

User Ideation on Online Platforms: A Case Study of My Starbucks Idea

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Abstract

The objective of this study is to understand how ideas are selected and implemented from a large pool of ideas submitted by users on a firm’s 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, 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 highest. Linked ideas need lower score than sole ideas to get implemented. The chance that an idea to be implemented largely depends on vote received by and point earned on that idea. The numbers of vote received and of earned point by a user significantly motivate him/her to submit implementable ideas.

Keywords: Crowdsourcing, idea generation, idea implementation, online platform, open innovation

Introduction

Business environments are becoming increasingly competitive. Consequently, firms are increasingly seeking new ways of idea generation (Westerski, Dalamagas & Iglesias, 2013). The Internet serves as an important way for firms to collaborate with customers for innovation (Sawhney, Verona & Prandelli, 2005). The importance of customers’ interaction for innovation is not a new phenomenon but the widespread availability of the Internet has significantly increased the firms’ ability to interact with customers. It is important for firms to recognize the significance of social interactions and communities in knowledge creation on crowdsourcing

platforms (Sawhney & Prandelli, 2000). Crowdsourcing has been defined in many ways (see Estellés-Arolas & González-Ladrón-de-Guevara, 2012)

Studies on user involvement for ideation have two major groups: user innovation and open innovation (Bogers & West, 2012). One stream of open innovation implementation is online open innovation communities where crowds submit ideas (Dahlander, Frederiksen & Rullani, 2008). Crowdsourcing ideas through online platforms seem to have great promise for ideation. Firms, irrespective of small or large, are increasingly collaborating with external sources (Chesbrough, 2003; Dahlander & Wallin, 2006). On online platforms, users not only interact with firms but also interact among themselves. Cisco, Dell, Microsoft, Nokia, Proctor and Gamble, Starbucks and Unilever are actively using online 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).

There are broadly two ways to solicit ideas from external sources on online platforms: (1) idea contest – calling external individuals to submit ideas within a time period, selecting and awarding best ideas, and (2) ideation with continuous dialogue between firms and external individuals. In ideation with continuous dialogue between ideators and firms, ideators do not need to have high skills and expertise rather they can propose ideas from 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 (Hossain, 2012a). The ICTs with related tools and features have not only accelerated the quantity but also quality of idea generation. Moreover, active users can be identified and enthused in ideation process to find more relevant ideas.

Researchers and practitioners are advocating for open approaches through engaging external individuals on platforms for innovation and ideation. Submitted ideas are finally evaluated by selection teams and the process of idea evaluation is very difficult especially when unimaginably

large number of ideas is generated in a short span of time (Jouret, 2009). Sometime, some excellent ideas may not be implementable by a firm (Martínez-Torres, 2013).

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 crowd are the appropriate ones (Boudreau & Lakhani, 2013). A common belief to engage professionals for idea generation is that they have the experience and expertise to bring out promising ideas. However, high familiarity of an individual with a problem may blocks creativity and identification of novel solutions (Franke, Poetz & Schreier, 2013; Wiley, 1998).

Integrating customers or 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). Despite the high importance of idea generation process at the firm level, researchers have limited insights into this arena (Poetz & Schreier, 2012). How to identify best ideas and the users who are active in submitting implementable ideas is limitedly known (Kristensson & Magnusson, 2010). The knowledge about individual's ideation is also sparse (Adamczyk, Bullinger & Möslin, 2012; Bayus, 2013; Natalicchio, Messeni Petruzzelli & Garavelli, 2013). However, Schulze and Hoegl (2008) believe that how the process of idea generation is conducted effectively is a crucial issue for both researchers and practitioners. Hence, the objective of this study is to understand how ideas are selected and implemented from a large pool of ideas submitted by users on a firm's online crowdsourcing platform.

Theoretical Perspectives

The integration of customers as part of external innovation processes is crucial for firms (Enkel, Gassmann & Chesbrough, 2009). In a study, 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 also found 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 platforms with continuous dialogues between firms and users, 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. The platform management team of a particular firm directs the overall ideation process so that an idea is refined, highly voted, 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.

Increasing digitization and decreasing cost for communication have brought an exponential growth of online platforms for ideation (Mahr & Lievens, 2012). In general, online crowdsourcing platforms of large firms receive numerous ideas from various individuals. However, the number of implementable ideas is very limited. Hence, most of those ideas remain unimplemented. In many cases, huge amounts of information submitted by individuals have negative effect in the identification of potential implementable ideas and a poorly managed online platform may result in a fiasco for ideation (Di Gangi, Wasko & Hooker, 2010). Prior studies pointed out that if a firm is not able to attract right users who could provide valuable ideas, the successful idea generation is impossible (Piller & Walcher, 2006). In order to increase the engagement of individuals on platforms, active participation of the organizing team is essential. Only a small number of the members provide valuable ideas, and majority of the members are involved with activities such as making comments, casting votes and providing suggestions. However, receiving votes, comments, suggestion or any other type of attention to an idea motivates the originator of that idea to contribute more.

Idea generation, in many cases, goes far beyond the imagination of customers. 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). They find difficulties to deal with enormous number of ideas that are received from the crowd. A large number of ideas from external individuals raise also 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 demonstrate that only one out of 3000 ideas ultimately becomes commercially successful.

Assessing ideas to select appropriate ideas is a daunting 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 it received. Active users spend a significant amount of time to submit ideas, discuss, vote, and comment, among others. 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).

Users' motivation 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 idea submission, voting, commenting, discussing, etc. Online platforms of many large firms are based primarily on intrinsic motivation. Apple, for example, has turned towards crowds to propel its growth. Starbucks' My Starbucks Idea, IBM's Global Innovation Jam, and Dell's IdeaStorm are highly popular online platforms which are based on intrinsic motivation. 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).

Materials and Methodology

Description of the Case Platform

My Starbucks Idea is an online platform where customers can submit their ideas, vote and make comments on others' submitted ideas. It is a place of interaction between Starbucks and its customers to improve the organization as a whole. It was launched in March, 2008. This brand-sponsored platform provides customers opportunities to express their views to improve offerings. Anyone can register to join in the platform with valid credential in free of cost. As on August 20, 2013, customers have submitted 162,156 ideas (Table 1). Submitted ideas are broadly classified into three categories: Product, Experience, and Involvement. Users discuss, debate, argue on various topics related with Starbucks' products and services.

Insert Table 1 about here

Platform management team provides comments to lead discussion and other activities to the right direction so that the community emerges with 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 crowds and the firm's evaluation. Under the frequently asked questions (FAQ) part of the platform, Starbucks has mentioned clearly about 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).

Data Collection

The implemented ideas are separately listed on the platform. The necessary and possible information related with each implemented idea are extracted from the website by visiting each idea link individually and related information was extracted manually. The majority of the implemented ideas (320) are of product category (255) followed by the experience category (46) and the involvement category is the lowest among the three with 19 implemented ideas. 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 users 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 user's involvement with the online community, we subtracted the date of registration of a user, whose ideas were implemented, from the date August 1, 2013. This later date is assumed as a bench point to understand the relative period of a user involvement with the platform.

Data Analysis

We used both parametric (t -test and ANOVA test) and non-parametric tests (Mann-Whitney 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 categories 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 three or more groups 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 and a simple regression analysis.

Result and Analysis

The following figure 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 same in the first two years. In 2010, there was a significant jump in idea implementation and it had grown steadily in the subsequent years.

Insert Figure 1 about here

Table 2 presents the results of descriptive statistics and correlations of the considered variables. Highly significant positive correlations exist between variables, such as comments submitted and votes submitted ($r_{4,6} = 0.95$); points earned and comments submitted ($r_{6,7} = 0.94$); and points earned and votes submitted ($r_{4,7} = 0.93$). Moreover, variables such as comments received and points of idea ($r_{8,9} = 0.61$), ideas submitted and points earned ($r_{2,7} = 0.60$), vote received and idea submitted ($r_{2,5} = 0.57$) are also significantly positively correlated. The period of presence of users has positively significant with variables, such as submitted to implement, votes received, comments received, and points on idea. Additionally, the variable vote received is positively related with the variables, such as comments submitted, comments received, and points on idea at significant level. Overall the correlation matrix shows that there are a considerable number of variables which are highly correlated with each other as we see in Table 2.

Insert Table 2 about here

To identify differences across the three of categories ideas such as product, experience, and involvement (Table 3), one-way ANOVA test is used for comparing means of variables including period of presence in the platform, total idea submitted, period from submission to

implementation, votes submitted, votes received, comments submitted, point earned, comments received, and point of the idea. Among the three categories of ideas, there are significant differences in case of seven variables such as total idea submitted, votes submitted, votes received, comments submitted, point earned, comments received, and point on idea. Additionally, such variables as comments submitted and comments received differ significantly in three categories. On the other hand, variables period of presence in the platform and period of an idea from submission to implementation have no significant difference in three categories.

Insert Table 3 about here

In addition to the above Anova test, we also performed a non-parametric Kruskal–Wallis test to identify difference of medians between three categories of ideas, (Table 4). There are significant differences in terms of four variables such as period of presence in the platform, comments submitted, point earned, and comments received (Kruskal–Wallis $\chi^2 = 16.67$, $df = 2$). In the involvement group, the tenure of users on the platform is more than that of the other two groups. The number of point earned in the product and the experience categories is almost same where it is very high in the involvement group. Similar pattern is also seen for the comments received variable. For other five variables used in the model, we have not found any significant difference among the three groups. Both Anova and Kruskal-Wallis tests show common patterns in case of the variables such as comments submitted, point earned, and comments received. Moreover, the difference between values of medians and means are very high in case of variables such as votes submitted, votes received, point earned and point on idea. In the case of other variables the differences are negligible.

Insert Table 4 about here

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 period of presence in the platform, votes submitted, comments submitted, point earned, and point on idea (Table 5). 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.

Insert Table 5 about here

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 (Table 6). We find significant difference in four variables such as 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 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.

Insert Table 6 about here

A regression analysis is performed and the results are presented in Table 7. The model provides very good fits of data as indicated by the high 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 variable (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.

Insert Table 7 about here

Discussion

Implications

This study contributes to the recently growing body of literature on user involvement in idea generation through online platform. The results yield some insightful findings for scholars and practitioners alike. Involving users 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. Hence, scholars need to find frameworks so that managers can reduce the ratio between submitted ideas and implemented ideas.

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. In contrast, users 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 especially in a case where ideas are created through continuous dialogue.

Even though the number of community members grows significantly over time, the number of implementable ideas does not grow in the same pace (Figure 1). 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 number of comments submitted by a user and number of comments received on an idea.

Among three categories of ideas, 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 need to gain highest values in case 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 vote received by, and point earned on that idea. Vote received and points earned by an idea creator significantly motivate him/her to submit implementable ideas.

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. Personal traits of the users are not considered in this study. Future studies may explore personal traits of the users that lead to submit implementable ideas. Here, by personal traits we mean users' education, age, level of income, personal orientation, skills, employment status, profession, passion, etc. among others. To what extent involving users 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 the 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 step to prove or disprove if it is worthy for firms to use platforms to get ideas from users.

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The list of Tables and Figures

Table 1: List of ideas submitted by customers (total ideas: 162,156)

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)

Table 2: Descriptive statistics and simple correlation

<i>Variables</i>	<i>Mean</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>
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: ** $P < 0.05$; $n = 320$

Table 3: 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: *** $P < 0.01$, ** $P < 0.05$, * $P < 0.10$

Table 4: Idea implementation traits across three clusters of ideas

Variable	Product (n =255)	Experience (n = 46)	Involvement (n = 19)	Kruskal-Wallis χ^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 5: 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: *** $P < 0.01$, ** $P < 0.05$, * $P < 0.10$

Table 6: 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	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 7: 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: *** $P < 0.01$

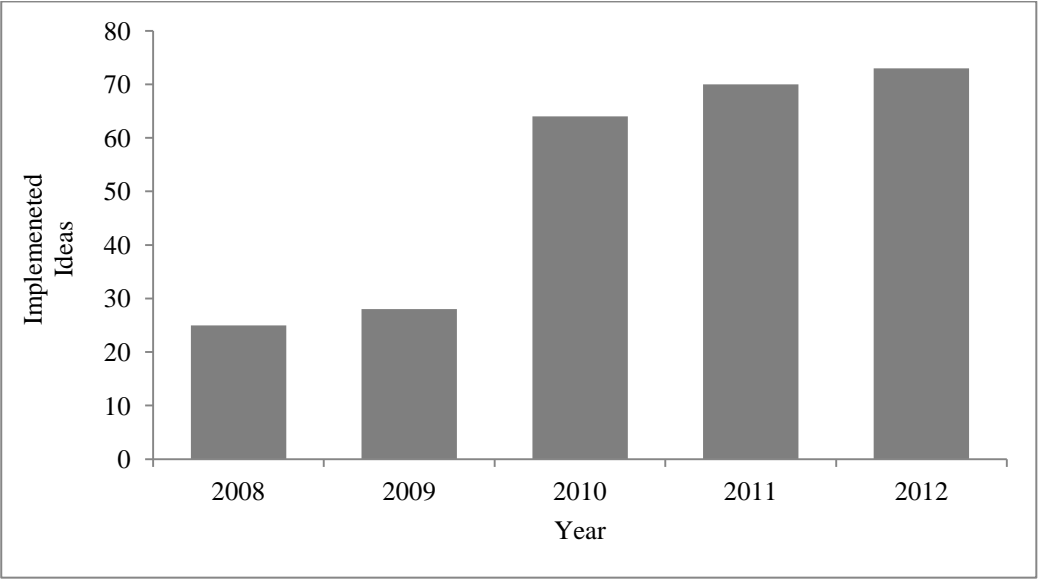


Figure 1: Trend of idea implementation over years based on Starbucks' record