Getting users involved in idea crowdsourcing initiatives:

An experimental approach to stimulate intrinsic motivation and intention to submit

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Supplementary Material

Pilot Study

The size of the small reward was determined in a pre-study with 80 students following the procedure of Garaus et al. (2016). We confronted the pre-study participants with a written scenario designed similarly to the one outlined in the paper and asked them: "Please indicate which reward size you would consider as very small?" Nearly all pre-study participants reported values of EUR 5 or higher. Only two participants indicated EUR 2 as very small and would very likely agree that an amount of EUR 5 is still small. Most participants reported much higher values leading to a highly positively skewed distribution. Data contained five missing values. In other words, all of the respondents considered EUR 5 as *very* small. Hence, we chose that amount for our small-reward conditions. We followed the same procedure for determining the size of the large reward for Experiment 3.

It is important to note that the perception of smallness or largeness is specific to idea crowdsourcing campaigns. In this context, the rewards of EUR 5 and EUR 10,000 may only be considered small or large, respectively, and these amounts are quite likely perceived very differently in other types of crowdsourcing, such as R&D tournaments, which often offer significantly higher monetary prizes (Jeppesen and Lakhani 2010 reported a mean prize of USD 29,689 for Innocentive in 2011, with a median of USD 25,000 and a range from USD 2,000 to USD 105,000), or micro-tasking, which offers significantly lower compensation (Horton and Chilton 2010 demonstrate that the wages of workers on Amazon Mechanical Turk approximated a log-normal distribution and exhibited a median wage of USD 1.38 per hour in 2010.)

Scenarios

For Experiment 1, the adapted version of the real-world scenario included a picture showing young people enjoying their beers with the heading "Stiegl idea crowdsourcing initiative—creative and innovative ideas are requested." Below the picture, background information about the company was provided featuring Stiegl's innovativeness in the past, and the company's intent to continuously increase value for its customers. This was followed by details about the requested task for the idea generation initiative, which dealt with the development of a new business model aiming at delivering products directly to customers' homes.

The material used in Experiment 2 was analogous to Experiment 1. It contained a picture showing a typical Starbucks interior design with the official slogan of Starbuck's idea crowdsourcing campaign. Information about the company and the task followed. The campaign allowed users to think of a great variety of business ideas, such as additions to or variations to the menu, but also ideas relating to employees, shop interior, locations, or technologies. The low-complexity stimulus was worded as follows: *"Share your new idea with us! Every little idea counts! On our website, you will find a simple online system that will allow you to submit an idea with just a few mouse clicks."* In the high-complexity condition, the task was worded in the following way: "*Share your new business concept with us! The more detailed your business concept is, the better! On our website, you will find an online system that will guide you step by step through the submission of a new business concept idea for Starbucks. At the end of this submission process, a detailed business concept is to be presented, which not only contains a first idea but also a marketing strategy."* The no-reward conditions offered no compensation. The small-reward condition provided participants EUR 5 for their efforts.

Experiment 3 also started with featuring the official picture and slogan that Lego used in its idea crowdsourcing campaign. Next to the picture and slogan, we once more provided information about the company and the task itself. For manipulating the autonomy-supportive cue, we used the following wording in the call formulation, "*Use this idea contest as a way to self-realization! Try something new, be inspired by others, and create something unique! There are no limits to your creativity. Make creations beyond your wildest imagination, let yourself be curious about what lies within you, and enjoy every moment of the creative process."* For the controlling condition, the call formulation appealed to the monetary incentive. It was stated as follows: "*Your idea is worth real money! Lego issues a cash prize."* and *"Use this idea contest as an additional income and get your cash prize."* For the manipulation check we used the following item: "Please indicate whether a monetary reward or self-realization is the focus of this call"; 1 = monetary reward, 7 = self-realization.

Measures

Intrinsic motivation (Amabile et al. 1994) α_{Study1}=.79, α_{Study2}=.75, α_{Study3}=.84

- I want my participation in the idea generation contest to provide me with opportunities for increasing my knowledge skills.
- Curiosity would be the driving force behind my decision to participate in the [idea crowdsourcing initiative].
- I would like to find out how good I really can create new ideas in the [idea crowdsourcing initiative].
- In the context of the [idea crowdsourcing initiative], I would prefer to figure things out for myself.
- What matters most to me with the [idea crowdsourcing initiative] is enjoying what I do.
- It would be important for me to have an outlet for self-expression in the [idea crowdsourcing initiative].
- No matter what the outcome of a project, I am satisfied if I feel I gained a new experience in the [idea crowdsourcing initiative] idea generation contest.
- In the context of the [idea crowdsourcing initiative], I would be more comfortable when I can set my own goals.
- I would enjoy relatively simple, straightforward tasks in the [idea crowdsourcing initiative]. (reverse coded)

- I would enjoy tackling problems that are completely new to me in the [idea crowdsourcing initiative].
- I would enjoy trying to solve complex problems in the [idea crowdsourcing initiative].
- The more difficult the problem in the [idea crowdsourcing initiative] is, the more I would enjoy trying to solve it.

Extrinsic motivation (Amabile et al. 1994) α_{Study1}=.57, α_{Study2}=.58, α_{Study3}=.67
- The money I could earn in the [idea crowdsourcing initiative] would motivate me a lot.
- I am keenly aware of the financial goals I can achieve by participating in the [idea crowdsourcing initiative].
- I am strongly motivated by the recognition I can earn from other people in the [idea crowdsourcing initiative].
- I would like other people participating in the [idea crowdsourcing initiative] to find out how good I really can be at my work.
- A reward, which I could gain in the [idea crowdsourcing initiative], would not be important for me. (reverse coded)
- To me, success in the [idea crowdsourcing initiative] means doing better than other people.
- I have to feel that I'm earning something for what I do.
- As long as I can do what I enjoy, I'm not that concerned about the size of a reward in the [idea crowdsourcing initiative]. (reverse coded)
- I believe that there is no point in doing a good job in the [idea crowdsourcing initiative], if nobody else knows about it.
- I'm concerned about how other people are going to react to my ideas in the [idea crowdsourcing initiative].
- I prefer working on projects with clearly specified procedures in the [idea crowdsourcing initiative].
- I'm less concerned with what work I do than what I get for it in the [idea crowdsourcing initiative].
- I am not that concerned about what other people think of my work in the [idea crowdsourcing initiative]. (reverse coded)
- I prefer having someone set clear goals for the idea generation in the [idea crowdsourcing initiative].

Participation Intention (Füller et al. 2008) α_{Study1}=.81, α_{Study2}=.85, α_{Study3}=.83
- Would you be interested in submitting an idea to the [idea crowdsourcing initiative]?
- Would you be interested in supporting [the company] in any other way in their new product development?

Domain-specific skills (Füller et al. 2008)
I consider myself very knowledgeable and can contribute with ideas for [the company].

Perceived innovativeness (Füller et al. 2008) α_{Study1}=.87, α_{Study2}=.89, α_{Study3}=.89
- I am an inventive kind of person.

- I consider myself to be creative.
- I have original ideas.

Brand attitude (Holbrook and Batra 1987) α_{Study1}=.90, α_{Study2}=.95, α_{Study3}=.90
How do you experience the brand [company name]?
- Like/dislike
- Good/bad
- Negative/positive

Sample Characteristics

Table A1. Sample Characteristics (Experiments 1–3)

Variable		Experiment 1 (N = 127)	Experiment 2 (N =199)	Experiment 3 (N =239)
Age (mean)		29.09	28.31	29.42
Gender	Men	52.8%	35.9%	46.2%
	Women	47.2%	64.1%	53.8%
Education	University	55.6%	59.2%	49.6%
	High school	34.1%	34.2%	34.3%
	Vocational school	2.4%	3.1%	5.1%
	Apprenticeship	4.0%	2.0%	7.6%
	Compulsory schooling	4.0%	1.5%	3.4%
Monthly income (mean) in EUR		1,500.99	1,484.80	1,570.87

Experiment 1: Awareness Check

In the control group, an item asked respondents to indicate whether a reward was offered or not; 90% of the participants answered this question correctly. In the experimental group, another awareness check was implemented by asking respondents how many users received a reward. The subsequent analysis considered only the respondents that deliberately read the stimulus material and passed the awareness check. This procedure led to the exclusion of 17 subjects and a final sample size of 127 participants.

Experiment 2: Awareness and Manipulation Check

To test whether respondents diligently read the stimulus material, the questionnaire again included one item asking respondents if the idea generation initiative offered a monetary reward. Eight respondents wrongly indicated the presence of a reward in the no-reward condition, leading to their exclusion. The final sample size was 199 participants.

The analysis proceeded with an ANOVA-contrast test, with task complexity (low vs. high) as the independent variable and effort expectation as the dependent variable. The results revealed a significant difference (t_{197}=4.72, p <.01). The high complex task without the reward (M = 5.12, SD = 1.40) and the high complex task with the reward (M = 4.51, SD = 1.74) were associated with significantly more effort than the low complex task (M = 3.74, SD = 1.56). Hence, the manipulation of the task complexity was successful.

Experiment 3: Awareness and Manipulation Check

Data cleansing discarded respondents who did not diligently read the instructions (i.e., they did not correctly respond to questions concerning the size of the monetary award or the likelihood

of receiving a large award). This resulted in a final sample size of 239. An ANOVA-contrast test (t_{235} = 5.80, p <.01) with linguistic cues as the independent variable revealed that respondents perceived a monetary reward being the focus of the call formulation in the controlling linguistic cues condition (M = 3.13, SD = 1.74), whereas, in the autonomy-supportive cues conditions, participants perceived self-realization as the call's focus (M = 4.60, SD = 2.00). Hence, the manipulation of linguistic cues was successful.