Motivation for Participation in Ideas Competitions: Empirical Insights from the SAPiens Case

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Abstract: This paper reports on an empirical analysis regarding motives of participants of the SAPiens ideas competition. The results reveal that motives of participants can be reduced to four factors: Hedonism, self-marketing, compensation and identification. Furthermore, the results indicate that compensation motive was rated most relevant by particpants. Understanding participants' motives it will be possible to design adequate incentives that will increase participation. So, based on the empirical findings, the paper delivers an expertise for the technical as well as organisational design of ideas competitions.

Keywords: ideas competition, motivation, incentives, empirical study

1 Introduction

In the 20th century, many leading industrial companies generated, developed and commercialized ideas for innovations in self-reliance. Nowadays, companies are increasingly rethinking the fundamental ways managing their innovation activities. According to Chesbrough's open innovation paradigm, overcoming company's boundaries in order to open up for other resources for innovation becomes more and more important [Ches06]. In this context customers are seen as one of the biggest resource for innovations [Ches06]. Customer integration into innovation activities is a strategy of value creation in which customers are taking part in innovation value creating activities. Especially software companies profit from this strategy because software users often have rather high product expertise, knowledge and creativity potential, which they gained by regular software usage and is hardly accessible for most companies.

In literature and practice certain practices for integrating customers into the early stages of the innovation process, where ideas for innovations were gener-ated, are discussed. These are e.g., the lead-user method, Internet-toolkits, and ideas competitions. Especially ideas competitions are an emerging popular strategy in order to generate and foster ideas for innovations from customers.

Although ideas competitions sound like a familiar method to get access to customer ideas there is only limited research that studied this customer integration practice in detail [Ern04], [Toub05]. The limited literature on ideas competitions lack studies that focused on the motivation of participating customers. Understanding motives of participants it will be helpful for organisers, namely the companies, choosing the right set of incentives that in turn will be an important influencing factor for the participation. Incentives can be implemented through certain design elements of ideas competitions, which became manifested in both organisational aspects (e.g., the determination of the level of prices) and technical aspects (e.g., the functionalities offered on the competition's Internet platform). So, understanding participants' motives one can gather important requirements for the design of an ideas competition.

Filling this gap this paper seeks to explore the motivation factors that make consumers participate in ideas competitions. The findings can be used as an expertise for the technical as well as organisational design of ideas competitions. As IS literature forces the necessity of modern computer-based environments enabling innovation and creativity processes [Shne00] our findings will deliver insights for the design of adequate IT environments or at least for the improvement of existing IT environments of ideas competitions, for example.

The proceeding of this paper is as follows. As research on innovation management shows a lack of studies on consumer motives for participating in ideas competitions we first researched possible motives that make people participate in such competitions. We extracted relevant motives from a literature review. We then analysed empirical data that we gained from an online survey conducting among participants of the Internet based ideas competition SAPiens. This analysis gives insights, which motives have been rated most relevant by participants of the SAPiens ideas competitions.

2. Theoretical Background

2.1 Ideas Competition

An ideas competition can be defined as an invitation of a company to its customer base to submit innovation ideas to a certain topic within a certain timeline. An idea-reviewers committee evaluates these contributions and selects the winner [Ebne08], [Walc07]. In conducting ideas competitions firms aim to integrate customers in the process of gaining and generating innovation ideas in the early phases of the innovation process. So, ideas competitions expand the scope for gaining new ideas. The inherent competition character that is forced by the award of the best ideas shall encourage participants' creativity as well as quality of submissions.

As mentioned above research on ideas competitions in the context of customer integration in innovation processes is limited. But in practice ideas competitions began to become an elaborate strategy for software companies integrating customers in innovation activities. There are some prominent examples: In 2006 IBM invited customer as well as employees to their ideas competition called "Innovation Jam". More than 140.000 participants from around the world joined the Innovation Jam that affords more than 46.000 ideas. The best ideas resulted in varied projects as software applications and services for micro-finance institutions. Motorola and Fujitsu Siemens are only two further examples of computer firms that run ideas competitions in order to integrate customers in innovation activities.

From finished ideas competitions, some major trends and best practices can be deduced. Typically, tasks are kept generic, offering participants a large solution space in which to submit their ideas. Submissions in the initial phases of idea competitions include a brief description of ideas limited in length to five DIN A4 pages. Incentives for customers' activation and consequently participation often comprise cash prices of up to 1.000 Euro. The idea evaluation process is carried out by juries. The typical duration for an idea competition is between 4 to 26 weeks.

In practice, ideas competitions for integrating customers into the innovation activities of a firm very often occur as Internet based ideas competitions, where ideas can be submitted via an Internet toolkit. After submission the ideas are presented on the Internet platform and can be regarded, discussed or even evaluated by other participants during the duration of the competition. For firms Internet technology facilitates the realisation of an ideas competition, as the Internet provides access for a larger group of customers and facilitates submission of ideas for participants. To sum-up, Internet applications lower the efforts and costs for participants as well as for organisers [PiWa06].

2.2   What Causes Participation in Ideas Competitions? Insights from Motivational Theory

Participation in ideas competitions depends on attendees' motives. In the research field of motivation psychology, a motive is seen as an individual's psychological disposition [vonR03]. A relatively stable set of motives is developed during an individual's socialization process [HeHe06]. In a particular situational context, an adequate motive will be activated and subsequently cause a certain behaviour. A situational context as whole or certain parts of it, that an individual perceive, will serve as incentive that stimulates corresponding motives. Rosenstiel [vonRo03] describes the activation of human behaviour in a simple model, illustrated in figure 1.
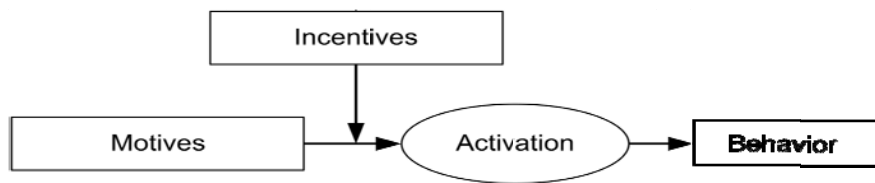
Figure 1: Motivation Model, adapted from [vonR03]

In order to explain why people participate in ideas competitions one can drawn on this motivation model. So, ideas competitions or certain parts of it like the prospect of winning a price can be interpreted by a customer as the mentioned incentive that activates this person's individual corresponding motive and then finally lead to participation.

But what are possible motives that can be stimulated by ideas competitions or certain elements of an ideas competition, e.g., the announced price, which finally lead to participation? A review of the scientific literature is helpful in order to extract motives that are relevant in this context. We conducted a search for relevant motives in the scope of a literature review. Its results will be presented in chapter 4.

3   The Case Background: The SAPiens Ideas Competition

SAPiens was an Internet based ideas competition initiated by the ERP software producer SAP. The ideas competition was run in summer 2008 over a period of 14 weeks and targeted users of SAP software. The users were randomly selected. These invited SAP users were asked to submit ideas that improve the SAP software or that bring out radical innovation in the scope of the SAP software. So, there were no limits concerning task specification.

Ideas had to be submitted via an Internet toolkit that was designed and implemented especially for the SAPiens ideas competitions and could be visited only after registration. Each submitted idea, phrased in a maximum length of a DIN A4 page, was visualised during the runtime in an idea pool, a separate section of the online platform. After the runtime of the competition submissions were evaluated by a qualified jury committee consisting of 10 SAP experts. The first 10 best ideas were assigned by lucrative cash prices as well as nonmonetary prices worth 6.000 euro in total. Figure 2 shows the homepage of the online platform that supported the SAPiens ideas competition.

During the runtime of SAPiens 127 SAP users visited (after registration) the SAPiens website. Of those users, 39 actively participated in the competition by submitting at least one idea. The contributors submitted 61 ideas in total. The rest out of 127 registered SAP users participated in just scoring and commenting submissions of other users or simply lurk. The comments and user evaluations were a helpful measure in the later evaluation phase when the submissions were evaluated and discussed by the 10 jury members. Evaluations and feedback from other users helped the ideas presenter to refine their ideas during the runtime of SAPiens.
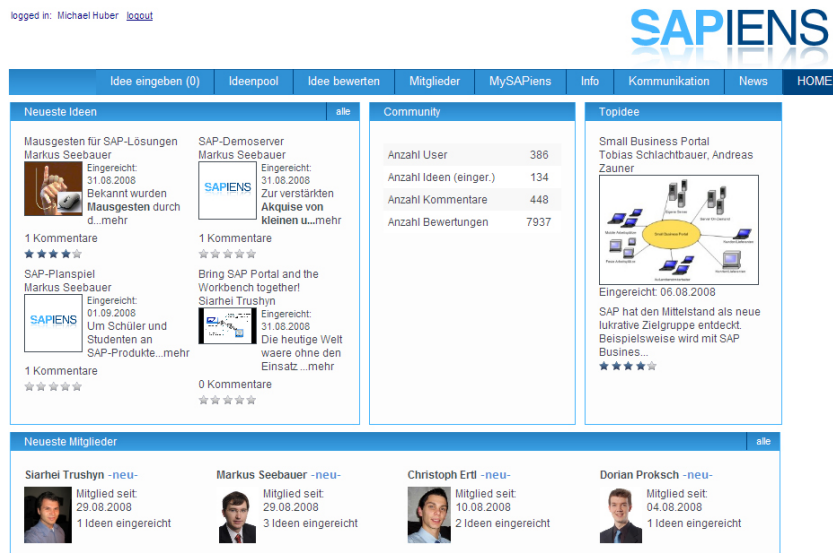

Figure 2: Screenshot of the homepage of the SAPiens online platform

4 Motives for Participation in Ideas Competitions: A Literature Review

There are certain activities and behaviours that some people naturally like to engage in, such as playing games or collecting coins. Deci calls this intrinsic motivation, because the underlying motives are stimulated by an inborn feeling, which again are activated in the above mentioned situational context [DeRy85]. So, these so called intrinsic motives are directly stimulated by an individual's inborn feeling and indirectly by the situational context. Intrinsic mo-tives can be seen as a class of motives that contains several motives. Three of them are relevant for the context of ideas competitions. The first motive is fun. Fun is a prominent motive studied in several open source motivation studies, e.g., [HaOu 02], [LaWolf05], and [Oste02]. In open source context, the fun motive is described as having fun or enjoying one-self when programming. Applied to ideas competitions the fun motive is manifested in having fun in developing ideas.

The second motive out of the class of intrinsic motivation is intellectual stimulation. Equal to the motive fun, the intellectual stimulation is studied in open source context. Raymond describes programmers who are motivated by this factor for engaging in open source communities as people "…who enjoys the intellectual challenge of creatively overcoming or circumventing limitations" [Raym96]. In their study [LaWolf 05] found out that the top single reason to contribute to open source projects is based on intellectual stimulation. Applied to ideas competitions developing ideas for participants is intellectually stimulating.

The third motive out of the class of intrinsic motivation is pride. While the motive fun relates to the activity of doing something pride of authorship refers to the result of it. Pride is discussed in the field of motivational psychology as an important factor of motivation [Hart85], [LeWe97], [Wein85]. Franke/Schreier researched pride as factor that stimulates customers using toolkits for user innovation [FrSc02]. Franke/Schreier called this motive pride of authorship, which can be applied in the context of Ideas Competitions, too.

Beside the motives that belong to the class of internal motivation there are several other motives, which do not arise from an individual's inborn desire. They arise directly from external stimuli that can be interpreted as the above mentioned situational context. These motives can thus be categorised into the class of so called external motives [DeRy85]. Some of them are relevant for the purpose of this study and are described in the following.

An important motive considered in studies that explore motivations of participants of sport competitions is "direct compensation", e.g., [DuWh98], [Ryan84], [VaFo98]. In sport events direct compensations become manifested in monetary and/or nonmonetary, e.g. medals or cups, prizes for the three best participants. Due to its competitive character, Ideas Competitions are also prized with monetary winnings as well as nonmonetary winnings for the best rated ideas. So, direct

compensation is also an important motive that has to be considered in the context of Ideas Competitions.

Another motive out of the class of external motives that typically related to sport competitions is the so called social motive, e.g., [DuWh98], [Ryan84], [VaFo98]. The social motives contains expected reactions of significant others, such as friends or the audience. Motivation to contribute to a competition should be higher the more positive the expected reactions of significant others are, weighted by the perceived importance of these significant others. This relation is formally expressed as a multiplicative function. Applied to Ideas Competitions participants expect positive reactions from other participants and the organizer. These reactions by thirds may be caused by the submitted ideas displayed on the Internet platform during the runtime. It should be noted, however, that the term "social motives" can be misleading because there are other motives that can be considered as "social" as well and that are not included in this concept, such as making new friends or socializing with others.

Furthermore, people may consider participating in ideas competitions as an effective way to demonstrate their capabilities and skills shown through their submitted ideas. Their achievements in ideas competitions can be used to demonstrate competence to the organizer of the Ideas Competitions or others. Reactions by the organiser may be caused on the basis of submitted ideas. Participating in Ideas Competitions, therefore, can be a good channel for self-advertisement for those seeking new job opportunities. This phenomenon is mainly discussed in the field of researching motivations of open source programmers as self-marketing motive, e.g., [HaOu02], [Hert03].

In different fields, identification is examined as a motivational factor. In the context of open source communities identification is a reason for programmers engaging in open source communities when other participants sharing some-one's aims, ideals, etc. [HaOu02], [Hert03], [LaWo05], [Oste02]. [KeBr95] as well as [Simo98] used identification in order to explain why people engage in social movements of specific social groups such as older people, women, etc. Applied to ideas competitions, people may regard for participating because they feel aligned to the organising firm of the ideas competition in a manner that marketing science characterises as customer's brand loyalty or company awareness [Aake97]. So, identification with the organising firm is a motivational factor worth to be include to our survey.

5 Methodological Aspects and Sampling of the Empirical Study

The purpose of the empirical study is to find out which of the identified motives are mostly relevant from a SAPiens participant's point of view. Since perceived motivation-related issues only can be expressed by the participants of the SAPiens idea competition themselves, conducting a standardised survey was the best method. We choose an online survey. Multiple items were formulated for each motive as shown in Table 1. Using a rating scale ranging from 1 (totally disagree) to 5 (totally agree), participants were asked to rank the degree to which extent a motive makes him or her participate in the SAPiens ideas competition.

The questionnaire used in this study was structured, tested and consequently adapted to the needs of the target audience. The questionnaire was pre-tested by 10 experts pursuing doctoral and Master's degrees in information technology and business administration. In addition, an online pre-test was carried out to control the content and functionality of the questionnaire. The objective of the two pre-tests was to ensure that none of the items was ambiguous and that the items adequately captured the domain of interest. Expert opinion indicated that the content of the scales was valid.

The questionnaire was implemented using the online-survey service "2aks". Each participant was provided with a personalized link to the online survey. The survey was administered over a period of five weeks and was sent to all 39 participants of the SAPiens ideas competition that submitted at least one idea. Thirty-two participants provided answers to the questionnaire which represents a 82.05% response rate.

With 71.88 % (n = 23), men were overrepresented in the sample. 78.13 % (n = 25) of the respondents were between 20 and 25 years old.

Motives	Items *I attended the SAPiens ideas competition because…*
Fun	… I have fun and enjoyment in working out creative solutions and ideas. *(fun1)*
	… I perceive composing creative ideas as exiting. *(fun2)*
	… I take much pleasure in being creative. *(fun3)*
Intellectual stimulation	… I'm intellectually challenged by developing creative ideas. *(stimu1)*
	… I'm stimulated by generating creative ideas. *(stimu2)*
Pride of authorship	… I take pride in completing an achievement. *(pride1)*

	… I feel pleased and satisfied after being creative. *(pride2)*
Direct compensation	… I hoped to win one of the prices. *(comp1)*
	… I hoped to get compensated when submitting an idea. *(comp2)*
Social motive	… I hoped that the jury members would appreciate my idea(s). *(socmo1)*
	… I hoped that other participants would honour my idea(s). *(socmo2)*
	… I hoped that SAP would value my idea(s). *(socmo3)*
Self-marketing	… I hoped that I could work for SAP after completing my university program. *(self1)*
	… I hoped to call attention to SAP. *(self2)*
	… I hoped to convince SAP of my skills and abilities. *(self3)*
Identification with the organising firm	… I identify with the SAP brand. *(ident1)*
	… I'm into SAP and because of that I wanted to support SAP. *(ident2)*

Table 1: Operationalisation of motives

6 Empirical Findings

6.1 Factor Analysis Findings

We pre-analyzed the items with the statistical software program SPSS 15.0. In order to test validity of our operationalisation we conducted a factor analysis. After two iterations the factor analysis revealed four factors. The results after the second iteration are shown in Table 3 in the section "appendix" of this paper.

The aim of the first iteration was to assure the adequacy of the further factor analysis of every single item as well as the rotated component matrix as a whole. We used the MSA test statistic for measuring sampling adequacy. As the MSA values for the items pride2 and stimu2 were < 0.5 (0.491 respectively 0.461) we eliminated these items in the second iteration according to Cureton and D'Agostion's recommendation, who deemed that items achieve sampling adequacy if values are equal or exceed the criterion of 0.5 [CuDA83]. After the second iteration all MSA values were > 0.5.

The reliability of the factor was checked using Cronbach's alpha. A Cronbach's alpha of 0.7 or higher [Nun78m] was used as an acceptable value for internal consistency of the measure. The Cronbach's alphas of the four factors range from 0.784 to 0.8893. These values support the contention that all the factors had adequate reliability. The reliability of the factors is shown in Table 3 (appendix).

After the second iteration the factor analysis resulted in four factors with eignvalues higher 1 (varimax rotation). The four major components explain a total of 69.952 % variance. The first factor explained 30.353 % variance. It was mostly determined by all items that represent the expected motive fun as well as the items stimu1 and pride1. As suggested above, intrinsic hedonistic motives seem to be a relevant factor making respondents participating in the SAPiens ideas competition. Furthermore, the item socmo2 load on factor one. Because of the fact that this new factor is determined mostly by hedonistic related motives as well as the fact that the left item socmo2 is relatively poorly valued (factor loading 0.627) factor one can be called hedonism.

The second factor explained 23.739 % variance and mostly was determined by all "self-marketing" items. As assumed the self-marketing motive is highly relevant. As the results in Table 3 (appendix) show the item socmo3 (which represents appreciation by others) also load on this factor. This result seemed to be not surprising as self-marketing is going hand in hand with appreciation. According to [LeTi02] self-marketing only become relevant when others appreciate someone's signals, which in this case are manifested in the ideas participated by submitters. Following this argumentation we will accept including the item socmo3 into the component self-marketing.

The third factor explained 11.307 % variance. It mostly was determined by all the items representing the motive "direct compensation". As Table 3 (appendix) shows, socmo1, which is manifested in appreciation, load also on factor three. As appreciation can be interpreted as an indirect compensation, this factor can be interpreted as compensation.

Finally, the fourth factor which explained additional 4.553 % variance was mostly determined by the supposed identification items (ident1 = 0.871 and ident2 = 0.767). As supposed, identification with the organisers seemed to be an independent motive of the SAPiens participants.

6.2   Descriptive Findings

In order to identify the accumulated parameter values for hedonism, self-marketing, compensation, and identification, which indicate participants' perceived relevance concerning each of these motivation factors, we accumulated (non-weighted) means of each factors' corresponding item. According to [BoDö02] it is feasible to calculate accumulated means for each factor by simply adding up them non-weighted if factor loadings are homogeneous. As the bold

values in Table 3 (appendix) indicate factor loadings fulfill this condition. The following Table 2 shows accumulated means for the factors hedonism, self-marketing, compensation, and identification that has to be interpreted in the light of the above mentioned rating scale ranging from 1 (totally disagree) to 5 (totally agree).

Factor		Mean	Accumulated Means
Hedonism	Fun3	4,063	3,9585
	Fun1	4,219	
	Fun2	4,156	
	Stimu1	3,719	
	Pride1	4,281	
	Socomo2	3,313	
Self-Marketing	Self1	3,750	3,73425
	Self2	3,500	
	Self3	3,531	
	Socomo3	4,156	
Compensation	Comp2	3,750	4,0103
	Comp1	3,875	
	Socomo1	4,406	
Identification	Ident1	3,250	3,5155
	Ident2	3,781	

Table 2: Accumulated Means

7   Implications and Recommendations

The purpose of this empirical study was to explore participants' motives for engaging in ideas competitions. Overall, the results suggest that the motives of SAP users participating in the SAPiens ideas competition can be categorized into the four major motivation factors hedonism, self-marketing, compensation, and identification.

As table 2 reveals the factor compensation was rated highest. This finding indicates that compensations, such as cash prizes or nonmonetary rewards, are the most prominent reason why participants engage in the SAPiens ideas competition. Our findings mirrors research results from [Walc07] who also identified prices

and awards as the most important motive. Obviously, compensations, such as cash prizes or nonmonetary rewards, are organisers' most important manipulating variables for increasing potential attendants' willing to participate in ideas competitions.

Respondents rated hedonism as second most important motive. This result overlaps with insights gained from open source motivation research. For example, [HaOu 2002], [Hert03], as well as [LaWo05] identified in their studies hedonism related motives, like fun etc., as prominent reasons why programmers participate in open source communities. So, when designing ideas competitions firms should take into account that hedonism is an important factor that would make customers participate. Thus, firms have to establish organisational structures or design elements in ideas competitions that serve participants fun in "generating ideas". For example, external experts that will support participants when generating ideas in the manner of a ghost-writer would be an adequate design element in this context.

The relatively high value of the motive self-marketing (compare table 2) indicates that participants of the SAPiens ideas competition seek to advertise their skills and capabilities to SAP. Thus, organisers of ideas competitions should procure possibilities that optimally display and represent participants' skills and capabilities. For example, implementing a separate profile-section on the Internet platform of an ideas competition, that displays participants' vita, competencies etc., would be fruitful in this context.

As our results show, participants of the SAPiens ideas competition were also motivated participating in the SAPiens ideas competition because they identify with SAP (identification motive). This result suggests that ideas competition can also function as channel for a firm to get in direct contact with the customer. So, organisers should play an active part in ideas competitions, for example by commenting or giving feedback to participants' ideas, speaking with participants as much as possible etc. These measures would strengthen customer relationship as well as brand loyalty in the scope of ideas competitions.

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Appendix

Item	Factor 1 "Hedonism"	Factor 2 "Self-Marketing"	Factor 3 "Compensation"	Factor 4 "Identification"	Alpha
Fun3	**0.825**	-0.078	0.064	0.047	
Fun1	**0.786**	0.253	-0.124	-0.148	
Fun2	**0.776**	-0.129	0.162	0.294	0.838
Stimu1	**0.753**	0.072	-0.037	-0.289	
Pride1	**0.736**	-0.011	0.244	0.012	
Socmo2	**0.627**	-0.027	0.123	0.207	
Self1	-0.144	**0.893**	-0.001	0.194	
Self2	0.220	**0.887**	0.025	0.165	0.893
Self3	0.104	**0.839**	0.195	0.212	
Socmo3	-0.128	**0.741**	0.188	0.097	
Comp2	0.054	0.065	**0.905**	-0.094	
Comp1	-0.003	0.509	**0.756**	0.074	0.784
Socmo1	0.460	0.052	**0.698**	0.121	
Ident1	-0.077	0.292	0.027	**0.871**	0799
Ident2	0.195	0.391	-0.029	**0.767**	
Eigenvalues	**4.553**	**3.561**	**1.696**	**1.187**	
Variance explained	**30.353**	**23.739**	**11.307**	**4.553**	

MSA (KMO) criterion = 0.5; Bartlett-test of specificity: c_2= 264.29, p = 0.000; principal component analysis (eigenvalues>1); varimax-rotation; n = 32. The bold values indicate the attribution of the variables to one of the four factors.

Table 3: Rotated Component Matrix