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EXAMINING THE LIAISON BETWEEN MARKETING COMMUNICATION AND OPEN INNOVATION, IN THE SCOPE OF THE HUNGARIAN INNOVATION CLUSTERS

Abstract:

In the last decade, a new phenomena has appeared in the scope of innovation, deriving from the exaggerated perception of the forming and optimizing effects of the community groups coming exist outside of the company which have an essential role to boost up its competitiveness in the future. Thus many companies have realized that sharing their innovations infers better position in the market.

It indeed contributed to the widespread of this concept. Nonetheless this phenomena – non episodically – brings additional advantages for the company, such as exploitation of the own market with enhanced research capacity or building in originally not existed ideas to the current capital (Chesbrough, 2003).

On the other hand, open innovation can be described as the flow of direct exploitation of knowledge for the sake of accelerating internal innovation along with expanding markets to its external applicability. On the market this philosophy appeared firstly with the open source software's (West and Gallagher, 2004).

In this manner, open innovation is a paradigm that assumes internal and external ideas are inseparably applied together when a company tends to develop technology, toolkit and communication. This business model is about to utilize even internally and externally created ideas to create values, simultaneously indicates internal movements to exploit a certain (created) value. As a result, open innovation brings significant advantages to the companies which become capable to obtain intellectual power from outside their boundaries (Gassmann, Enkel and Chesbrough, 2010).

In Hungary, the idea of open innovation is widely supported by the innovation clusters (currently 23 are operating in Hungary). The target population of my research was made up of the accredited innovation clusters. The duration of data registration took place between July 2011 and May 2013, during which period a total of 21 innovation clusters earned the title accredited cluster. In my assessment I managed to contact 18 accredited innovation clusters, which is 85.71% of the entire target population (access rate).

The result and practical significance of my study shows that innovation clusters are relevant organisational forms during the examination of open innovation. Because from networks they secure wider platform for cooperation; help the integrity of knowledge through collective projects and create trustful atmoshpere between the members using different communication technologies and practices.

Keywords:

innovation, open innovation, communication, clusters

JEL Classification: O32, M31

1. Introduction

In the last decade, a new phenomena has appeared in the scope of innovation, deriving from the exaggerated perception of the forming and optimizing effects of the community groups coming exist outside of the company which have an essential role to boost up its competitiveness in the future. Thus many companies have realized that sharing their innovations infers better position in the market.
It indeed contributed to the widespread of this concept. Nonetheless this phenomena – non episodically – brings additional advantages for the company, such as exploitation of the own market with enhanced research capacity or building in originally not existed ideas to the current capital (Chesbrough, 2003).
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However, it is unquestionable that having examined this concept, several dangers may come to light. If companies from the same network share their knowledge prematurely, they might take the risk to become vulnerable in the progress of their R&D activities. The difference in "sharing" and "keeping" probably lies in suitable timing.
In Hungary, the idea of open innovation is widely supported by the innovation clusters (currently 25 are operating in Hungary). The *target population* of my research was made up of the accredited innovation clusters. The duration of data registration took place between *July 2011* and *May 2013*, during which period a total of 21 innovation clusters earned the title accredited cluster. In my assessment I managed to contact 18 accredited innovation clusters, which is 85.71% of the entire target population (access rate).
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2. But what is open innovation?

As the classical concept defines, innovation assures for the companies to invest in certain R&D progresses by utilizing their own assets whilst retaining their intellectual property. However, open innovation goes far beyond that with implementing ideas coming from outside – f.ex stakeholders – in order to boost up the company's existing property (Fleming, 2001; Hargadon and Sutton, 1997).
To "open" the innovation can be explained with the obvious fact that an organisation in lack of partners is unable to adopt to the rapidly changing business environment, due to its isolated status and therefore here the R&D answers are inappropriate. Nowadays it is inevitable for any company to exploit external assets and implement ideas in order to keep their market position (Chesbrough, 2003).

Based on the model of open innovation (Figure 1), external technological sources can really be the root of R&D approaches in the innovation process and –eligibly- can emerge in the planning stage. The "open" term shows the variability of how an idea flows into the innovation process and how it goes out (Chesbrough, 2003).

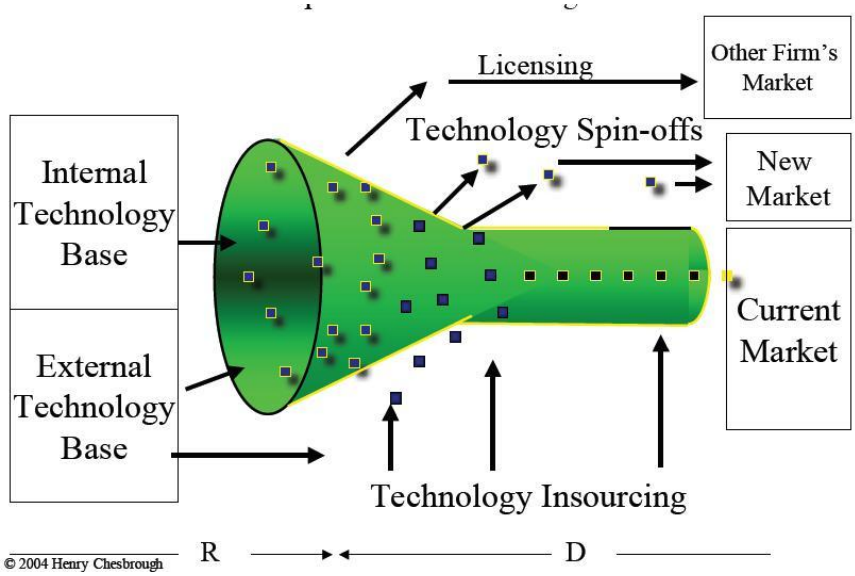

Figure 1: Open innovation
Source: Henry Chesbrough, 2003

Open innovation brings several advantages. On one hand it has a key function in reducing the delay of launching a product along with putting to view further properties to be gathered. On the other hand it realizes significant savings on the expenses of the innovation process by sharing risks between the partners and also infers the ability to be adaptable to consumer needs, altogether to enhance corporate reputation and image globally, since co-operating with a reputational firm, it influences our own reputation (Chesbrough, 2003).
Having evaluated some aspects of open innovation it has been pointed out that managers must be aware of the fact that ideas of innovation can arise not only internally, as well as R&D activities do not cover only the employees of the organisation but these are widely supported from external assets. Whilst these conclusions tend to be theoretically acceptable, putting open innovation into practice must face several problems of compatibility (Kalko, Glotova, 2010).
Opening innovation thus raises issues of how to prevent interim ideas. What happens if others utilised our ideas profitably? To what extent we prevent our properties if it is easily accessible for others. The classical managerial approach does not accept the phenomena of opening innovation because it goes against all the level of what they have done. The major issues of open innovation and the possible discrepancies of its applicability is shown on the second figure.

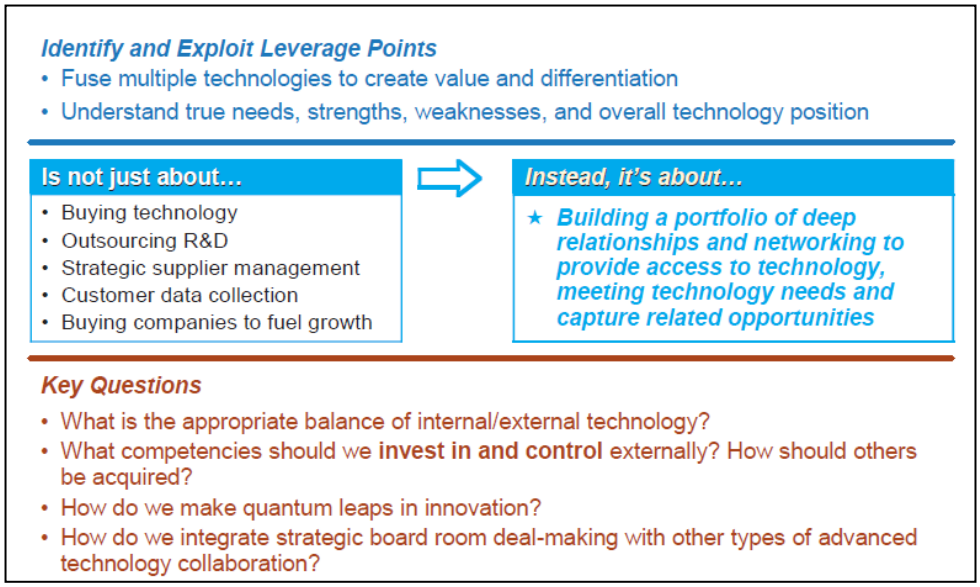

Figure 2: Objectives of open innovation
Source: Hastbacka, 2004

After all, open innovation is a paradigm that assumes a co-operational utilisation of internal and external ideas when companies aim to develop their technologies, tools and assets and communication. Creating values, defining internal movements to utilize them profitably in and out, these are what open innovation majorly do. Thus it brings significant advantages for the company through obtaining intellectual gains directly from its environment (Hastbacka, 2004). At last, figure 3 is about to summarize the endowments and requirements which are needed for the companies (regard to resources, organisational and strategic aspects) to realize a sustainable improvement through their innovation processes.

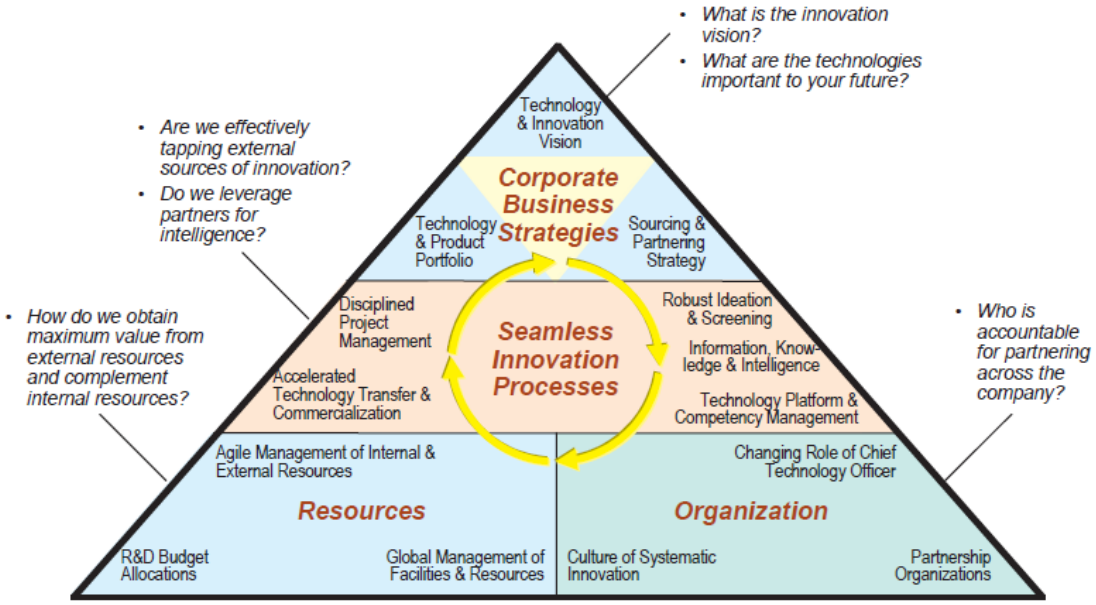

Figure 3: High performance technology and innovation management
Source: Hastbacka, 2004

It is visible that organisations need to take into account the attributes of the sub departments, along with the applied innovation culture and the changing technological objectives, thus liaison with the business partners have key importance in terms of defining R&D methodology. Besides of that, all internal and external assets need to be reconsidered (what budget calculation and distribution is desirable). Probably one of the most cardinal issues of open innovation come to light, namely, to what extent is the best outcome manageable or sustainable for product/service values through internal and external resources.
Obviously the strategy and the expected result of open innovation must be determined, along with the estimation of the available assets (technologies and ideas). To frame, the continuous innovation activity that assures a progressive evaluation of the exploited sources, relations and the applied methods of all.

3. The role of communities in open innovation

When we are talking about open innovation we need to realise that communities play a big role in the efficient use of this kind of innovation process since communities and their role in the innovation process fit whithin and offer an opportunity to extend the firm-centric concept of open innovation.
But what is a community? We can define a community as a group of interacting people living in a common location that is organized around common values and is attributed with social cohesion within a shared geographical location, generally larger in social units than a household.
„Since the advent of the internet, the concept of community has no longer geographical limitations, as people can now virtually gather in an online community and share common interests regardless of physical location" (Chapela and Moral, 2011, 2p.). That is why companies should develop their networks and open them using new communication channels, for example web2.0 applications.
The essential need for social and physical human relations, in other words the basic concept of the social attraction in regard to other people, is a natural substance for human beings. Communal belonging – beyond the biological necessities as such – specifically the bare association of others assures peculiar experiences. Contributing favourable values and associations, the feeling of the common power, the essence of mutual loyalty, cooperation an submission towards the others, together with dismissing outsiders altogether compose the determination of togetherness for the members of the community such as for the community itself (Andorka, 2004).
Group membership has an integrating and orientating effect in regard to the commonly accepted norms. At the same time, divergence from normative aspects might infer scorn and exclusion. The contribution for the sake of the group can be enhanced through altruistic, mutually agreeable signs that express emotions /such as abomination, compunction, disgrace, astonishment, negligence/ (Andorka, 2004; Csányi, 2003).
The members of the community show empathy and sympathy for the sake of each other. The formation of the communities could not happen only through personal liaisons but possibly evolves between strangers through interests, inducated by the group itself. Liaisons within the group can mature without long time pre-conditions or common roots from the past, communities as such can be formed spontaneously (Csányi, 2003).
Prior research has identified the importance of individuals, firms, networks, industries and nations upon open innovation (West, Vanhaverbeke and Chesbrough, 2006). Clearly communities are also an important source of innovations, innovations that have been utilized by firms as inputs to their own innovation strategies (von Hippel, 2005).

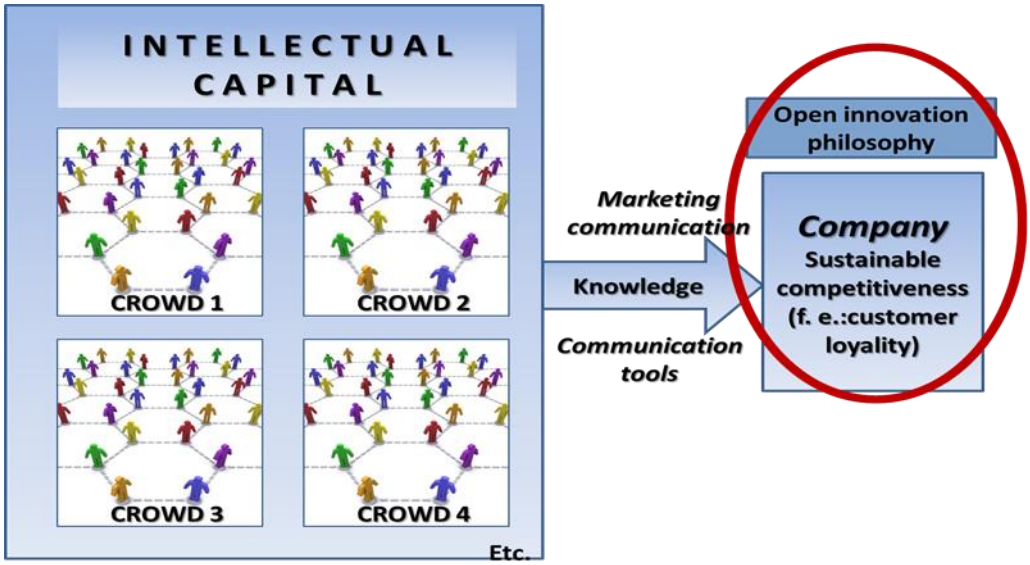

Figure 4: Connection between crowdsourcing, communities and intellectual capital

In figure 4 we can see how communities can become crowds with the help of the internet and its applications. The figure shows that with good communication strategy and with the new online applications (f. e. WEB2.0 etc.) companies can gain knowledge from the members (who can be costumers or business partners as well). With this knowledge and gained intellectual capital the organisation can become competitive on the market, can gain marketing advantages. That is how open innovation philosophy can grant success for companies which try to practice it.

4. How can innovation clusters help to open innovation and what is the liaison between marketing communication and open innovation philosophy?

The spread of open innovation in Hungary can be the effect of innovation clusters which already exist. Approx. around 200 clusters are known, but only 25 of them are accredited. This study is to examine these 25 clusters.

Clusters aim to support and conduce SMEs in being more effective, on the one hand by means of controlling and distributing current assets and capacities, technology and professional knowledge, on the other hand through common presence and the professional management on the market (Lengyel, 2002).

Cluster management assures optimizing the utilisation of sources in the areas of R&D, however clusters provide all the essential specifications and capital for innovative products to be put on the market.

From market prospective, collaboration brings better competitiveness both in domestic and international environment, whilst if we look at R&D assumptions, better rates can be realized in terms of the applied research and the number of patents – in line with dynamic employments conditions of the researchers.

Clusters have key importance in the introduction and realization of broad base products which are the outcome of thorough research, being ready to conquest external markets thus realizing sales export growth. More simply, clusters can be understood as local businesses connecting to each other in a network of a certain industry. Certainly different authorization policies and legal controls exist for each cluster that affects member legislation differences for instance (Dobronyi, Halmos and Somosi, 2012).

Hereby the major advantages of the clusters:

- positive effects on the local labour and the consumer markets

- possibility to cooperate within a cluster
- solid exchange of information between the members, enhanced quality, brainstorming
- standard presence on domestic and external markets
- additional gains /advantages (such as reputation, global appreciation, market launch, etc) (Schmitz, 1995).

Clusters can be granted to universities, non profit oriented firms, from SMEs even to large multinational companies. There is a serious problem in Hungary, namely that the researchers, inventors face significant obstacles whilst putting their products on the market. Some clusters aim primarily to accelerate projects and recruit members so that at the end it contributes even to introducing products to the market.

The members of the clusters are strongly motivated to seek new partners who have additional capabilities of what they do not possess on their own. It is possible to implement even the capacity from outside if the members are lack of available capacity to develop.

Certain economic players are getting deeply engaged with clusters. It is derived from the fact that by means of being a member of a cluster, expenditures can be reduced. On the other hand debates on the labouring progress and at several stages on the innovation chain are about to come up.

The clusters are strongly interdependent on the environment they operate in. Having proved with some research activities that the areas where more clusters were widely applied, better results were reached, as an opposition, lower intensity of clustering caused the particular sector to be laggard, comparing to others.

After having examined all these arguments that clusters can be perceived as principals in the wider understanding of open innovation itself, through the advantages it gives a plus for the members to exchange information better for the sake of better results in the launching progress of the product.

5. Research results

In our research we studied the *Accredited Innovation Clusters*. As it has been already mentioned, this study aims to find evidences to what extent is peculiar to implement external ideas to the member's existing innovation methodologies, what are the key supportive and retardant effects in the practical realization of the innovation networking, and how to encourage (through what communication devices/tools to encourage) the progress of "opening" the innovations. To analyse the recorded depth interviews, we used the NVivo qualitative data analysis software.

The *target population* of our research was made up of the innovation clusters which earned or renewed their titles of accredited cluster. The duration of data registration took place between *July 2011* and *May 2013*, during which period a total of 21 innovation clusters earned the title accredited cluster. In our assessment we managed to contact 18 accredited innovation clusters, which is 85.71% of the entire target population (access rate).

The industrial breakdown of our sample was the following (Figure 5): 33% of the clusters contacted operated in the IT sector (ICT[i]), 28% in health industry and 11% in the plastics and packaging industries respectively.

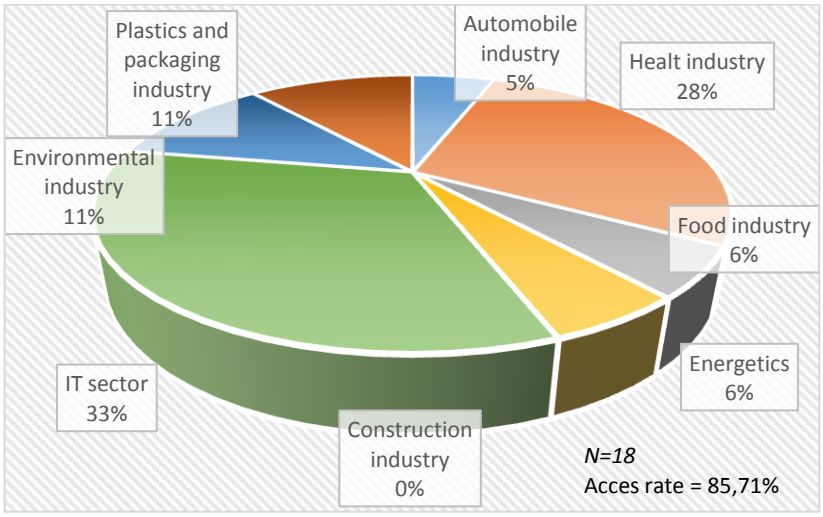

Figure 5: Industrial breakdown

The data reflect the dominance of *the IT and the health sectors*. Most popular are clusters oriented towards ICT. This can be attributed to the "trendy" nature of the sector at present, the rapid diffusion of innovations as well as the diversity and the fluctuating nature of the market. In addition, domestic companies also show a strong presence in these two areas, this is an especially common field among the start-ups[ii] and SMEs, while the health industry possesses a significant history of innovation, resulting in a strong motivation and cohesion force among the companies of this area to regain their previously lost market positions.

It can be established that the principal direction of this analysis is the communication, in other words, to how and to what extent open innovation can be implemented and embedded to communication platforms of certain companies, what is the applicable method for utilising external and internal tools in the clusters in order to motivate the members to exchange their ideas.

Based on the depth interviews, it can be stated that in all the clusters examined, the common (exchangeable) knowledge is the key concept which appears in every market when a product is realized (sold). Besides of that, clusters have to adopt to changing market environment in order to be competitive with up to date products, if possible with a brand new product via both domestic and foreign markets. Furthermore, not only the strictly connecting products are eligible to be sold directly at the sphere of the cluster (such as conferences or exhibitions) but the members' already existing products or services.

It has been noticed that whilst some clusters attempted to build up their external communications on their own in the last years, the most common practise for the larger companies tend to charge agencies to build communication up externally that covers image, event positioning, cluster positioning, press positioning, industry or governmental positioning as well.

Fifty percent of the examined clusters applied organised workshops for the members. Some of the networks use this way to boost up the effectiveness of the information exchange along with building up professional relationship. The outcome of this concept can be lighted with an example of the leader of Mobility and Multimedia cluster (MM cluster), where "after professional discussions, the members wanted to extend their discussions informally, therefore HiTechPub has been founded".

But how can clusters help to spread open innovation philosophy? They can create favourable background for market orientation validation in all kind of innovation process. The co-operational partners can share not only their technological intellectual capital but their resources too, and they can enter the market together with their new innovative ideas, products and services.

For cluster members their own products, and services can reach the market even faster thanks to the clusters promotional and communicational platforms and networks. For SME's clusters can create huge advantages on market with their common appearance.
From the above mentioned we can see that the variegation of co-operational partners and the diverse forms of collaboration are pointing in the direction of open innovation. The conscious adaptation of open innovation solution in domestic innovation clusters are in their infancy too. Since this requires from companies a new thinking method and in some ways a new business policy too, which can assure the user needs build into the innovation processes. This is not just the question of decision, because the spreading of open innovation philosophy needs adequate enviromental conditions, infrastructure and to ensure sufficient business and strategic tools too. For example the T-city in Szolnok, where the MM cluster members have the opportunity to test their products and services by their users before entering real market.

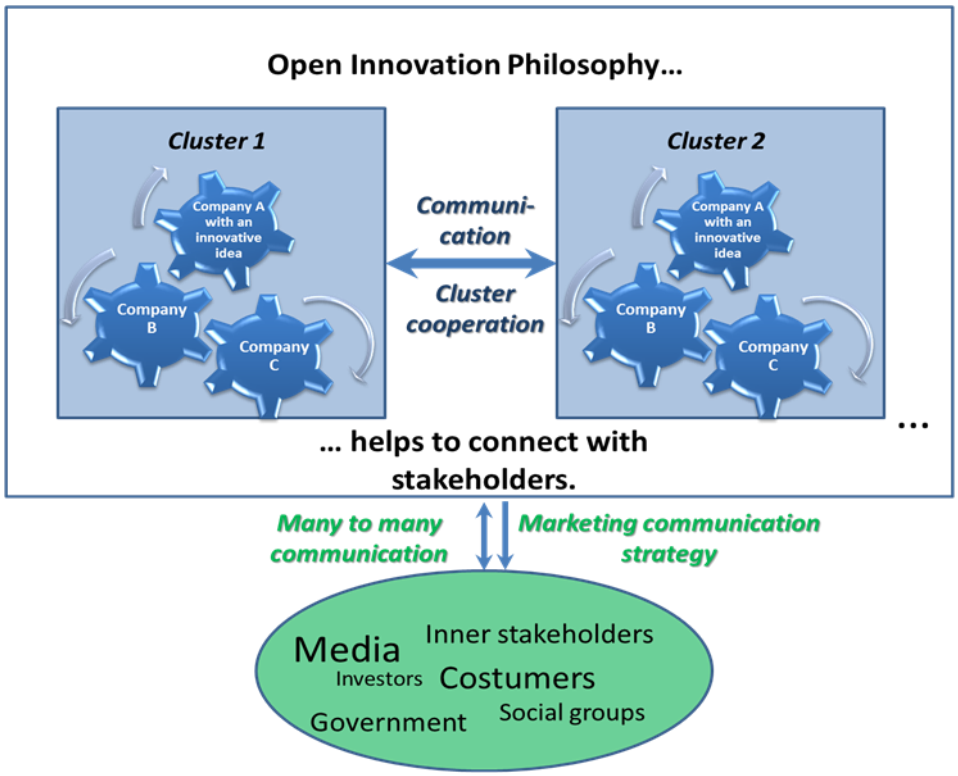

Figure 6: The liaison between open innovation and marketing communication

As shown on figure 6 we can see that members of innovation clusters could be the first in line to accept and adopt open innovation philosophy in their business policy. The figure demonstrates that in a cluster a company's idea is the main action force. It makes the member companies to work together and share the costs and benefits of their innovation process. We can see that not just members are working together but cluster too. They are communicating with each other, cooperating on similar projects like marketing communication; like how to enter the market with new products; like the practice of getting investors for R+D projects etc. So they share information connected with cluster management.
During our research we have seen that cluster member companies are more opened to new philosophies like other non member companies. They like to work with other non concurrence organisations; they are more open for new ideas and solutions. Figure 6 shows that accepting the open innovation philosophy will help the companies to connect with their stakeholders through new marketing communication tools, which indicates new marketing communication strategy and philosophy as well.

6. Conclusion

To stay competitive in an increasingly uncertain and changing environment companies could use open innovation. It can be essential for them because it can provide benefits not just for them but for their customers too (with the products and services which are better adjusted to the market; with flexible cost structures etc.).
However, we could see that open innovation does not come without risks. Companies have to understand what are their capabilities, skills and knowledge that can make them unique in the market. They have to realise that innovation can become outdated and thats the reason they have to stay innovative (to stay competitive).
As an organisation we have to know that nowdays knowledge can be accessed from anywhere. They have to know the right technological and organisation tools to have the right connections and links to knowledge.
And on the other hand companies should follow the new online communication trends which can help them to create their own networks and can help them find new solutions for creating new products/services (or develop the old ones).
Domestic innovation clusters are relevant organisational forms during the examination of open innovation. From networks they secure wider platform for cooperation; help the integrity of knowlede through collective projects and create trustful atmoshpere between the members. During the cooperation the members can help each other to utilize their innovative ideas on the market and they help to find new user oriented R+D ideas and solutions.
The future development of clusters needs to undertake the open innovation philosophy, the understanding of terms, and strengthening the marketing abilities with efficient communication.
In this part of our qualitative research we can state that we found identities and of course differencies in our domestic innovation clusters independently from industries. While a cluster functioning in an IT sector arranges prototype competitions where there members can demonstrate their new products, till then a cluster with member enterprises developing, manufacturing and distributing hospital and medical devices and providing services utilze the ideas coming from knowledge centers (not just inside the clusters).
We see that the Hungarian innovation clusters and their operational cluster manager institutions are raising actual management and marketing topics and questions, so we are willing to continue in our research in the near future too.

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[i] This acronym is the abbreviation of Information and Communication Technology and is also used as infocommunication technology.

[ii] A start-up is understood as a newly started knowledge intensive company which generates rapid growth at relatively low capital and labour investment levels. Beside this, it is able to provide a service or is able to introduce a progressive new product to the market with the help of which it achieves quick and significant growth.