Generating Ideas on Online Platforms: A Case Study of "My Starbucks Idea"

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A B S T R A C T

The objective of this study is to explore the factors that are keys for an idea to be implemented on an online crowdsourcing platform. A data set of 320 implemented ideas from My Starbucks Idea – an online crowdsourcing platform – has been analyzed. We find that only one out of 500 users' submitted ideas are selected for implementation. The number of implemented ideas increases significantly at the early stage of the platform. At the mature stage, even though an increasing number of ideas are submitted, implemented ideas are proportionately low. Among the three categories of ideas – product, experience, and involvement – ideas of the product category are implemented with lower values of some associated variables than that of the experience category whereas those values in the involvement category are higher. Linked ideas need lower scores than sole ideas to get implemented. The chance that an idea to be implemented largely depends on votes received by and points earned on that idea.

1. Introduction

Business environments are increasingly becoming competitive. Consequently, firms are continuously seeking new ways of idea generation (Westerski, Dalamagas & Iglesias, 2013). Researchers and practitioners are advocating for open approaches through engaging external individuals on crowdsourcing platforms for innovation and ideation. Crowdsourcing is an option to get ideas from external sources. Howe (2006) coined the crowdsourcing concept and defined it as follows: *Crowdsourcing is the process of obtaining needed services, ideas, or contents by soliciting contributions from a large group of people, and especially from an online community, rather than from traditional employees or suppliers*. However, crowdsourcing has

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numerous definitions. For instance, Estellés-Arolas and González-Ladrón-de-Guevara (2012) found at least 40 definitions of crowdsourcing in the literature.

The Internet serves as an important way for firms to collaborate with crowds for idea generation (Sawhney & Prandelli, 2000; Sawhney, Verona & Prandelli, 2005). The importance of customers' interaction for ideation is not a new phenomenon but the widespread availability of the Internet has significantly increased the firms' ability to interact with customers. Crowdsourcing has proven to be a great promise for ideation. Firms, irrespective of small or large, are increasingly collaborating with external sources (Chesbrough, 2003; Dahlander & Wallin, 2006). Large firms such as Cisco, Dell, Microsoft, Proctor and Gamble, Unilever and Starbucks are actively using crowdsourcing platforms to find ideas from external individuals such as users, customers, amateurs, and volunteers (Di Gangi, Wasko & Hooker, 2010; Martínez-Torres, 2013; Westerski et al., 2013). On crowdsourcing platforms, crowds not only interact with firms but also interact among themselves.

There are broadly two ways to solicit ideas from external sources on crowdsourcing platforms: (1) idea contest – calling external individuals to submit ideas within a time period, selecting and awarding best ideas, and (2) ideation with continuous interactions between firms and crowds. This study focuses on crowdsourcing where ideas are developed with continuous interactions between firms and crowds. In ideation with continuous interactions between firms and crowds on online crowdsourcing platforms, crowds do not need to have high skills and expertise. Rather they can propose ideas based on their day to day experiences. In other words, in the case of ideas which do not need significant cognition, active users can submit enormous number of those types of ideas. For example, a user of Dell's computer can submit ideas based on his/her using experience. Advanced information and communication technologies (ICTs) along with Web 2.0 facilitate an environment for activities such as interaction, voting, comments, and discussion on online crowdsourcing platforms (Hossain, 2012a; Mahr & Lievens, 2012). The ICTs with related tools and features have not only accelerated the quantity but also the quality of ideas. Moreover, active users can be identified and enthused in ideation process to find more relevant ideas. Integrating customers and other external individuals in the innovation process is considered as a powerful means to increase the success rate of and revenue from new offerings. Yet, the understanding of the mechanism of customers' integration for ideation is limitedly explored (Rohrbeck, Steinhoff & Perder, 2010).

Idea crowdsourcing possesses some challenges. Finding an appropriate team for idea evaluation is also a daunting task. Sometimes, some excellent ideas may not be implementable by a firm (Martínez-Torres, 2013). High familiarity of an individual with a problem may block creativity and identification of novel solutions (Franke, Poetz & Schreier, 2013; Wiley, 1998). Some managers resist crowdsourcing ideas because they are not sure what kind of problem crowd can really solve and how to manage the whole process, and how to be sure that ideas received from crowds are the appropriate ones (Boudreau & Lakhani, 2013). A common belief to engage professionals instead of crowd for idea generation is that they have the experience and expertise to bring out promising ideas. In crowdsourcing, the idea evaluation process is very difficult especially when unimaginably large number of ideas is generated in a short span of time (Jouret, 2009). The knowledge about crowds' ideation skills is also sparse (Adamczyk, Bullinger & Möslein, 2012; Bayus, 2013; Natalicchio, Petruzzelli & Garavelli, 2013).

Despite the importance of idea crowdsourcing, researchers have limited insights into this arena (Hossain & Kauranen, 2015; Poetz & Schreier, 2012). How the process of ideation is conducted effectively is a crucial issue for both researchers and practitioners (Schulze &Hoegl, 2008). To identify best ideas from a large number of submitted ideas is a challenging issue for managers (Jouret, 2009). Moreover, how to identify and support the crowd who are active in submitting implementable ideas is limitedly known (Kristensson & Magnusson, 2010). Hence, the objective of this study is to explore the factors that are keys for an idea to be implemented through an online crowdsourcing platform.

2. Theoretical perspectives

The integration of customers as part of external innovation processes is crucial for firms (Enkel, Gassmann & Chesbrough, 2009). Poetz and Schreier (2012) found that compared to in-house ideas, users' product ideas place better positions in terms of novelty and customer benefits. They argue that crowdsourcing might be considered as a promising method to gather external ideas which can, at least, complement internal idea generation of a firm. In online crowdsourcing platforms with continuous interactions between firms and crowds, the selection of an idea may depend on various factors, such as votes, comments, point earned, the amount of submitted ideas, relevance, feasibility to implement, and alignment of an idea with a firm's business strategy. A platform management team directs the overall ideation process so that an idea is refined, highly voted, and widely accepted by platform members before its implementation. Great ideas may get immediate attention from both community members and selection teams. Consequently, these ideas may become central issues on a platform. Moreover, an ideator's contribution to others' ideas such as voting, commenting, discussing, etc. helps to get attention to his/her own idea from other community members as well as from platform management team.

In general, online crowdsourcing platforms of large firms receive numerous ideas. However, the number of implementable ideas is very limited. Hence, most of those ideas remain unused. In many cases, huge amounts of information submitted by crowd have negative effect in the identification of most promising ideas and a poorly managed online crowdsourcing platform may result in a fiasco (Di Gangi, Wasko & Hooker, 2010). Prior studies pointed out that if a firm is not able to attract right crowds who could provide valuable ideas, the successful idea generation is seemingly impossible (Piller & Walcher, 2006). Generally, a small number of the crowds provide valuable ideas, and majority of the crowds are involved with activities such as making comments, casting votes and providing suggestions. It is important to identify individuals who are very active and enthusiast to

submit implementable ideas (Martínez-Torres, 2012). On platforms, users express their experiences, raise questions, comments, vote on proposed ideas, and answer questions posed by others. Thus, they develop ideas as a community (Rowley, Kupiec-Teahan & Leeming, 2007).

Idea generation, in many cases, goes far beyond the imagination of crowds. Some scholars believe that customers may remain too absorbed in the existing products that may prevent them from coming up with truly novel ideas (see Leonard & Rayport, 1997). However, collaboration with customers helps firms to create value through product innovation (Sawhney, Verona & Prandelli, 2005). Firms can tap into customer knowledge and engage them for ideation through continuous interactions (Nambisan, 2002; Sawhney & Prandelli, 2000). Assessing ideas to select appropriate ideas is a challenging task. Hrastinski, Kviselius, Ozan and Edenius (2010) point out that ideas from a large number of submitted ideas on platforms are typically selected in several ways: using some very simple community statistics, expert reviews of the submitted ideas and the number of votes or comments an idea received. A large number of ideas from crowd raise the challenge of absorptive capacity – firms' ability to identify and evaluate new knowledge into the current business (see Cohen &Levinthal, 1990). On the other hand, Stevens and Burley (1997) propound a success curve and claimed that it is valid for most industries regarding idea success. They argue that only one out of 3000 ideas ultimately becomes commercially successful.

The Motivation of a crowd to participate in online platform is a key factor for the success of a platform. Intrinsic motivation is more prevalent than extrinsic motivation when the task of individuals is simple. Online platforms of many large firms are based primarily on intrinsic motivation. Apple, for example, has turned towards crowd to propel its growth. Starbucks' My Starbucks Idea, IBM's Global Innovation Jam, and Dell's IdeaStorm are highly popular online crowdsourcing platforms which are based on intrinsic motivation. Intermediary platforms are also operating with various business models (see Hossain, 2012a; Hossain and Kauranen, 2014). In some cases, some kind of incentive prize is offered to individuals whose ideas are implemented. Intrinsic motivation includes personal learning, expression, creativity, enjoyment, fun, entertainment, and care of a community, among others (Antikainen & Vaataja, 2010; Boudreau & Lakhani, 2009; Hossain, 2012b).

3. Materials and methodology

3.1. Description of the case platform

My Starbucks Idea is considered as the case for this study. It was launched in March, 2008. Crowd can submit their ideas, vote and make comments on submitted ideas of others, etc. It is a place of interaction between Starbucks and crowds to improve the organization as a whole. This platform provides customers opportunities to express their views to improve offerings. Anyone can register to join in the crowdsourcing platform with valid credential at free of cost. As on August 20, 2013, customers have submitted 162,156 ideas (see Table 1). Submitted ideas are classified into three categories: product, experience, and involvement. On the platform, crowds discuss, debate, and argue on various topics related with Starbucks' products and services.

Platform management team provides comments to lead discussion and other activities to the right direction so that the crowd can submit more implementable ideas. Most of the ideas are under the category of product (105,161) followed by experience (35,098) while the number of ideas under involvement category is the lowest (21,897). Among 162,156 submitted ideas, only 320 ideas have been implemented. In other words, one out of around 500 ideas finds its way to Starbucks store after passing through the crowd and the firm's evaluation process. Of the 320 implemented ideas, 255 ideas belong to product category, 46 to experience category, and 19 to involvement category.

Table 1- List of ideas submitted by crowd.

Product	Ideas (#)	Involvement	Ideas (#)	Experience	Ideas (#)
Coffee & Espresso Drinks	34,542	Other Involvement Ideas	5,686	Atmosphere & Locations	15,294
Starbucks Card	17,063	Building Community	5,215	Other Experience Ideas	11,487
Food	16,267	Outside USA	1,626	Ordering, Payment, & Pick-Up	8,317
Other Product Ideas	11,202	Social Responsibility	9,37		
Tea & Other Drinks	10,196				
Merchandise & Music	8,464				
Frappuccino® Beverages	4,066				
New Technology	3,361				
Total Ideas in each category	105,161		21,897		35,098
Total Ideas in three categories	162,156				

Source: http://mystarbucksidea.force.com/ (August 20, 2013).

Under the frequently asked questions (FAQ) part of the platform, Starbucks has mentioned clearly various regulations of participation into the community. Any submitted idea becomes a property of Starbucks and no compensation is promised. Idea submission is voluntary, non-confidential, non-

committal, gratuitous, perpetual, irrevocable and non-exclusive. Starbucks gets royalty-free license to use any ideas or other contribution. By far, Starbucks has become very successful to generate promising ideas. Its Facebook account has over 35 million fans. Any posted document on the platform is shared to all other members as long as the content does not breach the rules and regulations of the platform. Starbucks does not share privately held information. However, some activities of the platform are highly criticized. For example, ideas are not properly catalogued and reviewed; hence a previous idea may resurface after a long period of time (Rosen, 2011).

3.2. Data collection

The implemented ideas are separately listed on the platform. The necessary and possible information related with each implemented idea are extracted manually from the Website by visiting each idea link. Extracted information related with each implemented idea are: vote received, point earned by idea submitter, point earned on an idea, comments received, category of idea (product, experience, and involvement), sole idea or an idea related with other submitted ideas. The extracted information is recorded in a spreadsheet for analysis purpose. Additionally, the registration dates of crowds of the implemented ideas and the dates of implementation of their ideas are also recorded. Moreover, names of the ideas with related statement are recorded. To find the duration of a crowd's involvement with the platform, we subtracted the date of registration of that crowd, whose ideas were implemented, from the date August 1, 2013. This later date is assumed as a benchmark to understand the relative period of a user's involvement with the platform.

3.3. Variables construction

We extracted variables based on data collected from the crowdsourcing platform. Ideas are classified into three major categories: product, experience, and involvement, which are considered as three different dependent variables to be used in three models. Moreover, some ideas are linked with other already submitted ideas. Based on link of ideas, they are classified into two groups: linked ideas and sole ideas. We used both linked ideas and sole ideas as two dependent variables to compare the ideas of these two groups. The platform management team finally decides to implement an idea after assessing an idea's potential in terms of the company's strategy and customers' benefits. However, an idea is implemented based on some quantitative values which are used as dependent variables here. Table 2 outlines the description of the variables used in the study.

Table 2- Description of variables.

Variables	Descriptions
Dependent variable	
Product	Category of ideas that are product type
Experience	Category of ideas that are experience type
Involvement	Category of ideas that are involvement type
Linked ideas	Group of ideas which are linked with other ideas
Sole ideas	Group of ideas which are not linked with other ideas
Independent variable	
User period of presence	Period from the time of registration of a crowd to a baseline
Ideas submitted	Number of ideas submitted by a particular ideator
Submission to implementation	Period between from the date of idea submission to its date of implementation
Vote submitted by an ideator	Number of votes by an ideator
Vote received on ideas	Number of vote received on ideas
Comments submitted by an ideator	Number of comments submitted by an ideator on the ideas of others
Point earned	Number of points earned by an ideator
Comment received	Number of comments received on ideas
Point on idea	Number of points received on idea

We used the period of presence of an ideator as an independent variable to see how the period of presence of an ideator affects in generating implementable ideas. An idea may get implemented instantly if it is considered as a great idea and easy to implement. Thus, the period from the submission to the implementation of an idea is an important variable that affects an idea to be implemented. An ideator's performance in the eyes of peers on a crowdsourcing platform is indicated by the number of points he or she earned from other crowds. Factors such as the number of ideas, the number of votes, and the number of comments submitted by a particular ideator play a crucial role to assess the activeness of an ideator. On the other hand, an idea is preliminary measured based on some factors such as the number of votes received, the number of points earned, the number of comments received, and the points earned on that idea. Hence, we considered these factors as independent variables. Thus, we have considered nine independent variables to understand their influence on an idea to be implemented.

3.4. Data analysis

We used both parametric (*t*-test and ANOVA test) and non-parametric tests (Mann-Whitney U and Kruskal-Wallis tests) to look for the robustness of the estimated results. The independent sample *t*-test was used to test whether the two groups of ideas – linked and sole ideas – are independent of each other in the obvious sense that they are separate samples containing different sets of individual characteristics. We did ANOVA test to see if multiple means of different variables in three categories of ideas are equal to each other. On the other hand, the non-parametric Mann-Whitney *U* test and the Kruskal-Wallis test were applied to detect whether two or more categories of samples come from the same distribution based on median values under the assumption that the shapes of the underlying distributions are the same. Finally, we applied a multiple regression analysis to identify the determinants of an idea's implementation.

4. Results and analysis

Figure 1 illustrates the number of implemented ideas over a five-year period. Since the platform was launched in March 2008, the figure of implemented ideas for 2008 is of eight months (April to December). The number of implemented ideas remained almost the same in the first two years. In 2010, there was a significant jump in the number of idea implementations and it had increased steadily in the subsequent years.
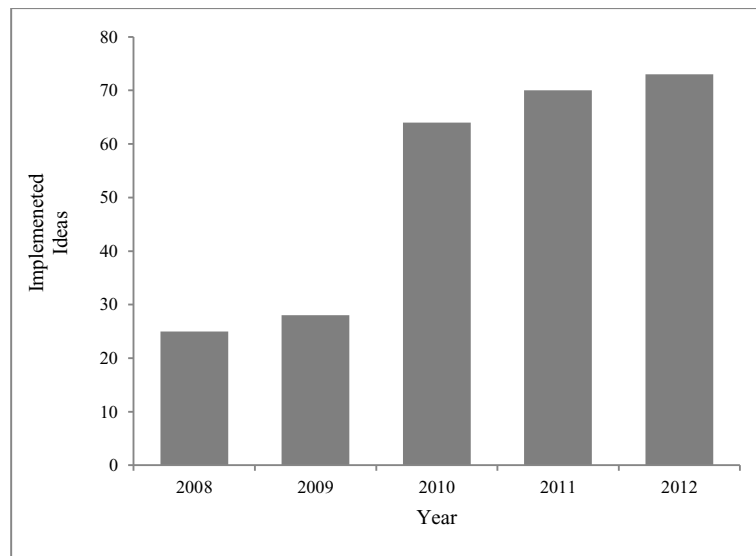

Fig. 1- Trend of idea implementation over years based on Starbucks' record.

Table 3 presents the results of descriptive statistics and correlations between the considered variables. Highly significant positive correlations exist between variables, such as comments submitted and votes submitted; points earned and comments submitted; and points earned and votes submitted. Moreover, variables such as comments received and points of idea, ideas submitted and points earned, vote received and idea submitted are also significantly positively correlated. The period of presence of users has significant positive correlation with variables such as submitted to implement, votes received, comments received, and points on idea. Additionally, the variable vote received is positively related with variables, such as comments submitted, comments received, and points on idea at a significant level. Overall, the correlation matrix shows that there is a considerable number of variables which are highly correlated with each other as we see in Table 3.

Table 3- Descriptive statistics and simple correlation.

Variables	Mean	SD	1	2	3	4	5	6	7	8	9
1 User Period of presence	1516.58	6.3749	1								
2 Ideas submitted	4.40	11.74	0.08	1							
3 Submitted to implement	395.18	378.28	0.29**	0.03	1						
4 Vote submitted	19.32	165.45	-0.10	0.36**	-0.02	1					
5 Vote received	1624.21	5548.41	0.14**	0.57**	-0.01	0.06	1				
6 Comments submitted	2.87	17.30	-0.06	0.53**	-0.02	0.95**	0.18**	1			
7 Point earned	38.19	204.54	-0.04	0.60**	-0.01	0.93**	0.37**	0.94**	1		
8 Comment received	25.28	66.72	0.15**	0.04	0.03	-0.09	0.22**	0.07	0.05	1	
9 Point on idea	5092.89	12432.43	0.17**	0.01	0.06	-0.02	0.3**	-0.02	0.07	0.61**	1

*Notes: **P<0.05; n = 320*

To identify differences across the three categories of ideas – product, experience, and involvement – one-way ANOVA test is used for comparing means of variables including the period of presence in the platform, the total idea submitted, the period from submission to implementation, votes submitted, votes received, comments submitted, point earned, comments received, and point of the idea (see Table 4). Among the three categories of ideas, there are significant differences in the case of seven variables such as the total idea submitted, votes submitted, votes received, comments submitted, point earned, comments received, and point on idea. Additionally, variables such as comments submitted and comments received differ significantly in three categories. On the other hand, variables period of presence in the platform and the period of an idea from submission to implementation have no significant differences in three categories.

Table 4- Results of ANOVA test of three categories of implemented ideas.

Variable	Product (n =255)	Experience (n = 46)	Involvement (n = 19)	Significance (Anova test)
Period of presence in the platform	1504.32	1508.41	1700.89	0.249
Total idea submitted	3.57	8.65	5.32	0.024**
Period from submission to implementation	381.02	465.53	403.11	0.346
Votes submitted	7.05	91.74	7.95	0.060*
Votes received	1383.73	847.90	4683.37	0.043**
Comments submitted	1.12	12.72	2.53	0.000***
Point earned	19.64	134.5	52.83	0.002**
Comments received	19.09	33.46	88.63	0.000***
Point on idea	4123.78	7522.18	12218.95	0.008*

*Notes: ***P<0.01, **P<0.05, *P<0.10*

In addition to the above ANOVA test, we also performed a non-parametric Kruskal –Wallis test to identify the differences of medians among three categories of ideas (Table 5). There are significant differences in terms of four variables such as the period of presence in the platform, the comments submitted, points earned, and comments received (Kruskal–Wallis = 16.67, df =2). In the involvement category, the tenure of crowds on the platform is longer than that of the other two categories. The number of points earned in the product and the experience categories is almost the same whereas it is very high in the involvement category. A Similar pattern is also seen for the comments received variables. For the other five variables used in the model, we have not found any significant difference among the three categories. Both ANOVA and Kruskal-Wallis tests show common patterns in case of the variables such as comments submitted, points earned, and comments received. Moreover, differences between values of medians are very high in case of variables such as votes submitted, votes received, points earned and point on idea. In cases of other variables the differences are negligible.

In terms of linkage, ideas are namely of two groups: sole idea and linked idea. Sole ideas are the ideas which are implemented from a single idea submission. A linked idea is the one that was the result of combination of several submitted ideas which are closely related. We conducted

independent sample *t*-test to compare means of variables between two groups. Of the nine considered variables, five variables differ significantly between the two groups. The five variables are the period of presence in the platform, votes submitted, comments submitted, points earned, and point on idea (see Table 6). However, the two groups of ideas did not differ significantly in terms of total ideas submitted, period from submission to implementation, votes received, and comments received.

Table 5- Idea implementation traits across three categories of implemented ideas.

Variable	Product (n =255)	Experience (n = 46)	Involvement (n = 19)	Kruskal-Wallis x^2 (df = 2)
Period of presence in the platform	1704	1598	1979	5.01*
Total idea submitted	1	1	2	3.17
Period from submission to implementation	326	357	299	0.65
Votes submitted	2	4	6	3.48
Votes received	227	209	912	3.76
Comments submitted	0	1	1	16.67***
Point earned	4	5	10	4.7*
Comments received	8	13	26	10.88**
Point on idea	1230	1320	3860	2.24

*Notes ***P<0.01, **P<0.05, *P<0.10*

Table 6- Results of the independent sample *t*-tests for sole ideas and linked ideas.

Variable	Linked ideas	Sole ideas	Significance
Period of presence in the platform	1465.50	1603.39	0.007***
Total idea submitted	3.85	5.33	0.270
Period from submission to implementation	407.46	374.73	0.460
Votes submitted	6.80	40.35	0.080*
Votes received	1468.36	1833.99	0.520
Comments submitted	1.41	5.31	0.050**
Point earned	23.79	62.50	0.100*
Comments received	23.46	28.34	0.53
Point on idea	6079.43	3762.62	0.06*

*Notes: ***P<0.01, **P<0.05, *P<0.10*

Along with the above *t*-test, we applied non-parametric Mann–Whitney *U* test on significant median differences to corroborate the robustness of our *t*-test (see Table 7). We found significant differences in the following four variables: period of presence in the platform, total idea submitted, votes submitted, and point on idea ($p < 0.05$). In most of the cases of variables, the average values are consistently higher in the group of the sole ideas than that of the linked ideas. For example, the average tenure of users in the group of the sole ideas is more than that of the group of the linked ideas (1857 days versus 1538 days, $p<0.05$). However, there are no significant differences between the two groups in case of variables such as period from submission to implementation, votes received, comments submitted, points earned, and comments received.

Table 7- Idea implementation traits between sole ideas and linked ideas.

Variable	Linked ideas (n =200)	Sole ideas (n =120)	Mann–Whitney Z(U)
Period of presence in the platform	1538	1857	-2.96**
Total idea submitted	1	2	-2.32**
Period from submission to implementation	326	337	-0.82
Votes submitted	2	5	-3.27**
Votes received	234	254	-0.48
Comments submitted	0	0	-0.78
Point earned	4	5	-0.77
Comments received	11	8	-1.0
Point on idea	1535	985	-2.41**

*Notes: **P<0.05*

Table 8- Determinants of idea implementation.

Variables	Implemented idea
Comments received	0.89 (0.37)
Point earned by Ideator	-0.25(0.80)
Votes Received	-8.48(0.00)***
Votes Submitted	-10.91 (0.00)***
Points Earned on Idea	10.16 (0.00)***
Idea Submitted	8.92(0.00)***
R^2	0.86
Adjusted R^2	0.73
F	140.37 (0.00)***

Notes: ***P<0.01

To identify the impact of the determinants on ideation, a multiple regression analysis is conducted and the results are presented in Table 8. The model provides very good fits of data as indicated by the R^2 value. In general, the estimated coefficients for the variables comments received and point earned by users do not reveal any significant relationship between the dependent variables (implemented ideas) and the independent variables. The significant estimated coefficient for votes submitted, points of idea, and idea submitted strongly supports the views that these variables have significant impacts in idea implementation.

5. Discussion

5.1. Implications

This study contributes to the recently growing body of literature on idea generation through online crowdsourcing platform. The results yield some insightful findings for scholars and practitioners alike. Involving crowds on an online platform for ideation is apparently considered as a simple task. However, only a small portion of total submitted ideas is implementable as we find that in the considered platform, one out of 500 ideas is implemented. This finding is similar to the results of Stevens and Burley (1997) who found that only one out of 3000 ideas ultimately becomes commercially successful. Hence, scholars need to develop frameworks so that managers can reduce the ratio between submitted ideas and implemented ideas. Although the possibility of an idea to be implemented primarily depends on the crowd's opinions, the ultimate decision for idea implementation remains in the hands of management team. Thus, best ranked ideas by crowds may not get implemented. However, crowds' contributions on a particular idea help the managing team to narrow down promising ideas from a large number of submitted ideas.

The tenures of crowds whose ideas have been implemented are almost the same in the three categories of ideas. However, ratio between implemented ideas and submitted ideas is lower in the product category than the other two categories. Thus, we can conclude that ideas of product category get implemented easily. Managers need to spend huge amount of time throughout the process to pick a tiny portion of implementable ideas from a large pool of ideas. Several previous studies also have confirmed this dilemma (Di Gangi and Wasko, 2009; Jouret, 2009; Bayus, 2013). However, crowds do not need to spend significant amount of time to come up with an idea as they inherit ideas from their first-hand experiences in Starbucks outlets.

We found that, even though the number of crowds grows significantly over time, the number of implementable ideas does not grow in the same pace (Figure 1). Thus, this finding corroborates results of some previous studies (Bayus, 2013; Westerski et al., 2013). Number of implementable ideas increased sharply at the early stage of a platform and that grows very steadily at the later stage. Idea implementation is greatly influenced by factors such as the number of comments submitted by crowds and the number of comments received on an idea.

Among three categories of ideas, the ideas of product category get implemented with lower score of the considered variables than that of ideas of the experience category, whereas ideas of the involvement category needed to gain highest values in cases of most of the considered variables. Linked ideas get implemented with lower score than that of sole ideas. The possibility of an idea to get implemented largely depends on votes received by, and point earned on that idea. Embracing crowdsourcing especially by large firms which involve with consumer products is essential for some compelling reasons. Crowdsourcing is not only useful for idea generation but also valuable for other activities such as marketing, strategy, and appropriate product and service development.

Early engagement of management team to keep potential ideas for further actions from the crowd may reduce irrelevant ideas to remove from discussions. Small firms may find difficultly to attract crowd to their platforms because it costs considerable amount to spread the news about crowdsourcing platforms. However, small firms can use intermediary platforms for crowdsourcing ideas.

5.2. Limitations and outlook

Some limitations of this study and the directions for future research are as follows. *First*, data were extracted from a selected website by visiting each implemented idea as recorded on the platform. The necessary and available information may not be accurately recorded. Online survey with appropriate scales and structured questionnaires would be valuable to consider in future studies. *Second*, the data were collected from a single website; hence it may not be generalizable. Comparative studies considering two or more similar platforms could be noteworthy for future studies, the results of which may be generalizable to a great extent. *Third*, personal traits of the users are not considered in this study. Future studies may explore personal traits that lead to submit implementable ideas. Here, by personal traits we mean crowds' education, age, level of income, personal orientation, skills, employment status, profession, passion, etc. *Fourth*, to what extent involving crowds for idea generation brings benefits (financially, image, and other terms) for firms is necessary to explore.

Starbucks is one of the large-scale platforms to interact with their customers. Some critics argue that ideas generated on online platforms are not worthy since it takes a large number of employees to engage in idea selection process and it is costly (Schwab, 2011). Hence, future studies can take steps to prove or disprove if it is worthy for firms to use platforms to get ideas from crowds.

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