

INNOVATION CROWDSOURCING AS A PROCESS FOR MANAGEMENT

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Abstract

All models are converging toward the idea that innovation activities can be more or less correctly be described and viewed in process models. Some models innovation management describe the life cycle of the innovation by the S-shape and logistic function, which is composed of three distinct phases: Emergence, growth and maturity . Other studies, place the emphasis on the characteristics of innovation which are defined as a function of innovation stages of development, e.g. Maidique distinguishes the recognition of the invention, the development, the achievement and the distribution of phases of the innovation process. Whatever the model, an innovation management is generally described as a practice or a new object. An innovation management obviously begins with new ideas (Tushman, 1977). Traditionally, these ideas have been generated by professionals such as engineers, traders or designers in a company.

Keywords: *Innovation, management, crowdsourcing and management performance*

JEL Codes: *M10, O31, O32*

1. Introduction

However, recently, there is a change in this line of thought which has pushed these two researchers to ask the following question: Who is able to find the best ideas, the professional employees of the company or the potential customers or users of these ideas? It is only recently that these potential users are seen as a useful alternative to generate new ideas. Many organizations now outsource the search for new ideas .This research will attempt to clarify the process management innovations of Crowdsourcing and to clarify the effect of this process on the stains creative and complex tasks. As well, we are going to present briefly a general view of literature on the process of innovations, the Crowdsourcing and we will present the results of our semantic study carried out on a

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sample of 23 volunteers motivated by the web, the E-management and the practice and the management of virtual communities which has been used in combination with a deductive study.

2. The interests of the Crowdsourcing

When a business company decides to perform an operation of outsourcing, it is based on a number of factors that determine its choice. The emergence of the Crowdsourcing lies in the following perspectives (Arnold, 2000 and Lebraty, 2007, p. 125)

- **The reduction of costs:** It entrusted the task to people non-professionals, but also qualified, generally it is sufficient to pay a small fee, or even without pay, it reduces the cost of labor.

- **The effectiveness:** The tasks of Crowdsourcing are carried out with the participants of the public on a large scale with the help of the internet, and has greatly reduced the time, the participants are users of products or services which may know exactly what the needs of the consumers, with their ideas, products are more practical and the innovation process is more simple. The participation of customers reinforces the relationship between consumers and the organization.

- **The flexibility and globalization:** the work of the world can participate in the process of Crowdsourcing without geographical constraints, with the application and development of the internet, and organizations can use many external personal easily.

- **The involvement of the user:** The major aspect of the Crowdsourcing affects the involvement, more or less directly, from the consumer to the creation of the product. In effect, through the use of ICT, and to the internet in particular, the purchaser is no longer in "end of string", by consuming in a passive way a product, but he participated in its creation, its promotion or its dissemination, and consequently removed the monopoly of these actions to the enterprise. Instead of simply receive, the Community product, published and acts. The community may include consumers, creators, readers, writers, listeners, recorders, for spectators, producers .

- **The focus on core business:** The platforms are typically used for benefits of service deemed non-essential, non-strategic, or requiring a specific expertise. The Crowdsourcing therefore allows delegating certain tasks, allowing you to focus on its core business or on other priorities.

- **The motivation of the participants:** This type of community is characterized by the fact to bring a very important interest to a domain, or to a product. And generally the members of this community type do not seek to be paid and their motivations are focusing on a individual commitment to improve the center of interest which the gathers. Therefore to attract their attention, it should be to find a center of interest likely to be the basis for the constitution of a community.

- **The quality of service:** The Crowdsourcing allows companies to improve the quality of their products and services in referring to the opinion of the public.

- **The value creation:** According to Lebraty: "the development of the Crowdsourcing can be explained by its contribution to the creation of value in the organization". In this perspective, we can see that via the Crowdsourcing, the firm incorporated the crowd in the chain of value creation especially in the phase of the development of ideas. From an etymological point of view, the root of the concept of innovation has Latin origin, meaning "to make new" and can be found in the Middle Ages, XV c. (Panteleeva, 2010, p. 25). Materialized and needed on the market novelty is the only one that can provide its organization creator with positive financial results. It is a prerequisite for generating profit, which is one of the main objectives of any business entity. (Ratka. Ivanova, 2017, p142).

2. Framework methodology

The objective of our research was to provide a clearer view on the contribution of the Crowdsourcing as a process of innovation on the two types of Crowdsourcing (complex tasks and creative spots). As there was a lack of empirical research on the Crowdsourcing, the deductive method has been used to acquire a better understanding of the process of Crowdsourcing. This has been done by the identification of configurations of these variables and exploring the mechanism behind it. The variables were based on the theoretical knowledge from a study of literature comparable in the areas of innovation. According to Omar Aktouf who specifies that starting from one or several hypotheses, we apply a deductive reasoning that is to say, the general provisions, known in advance to a particular situation addressed. It is equivalent to a hypothetic-deductive method. This is a classic approach to modern science. It arises out of the experimental method and is applicable in human science in all disciplines and with several methods of research (Aktou Omar, 1987, p. 214). In practice, the deductive method is to check a general assumption on the largest number of specific comments. In effect this method is to apply a general principle to a particular case (Mathieu Guidere, 2004, p. 258).

Then a semantic study was performed in order to explore the determinants of the process of Crowdsourcing and these assignments. The proposals made concerning the approach to strategic management of natural and social living environment are based on the interaction of the individuals subsystems and components of the regional system and the specific properties that distinguish it from the other systematic formations. (Vanev, 2017, p. 161).

2.1. Experimentation and put in place

To carry out our study, 23 motivated volunteers (including thirteen women) were

recruited because they were interested in the web, the E-management and the practice and the management of virtual communities. The majority of our sample of contributors exercised the functions of 'community's managers". They are phd students in our area of specialty with an average age of between 28 and 30 years (minimum 24 years and maximum 35 years). They have accounts, groups in various social networks and also they have often visited the platforms of Crowdsourcing (at least once every three months); which indicates that they may be to some extent representative of model players of the Crowdsourcing. (Filosofova, G. and V. Bikov, 2008, p.211)

They are also "players" who are as familiar with the vocabulary of marketing as the web ; this means that our sample is representative of the "professionals" more than that of conventional consumers. Our maintenance guide qualitative has been created during to our discussions. We center our meetings and our conversations around two scientific articles: The first one is Lebraty (2007) and the other is Lobre (2007), and we have quoted a few platformsof Crowdsourcing as sportingnews.com, fluevog.com, lego.com, crowdsourcing.typepad.com, internetactu.ne.

We have prepared our sample to this experimentation on three phases and in two different groups:

- **Phase 1: Presentation of the project and the objectives**

In this step, we have brought together all of the contributors to whom we have explained our goals concerning our research related to crowdsourcings. We have provided the contributors with a folder containing the two articles and a set of links to sites of Crowdsourcing.

- **Phase 2: debate and exchanges**

This phase was conducted to facilitate trade between the members and to clarify the different questions and shadows that can curb and/or prevent the success of the Crowdsourcing. It is the starting point of our study which was exclusively on the internet.

- **Phase 3: analysis and processing of information with the software Tropes**

In a first step of this phase we will then create a "scenario" from "references used" to the plan frame semantics from the essential themes mentioned. This "analysis grid" allows to visualize the essential concerns around systems of recommendation. In addition, the model Tropes applies the scenario as grid "automatic" on the qualitative texts collected and extracted the "phrases representative" helping to select the proposals or statements that will be used for the exercises of quantification with the "cards" and the "carpet game" for our research and subsequent experiments on the same subject. Of course, the actual phrases of cognitive exercises will be the more often rewritten for reasons of style, and grammar.

The texts produced by the discussions and individual opinions have represented a dozen pages occasions to be able to be treated by a specialized software in the semantic

studies Tropes® requiring an establishment of spelling corrections and punctuation.

In a second step, we have asked our sample of 23 people at a time on a social network and on Skype. The texts have been resumed on a Word file with correction of texts to create phrases understood by the computer (expressions, punctuation); without changing the substance of the opinion expressed. The text of a dozen pages was then gone under the model Tropes® package. To be clear, we are looking for a structure of understanding which depends in part on our expectations. The latter giving rise to the creations of themes, if this approach appears justified by the raw scan of references obtained. The scenarios are designed to enrich and filter the classes of equivalent in function of a strategy of analysis. What are the specific ontology, which allow to:

- A/define the own classifications; depending on the vocabulary corresponding to the environment of study.

- B/change or restructure the dictionaries of the Tropes® software

- C/define a grid of analysis to automatically generate a report.

2.2. The interests of the Crowdsourcing:

When a business company decides to perform an operation of outsourcing, it is based on a number of factors that determine its choice. The emergence of the Crowdsourcing lies in the following perspectives (Arnold, 2000 and Lebraty, 2007, p. 321):

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4. Discussion and inputs

After the results that have been found, we can say that companies can benefit from resources without being formally detained by them. This will be particularly the case during the use of the Crowdsourcing, the crowd then constituting a particular resource (not necessarily specific) not owned by the company. In effect, the vision of the company based on the resources also stresses the importance of the capacity for the integration of external resources made by the crowd. Nevertheless, the crowd does not include only qualified individuals. A large majority of these individuals presented a great problem of lack of knowledge and expertise. This incompetence of this part of the crowd might pose a problem for the conquest of the actants, potential customers of actor's providers. An efficient management of these skills is proving, therefore paramount, and even necessary. Nevertheless, according to: (Rus and Lindval, 2002, p. 296) the management of skills reveals the main activities of the Knowledge management.

The importance of the interdependence between the members of the crowd should be stressed. In effect asserts that the diversity of the group is a major asset in the use of the crowd. It is necessary to maintain this diversity among the crowd, he also claims that the diversity is an essential condition to have to benefit from the wisdom of the crowd. (Surowiecki, 2004. p.89) Therefore, the interaction between the members of the crowd offers a good contribution in term of diversity, quantity and ease, we can see this result on the graph 6 where the scenario interaction/work was treated. On this graph it is clearly noticed that the variables quantity, diversity and participation are very close and also a importance of variables: use and facilitates (sphere of large size in relation to the other).

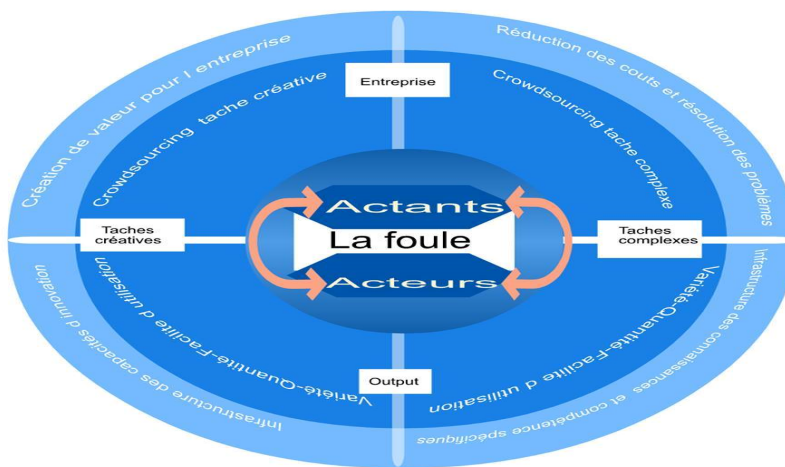
To summarize our results in a graph that highlights and explains the environment the process of the Crowdsourcing as a dynamic process between the different stakeholders namely, the recording (the licensor of orders for the outsourcing) and the actor (the receiver of orders) and that whatever the types of the Crowdsourcing and the purpose of the outsourcing (complex tasks, creative spots) and the contributions (output). Thus this proposed chart shows well that the Crowdsourcing is a process which is not a linear model of traditional innovations (first generation) or the innovation is represented by a line of sequential process which begins by pure science and ends by a commercial application (A. J. Berkhout et al. 2006, p. 45).

Also, it is not a model of innovation of second generation or the process of innovation is still designed as sequential steps as in the first generation except that the innovation process is reversed in this case science is replaced by the market, which has become the source of innovation.

Figure 6 shows that the proposed model describes a dynamic process or the interaction between the members of the crowd and the feedback (learning) between the crowd and the company (stating) affects the output of two types of Crowdsourcing in other words on the contribution of the Crowdsourcing.

In effect this quality is determined by the quantity of solutions or ideas proposed by the crowd, the variety, which reflects the diversity of options proposed to resolve the problems (Schenk and Guitard 2009) and the ease of use which refers to the usefulness of the ideas.

Figure no.1. Environment of the innovation process of the Crowdsourcing



Source: authors' own survey

The success of this dynamic process and interconnects the Crowdsourcing raises a creative interplay between infrastructure capacity for innovation and infrastructure of the specific qualifications of a large number of internet users. This success which will be materialized by quantity and quality of ideas and of the proposed solutions suggested to a business company, which will generate a value and additional reduction of costs. Indeed Lebraty and Iobré argue that the development of the Crowdsourcing can be explained by its creation of value for the organization. Precisely by taking into account the creativity and ideas of the crowd we have already created an additional value for the

firm. We can say that the firm created the value using the competence of the crowd to manufacture the products that wants the crowd.

Other shares Dujarier in 2008 specify that the Crowdsourcing is none other than the work of the volunteer amateur. This idea has also been supported by Lebraty, in 2007 year which stated that the individuals who offer their services have a salaried activity main. For them the Crowdsourcing is a "micro-task" that generates a "micro-income" and to which they give a small part of their time. In the case of the Crowdsourcing, the outsourcing is "open" to the crowd of "hobbyists". The generation of new ideas is essential to increase the competitive advantage of business organizations in terms of constant search for ways and means of improvement. (Filosofova, G. and V. Bikov. 2008, p. 25). New ideas are the basis of innovation and innovative activity of enterprises. The fast pace, at which consumer requirements change, requires investing in innovative solutions to ensure the continued existence and development of business organizations. Namely innovations are the main driving force of the market economy. (Nenov, T. 2010, p.3).

5. Conclusion

The results of this research to better understand the process of Crowdsourcing. However, our study presents a certain number of limits. From the point of view of the empirical analysis, many issues have not been addressed and remained to be dealt with in order to better understand the process of the Crowdsourcing, for example, what happened exactly after a process of Crowdsourcing? To which generation belongs the process Crowdsourcing? How the ideas are selected and which ultimately causes the adoption and use of contributions? How many firms, large & SMES, have recourse to this practice? What is the turnover of these past few years?

From the methodological point of view, we have based on the participants in a blog. The question of the legitimacy of these players deserves to be asked. Also, we have tended to guide the contributors and to orient in the virtual discussion during this experimentation. Would we find the same results; if we do not have oriented the contributors in this experimentation? Would we have the same factors with the same importance? Thus, in the context of a first approach to this concept of process Crowdsourcing, we believe these specialists, internet lovers, sufficiently representative and notified for that their evidence can be used in a scientific communication.

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