

Users' Motivation to Participate in Online Crowdsourcing Platforms

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Abstract – Online crowdsourcing platforms are increasingly used to capture ideas from crowd. Global companies are adopting crowdsourcing idea to connect with and get feedback from the users. The objective of this study was to understand what would motivate people to participate to innovate in online crowdsourcing platform, and to classify different motivational factors and incentives in online crowdsourcing platform. After an extensive literature review on motivation and incentive, different motivational factors and incentives were classified. This study has identified various motivational factors and classified them so that researchers can have more empirical studies to understand better. Moreover, the findings will also be worthwhile for the companies who are planning to launch similar crowdsourcing platforms to tap users' talents.

Keywords-- Crowdsourcing, Motivation, Incentive, Online Community, Online Platform

I. INTRODUCTION

Users' participation in online crowdsourcing platforms is very crucial as the success of platforms largely depends on the presence of their members. What motivate people to participate is considered as a major drive for a successful platform. Even though it is easy to introduce a platform but how to attract a large number of crowds especially in this competitive market requires close studies. Since the concept of crowdsourcing coined by Howe in 2006 [1], it has become an integral part of large companies. Moreover, numerous small companies have also been successful through using online crowd. Typical risks that are associated with crowdsourcing platform are content explosion, active members' extinction, too many ideas, difficulty in idea filtering, high user turnover, and user drop-off rate, etc. The objectives of this study are (1) to understand what would motivate people to participate to innovate in online crowdsourcing platform, and (2) to classify different motivational factors and incentives in online crowdsourcing platform. An extensive literature review on motivation and incentive, different motivational factors and

incentives prevalent in online platform participation have been discussed and classified. Moreover, tools, toolkits and functions related with online crowdsourcing platforms have also been explored.

The remained of this paper is structured as follows. Section two deals with motivation in general and section three describes motivation in online platform participation. Section four contains reviews on users' idea generation. Section five depicts the tools used and the functions in crowdsourcing platform. Section six includes a classification of motivators followed classification of incentive in the section seven. Finally, conclusion is drawn in section eight.

II. MOTIVATION

Motivation can be described as a process to release, control, and maintain physical and mental activities [2]. It is broadly divided into two - intrinsic and extrinsic. Intrinsic motivation refers to the task itself. People do something because of the task and do not expect anything else in return [3]. For example, hobby, enjoyment, interest, etc. are considered as intrinsic motivational factors. In contrast, extrinsic motivation refers to the factors that bring something in return and it is other than the task itself [4], [5]. For instance, monetary benefits, career, prize, and recognition, etc. are considered as extrinsic motivational factors.

Several studies have found that creativity is an outcome of risk-taking and uninhibited exploration [6]. Studies also revealed that the intrinsic motivation accelerate creativity whereas the extrinsic motivation inhibits creativity [7], [8]. McGraw [9] believes that the extrinsic motivation play a positive role in simple task and has negative effect on creative task. Moreover, studies have identified that extrinsic motivation has negative effect on creativity [10]-[13]. Thus, it appears that extrinsic motivation is not an ideal option to offer for creative tasks.

However, in some cases, intrinsic motivation can turn into extrinsic motivations. So, not only extrinsic motivation but also some intrinsic motivations which can turn into extrinsic need to be avoided in creative tasks. Firstly, rewards for already intrinsically interesting task can turn intrinsic motivation into extrinsic motivation. Secondly, task can be used as a means to end another task. Finally, task can be designed as a play because people consider work as a burden.

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However, if reward is given randomly after accomplishing a particular task, it may not have negative effect.

It is worthwhile here to mention that long ago, Herzberg et al. [14] divided motivation into two groups: 1) motivation itself and 2) hygiene factors. Here, they opine that motivation itself includes trust, freedom, career development, responsibility, satisfaction, contribution, achievement, recognition, peers, colleagues, being challenged, superiors, and the work itself etc. In contrast, the hygiene factors include pay, company policy and administration, personal relations, status, security and interestingly - processes of proposing and approving ideas, etc.

III. MOTIVATION TO PARTICIPATE IN ONLINE PLATFORMS

The previous section discussed task related motivation. However, the main focus of this study was to explore users' motivation to participate in crowdsourcing platforms. Hence, extensive review of past research has been discussed in this section. Wasko and Faraj [15] point out that the most dominating reason to participate in online platforms is to give back help to the community in return. Reputation, enjoyment hobby, and self-image, etc. are other dominant reasons for people to participate in online platforms [16]-[19].

Whatsoever, Daveport [19] finds that employees prefer channels over platforms as channels facilitate them to generate more visible information. Employees tenet is that they are "paid to produce, not to browse" so it is important to make awareness among the employees concerning the benefits of platform use. Antikainen et al. [16] find that synergy and fusion of ideas is an important motivational factor. Interestingly, Brabham [20] has revealed addiction as a reason to participate in online platform.

The success of a crowdsourcing platform largely depends on members and their motivation to participate. Motivation determines the quality and the quantity of contributions [21]. It is very important to know the factors that motivate people to participate and incentives required to increase motivation. The study on users' motivation to participate in online platforms started from the open source software field [22]-[27]. In open source programming platforms, highly skilled computer programmers dedicate their time voluntarily and they are not unpaid in general. The programmers work as hobbyists [23]. Moreover, motivation arises through interaction among different motives and incentives in a particular situation [28].

Intrinsic motivation means that individuals do not rely on external pressure [29]. It has been studied by psychologists since the early 1970s [30], [31]. People are intrinsically motivated if the task itself is enough for satisfaction and no further reward apart from the activity [30]. On the other hand, extrinsic motivation is driven by external incentives [32]. When the motives are apart from the actual activity and external factors such as money, fame, prize etc. trigger to motivate [33]. Desire to satisfy someone's own need is also found as a motive to participate [34]. In many platforms, especially in open source software, intrinsic incentive is a dominant motivational factor [23], [24], [25], [26], [34]. In

crowdsourcing platforms, the influential extrinsic motivational factors are reputation, status, peer pressure, fame, community identification and fun, etc. [5], [35], [36], [37], [38], [39]. However, fun and enjoyment are the two dominant intrinsic motivational factors present in online platforms [24], [25], [35], [39], [40], [41], [42]. Several studies have found reward and recognition as worthwhile factors. Classic social studies generally suggest that financial rewards are harmful for idea creation [6], [43], [44]. Whereas, Antikainen and Väättä [45] believe that monetary reward is essential in intermediary platform.

Altruism is an important motivational factor in online platforms. Altruism refers to the desire to increase the welfare other people or the obligation to do something for someone else with own costs [52]. Some researchers claim that tangible rewards do not have waning effects in all circumstances [53] In some cases, intrinsic and extrinsic motivation can conflict each other [3], [47], [48], [49], [50], [51], [54], [55]. Rewards to stimulate extrinsic motivation can have negative effect on the intrinsic motivation, too [56], [57].

IV. ONLINE COMMUNITIES IN IDEA GENERATION

A community is a social group that shares the basis of authority [71]. Online communities are used for a wide range of online activities [81]. The key benefit of using online communities is cost savings [1]. The activities are accomplished via volunteers or, if necessary, rewards are given based on obvious contribution [83], [84]. The people in a community usually have common interests and needs. The fundamental characteristic of online communities is that members mainly interact via online [71], [72].

The first stage of idea generation in online platform is to identify and generate opportunities, fresh ideas, and new novel concepts. Ideas of community members can be compiled by company staffs. These ideas should carefully be evaluated and rigorously refined to find the best ideas among them. Online communities use various means to select their members [78 79]. However, in the preliminary stage of idea generation process, the heavily involved community members take the positions of evaluators of the submitted ideas. Yet, companies are continuously struggling with how to select the best among numerous ideas and how to know which idea has more commercial potential.

V. TOOLS AND FUNCTIONS

Von Hippel [58] introduced interactive toolkits to facilitate users for trial-and-error learning by doing. Dahan and Hauser [59] introduced six web based methods to allow users to participate more actively. In idealized innovation process, members may assume the roles of buyers [60], [61]. However, members in online communities maintain protocols and norms in general [73], [74], [75]. These protocols and norms are maintained under a formal structure [76], [77].

There are several issues necessary to consider in online idea generation process. Reference [62] compiled four basic issues: 1) which attributes consumers can contribute, 2) where can

these consumers be found, 3) How to communicate with these target community members so that the process can be designed efficiently, 4) How the target community member be contacted and be encouraged to take part in idea generation. It is important to find the optimal fit between the members' ability and the task requirements. Factors to engage in online platform are very crucial. Netnography [63]-[66] is an approach that helps us to understand issue such as how to identify and get in contact with online communities, check trustworthiness, analyses ethics. Community members in an online platform differ in their social ties. For example, the so called tourists do not have strong attachment to communities. In contrary, the devotees are highly engaged in online communities.

Various tools and toolkits are used in online crowdsourcing platform [see Table I]. Interested participators can design their own products with these tools and toolkits. Antikainen et al. [16] believe Application Programming Interfaces (APIs) facilitate users to feel themselves and enrich a particular community. Users prefer to see what who are online, what kind activities are going on, the profiles of other users, tagging, etc.

TABLE I
TOOLS AND THEIR FUNCTION IN CROWDSOURCING PLATFORM

Tools		
APIs		Blog
Design tools		Wiki
Idea Customization		Podcast
Recommendation		Videocast
Status		Social networks
Tagging		RSS feed
Time scheduling		
User Profile		
Functions		
Collaboration	Creativity	Information Management
Broadcast news Complaint Competition Co-operation Discussion Get relevant news Know who are online Rewarding an accomplishment Searching	Comments Comparison Entertainment Evaluation Idea buying Idea development Idea improvement Idea selling Marketing ideas Promotion Rating Recognition Sharing ideas Submission ideas Test ideas	Advice Asking for help Extract data from outside Extract sticky information Helping others Improvement Mutual information sharing Observations Opinions Suggestions Common culture

Source: Compiled by the author

When it comes to work in group with unfamiliar members, it is always challenging to manage. Thus, making schedule, time management, co-operation spirit, etc. are fundamental challenging issues for crowdsourcing platform. In some

platform, tools are provided for innovation purpose. People like to share their ideas with others and preferably towards broad audience. For example, the wikis, blogs, YouTube, Facebook, etc. are well evident of this phenomenon. Moreover, in some platforms, tools are very easy to use and no HTML skills or other downloading software are necessary. However, users are required to have their own creativity.

There is no any clear cut solution to formulate virtual interaction [26], [52], [65], [66], [67], [68], [69], [70]. It varies a case to case as every community has its different goals. To achieve full potential of an idea generation platform, however, it is important to allow realistic judgments on ideas and concepts, environment, creativity, etc. [52]. Online communities can also be classified into two basic categories: knowledge sharing communities and production community [80]. Communities of practices are involved with knowledge sharing [81] whereas collective innovation models can be considered as production community [71], [82].

VI. CLASSIFICATION OF MOTIVATIONS

In section III, we had reviewed extant literature on users' motivation to participate. We have categorized different motivational factors (see Table 2) available in the existing studies. Motivations are mainly classifies into groups: extrinsic and intrinsic. Extrinsic motivation further classified into three groups: (1) financial, (2) social, and (3) organizational while intrinsic motivation cannot be classified further as the intrinsic motivation originate from a particular task itself.

However, there may have different classifications based other certain categories. Financial motivation includes, among other, benefits, cash, dissatisfaction, job opportunities, personal need, problem, pressure and revenue, etc. People socially bonded and social motivations are also prevailing in online platform. Moreover, social motivational factors are very useful as it does not require financial issues. The prominent social motivators are obligation, peer recognition, status, reputation, power, skill development, experience, knowledge gathering, social bonds social interaction, networking, collaboration, ego, publicity privilege attainment, frustration, helpfulness, etc. Apart from financial and social motivators, people are motivated for organizational purpose as in each organization people need to consider their responsibilities, prestige, career, recruitment. Furthermore, employees need to market themselves. Table II provides intrinsic motivational factors unclassified as there are no classifications of them. Intrinsic motivators of wide range: charity, enjoyment, pleasure, self-satisfaction, desire to solve, competence, fun, autonomy, self-determination, identification, altruism, belonging, community drives, pride, pastime, learning, self-fulfillment, getting.

TABLE II
CLASSIFICATION OF MOTIVATION IN CROWDSOURCING PLATFORM

Extrinsic Motivators

Financial Motivators	Social Motivators	Organizational Motivators
Benefits Cash Dissatisfaction Job opportunities Personal need Problem pressure Revenue	Obligation Collaboration Ego Experience Frustration Knowledge gathering Networking Peer recognition Power Privilege attainment Publicity Reputation Skill development Social bonds Social interaction Status	Career development Marketing oneself Professional prestige Recruitment Responsibilities
Extrinsic Motivators		
Charity Competence Desire to solve Enjoyment Fun Pleasure Self-satisfaction	Altruism Autonomy Belongingness Community Drives Identification Self-determination	Getting Ideas Ideas Comes True Learning Pastime Pride Self-fulfillment

Source: Compiled by the author

VII. CLASSIFICATION OF INCENTIVES

Incentives and motivators are highly inter-related. The incentives should be appropriate to meet what motivate people to do something. We have categorized incentives in similar fashion as we did for motivators. Hence, it gives a well illustration of comparative positions of motivators and incentives.

The salient incentives in financial categories are payment, premium, license, free product, free service, bonus, coupons, right to use product, right to use service, deals with lower cost, etc. On the other hand, social incentives are not many as we see in the Table III. Social incentives include, among others, award, prize, honor, pride for development, trustworthiness, etc. while organizational incentives mainly are extra right, extra privilege, career opportunities, accessibility to information, etc.

TABLE III
CLASSIFICATION OF INCENTIVES IN CROWDSOURCING PLATFORM

Extrinsic Incentives

Financial Incentives	Social Incentives	Organizational Incentives
Bonus Coupons Deals with lower cost Free product Free Service License Payment Premium Right to use product Right to use service	Award Honor Pride for development Prize Trustworthiness	Accessibility to information Career opportunities Extra Privilege Extra Right
Intrinsic Incentives An activity itself		

Source: Compiled by the author

VIII. DISCUSSION AND CONCLUSION

In this paper we have reviewed literature on motivation and incentives prevalent in online crowdsourcing platform and described motivation in general and in online community participation separately. Thus, prominent motivational factors and incentives have been illustrated based on empirical research available in the extant literature. The classification established here should give insights to have more rigorous empirical studies on online communities with particular focus on motivation to participate. This study will accelerate the foundation to understand motivational factors in online communities better.

Future quantitative research is expected to help to explore the relationship among different motivational factors and various incentives. Moreover, tools, toolkits and different functions have discussed to understand the importance of them. Technology is developing so quickly and more and more advantageous tools are merging and consequently, crowdsourcing platform are becoming growingly vibrant. The searching of new valuable ideas from every possible source, especially idea development through online communities provides companies a new way to accomplish the ideation process.

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