Understanding proactive leadership in crowdsourcing

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Abstract

Crowdsourcing is a relatively new concept, nonetheless it has been raising more and more interest with researchers. More and more organisations reach for it, for instance taking into account its potential business value. It decides about access to experience, innovativeness, information, skills, and work, which are located outside the organisation, actually in the crowd. An analysis of various examples of making use of crowdsourcing by organisations encourages reflection on the factors, which determine its success. In the literature, one emphasises, among others, the significance of proactive leadership to crowdsourcing. This article is an attempt to specify the significance of proactive leadership in crowdsourcing. For the needs of specifying, evaluating, and identifying the existing state of knowledge on the significance of proactive leadership in crowdsourcing a systematic literature review was conducted. It also enabled selection, critical evaluation of the existing research, identification and synthesis of the results of all of the principal research studies and theoretical approaches. The results of the systematic literature review indicate that proactive leadership is considered to be the necessary condition for beginning any actions initiating crowdsourcing. A proactive leader takes the initiative, starts the action, initiates, is able to find the best solution, and actively searches for information in order to increase the knowledge resources. This is connected with identifying by these persons of the possibilities and willingness to introduce changes in work organisation. It creates incentives for the participation of virtual communities in crowdsourcing and propagates and promotes accepting their knowledge by the employees.

Keywords: crowdsourcing, leadership, proactive leadership, systematic review.

Introduction

Crowdsourcing is one of the new subjects, which has appeared in the last decade. In business practice, it has become a megatrend, which drives innovations, cooperation in the field of scientific research, business, or the society. More and more organisations reach for it, for instance taking into account the potential business value connected with innovative problem solving. Owing to this, organisations acquire access to the experience, knowledge, skills, and ideas which are located outside of it. Often enough the decision on applying it is a requirement and a necessity. Despite many benefits, practice shows that in some organisations attempts to implement crowdsourcing end in failure. Moreover, not all organisations are able to manage it.

In view of the above, it should be emphasised that the success of crowdsourcing is dependent to a large extent on various internal factors (Sharma, 2010) One of them is proactive leadership (Erickson, et al., 2012). In the literature devoted to management it is pointed out that it creates incentives for participating of virtual communities in crowdsourcing and propagates and promotes accepting their knowledge by employees. Despite its undisputable importance, the literature is still scarce when it comes to considerations and presenting the results of research on its importance in crowdsourcing. Most papers focus on employee proactivity, whereby attention is rarely drawn to

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managerial staff's proactivity. According to such approach, proactive leadership becomes an interesting background for the reflections on crowdsourcing. The goal of this study is presenting the importance of proactive leadership for crowdsourcing. The results of a systematic literature review related to publications from the years 2006-2017 have been presented in it.

1. Background

1.1. Crowdsourcing

The concept of crowdosurcing was introduced into economic literature by the editor of Wired magazine J. Howe in June 2006. In his article entitled "The Rise of Crowdsourcing" he describes making use by various organisations of the Internet to establish cooperation with customers and engaging them in creating innovations. The definition of crowdsourcing proposed by J. Howe, after consulting it with his editorial colleague M. Robinson, appeared one month after the article was presented in a blog run by the editor (www.crowdsourcing.com). He defined crowdsourcing in the so-called White Book as "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, 2006).

J. Howe assumes that the crowd is distinguished by wisdom and each of its members possesses knowledge or skills which may become valuable to someone. The basis here is collective intelligence and mutual cooperation, which may contribute to creating values, choosing the best solutions, gathering opinions, and formulating judgements. Most authors acknowledge that the crowd is a general group, usually an undefined large group of people, online public (Kleeman, et al., 2008), which is often named users, consumers, clients, voluntary users, or online communities (Chanal & Caron-Fasan, 2008; Whitla, 2009). It is accepted that the crowd in crowdsourcing constitutes a group of amateurs, composed of students, young graduates, scientists, or organisation members (Schenk & Guittard, 2009).

A continuator of J. Howe's concept is D. C. Brabham. He proposed the first definition following numerous publications in the years 2008-2012, in his book entitled "Crowdsourcing" of 2013. According D. C. Brabham's opinion crowdsourcing is not "just old wine in new bottles". The author gives examples of open calls for solving difficult problems: creating an Oxford English language dictionary in 1800 by means of open discussions and the Alkali prize for developing an alkali method founded in 1775 by Louis XVI. In his opinion they are not examples of crowdsourcing since it is present when the organisation has a task to be performed, whereas the online community carries it out voluntarily. A result of these actions are mutual benefits for both parties. For D. C. Brabham crowdsourcing is an Internet, dispersed model of solving problems and production, a tool of social participation, planning for governments, a method of building common resources and processing a great number of them.

1.2. Proactive Leadership

Leadership is defined as a process, ability, or relation, through which an individual (or leadership team) induces a group to aim for the leader's goals or the goals shared by the leader and his/her followers. Another definition talks about the ability to go beyond the specific organisational culture and initiate a process of evolutionary changes which increase its adaptational capabilities. J. Kouzes and B. Pozner define leadership as a relation between house who aspire to lead and those who follow them (Kouzes & Pozner, 2007, p. 24). The following tasks are important in leadership: understanding the context of the organisation, importance of the employees, formulating a vision, communicating the directions of action to employees, motivating them, building teams, encouraging to create ideas,

inspiring to take action, breaking through institutional barriers in the organisation (Robbins & DeCenzo, 2002, p. 18), and orientation on learning.

The contemporary managerial staff should be an active creator and architect of organisational processes and be distinguished by the ability to capture from the organisation's surroundings the appearing possibilities. The need for creating organisational values, building effective teams, and inspiring the employees gains on importance. It is more often said that a manager is to be proactive. Proactive leadership is defined in the subject literature in various ways. It means behaviour and attitude in which the managerial staff takes over the initiative, begins some action, initiates is able to find the best solution (Seibert, et al., 2001) and actively and continuously searches for information in order to expand the knowledge resources (Crant, 2000). It also focuses on implementing changes to the organisation, but also its own behaviour (Parker, Williams & Turner, 2006). This is connected with identifying by these persons the possibilities and willingness to introduce these changes (Crant, 1995), effective leadership (Crant, Bateman, 2000), or entrepreneurship (Becherer & Maurer, 1999). Proactive people possess the ability to scan the surroundings in search for opportunities for change (Baterman & Crant, 1993), to define effective methods of realising goals, foreseeing and preventing problems, carrying out tasks in a more effective way. They are also distinguished by perseverance, being oriented on achieving results, and a vision of the future (Frese & Fay, 2001). These behaviours are called the chain of behaviours in a progress of proactive goal achievement (Bindl & Parker, 2009; Frees & Fay, 2001; Grant & Ashford, 2008).

2. Methodology

In the search for the dependence between proactive leadership and crowdsourcing a systematic literature review has been conducted. According to its methodology, the entire procedure includes three stages: (1) selecting databases and a collection of publications, (2) selection of the publications, development of a database, (3) bibliometric analysis, contents analysis, and verification of the usefulness of the obtained results for further research.

The first stage constituted a choice of the subject of research. This concerned specifying a collection of publications, which would be analysed. The basis at this point was selecting the databases. The analysis covered full text, greatest databases which include the majority of journals dealing with strategic management i.e. Ebsco, Elsevier/Springer, Emerald, Proquest, Scopus, and ISI Web of Science. The principal issue in defining the collection of publications is the choice of key words connected with the subject of research in order to identify potentially significant scientific articles from the point of view of the analysed problematic aspects. In each of the above-mentioned databases key words were used which meet the following criteria of inclusion: "crowdsourcing", "crowd sourcing", "proactive leadership" in the abstract, title, and key words. The base of publications obtained in such way was further analysed and selected in the next stages. As a result of searching through the chosen databases over 10,000 publications were obtained selected from English language bases.

The second stage is based on imposing limitations and database selection according with the "snowball" procedure. Therefore, the following limitations were imposed on the identified articles: full text, reviewed publications and the area of management sciences. Publications related to IT, social, technical, mathematical, medical sciences, and humanities were excluded from the collection. Duplicating publications, books, dissertations, and book chapters were eliminated. Articles in their full version, published in journals and the so-called proceedings were included.

The third stage will be the basis for identifying the areas for further research exploration valuable from a cognitive point of view and important for the development of the theory of management. At this stage, the usefulness of the obtained elaborations for realisation of the research aims was verified. Those publications, which did not strictly concern crowdsourcing, but rather treated it as a secondary

subject, were discarded. Only those publications were deemed important from a research point of view, which leading object of analyses was the term "crowdsourcing" placed in the title and key words. As a result, a literature base was obtained in the form of 20 publications selected from English language bases.

3. Proactive leadership and crowdsourcing

It is pointed out in the literature that crowdsourcing is a multidimensional concept. Taking into account the postulate for analysing crowdsourcing in a holistic way according to this approach (organisational, virtual community, and technological level), further considerations will be expressed according to the guidelines indicated in the literature (Zhao & Zhu, 2014).

The organisational level: the initiator. The initiator is defined In the literature as the "crowdsourcer", namely a person or persons who are able to mobilise for action a potentially useful crowd (Kramer & Cook, 2004). The initiator may be a private person, organisation, institution, or local government unit. In most cases the initiators are commercial and public organisations, but also private persons who possess funds, an appropriate supply base (inter alia: access to a platform, project promotion, payment of gratification) to carry out a crowdsourcing initiative. The role of the initiator is to direct to the crowd, through a crowdsourcing platform, an open call for cooperation and to define the tasks envisaged to be solved. It is important at this point to define by the initiator the goal, scope, schedule, expectations, awards, or recipient group. The initiator should also, in the duration of the project, exercise control over its course, e.g. evaluate incoming ideas/solutions, answer the participants' questions. From the initiator's point of view, not without significance is benefiting from crowdsourcing, inter alia: access to talents, external knowledge (Burger-Helmchen & Penin, 2010), valuable information (Greengard, 2011), resources (Brabham, et al., 2009; Chen, 2016), skills, experience (Oliveira, Ramos & Santos, 2010), mobilisation (Zhao, Zhu, 2012), and competences (Chanal & Caron-Fasan, 2008). It may also be used for creating open innovations (Brabham, 2008; Burger-Helmchen & Penin, 2010), building competitive advantage (Leimeister & Zogaj, 2013), improving business processes (Burger-Helmchen & Penin, 2010; Brabham, 2008; Balamurugan & Roy, 2013), optimising the costs of the organisation's activities, or business models (Garrigos-Simon, et al., 2014).

On the organisational level, the factors of success of a crowdsourcing initiative are important because the organisation invests in, inter alia, hiring or purchasing a platform, involves a team of employees, and secures awards for the potential winners. Its success depends on various factors (Villarroel & Reis, 2010). For instance A. Sharma (2010) discerned the organisation's vision, strategy, its relations with the environment, human capital, and trust. R. Buettner (2015) reviewed 217 publications devoted to crowdsourcing and identified the following factors: organisational culture and climate, openness to new knowledge, involvement, developing employee skills, managing individual and group efficiency, transformational and proactive leadership, (however, the former has been considered as the initial condition for effective conducting of crowdsourcing, whereas the latter as the necessary condition when using crowdsourcing), a transparent, responsible, sustainable, and reliable work environment. Other authors also point out to organisational culture (Qin, Van der Velde, Chatzakis, McStea & Smith, 2016). L. B. Erickson, E. M. Trauth and I. Patrick (2012) analysed 106 reviewed academic papers. In addition, eighteen semi-structuralised interviews with managers of American small, medium, and large enterprises have been conducted. The results of the research indicate the importance of organisational goals, desired results, common tasks, organisational perception, and proactive leadership. The researchers acknowledged that organisational perception is connected with the importance of employee and managerial staff openness to accepting ideas generated by the virtual community, organisational culture that is open to innovations, an innovative organisational structure, system of communicating and creating inter-organisational ties.

Hence, at the organisational level the following seem to be important: (1) employee motivating and (2) management. First, the employees' motivation to crowdsourcing. It is pointed out more and more often that new solutions will not be accepted if the employees do not see the benefits (Simula & Vuori, 2012; Louis, 2013). This refers to the fact that the employees' internal motivation may stimulate making use of knowledge coming from the crown and it is connected with the state of acceptance and readiness to accept knowledge coming from virtual communities. The reason is the need and willingness to make use of this knowledge to connect it with the knowledge already possessed. This may bring about creating new ideas, improvements at one's work post or for the whole division/department (Gong, et al., 2012). This may depend on internal and external motivation. Within the self-determination theory, internal motivation is connected with satisfaction, curiosity, and happiness related to acting and improving one's competences (Frey & Jegen 2001). In order for a given person to be internally motivated, two needs have to be satisfied: independence and possibility to make decisions (Ryan & Deci, 2000). Whereas, the external motivation is connected with receiving by the employees of financial compensation or avoiding penalty (Frey & Jegen 2001). In other words, external motivation may appear in a situation when an individual carries out his or her work because of control or fear of a penalty.

The literature on crowdsourcing indicates that in the context of motivation the possibility to share information (Bonabeau, 2009), learning something new (Boudreau & Lakhani, 2013), realising independent work are important (Schenk & Guittard, 2009). Nevertheless, these conditions only concern the virtual community. F. Ederer and G. Manso (2013) found out that the employees' motivation is increased by a possibility of receiving incentives from the very beginning of a crowdsourcing initiative. A. Wendelken, F. Danzinger, Ch. Rau and K. M. Moeslein (2014) think that employee motivation to crowdsourcing is influenced by career, personal development, willingness to play, reputation, and learning, while financial awards and altruism are not the sources of motivation. According to S. Fernandez and D. W. Pitts (2011) organisational climate, appreciation in the work process constitute factors which motivate employees to crowdsourcing, which means that the more the employee feels a part of the process of making decisions related to his or her work, the more he or she will be inclined to innovation. K. Palin and V. Kaartemo (2016) conducted research in a Finnish company VR, active in the railway sector and offering services related to bus transports and catering (case study, 18 semi-structured interviews: with 5 managers and 13 employees). The aim of the study was to identify the external and internal factors which impact employee motivation to crowdsourcing. The obtained results lead to an ascertainment that what is important and motivating to the employees is knowledge about crowdsourcing, time, faith in the ability to undertake some change, atmosphere at work, support on the part of co-workers, a feeling of being able to influence the organisation's policy, support from the superior, and experiences in the face of challenges, especially in the technical aspect. This research refers to the statements of other researchers about the inter-organisational conditions for crowdsourcing success (Villarroel & Reis, 2010; Stieger, et al., 2012; Simula & Vuori, 2012). Kesting an Ulhøi (2010) ascertained that the employees' attitude contributes to crowdsourcing success. By the same token, considering the importance of the employees, it is pointed out that it is important to motivate them to share knowledge within the organisation (Aalberset, et al., 2013).

Second, management. Management constitutes an important factor which determines making a decision about crowdsourcing. In particular this concerns costs, coordination, and risk. The will to save money or lack of funds for realising an action may constitute the premise for making a decision about crowdsourcing (Zhao & Zhu, 2012). Next, coordination of actions or the mechanisms of coordination in the organisation are of key importance to crowdsourcing. Their lack may mean resource leakage. Therefore, the organisation should possess workflow management (Potter, McClure & Sellers, 2010), members management (Dow, et al., 2011), and agreement management (Psaier, et al., 2011). Therefore, proactive leadership play a key role in reducing and eliminating obstacles in the potential failures of crowdsourcing. Proper management of human resources may increase trust and by

the same token the motivation among the employees engaged in crowdsourcing. Moreover, those employees who have good relations with their superiors are also more inclined to innovation. It is the managerial staff that contribute to an increase or decrease of employee motivation to accept external knowledge (Sonnentag, 2003). What is important here is training of employees in crowdsourcing, promoting the entire crowdsourcing initiative, ensuring resources to realise and continue crowdsourcing, communicating changes, which is connected with ensuring the possibility of constant giving answers to employees' questions – so that they do not perceive crowdsourcing as a threat and do not feel disoriented. Generally speaking, it is important not only to constantly inform the employees about the benefits of crowdsourcing, but also supervising the use of new knowledge in daily work. Which means that all employees should have an equal share in benefiting from crowdsourcing. To this end, the human resources department should define what benefits, resources the organisation may obtain thanks to crowdsourcing. Only such actions cause that new knowledge acquired within crowdsourcing will be applied at work (Jayanti, 2012). For example S. J. Adriole (2010) studied 100 organisations and proved that only 6% of their employees made use of the knowledge acquired from online communities in their work and 4% to support decision-making processes. In this aspect it may be ascertained that proactive leadership may be considered the necessary condition for starting any activities which initiate crowdsourcing (Erickson, et al., 2012; Louis, 2013) and it is indicated as the main element of the organisational level of crowdsourcing (Erickson, et al., 2012; Louis, 2013).

At the level of the virtual communities the following is pointed out: (1) virtual community's motivation and (2) virtual community's work coordination. First, the virtual community's motivation. It is emphasised in the literature that this community is driven by various motives when it decides to participate in crowdsourcing (Estellés-Arolas & González-Ladrón-de-Guevara, 2012, pp. 4609-4618). The most important ones include, among others: possibility of creating new products (Fuchs & Schreier, 2011), innovation (Füller & Matzler, 2007; Sawhney, et al., 2005), interacting with other members of the virtual community (Faraj et al., 2011; Von Hippel, et al., 2011; Sawhney, et al., 2005), testing one's skills, facing a difficult task and willingness to learn something new, developing knowledge (Sloane, 2011), which is important for the organisation's growth (Nooteboom, 2000). Another reason is also knowledge sharing. The role of the managerial staff, creating incentives for virtual communities' participation in crowdsourcing, is not without significance. Second, virtual community's work coordination. In crowdsourcing it is important to specify by the managerial staff the methods of acquiring, managing, and motivating the crowd to take action, the criteria of the target group, appropriate size and diversity of the crowd, and thus a selection of appropriate members of the crowd to the task's specifics. However, it is pointed out that its diversity may be beneficial for obtaining good quality solutions and ideas and it decreases the risk of failure. A lack of or inadequate development of the mechanisms which coordinate the work of the virtual community, in particular the criteria of crowd selection, method of acquisition, management, motivating, or evaluation may contribute to increasing the costs and losing control over crowdsourcing and even failure of the whole crowdsourcing initiative. Not without importance is not only developing by the organisation of mechanisms that encourage the members of the online community to act, but also trust towards the platform and the organisation. It is suggested here to implement control mechanisms that provide safety to the online community's members for example safety connected with protection of data sent by them. The ethical, legal issues and those connected with privacy may constitute the main problems while implementing crowdsourcing (Whitla, 2009).

The technological level includes requirements that a crowdsourcing platform, which brings benefits to the organisation and appropriate functionalities for the Internet users, should meet. An incorrectly chosen crowdsourcing platform may contribute to obtaining low quality of the ideas developed by the virtual community and an aversion of the crowd to interact with crowdsourcing. Therefore, the following parameters are important: reliability, range, capacity and storage, efficiency,

safety, comprehensiveness, types and methods of available interactions, throughput, platform range, types of the administrator's powers, access to the platform by means of various devices and operational systems, possibility to subscribe and unsubscribe at any time, collecting a large quantity of data, multi-level access to the tasks, a module of communicating with the organisation and virtual community members, intuitiveness of its operation, authentication mechanisms, coordination, allocating to a specific task, help-desk option, declaration of the crowd's skills, supervision, monitoring, feedback, negotiations by the crowd of the task completion deadline, aggregation of results, procedures for protecting the organisation and the virtual community members' intellectual property, and idea archive (Spreitzer, 2008). This translates to the level of crowdsourcing quality, its intensiveness, willingness to add entries, and knowledge sharing (Soliman, 2014).

4. Conclusions

The analysis of crowdsourcing levels and the existing theoretical papers and research results authorise to formulate the following conclusions:

1. Proactive leadership is considered as the central element and one of the conditions of crowdsourcing project success.

2. At the organisational level the issues of motivating employees to accept knowledge acquired from the virtual community and developing mechanisms of coordination, costs, and crowdsourcing risk are important. A proactive leader not only inspires the employees to take action, but he or she also propagates and promotes crowdsourcing and provides appropriate resources for its implementation and realisation.

3. At the virtual communities' level the mechanisms of motivating the crowd to act and coordinating their work are of importance. This means that a proactive leader has knowledge of the factors which motivate the virtual community to take action (Brabham, 2008, 2010; Lakhani, et al., 2007) and the methods of maintaining it. A proactive leader not only motivates the virtual community to act, but also creates a friendly environment for these communities.

4. Not without importance is the technological level, i.e. a crowdsourcing platform appropriately chosen by a proactive leader that is friendly to the virtual community, which enables acquiring good quality ideas, openness in building the Internet users-organisation and organisation-organisation relations and interacting, including willingness to cooperate in future initiatives.

The theoretical findings enable drawing of a conclusion that a simple dependence between crowdsourcing and proactive leadership does not exist. Nonetheless, proactive leadership is considered as the necessary condition for all actions which initiate crowdsourcing, in particular during the entire endeavour. Also, the voices of academics may be heard which talk about the importance of transformational leadership to crowdsourcing. In this aspect, the holistic, multilevel research oriented on identifying the proactive and transformational leadership's impact on crowdsourcing is of importance. An attempt to find the answer to this question will contribute to eliminate the negative consequences and obtain maximum benefits from crowdsourcing.

Acknowledgments

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