

# **OPEN INNOVATION AND SHARING ECONOMY AS KEY BUILDING BLOCKS OF COLLABORATIVE ECONOMY APPROACH**

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## **Abstract**

This paper deals with two concepts: Open Innovation and Sharing Economy and their integration. The first mentioned represents a counterpart to closed innovation and provides new ways of utilization of company assets, specifically intellectual property. The latter is believed to gain more business potential in the near future. Sharing economy encompasses unique characteristics, which enable to gain competitive advantage and is no more relevant only for start-ups. This concept is presented by scientific literature to be linked to the lifestyle of the generation Y and to the emerging software platforms enabling interaction among private sellers and buyers. Research question addressed in this paper covers the specifics of integration of Open Innovation and Sharing Economy as two seemingly independent and separated paradigms in two intertwined contexts – companies and individuals. Resulting collaborative approach enables cooperation of organizations and individuals for problem solving in general with results in pursuing and achieving higher objectives than when acting alone. Problems with the integration of both concepts are presented, the outcomes of a survey research are discussed and implications for further research are drawn. The conclusions of this paper can be used as guides for companies for the adoption of beneficial characteristics of both concepts and thus providing a new view of their business model.

**Key words:** Open Innovation, Sharing Economy, collaborative approach

**JEL Code:** JEL17, L25, O33

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## **Introduction**

The role of innovation in company value creation is beyond question. Since the product life cycle is little by little shortening, companies pursue the most effective way of innovation management. That is why innovation communities are in search for non-traditional approaches to innovation which would enable shortening product life cycle as well as reduction of

development costs. Collaborative approach to innovation development brings new quality to innovation process. One of the most frequently discussed concepts is open innovation (Chesbrough, 2003, 2004). This concept enables external subjects to participate in innovation process and benefit from innovation in exchange for sharing their own know-how and technology base. Open innovation concept complements on traditional concept of close innovation and generates shareholders value from mutual sharing knowledge, technologies and intellectual property. Even if open innovation concept is still under exploration there are several examples which endorse its viability.

The paper deals with three mutually interlinked concepts which came into light over past two decades –sharing economy and open innovation which may be regarded key building blocks of collaborative economy approach.

## **1 Research methods used**

As the method of choice qualitative research which was based on questionnaire survey was used. Questionnaire survey was aimed at the exploration of the adoption of sharing economy, open innovation and collaborative approaches by Czech companies. The sample consisted of more than 50 companies encompassing industrial companies operating in various industrial branches (machinery, construction, chemistry, IT etc.). Simple statistic methods as modus or frequency calculation were used for the evaluation

## **2 Sharing economy, open innovation and collaborative approach to innovation**

Over past decade traditional company management was ambushed by new phenomena like sharing economy, open innovation and collaborative approaches which started to undermine established business models (Richardson, 2015). At the beginning, companies were rather suspicious to possible benefits which might be generated by these new approaches that came to break existing business rules. In general companies were not sufficiently prepared for this new paradigm which was based on sharing, openness and collaboration. They suffered from the lack of competences, knowledge and skills which would enable them to benefit from these new approaches. Companies that quickly acquired new entrepreneurial philosophy like Tesla, Airbnb or Uber gained strong competitive edge.

## 2.1 Sharing economy

The concept of the sharing economy systematically penetrates the life style of current generations (preferably generation Y) and systematically influences their social behaviour. The Economist (2013) sets forth another synonyms for the sharing economy like the *Collaborative consumption, the asset-light lifestyle, the collaborative economy, peer economy* or *access economy*. Notwithstanding previous definitions other authors see slight differences among these terms (Leong, 2015). Sharing has been subjected to continuous re-imagination and positioning throughout networked culture's history. Recently there has been specific emphasis on user-generated content and social media platforms (Roh, 2016). Particular social actors such as social media platforms attempt to cultivate an imaginary of sharing in networked culture. They do this by appropriating positive social values associated with common understandings of sharing, such as community, generosity, shared values of cooperation and participation (Kennedy, 2016; Roh, 2016).

The sharing economy is a suite of emerging software platforms acting as an intermediary between private buyers and private sellers, allowing them to share their existing resources (Allen, 2015; Richardson, 2015). Generating new sources of revenue is only one form of profiting from the collaborative consumption movement. Another approach is to align with peer-to-peer sharing as a platform to promote one's products and services to potential customers. The sharing economy requires the involvement of physical assets and services among individuals: technological systems, platforms, and marketplaces back the exchange of belongings and services in the sharing economy. Individuals are distributing assets to augment their income and employing other goods to make economies. Sharing economy platforms enable individuals within and across communities to link with people to supply and gain from fundamental skills and services (Nica & Potcovaru, 2015). Sharing economy is growing faster than Facebook, Google and Yahoo combined. The former has been valued at 15 Bill. USD, the latter at 11 Bill. USD over the past seven years. The figures which confirm the accelerating pace of the penetration of sharing economy look very interesting (Business Insider, 2016). 35% of Unicorns (start-ups the value of which exceeds 1 Bill. USD) have based their business models on the principle of sharing economy. The global sales of companies some way involved in sharing economy accounts for 15 Bill. USD. Moreover, collaboration at work generates 46 Bill. GBP. Another public survey showed that 51% of people prefer to share rather than own (Mafolska, 2016). In addition, the research performed by PwC in Germany in 2015 showed that 64% of the people had already used or planned to use some forms of sharing economy. Half of the respondents considered offering some service or product which had something in

common with sharing economy, such as sharing unused meals or cooking an additional meal to invite other guests to a dinner.

It is a positive feature that sharing economy has caused a significant drop in the prices of services offered through this platform. Typically, Helping.de charges an almost humorous 12.9 USD for one hour of cleaning. It is not surprising that the current valuation of peer-to-peer business models are over 75 Bill. USD (Allen, 2015).

## **2.2 Open innovation**

Open Innovation as a term was first coined by Chesbrough (2003, p. 43). As per Chesbrough *“Open Innovation means that valuable ideas can come from inside or outside the company and can go to market from inside or outside the company as well. This approach places external ideas and external paths to market on the same level of importance as that reserved for internal ideas and paths to market during the Closed Innovation era.”* Even though Chesbrough’s definition of Open Innovation is widespread in literature, there has been effort to further ramify the concept. West & Gallagher (2006, p. 320) offered following definition: *“Open Innovation means systematically encouraging and exploring a wide range of internal and external sources for innovation opportunities, consciously integrating that exploration with firm capabilities and resources, and broadly exploiting those opportunities through multiple channels.”* The Open Innovation approach changes the interaction between the company and the environment in which it operates. At these circumstances, the boundaries of the firm become penetrable from both the inside and outside. The firm can deploy innovation internally based on external and internal ideas and technologies. However, the firm can also allocate ideas to external parties, who commercialize them through their own innovation projects. This contrasts to the Closed Innovation model, which assumes there is no other path for ideas to enter the firm, nor leave the firm as products or services. Chesbrough (2006) provided strong evidence of eroding factors affecting the traditional Closed Innovation paradigm. Chesbrough has built a strong case for Open Innovation, but does not provide a descriptive model for deciding between the two approaches. This may be due to real-life examples, where most companies choose a combination of both approaches. The Open Innovation trend may seem inevitable, but it is important to determine if a company is ready to implement Open Innovation.

## **2.3 Collaborative approaches**

Within the literature, there is much reference to the characteristics of collaboration and partnership. Collaboration is the process by which people/ organizations work together to

accomplish a common mission. Collaboration is also seen as a complex partnership in innovation development, when involving parties to this process through establishing collaborative scientific agreements or scientific projects solve the complex problems of innovation acceleration, getting mutual benefit from working together. Collaboration replaces hierarchy and supervision leading to innovative production models (Manfredi et al., 2014).

The defining attributes of collaboration include that ‘two or more individuals must be involved in a joint venture, typically one of an intellectual nature in which participants willingly participate in planning and decision making’ (Henneman et al., 1995). Henneman et al. further argue that individuals consider themselves to be members of a team working towards a common goal, sharing their expertise and responsibility for the outcome. Gray (1989) defined collaboration as “*a process through which parties who see different aspects of a problem can explore constructively their differences and search for solutions that go beyond their own limited vision of what is possible.*” Others have described collaboration as a process that enables independent individuals and organizations to combine their human and material resources so they can accomplish objectives they are unable to bring about alone (Kanter, 1994; Wandersman, Goodman & Butterfoss, 1997; Zuckerman, Kalan & Ricketts, 1995).

### **3 Results and discussion**

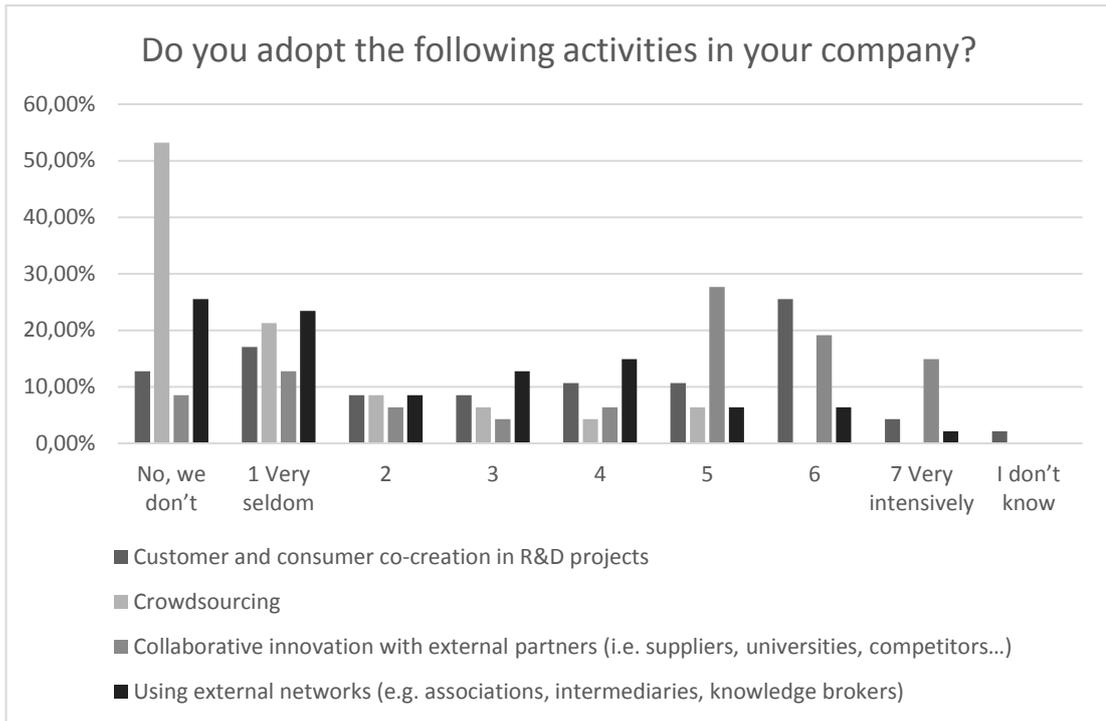
To define determinants for collaborative approach we used the results for the Czech Republic which were based on a questionnaire survey conducted within the framework of an academic project LLP - Erasmus “European Academic Network for Open Innovation” which was executed in 2013-2016.

Four open innovation activities were identified to bear relations to sharing economy:

- Customer and consumer co-creation in R&D projects
- Crowdsourcing
- Collaborative innovation with external partners (i.e. suppliers, universities, competitors...)
- Using external networks (e.g. associations, intermediaries, knowledge brokers)

The outcomes are illustrated in the Fig. 1.

**Fig. 1: Collaborative activities adoption by Czech companies**

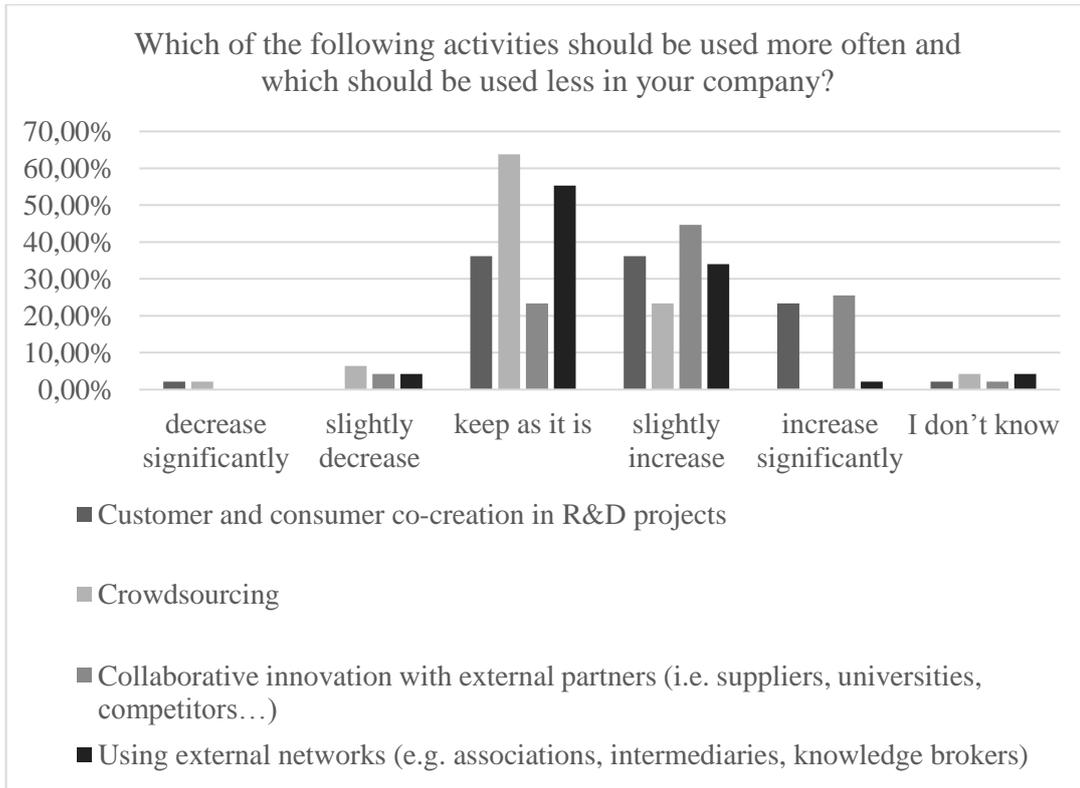


Source: Own research

The activities using external networks and crowdsourcing do not have a deep penetration in the Czech companies. The reason of low reported adoption of these activities might be connected to relatively low awareness of the benefits of the innovation tool in the Czech Business environment.

Collaborative innovation with external partners and customer and consumer co-creation in R&D projects are reported to be the most adopted practices. In particular collaborative innovation being adopted by more than 60 % of the companies and 40 % in the case of customer and consumer co-creation (reported 5 – 7 on the Likert scale). Almost 15 % of the companies reported the highest grade: 7 – very intensive adoption of the collaborative innovation, suggesting that these companies are already prepared for reaping the benefits of the collaborative approach.

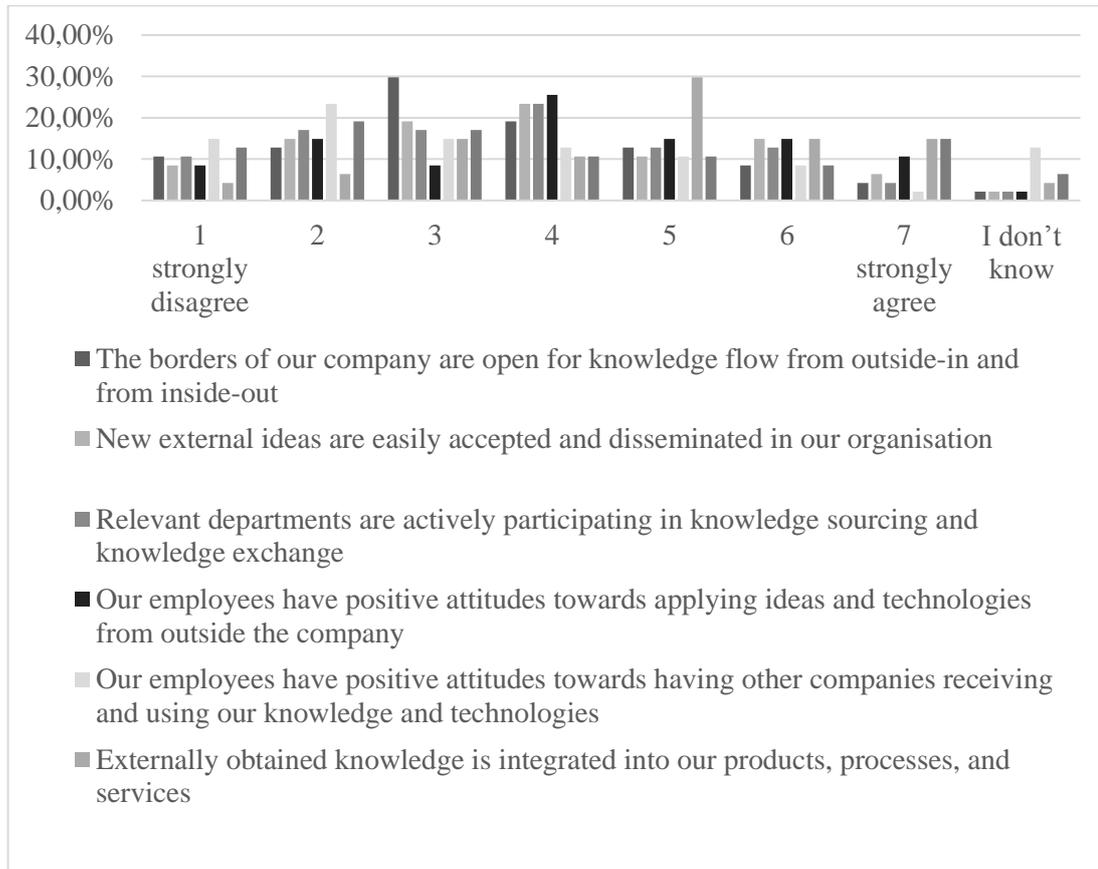
**Fig. 2: Collaborative activities perspective used by Czech companies**



Source: Own research

Fig. 2 further examines the collaborative activities within the Open Innovation context. More than 23 % (Customer and consumer co-creation in R&D projects) and 25 % (collaborative innovation with external partners) of companies reported further need to significantly increase of the already adopted practices. The two poorly adopted practices are reported to slightly increase, suggesting a brighter future for a synergy produced by the wider adoption of all four identified activities.

**Fig. 3: Czech companies' preparedness for Collaborative approach**



Source: Own research

We further identified practices within the OI framework, which relate to preparedness of a company to collaborative approach. The practices and the respective answers of the respondents are indicated in the Fig. 3. There are no strong conclusions to be drawn out of the analysis for the statements “New external ideas are easily accepted and disseminated in our organization”, “Relevant departments are actively participating in knowledge sourcing and knowledge exchange” and “Our employees have positive attitudes towards applying ideas and technologies from outside the company”. Strong to “mild” disagreement (grades 1 – 3 on the Likert scale) were reported for about 50 % of the companies in the following statements: “The borders of our company are open for knowledge flow from outside-in and from inside-out”, “Our employees have positive attitudes towards having other companies receiving and using our knowledge and technologies” and “Our competitive advantage lies in collaborating with external partners”. The data further illuminate the low penetration of the activities and practices but now within the companies, who reported not having the employees and organizational culture prepared to accept the OI/shared economy/collaborative approach point of view. This

might be a further complication in adopting the practices – the change should include a culture change within the company.

The somewhat positive outlier is that almost 60 % of the companies reported mild to strongly positive agreement with the “Externally obtained knowledge is integrated into our products, processes, and services” statement. In the flow of the data analysis this merely further underlines that the companies are not adopting new practices, but still view innovation through the closed-innovation lens.

## **Conclusion**

Collaborative approach which places different subjects (typically industrial companies and universities) on the common ground can be not only meaningful source of competitive advantage but also a generator of shareholders value. It effectively combines knowledge, skills, sources and infrastructure of both parties. Such collaboration facilitates mutual exchange of knowledge base which is conditional for prospective success. Notwithstanding proven value and continuous proliferation of innovation concepts like sharing economy, open innovation and collaborative approach the companies in the Czech Republic are still hesitant to fully adopt these practices. Companies consider these approaches risky and demanding to implement. Draining company intellectual property, general distrust to these techniques or low agility to tackle new concepts belong among other reasons which are worth mentioning. One of the most significant barriers to smooth implementation of sharing economy principles may be represented by legal barriers which slow down the pace of implementation. In addition, functional normative models which could provide an inducement to the adoption are either missing or insufficiently elaborated. Further research should be dedicated not only to the exploration of the penetration of these techniques but also to the development of normative models to be applicable in management practice.

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