

# Participation throughout the crowd. The importance of crowdsourcing

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**Abstract.** The progress of information and communication technologies (ICTs) and the evolution of the Internet and the social networks have had a deep impact in the structure of firms and have altered the way organizations manage the production process of all kind of firms.

In order to face the new environment, firms are originating new business styles based on such concepts as virtual teams and virtual communities (Kodama, 2005). One relevant mechanisms used by organization to copy with the new changes, is the namely “crowdsourcing”, which has allowed labor to be outsourced to the crowd (Corney et al., 2009). This mechanism is applied from the definition of the product through its development, the production process and the logistics or distribution process, to its positioning, communications, brand management, or the sales service.

This paper concentrates on exploring the importance and relevance of these crowdsourcing processes in the new business environment

**Keywords:** Crowsourcing, Information and communication technology

## 1.1 Introduction. The participation throughout the crowd

The networking potential, promoted by the new innovations, “drives all of society and corporations to work faster, create and manage more interdependencies, and operate on global markets” (Kalpic and Bernus 2006:41). ). In the new arena, “as products and services become dematerialized, and the value chain itself no longer having a physical dimension” it is necessary a change in the conception and

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analysis of organizations, particularly for those where both the product and supply and demand chain is digitized, “in sectors such as banking, insurance, telecommunications, news, entertainment, music, advertising, and certain areas of the public sector” (Peppard and Rylander, 2006:131).

In addition, the transformation of the customer from a passive client into a hyperactive one who wants to participate in all production processes (Shiffman, 2008) and the development of social networks are changing the view of production itself, forcing organizations to create a link with the market and interact, to be open, and cooperate with customers and other stakeholders in all the production process. In this context, according to Peppard and Rylander (2006:131), “the value chain concept becomes an inappropriate device with which to analyze many industries today and uncover sources of value”. It is therefore necessary to move from the value chain to the value network concept, where “value is co-created by a combination of players in the network” (ibid).

In the new frame, as Garrigos et al (2011) point out, without the participation of the users, we could not understand the new business environment. This fact is also stressed by Fuchs et al. (2010:46), who mentioned that “the user is an integral part in the production process of content, tastes, emotions, goods, contacts, relevance, reputation, feedback, storage and server capacity, connectivity, and intelligence”. The participation of people, but not only customers or employees, in all the process of a firm has its maximum relevance in the namely “crowdsourcing”, an important business model in the new era.

## 1.2 Crowdsourcing

Crowdsourcing, also known as “massive outsourcing” or “voluntary outsourcing”, is conceived in this study as the act of taking a job or a specific task usually performed by an employee of the company, or contractors, and outsourcing it to a large group of people or a community (crowd or mass), over the net, through an open call. The expression was coined by Jeff Howe in the June 2006 issue of the computer magazine *Wired* (Howe, 2006a). For this author “crowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call”. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals (Howe, 2006b).

The term, defined also as “the outsourcing of tasks to the general internet public” (Kleemann et al., 2008:5), “describes a new web-based business model that harnesses the creative solutions of a distributed network of individuals through what amounts to an open call for proposals” (Brabham, 2008:75), with the aim of “animating individuals to make a contribution to the firm's production process for

free or for significantly less than that contribution is worth to the firm” (Kleemann et al., 2008:5).

### **1.3. The use of Crowdsourcing**

Actually, the crowdsourcing can be view as a development of the classical “self-service”, which emerged in the story of consumption with the development of department store and the apparition of the first vending machines at the end of the nineteenth century, and which principles started to be prevalent in grocery stores and many areas of retailing, but also quickly in tourism organizations such as fast-food chains, since the 1970s (Kleemann et al., 2008).

Obviously, the process where expanding with the growth of the Internet since the 1990s, which played an important role of creating new forms of cooperation between firms and consumers in the production process and the service provision, including customers considered as “co-workers” (Rieder & Voß, 2010:4), but also including all kinds of stakeholders who are not employees of the organization, in the production process. This has been developed mainly with the expansion of the social networks, which has allowed labor to be outsourced to the crowd (Corney et al., 2009), with very diverse kinds of remuneration and motivation mechanisms for contributions (Geiger et al (2011).

Nevertheless, such as Brabham (2008:79) point out, “crowdsourcing is not merely a web 2.0 buzzword, but is instead a strategic model to attract an interested, motivated crowd of individuals capable of providing solutions superior in quality and quantity to those that even traditional forms of business can”. Such as this author states, the crowd can help to design products, to produce memorable commercials and images, and to outperforms industry faster and cheaper than even the top minds in the fields. Geiger et al. (2011) used 46 crowdsourcing examples, with 19 distinct types of processes. By developing its use, Kleemann et al., (2008: 12-14), described and gave examples of the next main types of crowdsourcing: consumer participation in product development and configuration; product design; competitive bids on specifically defined tasks or problems; permanent open calls; community reporting; product rating by consumers and consumer profiling, and customer-to customer support.

However, the process could be very broad in domains ranging from tourism to t-shirt design. For instance, we think that crowdsourcing can help to capture, systematize or analyze large amounts of data (see also citizen science), it can let the public be the one to invent and develop new technology, solve the problems that stumps corporate scientific researchers, improve a process or algorithm (eg. human-based computing, and a developer community), or even to carry out a design task (also known as community-based design (eg. shirts), and distributed participatory design) or produce memorable commercials.

To sum up, it could include everything from the design of a product or process, product development and configuration, solving technical or other problems, creating content, doing corporate R&D, advertising, quality monitoring... , (Brabham, 2008, Howe, 2006, Kleemann et al., 2008), to the inclusion of almost every step in an organization's value chain (examples of crowdsourcing can be seen in Brabham, 2008, Kleemann et al., 2008, or in <http://dailycrowdsource.com/companies/>).

In addition, the process allows the participation of customers, but also the participation of every kind of stakeholders interested. Obviously, as "the crowd outperforms industry faster and cheaper than even the top minds in the fields" (Brabham, 2008:79), the procedure is essential as it represents "a profound paradigm shift in our view of the professional, of the corporation, of the global commons, and of the value of intellectual labor in a transnational world (ibid).

Examples of traditional outsourcing to non-employees are ticket machines and online ticket sales, e-shopping and self-scanning in retail, self check-in in transportations or offices and in the wide range of transactions in tourism, banking and investments that individuals can carry out via the internet (Kleeman et al., 2008). Going further, extensive crowdsourcing has been utilized to identify a new brands, operational activities such as marketing (e.g. Starbucks Idea) or user-generated content for social media websites (e.g. Facebook)" (Rieder & Voß, 2010:4). "User-generated [advertising] content is a favorite of companies like JetBlue Sony, and Chrysler hoping to reach young, tech-savvy consumers who will spread their marketing messages [virally] around the Web" (Brabham, 2008:78).

Crowdsourcing includes also the advise that customers give to other customers, by writing product reviews or the uploading of all kind of information, in virtual travel agencies, diverse networks, the web pages of tourism organizations, or specific sites like ctrips.com, gazettters.com, IGOUGO, TripAdvisor and Wayurn.com (Buhalis et al., 2011; Sigala, 2009). It can also helps organizations to notify any observable changes in market supply or consumer demand, complementing traditional market search (Kleemann et al., 2008). In this vein, crowdsourcing is essential to satisfy the individual demands of specific segments of customers.

Nevertheless, and apart from marketing, crowdsourcing can be seen as a mechanism to improve the development of organizations and several applications of crowdsourcing provide a view into a problem solving model that can be generalized and applied to solve both mundane and highly complex tasks (Brabham, 2008). To sum up, people can create and submit ideas for the products, the process, or the design of all kind of organizations.

## 1.4. Conclusions

This paper has focused the importance of “crowdsourcing” and how it can be used by organizations. The paper has given examples of the main types of crowdsourcing processes in the business literature. However, it goes further, including its possible use in almost every step of the value chain of the organizations, from the marketing, design and development of products and processes, to R& D and solutions for all kinds of technical problems.

After this, we are able to stress that that in a near future the effective new models will be the ones who promote the participation and diverse mechanisms of motivation of the crowd (Geiger et al. 2011), essentially through the collaborative intelligence (not only the collective intelligence, as collective intelligence does not implicate effort) of internal and external stakeholders, by creating and developing communities through the firms.

We are conscious that this paper has been a first step of analyzing the impact of the crowdsourcing processes on organizations. We recognize the limits of this exploratory analysis and that all these transformations need further analysis. For instance, further papers could analyze the impact of social networks on firms and organizations, or how to use the crowdsourcing in every step of the value chain or value network of organizations, by concentrating in diverse economic sectors.

## 1.5. References

- Brabham, D.C. (2008) Crowdsourcing as a Model for Problem Solving. An Introduction and Cases. *Convergence: The International Journal of Research into New Media Technologies*, 14(1): 75–90
- Buhalis, D., Leung, D., and Law, R. (2011). eTourism: Critical information and Technologies, In Wang, Y., and Pizam, A. (eds.) *Destination Marketing and Management: Theories and Applications*. (pp.205-224). CAB International, 2011, Wallingford, UK.
- Corney, J.R., Torres-Sanchez, C., Jagadeesan, A.P., and Regli, W.C. (2009). Outsourcing labour to the cloud. *International Journal of Innovation and Sustainable Development*, 4 (4): 294-313
- Fuchs, C., Hofkirchner, W., Schafranek, M., Raffl, C., Sandoval, M., and Bichler, R. (2010). Theoretical Foundations of the Web: Cognition, Communication, and Co-Operation. Towards an Understanding of Web 1.0, 2.0, 3.0. *Future Internet*, 2: 41-59.
- Garrigos, F., Gil, I., and Narangajavana, Y. (2011) The impact of social networks in the competitiveness of the firms. In Beckford, A.B., and Larsen, J.P. (Eds.) *Competitiveness: Psychology, Production, Impact and Global Trends*. Nova Science Publishers, Inc. Hauppauge.
- Geiger, D., Seedorf, S., Schulze, T., Nickerson, R., and Schader, M. (2011). Managing the crowd: Towards a Taxonomy of crowdsourcing processes. *Proceedings of the Seventeenth Americas Conference on Information Systems*, August, 4<sup>th</sup> – 7<sup>th</sup>. 1-11. Detroit, Michigan
- Howe, J. (2006a). The Rise of Crowdsourcing. *Wired*, 14(6). Retrieved 15 November 2011, from <http://www.wired.com/wired/archive/14.06/crowds.html>

- Howe, J. (2006b). Crowdsourcing: A Definition, *Crowdsourcing: Tracking the Rise of the Amateur*. (weblog, 2 June), Retrieved 15 November 2011. From [http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing\\_a.html](http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing_a.html)
- Kalpic, B., and Bernus, P (2006). Business process modeling through the knowledge management perspective. *Journal of Knowledge Management*, 10(3), 40-56.
- Kleemann, F., Voß, G.G., and Rieder, K. (2008). Un(der)paid Innovators: The Commercial Utilization of Consumer Work through Crowdsourcing. *Science, Technology & Innovation Studies*, 4 (1), July: 5-26.
- Kodama, M. (2005). New knowledge creation through leadership-based strategic community—a case of new product development in IT and multimedia business fields. *Technovation*, 25: 895-908.
- Peppard J. and Rylander, A. (2006). From Value Chain to Value Network: Insights for Mobile Operators. *European Management Journal*, 24 (2–3): 128–141
- Rieder, K. and Voß, G.G., (2010). The working customer - an emerging new type of consumer. *Psychology of Everyday Activity*, 3(2): 2-10.
- Shiffman, D. (2008). *The Age of Engage*. Hunt Street Press.
- Sigala, M. (2009). WEB 2.0 in the tourism industry: A new tourism generation and new ebusiness models. Retrieved on October, 22, 2011, from [http://www.traveldailynews.com/pages/show\\_page/20554](http://www.traveldailynews.com/pages/show_page/20554)