

How to Overcome the Barriers Between Economy and Sociology With Open Innovation, Open Evaluation and Crowdfunding?

Robert Freund

PhD Candidate, Martin – Luther University, Halle Wittenberg, Germany, info@robertfreund.de

Received (10.07.2010); Revised (19.09.2010); Accepted (30.09.2010)

Abstract

This paper is structured in the following way. The first part describes Open Innovation as a business model which uses internal and external knowledge for innovation. Part two focus on the large base of ideas which can be evaluated (intern/extern) with IT-solutions (Open Evaluation). And in part three it is argued, that crowdfunding can overcome the barriers between economy and sociology.

Key words: open innovation, open evaluation, crowdfunding

1. INTRODUCTION

More and more organizations are confronted with highly dynamic external organizational environments. The drivers of change are globalization, sustainable development, new technologies and the aging population. The pressure on organizations forces them to continuously adapt to the environmental shifts [1] and to create organizational forms able to provide fast and innovative response to market threats and opportunities [2]. Innovation is a key-factor of business success [3], but in “many organizations, especially those with a traditional approach, innovation is often only seen as valid when it is completely ‘homemade’. This traditional view of innovation – Closed Innovation - completely disregards the growth market of demand-driven innovation” [4] or Open Innovation (Figure 1).

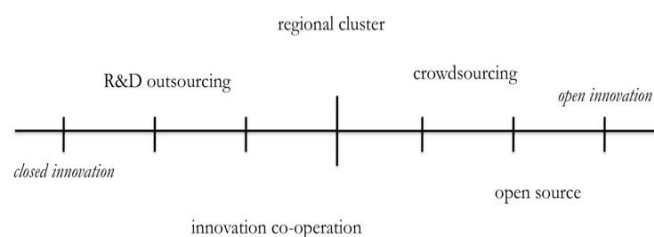


Figure 1. The innovation continuum [5]

Open Innovation is “the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation (...). Open Innovation should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology” [6, 7]. Research activities has been focused on the notion of Open Innovation, business models, organizational design and boundaries of the firm, leadership and culture, tools and technologies, IP, patenting and appropriation, industrial dynamics and manufacturing (Table 1). This paper affects the themes business model, tools and technologies.

Table 1. The themes found in the existing literature on Open Innovation [4]

Themes	References
The Notion of Open Innovation	Chesbrough, 2003, 2004, 2006; Chiaromonte, 2006; Gassmann & Reepmeyer, 2005; Gaule, 2006; Gruber & Henkel, 2006; Motzek, 2007; West & Gallagher, 2006; West, Vanhaverbeke, & Chesbrough, 2006
Business models	Chesbrough, 2003, 2007; Chesbrough & Schwartz, 2007; Van der Meer, 2007
Organizational design and boundaries of the firm	Brown & Hagel, 2006; Chesbrough, 2003; Dahlander & Wallin, 2006; Dittrich and Duysters, 2007; Fetterhoff & Voelkel, 2006; Jacobides & Billinger, 2006; Lichtenthaler & Ernst, 2006; Lichtenthaler, 2007; Simard & West, 2006; Tao & Magnotta, 2006
Leadership and culture	Dodgson, Gann & Salter, 2006; Fleming & Waguespack, 2007; Witzeman et al., 2006
Tools and technologies	Dodgson, Gann & Salter, 2006; Enkel, Kausch & Gassmann, 2005; Gassmann, Sandmeier & Wecht, 2006; Henkel, 2006, Huston & Sakkab, 2006, 2007; Piller & Walcher, 2006; Tao & Magnotta, 2006
IP, patenting and appropriation	Chesbrough, 2003; Henkel, 2006; Hurmelinna, Kyläheiko & Jauhiainen, 2005
Industrial dynamics and manufacturing	Berkhout et al., 2006; Bromley, 2004; Christensen, Olesen & Kjaer, 2005; Cooke, 2005; Vanhaverbeke, 2006

Alliances and Open Innovation systems might facilitate the diffusion of knowledge over firms and within firms much better, adding to the chances of recombining

mature and emergent knowledge [8]. Open Innovation today has a much broader application than first proposed by Chesbrough [9], e.g. the “Lead User Concept” or “User-Centred-Innovation” [10], or “Interactive value chain” [11]. The emerging research field of Open Innovation is in a phase that is still very fluid [4], with many national/global [12] and regional [13] Open Innovation activities.

Transferring knowledge, creates a rich variety of possible research issues and is an operation that should be separately managed and guided for each enterprise. The most certain result is viewed through the power of external tendencies, which could be brought into the firm and implement new products and services. The previous essential strategy of Closed Innovation will be continuously transformed into Open Innovation. The distribution of knowledge take place not only in research facilities in specific enterprises but also, among the customers, governments, institutes, universities, schools and companies. Companies can find vital informations and knowledge everywhere in such an environment. Open Innovation works from external ideas and knowledge in conjunction with the internal research and development activities. This bidirectional relationship offers new ways to create value. The existence of many smart people outside a company is not a regrettable problem for the prosperity of the company, it indicates also an opportunity for the company. In a better system, the internal research and development occurs awareness, connection and information from outside research and development. The innovation process is more profitable, valuable and the effort is multiplied many times through the inspiration of the system. It becomes a value creation engine, value according to the customers, so it is essential for a company to learn from its customers. Internal research and development is indispensable because they solve internal complex dependencies in fabricated technologies. The internal activities besides can define the analogy of the value segments along the value chain and link them with external activities, if it is necessary, to create and deliver value to the customers. The focus of this system is that a new network of knowledge, expressed mostly by internet, is functional and viable. The knowledge-based economy can be supported by Open Innovation [14, 15].

Successful Open Innovation depends on the open character of the business model and on network-like interactions between multiple parties in the process of innovation [16]. The more *complex* knowledge bases, products or processes become, the higher the dependence on various external sources of information, ideas and knowledge. These external sources may in turn be representatives of completely different technologies or “sectors” as traditionally understood; causing sectoral systems of innovation to blend with each other [17]. The variety of variables that needed to be taken into account make a clear assessment and evaluation of the overall system for companies alone an impossibility. It is against this background that evaluation is a critical success factor for Open Innovation business model.

2. OPEN EVALUATION

Selection and evaluation of innovative ideas or concepts are typical activities of the company itself. The benefit of Open Innovation is a much larger base of ideas and technologies. Open Innovation tools e.g. lead user method [18, 19], toolkits [20, 21], communities [22, 23] or innovation contests [9], allow external partners too to evaluate and select. Internal and external (IT-) evaluation of ideas is called Open Evaluation [24]. To handle the huge amount of ideas created by online communities isn't that easy. A good example is Google's Project 10¹⁰⁰ where thousands of people from more than 170 countries submitted more than 150.000 ideas, from general investment suggestions to specific implementation proposals. These ideas were evaluated by 3.000 Google employees [25] and not by the crowd (community).

The relevant differences emerging in the new generation of innovation communities are: the “virtuality” and the “connectivity” dimensions enabled by the Internet, this changes the rules of innovation generation, evaluation and dissemination; and the process of spreading of new ideas, becomes global and fast [26]. So it's not only important *that* a company interact with customers, it is more important to analyze *how* they collaborate [27].

Another example is the company Atizo [28] a specialist in crowdsourcing and IT-based open community management, located in the Swiss capital Berne. Founded quite recently in May 2007, the company has already been able to attract an impressive list of partners: PostFinance, CreditSuisse, Swiss Post, Toshiba, Fuji, Mammut and Google are among the clients of the provider of Switzerland's first crowdsourcing platform [5]. Atizo administers a growing web-community of creative thinkers, who are characterised by their user, consumer and special knowledge. For the mobilisation of this community and yet other innovator teams, Atizo continually develops innovation management tools, which are applied in innovation projects of companies and organisations of all sizes and sectors. The Atizo process in detail [28].:

Generate ideas:

1. Clients formulate a briefing of ideas and decide on an award
2. Innovators collect as much inspiration and input as possible in an open and collaboratively designed public online brainstorming phase
3. Clients select the best ideas and divide the award

Evaluate ideas:

4. Clients define innovators' profiles for assessment of ideas, formulate criteria and look for the best ideas to be assessed.
5. Various innovators evaluate the best ideas selected
6. Interesting favorites for implementation crystallize out of the results

Realize ideas:

7. Clients draft a project assignment and assemble teams
8. In a collaborative, closed process in co-operation with the client, innovators develop concepts or first prototypes.
9. Clients evaluate results and award innovators depending on the particular projects.

Unlike facebook.com, xing.com, or odnoklassniki.ru, at atizo.com the community is not the client but the business partner of the platform provider. This is indicated by two further links called projects and rewards [5]. Ideas are evaluated by the community of members, which is not open. But an Open Evaluation process, based on IT-technology, should not work with a predefined network and innovation contests should take into account more dimensions. There are several dimension at the front end (Idea screening, product related discussion forums, idea contests, communities of creation) and at the back end of new product development (Toolkits for user co-design and customization, virtual concept testing & trading, toolkits for user-innovation, peer-production: Crowdsourcing) [29]. A framework of dimensions and specifications (Table 2) in innovation contests could be a good starting point for a systematic approach to Open Evaluation.

Table 2. Dimensions of innovation contests [24]

Dimension	Specification
Medium	Online, mixed, offline
Organizer	Company, public organizations, non profit, individual
Topic specification	Low, defined, high
Elaboration	Idea, draft, concept, prototype, solution, developing
Target group	Specific, unspecific
Participant	Individual, team, both
Runtime	Very short-time, short-time, long time, very long time
Reward motivation	monetary reward, non-monetary reward, mixed
Community functionality	Existent, nonexistent
Evaluation	Jury of experts, peer review, self-evaluation, mixed

2.1 Cultural Values

Open Evaluation can contribute to the innovation process in marketing research, idea generation, idea screening and marketing [24]. But as innovation activity globalizes, managers in general, and innovation managers in particular, must increasingly understand which design elements mirror the cultural values of the global internet community [30]. Topic specificity, evaluation, eligibility and rewards (Table 3) are central elements of innovation contests reflecting cultural values such as uncertainty avoidance, power distance, collectivism and performance orientation [30].

Customer and context-specific Open Evaluation means to reflect on cultural values, especially in the central european region with its mix of cultural diversity.

Table 3. Design elements and cultural values [30]

Design element of innovation process	Cultural Value
Topic specification Low task High task	Low level of uncertainty avoidance High level of uncertainty avoidance
Eligibility Individuals Teams	Low Collectivism High Collectivism
Reward motivation High monetary reward Low monetary reward or non-monetary reward	High performance orientation Low performance orientation
Evaluation Jury of experts Peer review	High power distance Low power distance

To evaluate ideas by the community is an important step forward but the next step, to realize and finance these ideas, is the key to success.

3. CROWDFUNDING: ECONOMY AND SOCIOLOGY

Companies which use a crowdsourcing approach, in contradiction to companies that use an Open Innovation approach, do not use a predefined group of experts or companies. They outsource functions to an undefined network of people in the form of an open call, where companies with an open innovation approach use a predefined (often contract based) network of experts to collaborate with [31]. There are four types of crowdsourcing [32]: Collective intelligence [33, 34, 35], crowdcreation, voting and crowdfunding.

Crowdfunding is about financing of projects and people by large crowds. Instead of seeking finance from institutional sources, the supporting community is asked to spend money for ideas or projects. A crowdfunded network can assemble and disassemble at any time, and is therefore different to traditional cooperations [31]. A new way to monetize web activities based on crowdfunding are represented by *Rewrd* (based in Thessaloniki, Greece, launched in April 2010), *Startnet* (Germany) and *Flattr* (based in Malmö, Sweden, launched publicly in March 2010 and then opened up to the public in August 2010).

This bottom-up approach in financing innovations is a combination of economy (capitalism) and sociology (social aspects). To make business in a social, complex and uncertain environment is difficult, because economists and sociologists each hold half of the truth, „so to speak, when it comes to markets, it seems natural that they should try to coordinate their efforts”

[35]. All of this may remind one of John Ruskin's lament, put forward one and a half centuries ago: "We pour our whole masculine energy into the false business of money-making" [36]. Well, private firms always have to "make money", but that is not their business. Organizations are in *the business of solving customer problems*, be they individual needs such as nutrition, health or locomotion, or the social and ecological problems faced by our world. These kinds of functions and purposes bestow upon organizations their very *raison d'être* [37]. Open Innovation, Open Evaluation and Crowdfunding can help to overcome the barriers between economy and sociology.

According to Economic Sociology [38, 39] *capitalism* follow the interests of shareholders and *sociology* follow the interests of social communities. We can follow the interests of both: Economic Sociology (Sociology of production, Sociology of consumption, Sociology of profit) - *Follow the interests!* [35]

4. CONCLUSION

Open Innovation use internal and external ideas, as well as internal and external paths to market, to innovate. The benefit of Open Innovation is a much larger base of ideas and technologies which should be evaluated by internal and external partners (IT-communities). This Open Evaluation process has several dimensions and should take cultural values in mind. To realize and finance innovative ideas/projects crowdfunding is a promising alternative to seeking finance from institutional sources. Crowdfunding integrates economy and sociology and helps to overcome traditional barriers between these disciplines. Open Innovation, Open Evaluation and Crowdfunding should be part of Economic Sociology. Further research should focus on integrated concepts of economy and sociology from the Open Innovation point of view.

5. REFERENCES

- [1] Greenwood, R., Hinings, C. R. (1996): Understanding Radical Organizational Change: Bringing Together the Old and the New Institutionalism. *Academy of Management Review*, 21 October, pp. 1022 – 1054.
- [2] Coleman, H. J. Jr. (1999): What Enables Self Organizing Behavior in Businesses. *Emergence*, Vol. 1, pp. 33 – 47.
- [3] Schroer, H. (2007): Innovation as a Factor in Business Success, Kaufmann Symposium 2007. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1022113 [02.07.2010]
- [4] Fredberg, T.; Elmquist, M.; Ollila, S. (2008): Managing Open Innovation. Present findings and future directions. VINNOVA Report VR 2008:02.
- [5] Roth, S. (2008): Open Innovation Across The Prosperity Gap: An Essay On Getting The Caucasus Back Into The European Innovation Society. *IBSU Scientific Journal 2008*, Vol. 2(2), pp. 5-20.
- [6] Chesbrough, H. W. (2003): Open Innovation. Boston, Massachusetts: Harvard Business School Press.
- [7] Chesbrough, H. W. (2006): New puzzles and new findings, in Chesbrough, H. W.; Vanhaverbeke, W.; West, J. (Eds.): Open Innovation: Researching a new paradigm, pp. 15-33. Oxford: Oxford University Press.
- [8] Schoenmakers, W.; Duysters, G.; Vanhaverbeke, W. (2008): Radical versus non-radical inventions. UNU-MERIT Working Paper Series. www.merit.unu.edu/publications/wppdf/2008/wp2008-036.pdf [02.07.2010]
- [9] Piller, F.; Walcher, D. (2006): Toolkits for idea competitions: a novel method to integrate users in new product development. *R & D Management*, Vol. 36(3), pp. 307-318.
- [10] von Hippel, E. (2005): Democratizing Innovation
- [11] Reichwald, R.; Piller, F. T. (2009): Interaktive Wertschöpfung.
- [12] OECD (2008): Open Innovation in Global Networks.
- [13] Wagner, K.; Ziltener, A. (2008): Open Innovation System - Ein Ansatz zur Steigerung regionaler Innovationsaktivitäten. Discussion Paper for Entrepreneurship and Innovation, Swiss Institute for Entrepreneurship, Chur, Switzerland.
- [14] Freund, R. (2009): Multiple Competencies in Open Innovation Business Model. Paper presented at MCPC2009, 5th World Conference on Mass Customization and Personalization, 04.-08.10.2009, Helsinki, Finland.
- [15] Freund, R.; Chatzopolous, C.; Tsigkas, A.; Anisic, Z. (2009): Open Innovation for Entrepreneurs in Central European Region. Paper presented at ICEIRD 2009, 2nd International Conference on Entrepreneurship, Innovation and Regional Development, 24-25.04.2009, Thessaloniki, Greece.
- [16] Howaldt, J.; Schwarz, M (2010): Social innovation. Concepts, research fields and international trends
- [17] Herstad, S. J.; Bloch, C.; Ebersberger, C.; van de Velde, E. (2008): Open innovation and globalisation: Theory, evidence and implications. VISIONERA Report.
- [18] Urban, G. L.; von Hippel, E. (1988): Lead user analyses for the development of new industrial products. *Management Science*, Vol. 34, No. 5, pp.569-82.
- [19] Luethje, C.; Herstatt, C. (2004): The lead user method: An outline of empirical findings and issues for future research. *R&D Management*, Vol. 34, No. 5, pp.553-568.
- [20] Franke, N.; Piller, F. T. (2004): Value creation by toolkits for user innovation and design: The case of the watch market. *Journal of Product Innovation Management*, Vol. 21, No. 6, pp.401-415.
- [21] von Hippel, E. (2001): Perspective: User toolkits for innovation. *Journal of Product Innovation Management*, Vol. 18, No. 4, pp.247-257.
- [22] Piller, F.; Schubert, P., Koch, M.; Moeslein, K. (2005) Overcoming mass confusion: Collaborative customer co-design in online communities. *Journal of Computer-Mediated Communication*, Vol. 10, No. 4.
- [23] Franke, N.; Shah, S. (2003): How communities support innovative activities: An exploration of assistance and sharing among end-users. *Research Policy*, Vol. 32, No. 1, pp.157-178.
- [24] Mösllein, K. M.; Haller, J. B. A.; Bullinger, A. C. (2010): Open Evaluation: Ein IT-basierter Ansatz für die Bewertung innovativer Konzepte. *HMD Sonderheft: IT - basiertes Innovationsmanagement*, 273, pp. 21-34.
- [25] Google (2010): Google Project 10 to 100, www.project10tothe100.com [02.07.2010]
- [26] De Maggio, M.; Gloor, P. A.; Passiante, G. (2009): Collaborative Innovation Networks, Virtual Communities and Geographical Clustering . *International Journal of Innovation and Regional Development*, Vol 1, No. 4, 2009, pp. 387 – 404.
- [27] Diener, K.; Piller, F. (2010): The Market for Open Innovation. Increasing the efficiency and effectiveness of the innovation process.
- [28] Atizo (2010): Atizo platform www.atizo.com [02.07.2010]
- [29] Piller, F.; Ihl, C. (2009): Open Innovation with Customers Foundations, Competences and International Trends
- [30] Bullinger, A.C.; Neyer, A.-K.; Kölling, M. (2009): Is open innovation really open: A cross-cultural perspective. Paper presented at XX ISPIM Conference, Vienna. <http://www.mendeley.com/download/public/6537/3385746372/852d2dbe581a5b4c3b3fdab9c55ea51f723789d2/dl.pdf> [02.07.2010]

- [31] Bons, E. et al. (2010): Open Innovation: The benefits of crowdsourcing.
www.emilebons.nl/publicFiles/100110openInnovation-theBenefitsOfCrowdsourcing.pdf [02.07.2010]
- [32] Howe, J. (2006): The Rise of Crowdsourcing. In: Wired 06/2006.
<http://www.wired.com/wired/archive/14.06/crowds.html>
[02.07.2010]
- [33] Surowiecki, J. (2004): The Wisdom of Crowds (New York: Doubleday).
- [34] Malone, T. W.; Laubacher, R.; Dellarocas, C.: Harnessing Crowds: Mapping the Genome of Collective Intelligence. Working Paper No. 2009-001 (1-20), Cambridge, 2009.
- [35] Swedberg, R. (2003): The economic sociology of capitalism: An introduction and agenda.
www.economyandsociety.org/publications/wp5a_swedberg_03.pdf [02.07.2010]
- [36] Ruskin, J. (1865): Sesame and Lilies. 1907 edition. London: George Allen.
- [37] Schwaninger, M. (2006): Intelligent Organizations. Berlin Heidelberg - New York.
- [38] Smelser, N. J.; Swedberg, R. (Hg.) (1994): The Handbook of Economic Sociology. Princeton: Princeton University Press.
- [39] Swedberg, R. (2008): Grundlagen der Wirtschaftssoziologie. Herausgegeben und eingeleitet von Andrea Maurer. Vorwort (zur amerikanischen Ausgabe), pp. 29-33.