

## **Open Innovation Practice in Hungary**

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### **Open Innovation's Status in Hungary and Central East Europe**

The area of Open Innovation (OI) is relatively new in East European countries. Our purpose is to investigate the special situation of OI in this region of EU. In our paper we are dealing with the Hungarian case. In Hungary, OI is a quite new approach in the field of innovation management. Innovators are engaged to well-known innovation techniques and procedures. This is why, the OI practices are not so widespread and it is a sort of change management problem as well.

Thus, this paper aims to study the possibility of use of OI tools on the development of entrepreneurship in Hungary in order to get a comparison basis for further cross-country research and be able to formulate possible cooperation considering the local actors behavioural specifications. It contains many different aspects what are selected after a literature review, and help us to examine the research question from different approaches. Thus, the result of our research can serve a good resource for practitioners as well.

### **Open Innovation**

According to Global Competitiveness Report 2012-2013 (WEF, 2013), which assesses the competitiveness of 144 economies based on drivers of their productivity, Hungary is in the transition stage from efficiency-driven to innovation-driven economy. The Hungary's place in overall rating is 60<sup>th</sup>, 37<sup>th</sup> in innovation and 86<sup>th</sup> in business sophistication. Analysed country has different positions in terms of institutions (Hungary – 80), infrastructure (Hungary – 50), and macroeconomic factors (Hungary – 44).

The term 'Open Innovation' has various commonly accepted definitions, which are all subject to continuous change. It can be defined as "...the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively." (Chesbrough, Vanhaverbeke, and West, 2006) The endgame of this new paradigm is to create economic growth by utilizing internal and external ideas and internal and external paths to market. To achieve this goal, new capabilities are needed to manage internal and external knowledge in open innovation processes. It has been recognized that the large, vertically integrated R&D laboratory systems of the 20th century are giving way to more vertically disintegrated networks of innovation that connect numerous companies into ecosystems and these processes need new competences (du Chatenier, Verstegen, Biemans, Mulder, and Omta, 2010; Gassmann, Enkel, and Chesbrough, 2010).

The Hungarian literature about OI is quite narrow, only a few scholars dealt with this topic (Dóry & Tilinger, 2012; Hronszky, 2011; Kovács, 2010). The reason behind this could be bipolar: on one hand it could be rooted from the fact that it is a new topic to investigate. On other hand, it is relatively difficult to find those enterprises what use OI approach and tools.

According to Chesbrough and Bogers (2014), we are considering the Open Innovation as a distributed innovation process based on purposively managed knowledge flows across organizational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organization's business model. This approach is still less known in Hungarian entrepreneurship. That kind of collaboration among organizations stated in Chesbrough and Bogers' definition is really rare nowadays in Hungary.

Thus, further investigation is needed in order to explore more precisely the characteristics of the phenomenon.

This study explores the role of OI on the entrepreneurship in Hungary – a CEE country with different background, political and economic system and level of market and technology turbulence comparing to Western European countries where OI tools and practices are used on more conscious and advanced level.

Our main research question is formulated as follow:

How is it justified to use OI in Hungarian SMEs? What kind of foreign best practices are adoptable in the Hungarian reality?

### **Research design**

This paper is exploratory by nature, meaning we try to explore the factors influencing OI tools usage in Hungary. The questionnaire was constructed using developed and validated scales from OI-Net Questionnaire. Besides of the questionnaire, we are conducting interviews with practitioners as well.

The companies in the sample are young SMEs; they were established between 2006 and 2013. The large part of the sample indicated that they are the residents or graduates of the business incubators. Number of personnel varies between 1 and 15 employees, and 70% of the firms indicated that number of employees' increased compared to the previous year. 95% of respondents stated that all employees of the firm have university degree, what is typical for technology intensive firms. The development of the companies has also been supported by the fact that companies actively invest in employees' education and training. In spite of the fact that all companies identify themselves as high-tech firms, the R&D intensity indicator doesn't correspond to level of high-tech in many firms (OECD, 2009). The customers' analysis reveals that the start-ups (as one of the main actors in OI relations) in Hungary are oriented on the domestic markets; only 25% have international customers.

The survey was designed so that it will continue to serve as a continuous standardized 'need collection form' that could be utilized to update the curricula in accordance with changing industry needs and developments in the open innovation theory. The questionnaire for the survey was developed to gather needs and information essential to developing the open innovation curriculum and recommendations for subsequent customization to different segments.

The questionnaire covers the following broad topic areas: 1) Current state of open innovation adoption in the industry; 2) Perceived importance of open innovation for the industry currently and in the near future; 3) Current level of open innovation knowledge and skills with industry employees; 4) Needed set of skills for fresh graduates in open innovation context.

The questionnaire includes also general questions on industry, size and market orientation of companies, and respondents' info and feedback part. Some of the key questions are marked as obligatory, but company-identifying questions are optional in order to keep survey anonymous. The full versions questionnaire is published on platform and distributed to the partners. The main language of the survey is English, but, according to the partners wish, questionnaire was translated into 12 other EU languages, Hungarian is included as well.

The survey was distributed to approximately 800 Hungarian companies of all size and industries sectors and only 45 responses were collected. Questionnaires were sent out to CEO, CHRO or innovation specialists and chief researchers.

In spite of the very low responses rate, OI seems to be a subject of interest for Hungarian firms as showed hereafter.

However, respondents were well aware of their core competitors both locally and internationally. Due to the size of the markets and product specific, Hungarian has both local and international competitors.

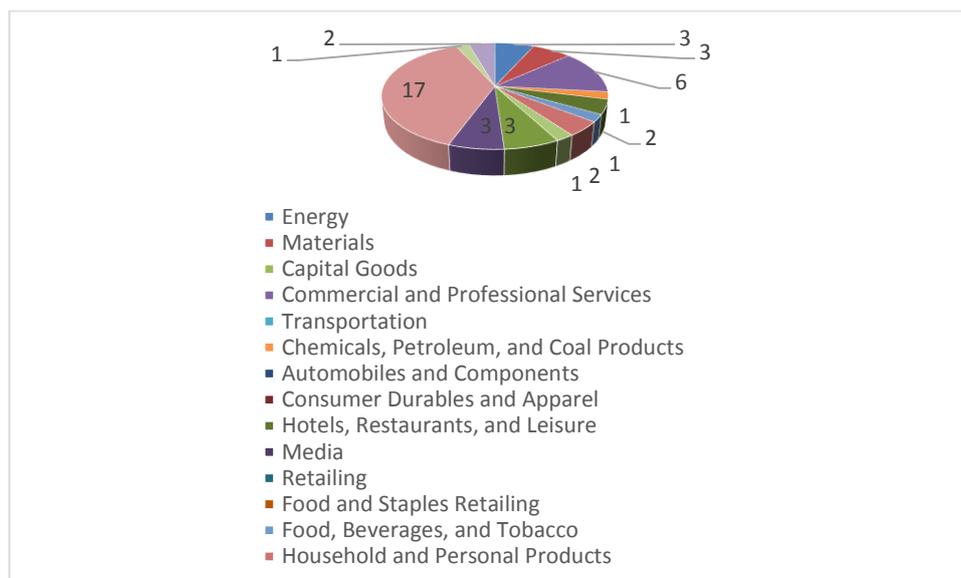
During the sampling process, we have followed the steps of OI-Net project guidelines. The sample size and structure was planned to fit for multilevel analysis: the OI-Net aimed to collect data from 35 countries (level 1), the minimum of 10 core industries (level 2), and corresponding amount of companies (level 3). The methodological assumption is 5 multiple rule:  $\text{min } 5 \text{ countries} * 5 \text{ industries} * 5 \text{ companies}$ . The selection of key industries for survey was done based on country and statistical economic significance criteria. First, each targeted country was viewed from publicly available statistics (Eurostat) and the top 5-10 industries in terms of contribution to national GDP were selected. The methodological recommendations were distributed to partners. The minimum amount of industries to be surveyed was 5. From each industry at least 5 (depending on industry structure) representative companies are selected by the partners of the OI-Net network and approached with the survey. The targeted sample was 875 filled questionnaires if 25 companies per partner country would participate in survey. In small countries, it was possible to collect data from 3 industries. The stratas on size, age, turnover, and other indicator were not set. There was recommendation expressed to partners to distribute survey to innovative companies, hence no limitations on R&D intensity is set.

Depending on size of the company and the organizational structure, the key respondents should have been HR specialists, innovation or R&D managers / directors, place of location open innovation function – sales / marketing, or CEOs. It was recommended, when possible, to send questionnaire to few respondents in each company. Special attention was paid to the companies, who were willing to participate in interviews and agreed to collaborate in case writing for the aim of this project.

Regarding on the interviews, we chose narrative interviews as qualitative research method. It is useful for us because the investigated topic is still less known among the actors of Hungarian market and thus, we have the opportunity to have insight to entrepreneurs' thoughts about OI. It could serve to understand more details about OI in Hungary.

## Findings

We focus on the justification of OI in Hungarian organizations. On the following figure we can find the respondents' industries.



*Figure 1. Hungarian participants by industry*

The majority of respondents is from “other” services, and “Commercial and professional services”.

Regarding on the Open Innovation statuses and innovation performance in Hungary, we can say that most of companies are currently interested to implement or improve Open Innovation activities:

- 8.9 % of respondents are in the process of refining OI activities,
- 48.9 % are in early stages of implementing OI activities,
- 13.3 % plan to implement OI.

Only 17.8 % are experienced adopters of OI and 8.9 % are not planning to adopt OI.

Furthermore, more than 60% of respondents indicate “success of radically new or significantly improved products and services development” to assess their performance in innovation.

OI practices adopted by Hungarian companies are mainly:

- Collaborative innovation with external partners,
- Subcontracting R&D,

- Customer and consumer co-creation in R&D projects.

Large companies assert that they influence industry standards. The most adopted activity by medium enterprise is crowdsourcing but they are also using co-creation and IP-licensing. Small companies affirm that their OI activities are ideas scanning and external networks.

The most sought skills for OI-specialist sorted by importance are:

- Problem-solving
- External collaboration
- Communication
- Negotiation
- Team-working

The most sought abilities for OI-specialist sorted by importance are:

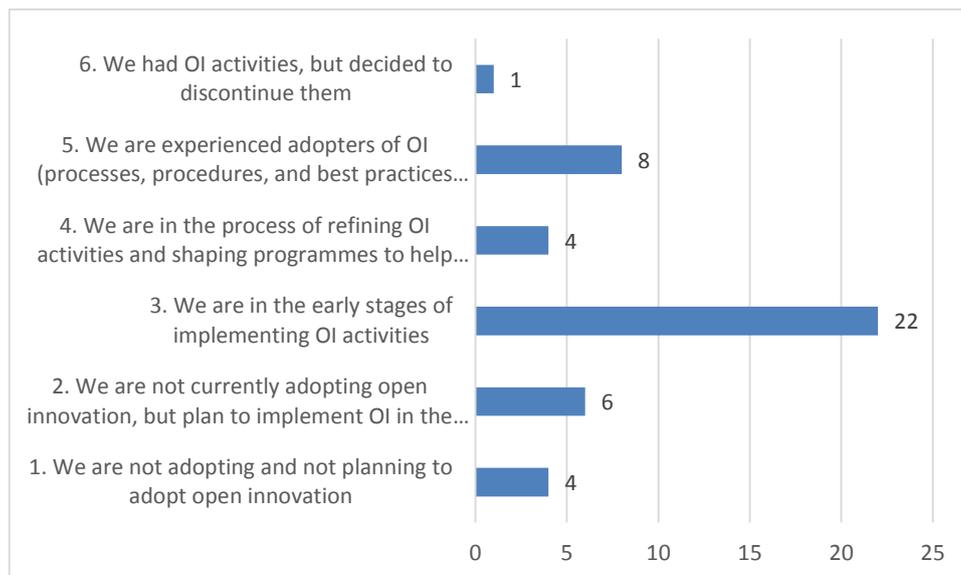
- Adaptability and flexibility
- Ability to work in an interdisciplinary environment
- Ability to share knowledge and ideas internally / within an organization
- Project management
- Ability to share knowledge and ideas externally

**Contribution: What do the outcomes and results add to current understanding or theory in the IM community?**

With our research, we can contribute to understanding of OI in CEE. The Hungarian results can provide a case what can serve as a comparison basis to neighbouring countries and to Western European countries.

**Practical implications**

Our findings can serve as a useful information and handbook for practitioners and company leaders who are working in innovation-intensive market, and they would like to show difference from traditional innovation processes. The majority of respondents is in the early stage of implementing OI activities.



*Figure 2. Self evaluation of current open innovation status*

Few of our respondents do not plan to use Open Innovation and Hungarian firms seem to be concerned by OI. Depending on their size, firms use a narrow scale of very traditional OI activities. To attempt their objectives, companies need employees skilled in communication, collaboration and team working. An OI specialist has to be able to work in an interdisciplinary environment and, as expected, has to be creative.

### **Further research area**

For more detailed information and valuable feedback from the field of OI, we need to broaden the scope of respondents. A further challenge is to reach and collaborate with those companies that can allow us to work together with them for further years and examine the effects of OI activities. The Hungarian market size and the influence of OI activities on it need deeper analysis and overview about the organization's behaviour related to OI.

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