hence the open innovation buzz should be tailored to the needs of the organization and the value from open innovation can only be measured as the sum of the total earnings earned by the company in terms of monetary value, knowledge, capabilities and other undefined benefits.

7. CONCLUSIONS

According to our understanding of the returns and the research on appropriating the value from open innovation, we conclude that the following factors are essential.

1. The recipient attitude towards accepting and valuing the open innovation ideas.
2. A real understanding of the complementary assets, includes upstream (manufacturing, design etc) and downstream innovation processes (marketing and distribution)
3. A clear innovation strategy, which defines the approach towards open innovation
4. The ability to communicate and share the tacit knowledge not only within the domains but also between the companies. Hence bridging of knowledge management and open innovation is crucial for the successful appropriation of returns from open innovation.
5. Appropriability regimes, either tight or weak – Depends on the strategy of the company

Though the theories mentioned in the literature review explains the appropriation process, some of them miss the information technology revolution in this twentieth century. These factors will help to fill those missing gaps in theories and lineate the findings, taking into consideration technological changes and the change in attitude of the organizations.

Finally, we wish to provide some implications for the managers practicing innovation. If the company is looking for ideas with the development of already existing product, then the level of considering open innovation should be limited, unless the product is directly related to the customers (as in FMCG sector). It is logical that the internal resources have developed the product and should have better understanding of the products and its development. But on the other hand, if the company feels that the internal resources are not sufficient for creating new ideas for the product then open innovation is an ideal choice. Also the companies should be aware that communicating the already existing technologies and products will be difficult and requires tremendous effort. So if the companies are looking for radically new ideas then open innovation users will provide different perspectives that the company will never foresee.

This idea with regard to the new ideas for products can be extrapolated to the business model innovations and diversification opportunities. It will be extremely difficult for the companies to consider the business model innovations while performing the practices of the organization. In that case, outsider views will definitely provide a tremendous opportunity to identify new businesses and opportunities. These guidelines may or may not be suitable for different kind of industries. But we suggest that these principles will help achieve appropriation of the value from open innovation, provided the open innovation practices are tailored to the needs and capabilities of the company.

8. FURTHER RESEARCH

This research does not consider the appropriation problems that arise because of the conflicts due to bringing in the external ideas in to the organization. Future works can therefore be based on how far the companies can proactively manage their appropriability regimes or intellectual property rights, so that they can maximize their benefits from open innovation. Further research may also be performed to analyze the factors that are necessary for properly internalizing the external ideas. In other words, the research can focus on the monetary, technological and organizational needs for implementing open innovation practices within the company.

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10. APPENDIX

INTERVIEW TRANSCRIPTS

INTERVIEW 1:

Date: April 09, 2011

Place: Skype

This is the transcript of the interview with the key members of new product development team at two different product innovation companies in the same industry. The interviewees are engineers involved in development of new products, while they have the managerial responsibility as a part of the marketing team, which plays a major role in new product development (NPD). The NPD team is accountable to R&D and hence we chose to interview the initial starting place for new concepts to study about open innovation. Since the interviewees don't want their identities to be revealed we will consider the interviewees as C and D, in the following transcript.

The companies belong to the manufacturing industry, in which D belongs to the company which is a market leader and C has worked with the company which is a competitive follower and now working with the market leader. The interview was done through Skype and lasted for about 50 minutes. Since the interviewees are uncomfortable with recording the interview, the interview has been transcribed. Since the interview has so many halting, false starts etc, occasionally we have had to exercise some judgment in deciding what to include and eliminate from this transcript.

Legends: D- Participant 1; C- Participant 2

Interviewer: Firstly, I wish to thank you for accepting to spend your valuable time for providing input for our thesis. Let me give a brief recollection about our thesis and its objective. Our thesis is about open innovation, which is utilizing ideas from within and outside the company for the benefit of the company. Our research objective is to understand the factors that will lead to realize returns from investments made on open innovation.

D: Thank you and if I am not wrong, I think you are looking for ways in which company can get profits from innovative ideas originating outside the company. Right?

Interviewer: Yes we try to find out how to get returns from open innovation and factors that affect these returns. If you are clear, can I proceed to the first question?

D: Yeah. Ok

C: Yeah.

Interviewer: Why open innovation? Why do companies want to go out in search of new ideas?

C: Ok. Let me give you a basic understanding of the industry. It will help you to understand the companies in this industry. First of all, Control valve industry is not a rapidly changing industry as like mobile phones, computers and IT industry. Most of the innovations are expected to do business for at least 20 years.

Interviewer: Do you mean to say that the innovations are happening very slowly?

C: No. I mean to say that the companies innovate continuously but the radical innovations are very few. Most of the innovations are incremental improvements of the already existing valve constructions. The breakthrough products are created only if there is a drastic change in the market requirements and desperate need for new products.

D: Exactly. Being a market leader, I have observed a trend. If our company initiates a new project for the development of the new product then there are so many projects sprouting out within other companies, as well for creating new product for the application. Moreover, I feel the innovation is really closed than open innovation. Most of the products are strongly protected by the IPs. There is no visible attitude to collaborate with outside world. The reasons may be many. But I think the specialization is major hurdle for innovating openly. For example, if an automobile company needs a new idea or concept for its next generation cars; they can go out and search for a solution. But if we need a solution for our problem, it is not easy for us to go out search for the solution. It is not the case, most of the times, people are aware of the valve engineering and the solutions. Hence we restrict ourselves to innovate openly for our digital products such as digital valve controller, limit switches, solenoid valves etc and IT solutions.

Interviewer: So most of the companies in this industry have really closed innovation for new product development in valve constructions, materials and all. But they prefer to go out for finding solutions for digital components, IT etc, where they don't have competence and skills.

C: Yes exactly.

Interviewer: Can you tell me how you classify these projects that can use ideas from outside and should only use internal R&D?

D: We actually classify projects into four categories.

1. Incremental Innovations: This involves continuous improvement of our products by getting feedback from post product launch and using Voice of Customer (VOC) to make the necessary changes according to the market needs. While the basic configuration remains the same, we will add components and modify parts by actively working with customers, suppliers and local business partners (LBP).

2. New to the market: This is new to the industry. This kind of project will be kept inside the company very confidentially and developed only by internal R&D. Even the code names will be chosen for the project to disguise its true identity. It is 100% closed innovation.

3. New to the world: This kind of projects involve IT, digital valve solutions etc. Recently, we are considering "Cloud" for our data management systems, in which we don't have expertise. So we are actively collaborating with various research units, suppliers and considering using companies and individual consultants to help implement the project.

4. New to our business: These projects are mainly market penetration businesses. We seek ideas from all around the world without any restriction for these projects. But we will acquire a company to develop the internal competency to acquire the market. Most of the recent successful innovations came from these recent acquisitions. It may seem closed since these companies have been acquired and brought into our company. But still they provide the capability to identify new areas outside our business scope, which we have never considered.

C: Yes it is very true that it is not possible to get ideas from outside for all the projects. Since the products have to do business for very long time, we need to protect them from other competitors through patents. But in the case of new projects such as entering the pharmaceutical industry, we need some expertise and capabilities to understand the needs of the industry. Hence we will start working with companies in the market, then after establishing our presence we will acquire them into our umbrella of companies.

Interviewer: The specialization is a great hindrance factor for collaborating openly with the outside world for the business?

C: It is one of the reasons. It is possible to gain from the patents that competitors have. The attitude of keeping the ideas secretly within themselves and trying to enter the market with a path breaking innovation can also be the reason. If there are no worthy ideas outside why do you want to innovate openly? Instead companies try to invest heavily on their R&Ds.

Interviewer: Got it. How can you say that the innovation is profitable?

C: In simple terms, if the R&D investment for the innovation has been exceeded by the sales turnover, then it is profitable. But the measurement of these investments specific for the specific innovative product is very difficult. Hence we will term the innovation profitable if it serves as the product that provides a satisfactory solution to the problem and widely accepted by customers.

D: Also the innovative product should change the trend in the market. To be simple, if the competitors try to imitate and copy our product, then it can be surely said that it is an innovation. But profitability depends on several other factors such as how cost effectively we can manufacture it, market it etc.

Interviewer: So profitability depends not only on the successful launch of the product. It is the sustainable profits that it can provide? Am I correct?

C: Yeah. It may be the closed style as we follow or the open style that you have mentioned; it is the sustainability of the product. But in open innovation, this sustainability is extremely difficult since there are difficulties with managing IPs when the ideas are coming from outside. Most of the people consider open source codes as an example for this open innovation. Open source code can be successful since there will be continuous improvement and can be incorporated into the product more easily. But when you consider our industry, the product should be manufactured and can't be changed very rapidly since the customers will get irritated. So we have to develop a product that should provide us business for at least 10 to 20 years. For that reason, we feel IPs is very important since the constructions can be copied and with slight modifications can be patented for their benefit, leaving us no advantage.

Interviewer: So you prefer not to use open innovation for your products at all?

C: No. I haven't mentioned that at all. Where would you feel we have to look for the ideas in our field?

Interviewer: May be you can use open innovation intermediaries like Yet2.com, Ninesigma, Innocentive etc.

D: Educational institutions, labs?

C: But you have to understand that these intermediaries should have the capability to support our needs. We have never ruled out using these open innovation platforms for our business. We will generally analyze whether using these intermediaries provide cost benefits to us than using our internal R&D. Most of the times, they are cost effective but they are capable of providing answers for our problems. But as D said, research labs and universities are very good options. We have used professors at the universities as consultants for our business. But most of the times, the internal R&D feels not convincing with the solutions provided by these consultants. Hence we are slowly developing processes to involve these consultants and external agents as a part of the team. It is coming up very well.

D: In our case too, we are not hesitant to use open innovation. But we are worried about the networks that we have to develop for utilizing the benefits for this open innovation. Since Innocentive and Ninesigma are not worthy in providing such a network, the creation of network is often costlier than using internal R&D. But in the case of IT management, digital components development, we opt to go out and search for latest solutions to keep with the trend.

Interviewer: This is the final question. If you use open innovation, what are the problems that you face in profiting from the innovation?

D: As already said it is not a rapidly changing market. Customers are a part of our NPD team. They want new products but not very often. Hence we try to use the incremental innovations with the ideas from outside as well as inside to benefit from the innovation. The innovations are copied very faster and we need to develop capabilities to retain the profits. For example, we have developed a database management system for integrating our operations and it is not possible to

copy, since it requires a huge investment. Also we developed a digital product if integrated with our prime component, provides superior advantage. But it is not possible for the competitors to copy this technology since we acquired the capable manufacturer. So we have to retain the capability to supply the superior product continuously.

C: The most important problem in considering open innovation is the security and confidentiality. We don't want to expose ourselves to our competitors and lose our advantage. We are devising a strategy to manage the IPs for the innovations produced by this open innovation means. If the open innovation processes are capable of paying off than our internal R&D processes and provides solutions to our problems in a faster manner, then we are happy to adopt these processes.

Interviewer: Thank You sirs. I have got a lot of new interesting perceptions about the open innovation in nontraditional industry.

INTERVIEW 2

Date: April 12, 2011

Interviewee - Magnus Lindquist

Place: Ostermalmstorg, Stockholm

Interviewer - What are the drivers for Open Innovation?

Magnus – Innovation is not defined by the idea but by the usage. The major concern for the companies today is to minimize their resource inputs such as time, money, etc and maximize their profits. In their quest for efficiency, many try new methodologies to achieve this maximization. Open Innovation is the latest concept that is abuzz in the market which has a romantic idea of utilizing resources all over the world.

Interviewer – As a Trendspotter, How do you see Open Innovation Today?

Magnus – I actually see two galaxies of people & organizations practicing open innovation in different ways. One is the new and upcoming entrepreneurial group which sees immense opportunity in Open Innovation and wants to pursue it vigorously and religiously while the other set of people & organizations which have a strong institutional character want to benefit from open innovation but are wary of diluting their organizational boundaries. I do not see these two galaxies coming together any time. To be honest, I see them drifting apart.

You can consider the example of Apple which has an image of a work of Art by one Steve Jobs. Crowd-Sourcing cannot substitute this business model as people do not want to pay a premium for a crowd-sourced art. The same thing happened with NIKEiD where people could design shoes through an open platform and organizations saw it as the future of Nike. However they had actually overestimated a niche market which turned out to be very small. The beverage brand Vitaminwater tried the idea of “Flavourcreator” through Facebook to allow people to choose their own flavored vitaminwater. But this creative marketing campaign did not really take off and it was not practiced for any of their future brands. But cases of success story such as Häagen-Dazs, Pringles, and etc show how open innovation can benefit companies. But there are many companies which have burnt hands with the idea of open innovation in an attempt to increase their efficiency & profits.

Say the professional services industry in which customers never want an open innovated idea or service. The organizations in such industries are very careful & cautious in dealing with the idea of Open innovation. They do not want their brand to be diluted. The attempt to build the community car in Detroit which is actually the idea of utilizing the mass knowledge within the community. But this proved to be a niche market and it never grew out of this boundary.

The pace of technological Innovations is quite faster than the adaptability of human emotions.

But I see an over estimation of the peoples mass creativity quotient since most of these are based

on rapidly evolving Internet technologies. The idea of open innovation has not yet revolutionized but an immense potential for development is visible in the near future.

Interviewer – I use the Mozilla Firefox which is an open sourced technology and I do not have any regrets or qualms just because of its crowd-sourced origins.

Magnus - The software technologies are different from other cases. People attitude always keep pace with the fast developing technologies. If not all, but surely the community of sophisticated IT users.

Interviewer – How do the Innovation Practitioners bring the outside ideas into the company?

Magnus – Diminishing returns is the main reason for approaching ideas outside the organization. A perfect example is that of the Pharmaceutical Industry which encounters a diminishing returns from their R & D efforts. They therefore buy new Biotech Startups to increase the profitability and efficiency.

Interviewer – There is a general saying that these companies are bought to be killed inside the parent organization. What do you think about it?

Magnus – Most of these well performing upstarts generally possess innovative patents that cannot be foreseen by the parent huge organizations. But these parent organizations always have the belief of operating under a certain level of secrecy and boundaries. So they always prefer to buy in these startups to acquire their patents. Also these startups have a few strongly innovative figureheads which would bring in a lot of new ideas on to the table for the larger acquiring organizations.

Interviewer – Is the open innovation particularly restricted to the Hi-Tech companies?

Magnus – The term hi-tech is itself a misnomer. One of the most hi-tech industries is the mining industry while the mobile telephony industry is not a hi-tech industry. The Fast Moving Consumer goods leader P&G utilized the open innovation concept to successfully identify a bakery in Italy which was capable of printing words on Pringles chips.

Interviewer – How do you define the parameters for success of Open Innovation or do you believe that organizations should intuitively invest in the idea?

Magnus – The open innovation is a new concept and a romantic idea but not all companies are emotional enough to practice this idea. Small entrepreneurial startups may have the courage to carelessly pursue on Open innovation just based on their intuitions and faith. For the Larger organizations, there is always a risk associated with the stakeholders. Also there is a middle management which the fear factor which makes averse to taking risks. Rexam PLC, which is a packaging company, does not want to deal with products on a small scale and always prefers to deals with large numbers. The only exceptional emotional instance where they actually entertained a small organization is the case of “Red Bull” which is now a success story.

Interviewer – Measurability of Success?

Magnus – In their efforts to improve the efficiency and profits, companies always try new methods. They do a lot of trial and error and learn by the leap of faith. The R&D will always be looking for the next cash cow and try different methods. Microloans are an example of crowd-sourcing where the lender has faith on the borrower whom he would not otherwise loan a sum of money. It is a case of faith and trying different method. The Google's Beta testing method is another such approach towards success of their innovations. Even the automobile & the mobile telephony sector can take a leaf out of Google's handbook and use Beta Testing to get rid of bugs.

Interviewer – How do you trend spot the future of open innovation?

Magnus – In near future, the abuzz “open innovation” term will fade away as like electricity did when more and more people and organizations adopted it. The term will be redefined with the experimentation in which some will be successful & many will radically change the today's definition. As a result there will be no recognition on what a definition of a firm is.

This open innovation has a lot of promises made on the basis of Internet which forms the open platform for knowledge sharing.

In the longer term, there will be a giant army of Freelancing ants but still the protectionist attitude of the organizations will prevail. The false assumption of lack of ideas inside the organization may be better understood. Even today there are lots of ideas within and outside the organization. The knowledge of backing the right idea and managing the existing ideas is a tedious task. Companies in future may start thinking on why not to concentrate on the existing ideas rather than piling new ideas.

In the FMCG sector, the point of intersection of the inventor, user and consumer cannot happen for all the sectors. Even if it happens with a strongly built distribution channels, these existing organizations will flourish. Also consider the example of Apple Store. It is nothing more than a retail store but with a strong distribution network it can afford to charge a premium from its customers.

Interviewer – What are the effects of bringing external ideas to the internal system?

Magnus – The immune system, which is the characteristic of any organization will always repel the ideas because of the “Not invented here syndrome”. But the companies have to adapt to the needs of the future. These immune systems should act as a filter to allow only the right ideas to flow into the system. In an attempt to increase their profitability, the companies should try to do things differently and rise to achieve the premium of risk taking.

INTERVIEW 3

Date: April 18, 2011

Interviewee: Donnie Lygonis

Place: Linstedtsvagen 30, Stockholm

Interviewer: My first question is why the companies need to look for ideas outside. Simply saying why open innovation?

Donnie: If you look historically the cycle from idea to concept to product to market. We come from a product oriented society where we offer products to consumers and those products need to be manufactured. But I mean we moved a lot more to service provider society and the service, idea might not be easier to come up but it will be easier to understand and it's a lot shorter cycle to implement the service than product. Basically the border between the product and the service has been not completely eliminated but at least made hazy. For example, ten years ago in every business competition like venture cup, there is a clear line between the product innovations and service innovations. But today there is no line, Spotify is that a product or a service? I mean today products have become services and services became products. That is one of the reasons for shorter cycles. There are hundreds of reasons for why companies need to innovate more now than they have been 100 years before. 100 years ago, a fewer companies are offering a fewer products, of course a lot few consumers. But today we have lot more consumers we have different factors online and so many factors driving shorter and faster cycles – idea to product, idea to sales, idea to transaction. And I mean most companies start based on one idea, one product or one service. Very few companies are started because they are going to become an innovative company that always comes up with new things. They start around with one thing. Many companies have reached a stage where they realize we need new ideas, new things. Most often they don't have themselves so they have to find out somewhere else.

Some companies like P&G or GE have been good at sort of changing their whole DNA from one, hundred or thousand product company to something more of an innovative engine that always serves new stuff to the end users. P&G's business idea today is more of being innovative than just selling shampoo. I am seeing a shift with more and more companies, last 10 years we have been talking about innovation but nobody has really understood why? A very few companies has yet grasped the concept of how and what that means. But I think now more and more companies realized that it is not enough to say that we are an innovative company, we want to be an innovative company, on forefront of innovation; it is not enough to say that but you also have to prove it. If you are serious about working with innovation in your commercial entity, then you need to build it into your DNA. I mean the innovation; the creative part needs to be a part of what you do and not an add-on module where you phone inno or ideo when you need an innovative idea. Then you are not an innovative company but you are just reactive. I see one of the key drivers is that to be innovative or perceived to be innovative is to go out and ask customers, suppliers. You get the service innovation part, service innovation is all about understanding the users, customers their needs and addressing their needs so they can be perceived an amount of value. That doesn't mean that you are disruptively innovative but you just tried to serve the customers. I mean it is not innovation. Listening to what the customer wants and giving them that is not innovation; it is sales. Open innovation is opening up and working with a number of questions, working with how to do things better is a way of addressing the needs. The idea of open innovation, crowd sourcing and everything, the idea is if you only let the customers in, they will fix it for you. In my personal opinion, it is the wrong way to do it. Open innovation is one way of many to work when it comes to innovation as not only an add-on tool. To make innovation as a part of your business you need to get in touch with what's going on, you need to ask your customers. But that is not innovation; it is good sales or customer relations; People tend to mix these things up. But of course good ideas can come from outside since people see things that you don't. I am not saying open innovation is a bad thing in fact it is a good thing if you understand that it is one of the ways of being innovative.

Interviewer: But I think just extending the external relations with the customers and suppliers are the mistaken image of open innovation. What can you say about this?

Donnie: Yeah, I am about to say that when you go out and ask your customers, suppliers then there will also be ideas. But the magic trick with open innovation where many companies go wrong is that yes you need to go out and ask the customers. But don't listen to what they say, listen to what they mean. That is the pure dimension shift between sales and services and the open innovation. Most of the companies go out and ask what they need, what they want and listen to what they say. That gives them a very short term idea of what they have to develop. But they don't look at what they mean to say, don't step back and see the bigger picture, don't understand what is going on there and don't understand what problem they are solving. For example, a customer may be complaining about a cup as not able to do something whereas cup is only a part of the system. There are other parts of the system that needs to be fixed instead. So don't listen to what they are saying about the cup but listen to what they are saying about the system. That's where as an open innovation receiver, I can be innovative. Actually it takes the right person to be able to open up and understand the person they asked is actually talking about.

Interviewer: How do you define the boundaries of a firm?

Donnie: One perception of open innovation is also the idea of submitting ideas, seeing other people's ideas, rating and being able to cross connect ideas, and collaboration is the biggest thing in open innovation. Whereas it's not always that easy. Because you can't just create a website and ask public to give ideas. But yes companies do that. In my personal experience, people who have good ideas, really know that their ideas are good will definitely ask why I should post my idea in that website. I don't want to let everyone know my idea; I should speak directly to the company and should get paid for my idea. So when you are working with open innovation there

are number of paradoxes, opposing arrows of forces like openness and protectiveness. When you are very open then there will be a problem with protectiveness. Hence when you are working with innovation in a corporate environment, then there will always be two or three opposing forces, which you need to take care of. I actually started open innovation 12 years before, when I set up an idea management system in 99 or 2000. The problem was how to create an environment in which people can talk about their ideas and still maintain the secrets. If we are going to open up what can we expect people to share about. For example, if I ask to share ideas about improving Stockholm traffic, it is a neutral topic and I can post ideas whether the pedestrians should be allowed to cross the roads etc. Then people can comment on that idea, we can improve it and cross connect as well. But if a corporation posts a competition with a price, then if I post my idea somebody else will develop and get the price. SO in that case do I really want to post my idea in the website? So it is a balance. I worked and work with a lot of corporate environments with the idea management systems. The biggest problem is the openness and the rating. And there is also a problem of how do we reward innovation in a corporate environment? If I say I can reward the best idea and one of the employees having the best idea will be rewarded, then I have already created an atmosphere in which the people are not open. So it also an opposing force with open innovation, the reward and the openness, sharing of ideas. Why should I share the reward with you, when it is my idea? So that is why I am saying open innovation is one of the ways of practicing innovation, its difficult. If it is easy everyone will be doing it. Innovation itself is difficult since it will demand a lot from the organizations performing it. Phoning ideo or inno and asking for ideas and looking for startups with the best ideas. In fact latter is the easiest idea since you don't have to be innovative yourself. If a company wants to be innovative then they are under a great pressure. Most probably only a very few companies that say they are innovative are really innovative. I mean the boundaries extend if they buy those startups and it's almost virtual.

Interviewer: Do you think tacit knowledge is one of the reasons for open innovation not prevalent in manufacturing sectors?

Donnie: Again it depends on what you ask for. Most of the companies have a value chain such as from product-production-sales-support and so on. Say we will concentrate only on the ideas for the product that will fit into the existing production line, since we are not ready to change the production line. But the ideas for the product can be in different ways. On the other hand if we step back and see what else can the knowledge be used for? Most companies are ignorant or don't know what their assets are. They think the production line is their valuable asset but if compared with others there is no difference. But they may have a distribution system that is really good. But I think most companies don't understand what value they have. I mean in early 80's, when large companies started selling off, say Volvo used to be one of the largest producers and distributors of the frozen food with Procordia, which they sold in 80's. Because they want to focus on their core business which are cars, trucks and focus, focus, focus. That was the management term then. I think we have created a situation in which it will be difficult to reinvent ourselves. People became narrow minded and they don't understand what they have as value in their organization. So coming back to question, yes, the can ask for the knowledge but how far they are prepared mentally to be innovative does matters. I am saying this because, I have been part of many focus groups, and workshops etc, but when I come up with ideas they often say we can't do that. It's too farfetched; don't touch the production line just focus on the cup. So the challenge with the open innovation is more on the receiving side than on anything else.

Interviewer: What are the problems that you can see when bringing ideas from outside to inside?

Donnie: Apart from Not invented here syndrome, as I just mentioned the scope up to which the companies are open is the problem. Instead of looking at the whole picture mostly we will focus on the certain product or problem. But yes it is difficult to have a wide view and accept that we can change the whole business. So we have to be focused of course. The idea campaigns are really focused since we need people to think of one idea. Well, most of the times when ideas are

coming from outside, you tend to think that they don't understand our business. You need to know about manufacturing before coming with ideas about manufacturing. You can't just come up with ideas. I have been in this business for 40 years, I know what works or not. One another common syndrome is that we have tried it ten years before and it hasn't worked either. Why should we try it again as we tried it last time. That is also the reason why many good ideas fail, because in my opinion I think innovation is timing. Timing to market and time to market are quite different things. Time to market is getting as soon as possible to the market. But timing is all about understanding context, trends and what will work when. I am a living example. I had some of the companies which failed miserably because the idea I am trying to sell is two to three years ahead of the technology. After two or three when I am sick and tired of my idea and moving on to something new, suddenly I see everybody selling what I was trying to sell three years ago. So timing to market is crucial for successful business innovation. Understanding which idea will work now and which will work later and if we think the idea may work in future, we will put in the slow pace. If there is a situation when we have spotted a trend and we can affect the trend, then we will push the idea forward. Again, it differs between small and large corporations. If you are a large corporation with lots of resources you have the capability to create your own markets which you can't do with small corporations. There is an old saying from an American advertising, "We won't be able to sell shaving creams to Russian farmers if we don't change their habit of having a beard". How good may be the shaving soap you produce, it doesn't matter if it is a fashion to wear a beard. If we can put an effort to have the shaving cream ready, protected with patents, IPs etc. Since nobody is interested in the business as nobody is buying shaving soap, so we will first have the market setup with strong patents, IPs etc. Then we will spend a hell a lot of money in cool advertising, films, product play and we will make heroes in the movies to appear out shaven and it's a cool thing to be clean shaved. Suddenly there will be a fashion, people start to shave. Ok this is a stupid example, but this is the way it works. So that is I mean that it is not impossible for small corporations but it is much easier for large corporations. If they want to affect a trend then they can do it, but it takes time as well it can be done.

Interviewer: How do you say whether an innovation is success or profitable?

Donnie: It is one the reason why innovation is difficult. We have a system in which we are measured from what we have done, the quarterly reports. Here is another quote from me. As long as large corporations are focused on making money, then they will never become innovative. Because there will be a focus only on getting the extra last dollar that they have got. Why they should have to change to something insecure, when they know they have got? Most companies fail because they wait too long to change. Then they dip deeply and it is a huge effort to make it see upward again. They wait too long by holding to what they have. Look at the history, there are hundreds of companies who were the biggest and the largest once but now they are gone. I won't say they failed to identify a new trend but they failed to transform, because they are more focused on getting the last money from their old stuff and then taking the leap into the new stuff. If you have this fear of making money from the old stuff combined with the inability to identify new trends then you are not in the road to success. So building the idea of being innovative into your DNA means that you are continuously looking for new business not only to make money. Creating new business will make you money. But in people's minds these are two different things. Because creating new businesses is scary, it means trial and error, it means failure. So managing innovation process should build a system where you will fail fast. You should continuously try new ideas, prove whether it work now or not and if not put it aside and try something else. You should fail to win.

Interviewer: How do you see intellectual property rights with open innovation?

Donnie: It is how we started the discussion. It all depends on the level up to which you have to open. If it is employees of your own company there is no problem. If you are involving a specially invited group of people, it might not be a problem. But if it is the employees, suppliers,

customers then it is definitely a problem. As soon as this comes out, then people in the other end will also say that how I can be confident that my idea is protected, how do I know that I will be the one gets credit for this idea? I think it is the hard way and I see it as the one of the biggest opposing forces in open innovation.