

A study on the effects of Information asymmetry and sentimental communication in Crowdfunding platform*

Lim, Sung Jun** · Lee, Jong Hag***

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ABSTRACT

Recently, crowdfunding has been receiving increased attention due to the variety of novel ways it provides for connecting funders and fundraisers. Concurrently, however, it has been criticized on the grounds of information asymmetry. We are interested in whether information collected from an asymmetric information source significantly influences crowdfunding success. Through this study, we would like to establish a social field of convergence pursued by Serve Science and to conduct practical research and practice together. First, we investigated the importance of interaction between funders and fundraisers within the crowdfunding platform. In the “comments” section, communication between funders and fundraisers reduces the degree of asymmetric information. In the aspect of presumable funders, they should make the best of the “comments” section to collect more solid information without losing return on their investment. Second, we analyze sentiment-based optimistic and pessimistic information from the “story” (asymmetric source) and “comments” sections. In conclusion, it shows that the optimistic and pessimistic information of the “comments” section has a great impact on crowdfunding success and that the influence of the “story” section is limited to pessimistic information under certain conditions. The crowdfunding platform is an innovative and productive way for startups and entrepreneurs to start a business, and since information an important role in the success of crowdfunding, It can be seen that it is essential to focus on establishing the best communication methods.

Keywords: Crowdfunding, Startup, Optimistic & Pessimistic information, information asymmetry, Kickstarter

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** First Author, M.A Graduate of Sogang University, Department of Business Administration, s.j.lim@outlook.com

*** Corresponding Author, Ph.D, Candidate, Graduate school of Business, Sogang University, jhlee0216@sogang.ac.kr

1. Introduction

Crowdfunding refers to the use of social networking services to raise funds from an unspecified number of people through Internet-based platforms for sponsorship or investment(Carvajal et al. 2012). Looking at recent trends in crowdfunding, it has developed into a practical and popular substitute channel for entrepreneurs or start-ups to fund the initial, launch stage of their business. Initially, crowdfunding tended to be seen as operating within the scope of charitable donations from a large number of individuals(Fisk et al. 2011). Latterly, as the concept of donations and sponsorship has expanded, it has become widely used as a way of generating resources for creative ideas through social networks. Thus, crowdfunding suggests a new form of sponsorship that supports projects by providing the project's proposer(s) with as much as they desire.

Crowdfunding platforms depend on computer-mediated communication and include one-way and two-way communication tools. The main form of communication is the "story" section, which utilizes a one-way communication mechanism. Fundraisers use the story section as a strategic option to promote their projects and influence funders to contribute to them. Funders rely on the story section to evaluate projects and make funding decisions because they usually have limited information on the project's development and actual usage of any tangible products. Under this one-way information transfer structure from fundraisers to funders,

information asymmetry is likely to exist. In contrast, two-way communication is available in the "comments" section, in which both funders and fundraisers can engage in multilateral communication. Discussing various issues in the comments section may improve investors' comprehension of the project. As a result, stakeholders might be able to reduce the level of information asymmetry.

When it comes to the impact of information on the success of a project on a crowdfunding platform, the existing literature has focused exclusively on the case when the information is obtained from a non-asymmetric information source or within an environment of diminished asymmetric information. In early studies, researchers focused purely on the quantities of comments left by funders. Kunz et al.(2017) showed that the number of comments posted has a positive influence on a crowdfunding project's performance. Later, as attention has been directed to the linguistic style or sentiment of the comments, sentiment-based comments were examined to determine whether they have an impact on the backer's investment decision(Mitra and Gilbert 2014; Parhankangas et al. 2017).

In summary, and to the best of our knowledge, the impacts of information collected from asymmetric information sources on a project's success have never been studied before. We anticipate that the impact of information from asymmetric information sources on crowdfunding success will be limited in comparison with that from non-asymmetric sources. The impacts of sentiment-based

optimistic and pessimistic information are analyzed separately and tested for their influence on crowdfunding success in order to identify precisely how positive and negative sentiments play into the investment decision. Specifically, we study the effect of communication sentiment in completed reward-based crowdfunding projects on Kickstarter. Note that crowdfunding has been established in the United States since 2008, and many crowdfunding sites operate on social networks; Kickstarter and Indiegogo are currently representative service providers.

Through this study, we would like to establish a social field of convergence pursued by Service Science and to conduct practical research and practice together. In addition, we would like to draw an actual case of knowledge-based services in the situation where a high scientific approach is needed for core research and that leads to the service of products and the commercialization of services.

2. Theory and Hypotheses

2.1 Optimistic & Pessimistic Information

On online crowdfunding platforms, creators and observers rely on optimistic and pessimistic information to gain an impression of the information posted; optimistic and pessimistic information have a different impact on each individual. As stated in one of Sharot's studies, there is a neurological phenomenon called "optimism bias" in which optimistic information

has a greater tendency to confirm people's beliefs about the future than pessimistic information (Sharot 2011). However, to gain attention, pessimistic information could engender shock of fear, yielding a competitive advantage compared to optimistic information. Besides the advantage of attracting attention by its tactical use, pessimistic information is problematic in that processing such information could lead to exhaustion and disengagement (Ruiter et al. 2001).

Since products on crowdfunding platforms are both innovative and not yet available to the public, it is important to consider how funders using the platform would process the information. Although information processing may be based on an individual's self-conscious reflection on their prior knowledge, concerns, or backgrounds, optimistic and pessimistic information could nevertheless have an impact. Fundraisers or project creators need to focus on optimistic information being maintained while increasing attention through tactically deployed pessimistic information.

2.2 Information Asymmetry

Crowdfunding comprises four distinct segments, namely reward-based, donation-based, equity-based, and lending-based crowdfunding, and these segments have different determinants for success. Among these segments, we focus on reward-based crowdfunding. One of the biggest issues for a reward-based crowdfunding platform is information asymmetry and uncertainty. Information asymmetry between fundraisers and funders could lead to inefficient economic

exchange and could potentially result in market failure(George 1970). In the context of entrepreneurial financing, external investors and backers usually possess incomplete and imperfect information about the prospect of the start-up as compared with the entrepreneur. As a result, investors and backers face the economic risk of investing in a “lemon”, while entrepreneurs face the challenge of credibly informing potential investors and backers about their start-up’s potential.

Reward-based crowdfunding is a novel type of financing for creative entrepreneurs. Therefore, the products promoted on crowdfunding platforms are usually prototypes undergoing pre-production development. It could take some time for a prototype product to be delivered to the funders. As Racherla and Friske(2012) mentioned, potential buyers, treat previous buyers’ reviews as reliable information on which to form their purchasing decisions since these reviews are based on actual usage of the product. In crowdfunding platforms, however, these projects’ products are based on the fundraiser’s creative idea and do not exist until the project is successfully completed(Beaulieu et al. 2015).

2.3 Communication Tools

According to the literature, one way to reduce information asymmetry from a funder’s perspective is to communicate with the fundraiser through computer-mediated channels to develop a deeper understanding of the project (Kunz et al. 2017; Mollick 2014). Crowdfunding

platforms typically comprise three different sections of communication content: the story, updates, and comments sections. In the story section, fundraisers post descriptions of the products or services currently under promotion. Similarly, in the updates section, fundraisers post any updates that funders should know about the project. Finally, in the comments section, funders and fundraisers can communicate with each other, with communication including questions, complaints, answers, or explanations regarding the project.

Communication may be either one-way or two-way. One-way communication is defined as information transmitted from sender to receiver without any sort of feedback from the receiver. The story section in a crowdfunding platform is deemed to be one-way communication because funders extract information from the project or product description without any opportunity for feedback. Two-way communication, also known as interpersonal communication, is available when both parties are involved in transmitting information to each other. The comments section of a crowdfunding platform is a form of two-way communication, in which funders and fundraisers post and reply to information that needs to be exchanged to complete the communication cycle. This section reduces information asymmetry the most because the information gained can reduce misunderstanding and prompt more accurate information to be obtained.

2.4 Hypotheses Building

Internet-based communication characteristics play a very important role in crowdfunding since, unlike in many other investment relationships, the Internet is the only way for entrepreneurs and potential funders to communicate. The key information that the fundraiser alone can provide can influence a commitment to pay for the final product (Kim and Crompton 2001). This information source, corresponding to the story section of the crowdfunding platform, is a form of one-way communication. However, optimized understanding of the project seeking funds will be a dominant determinant for successful investment and seems to be available through two-way communication or non-asymmetric information sources, of which the comments section is a key element.

Looking at the other dimension of our study, optimistic and pessimistic information is known to have a different impact on different individuals. Therefore, we analyze the impacts of information on crowdfunding success after separating optimistic and pessimistic informational content; this will be meaningful in terms of investigating the precise pathways through which optimistic and pessimistic information operate. We further predict that optimistic information will in general increase the chance of crowdfunding success, whereas pessimistic information will tend to decrease the opportunity for success. Note that the existing literature has utilized score systems, adding up optimistic and pessimistic information, in which the individual roles of optimistic and pessimistic information could not be tested since they are traded off (Gaikar et al. 2015; Liang et al. 2015; Mitra and Gilbert 2014; Chen et al.

2015).

To implement the theoretical framework above, we separate the impacts of optimistic and pessimistic information on crowdfunding success and test whether each of them influences crowdfunding success. Prior to this test, we consider the differing information impacts of asymmetric and non-asymmetric information sources, as represented here by the story and comments sections, respectively on crowdfunding success. We can predict that asymmetric information may not be particularly meaningful for crowdfunding success.

Therefore, when we test the hypotheses for the asymmetric case, we consider two cases: either the information impact is significant or it is not significant. In particular, these cases are separately tested for optimistic and pessimistic information. For the optimistic information case, we will test the following hypotheses, in which the impact of information on success is associated and not associated:

H1: Optimistic information in the story section for the project is positively associated with crowdfunding success.

For the pessimistic case with the asymmetric information source, we will test the following hypotheses:

H2: Pessimistic information in the story section for the project is negatively associated with crowdfunding success.

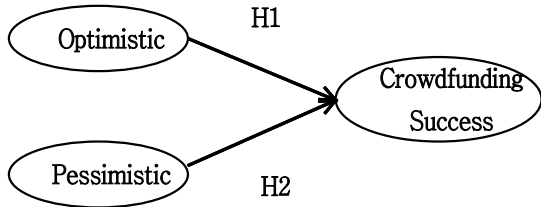


Fig. 1 Model 1 : Story Section (Sentiment) - Hypothesis

Regarding the non-asymmetric information source, the impacts of optimistic and pessimistic information on crowdfunding success seem to be evident. Potential funders require information from various sources to make decisions. They utilize the information in comments from previous investors to process into their thinking and understanding (Dennis et al. 2008). Therefore, if the comments for a crowdfunding project are generally negative, this indicates that overall investors are not pleased, outweighing the positive effects of comment quantity on the crowdfunding project. Conversely, positive comments by other investors can signal the project’s high quality (Cui et al. 2012) and can reduce uncertainty in potential investors who perceive risk in the project (Chen et al. 2011). Therefore, projects with more positives in the comments section will have a higher chance of successful crowdfunding, whereas projects with more negatives will decrease the chance of funding success. These notions are tested using the following two hypotheses:

H3: Optimistic comments in the comments

section are positively associated with crowdfunding success.

H4: Pessimistic comments in the comments section are negatively associated with crowdfunding success.

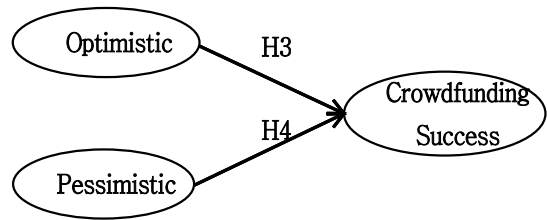


Fig. 2 Model 2 : Comment Section (Sentiment) - Hypothesis

3. Data and Methology

3.1 Sample Data Collection

The sample data set was extracted from Kickstarter, a major crowdfunding platform in the United States. Kickstarter first launched their business in April 2009, attracting investor attention during 2010 and growing rapidly globally thereafter. As of May 2020, the total amount pledged via the platform is approximately \$4 billion, with 181,419 successful projects since 2009, corresponding to a success rate of 37.67%.

We extracted data for completed projects during the period from April 2009 to February 2020. The data extracted consists of 13,763 records of project duration, story section, goal amount, amount pledged, number of funders,

comments, updates, and videos. After extraction and data cleaning, 7,775 of the 13,763 projects had failed (56.52%) while 5,981 were successful (43.47%).

3.2 Variables

3.2.1 Dependent Variable

For crowdfunding platforms, the success of a project can be measured as a binary term, with 1 equal to success and 0 equal to failure of the project. Since the data from Kickstarter follows an all-or-nothing model, we define each project as successful if the project has met or exceeded its goal amount in pledges.

3.2.2 Independent Variable

Our main objective in this study is to research the effects of optimistic and pessimistic information from both fundraisers and funders, comprising story and comments sentiment scores for individual projects, in a crowdfunded project's success. To analyze sentiment in the story and comments sections, we performed sentiment analysis, a natural language processing technique intended to identify people's opinions, feelings, evaluations, attitudes, and emotions about entities such as products, services, institutions, individuals, events, subjects, and characteristics (Van de Kauter et al. 2015).

We used the lexicon-based approach (Ding et al. 2008) to extract sentiment from stories and comments in our study. In order to obtain positive and negative sentiments from the description and comments, we used Bing Liu's sentiment lexicon. We separately aggregate

positive and negative sentiment scores for both story and comments sections per project. The computed positive and negative scores are then evaluated for their influence on the success of the project.

3.2.3 Control Variable

To control the effects from other variables, we identified several variables: goal amount, pledged amount, project duration, number of videos, number of frequently asked questions, number of updates, and number of funders. We added control variables utilized by previous research, such as categories, durations, updates, funders, and videos (Mollick 2014). Kosh et al. (2015) verified that crowdfunding success increases when the fundraiser adds more information (increasing words) in the story section. Since our research is based on reward-based crowdfunding, the amount of rewards was included as a variable, since the higher the rewards offered by a project, the higher the chance of success (Lin et al., 2016). Pledged amount plays an important role for a crowdfunding project as the amount pledged to the project can attract more funders; the higher the amount already pledged, the more funders it tends to attract (Kuppuswamy and Bayus 2013).

Table 1 summarizes the dependent, independent, and control variables for this study and their measurements.

Tab. 1. Variables and their measurements

Variable	Measures
Dependent Variable Project Status (PS)	A dummy variable (1 if successful, 0 if failed)
Independent Variables Story (Optimistic) (OSS)	Positive sentiment in the description
Story (Pessimistic) (PSS)	Negative sentiment in the description
Comments (Optimistic) (OSC)	Positive sentiment in the comments
Comments (Pessimistic) (PSC)	Negative sentiment in the comments
Control Variables Goal Amount (GA)	Total target amount set by the fundraiser
Pledged Amount (PA)	Total amount funded by the funders
Project Duration (PD)	Number of days the project stayed active
Video (VI)	Whether project description contains video
Funders (FU)	Number of funders invested in the project
Updates (UP)	Number of updates during the active period
Rewards (RE)	Amount of rewards sold
Word Counts (WC)	Number of words in the project's description
Categories (CA)	Categories in Kickstarter matched by the project

3.3 Model

The binary logistic regression model is used to test our hypotheses due to the dependent variable being dichotomous since its values are stated as successful or failed. In the current study, we established four different models for purposes of comparison. The baseline model is Model 0, which includes only control variables. In Model 1, along with the control variables, independent variables for the story's sentiment scores are added to test hypotheses H1 and H2. Model 2 includes independent variables for the comments section's sentiment scores, in which

hypotheses H3 and H4 are tested. Model 3 includes all the independent variables in order to test all four hypotheses together. For parameter estimation, the maximum likelihood estimator (MLE) method is implemented. Each model is evaluated and compared by the Aikake information criterion (AIC). Note that a model with a lower AIC result indicates a better fit.

4. Analysis Result

Summary statistics for response and predictor variables are reported in Table 2.

Tab. 2. Summary statistics of variables

Variable	Unit	Min.	Max.	Mean	SD
Project Status (PS)		0	1	0.43	0.49
Goal Amount (GA)	USD	1	100,000,000	55,888.97	934,044.38
Pledged Amount (PA)	USD	0	5,402,724	18,252.48	117,956.25
Project Duration (PD)	Days	1	91	34.21	11.80
Video (VI)	#	0	1	0.31	0.46
Funders (FU)	#	0	35,550	138.92	617.79
Updates (UP)	#	0	131	5.92	9.07
Rewards (RE)	#	1	61	8.33	5.28
Word Counts (WC)	#	2	5,594	776.30	619.91
Categories (CA)	Category	-	-	-	-
Story (Optimistic) (OSS)	#	0	238	30.18	25.88
Story (Pessimistic) (PSS)	#	0	211	10.93	11.23
Comments(Optimistic) (OSC)	#	0	170	8.72	16.48
Comments(Pessimistic)(PSC)	#	0	98	3.08	7.87

In our study, we tested multicollinearity between the variables. We used variance inflated factor(VIF) to check for our multicollinearity test, where VIF shows that how much the variance of the coefficient estimate is being inflated by multicollinearity. If the value of VIF is 10 or more, it may be necessary to adjust such as excluding variables because it is judged that there is a problem of multicollinearity.

As result, for both our hypothesis models, VIFs for each variable showed lesser than 3. Table 3 shows the VIFs for each variable. Therefore, we have confirmed that there is no problem with the results of the multicollinearity tested in this study.

Tab. 3. VIF Test Result

Story-Hypothesis 1		Comments-Hypothesis 2	
Variables	VIFs	Variables	VIFs
Goal Amount	1.389	Goal Amount	1.369
Pledged	1.086	Pledged	1.074
Duration	1.019	Duration	1.013
Videos	1.000	Videos	1.000
Funders	1.230	Funders	1.375
Updates	1.234	Updates	1.240
Rewards	1.174	Rewards	1.170
Word Counts	2.969	Word Counts	1.262
Categories	1.049	Categories	1.055
Positive Sentiment (Story)	2.590	Positive Sentiment (Comments)	1.784
Negative Sentiment (Story)	1.633	Negative Sentiment (Comments)	1.850

The correlation matrix for response and predictor variables is reported in Table 4.

Tab. 4. Correlation matrix between variables

	PS	VI	UP	RE	WC	GA	PA	PD	FU	CA	OSS	PSS	OSC	PSC
PS	1													
VI	.772	1												
UP	.545	.484	1											
RE	.293	.261	.332	1										
WC	.062	.169	.297	.317	1									
GA	-.038	-.026	-.013	-.009	.009	1								
PA	.146	.179	.236	.112	.134	.051	1							
PD	-.178	-.055	-.053	-.063	-.005	.038	.038	1						
FU	.211	.238	.350	.146	.153	.005	.457	.008	1					
CA	-.315	-.081	-.271	-.188	-.129	-.013	-.082	.131	-.096	1				
OSS	.086	.198	.292	.325	.903	.005	.152	-.013	.166	-.143	1			
PSS	.020	.078	.207	.222	.755	.013	.096	-.025	.106	-.154	.688	1		
OSC	.369	.402	.535	.250	.308	-.003	.248	-.005	.316	-.257	.323	.216	1	
PSC	.306	.351	.512	.180	.267	.005	.294	.009	.352	-.224	.273	.209	.789	1

Tab. 5. Binary logistic regression results

Variable	Model 0		Model 1		Model 2		Model 3	
	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.
OSS			.005	.476			.001	.880
PSS			-.029	.030*			-.022	.109
OSC					.003	.001**	.031	.001**
PSC					-.123	.000**	-.115	.000***
AIC	1841.6		1840		1825		1826.3	

Note: ***, **, and * indicate significance at levels (0.01), (0.05), and (0.1) respectively.

Binary logistic regression analysis results are reported in Table 5. According to this table, the estimation results of Model 0, the baseline model with only control variables, indicate that the goal amount (-1.231, $p = .000$), pledged amount ($7.639E-06$, $p = .000$), duration ($2.461E+01$, $p = .015$), funders ($5.628E-03$, $p = .000$), updates ($1.943E-01$, $p = .000$), and word counts ($-3.615E-04$, $p = .020$) are significantly associated with the success of the crowdfunding project.

In Model 1, the hypotheses H1 and H2 are tested by checking the significance of optimistic and pessimistic sentiment scores from the story section, respectively. Here, we could observe that only the negative sentiment score from the story ($-2.929E-02$, $p = .030$) showed significance.

These results support H2, meaning that pessimistic information negatively influenced the project's success, whereas optimistic information was not associated with it.

To test the significance of optimistic and pessimistic information via the comments section, the estimation results of Model 2 are examined. In contrast with the story section, positive ($3.207E-02$, $p = .001$) and negative sentiment scores ($-1.235E-01$, $p = .000$) from the comment section indicated significance for supporting both H3 and H4. Unlike the information impact of the one-way-based story section, optimistic and pessimistic information in the two-way-based comments section both had a statistically significant impact on crowdfunding success.

Lastly, we tested all the hypotheses (H1, H2, H3, and H4) in Model 3. The results from the comments section are significant for both optimistic (0.031 , $p = .001$) and pessimistic sentiment (-0.115 , $p = .000$). Conversely, the results from the story section do not seem to suggest a strong association with the project's success. As with the Model 2 results, both optimistic and pessimistic information from two-way communication showed significance supporting H3 and H4, respectively.

Finally, to confirm our analysis results, we further calculated the area under the curve (AUC) from the ROC (receiver operating characteristic) curves for Models 1-3. The calculated AUC values for all three models are above .996, which confirms the appropriateness of the proposed binary logistic regression approach in testing the hypotheses.

5. Conclusion

Our study makes two contributions to crowdfunding research. First, it investigates the importance of interactions between funders and fundraisers within a crowdfunding platform. In the comments section, communication between funders and fundraisers reduces the degree of asymmetric information. In the aspect of presumable funders, they should make the best of the comments section to collect more solid information without losing return on their investment.

Second, our study investigates the impact of information from an asymmetric source, namely the story section provided by fundraisers, on crowdfunding success. Unlike the impact of information from the non-asymmetric source, only negative information from the asymmetric source was associated with the success of the project, albeit negatively. Therefore, making too much use of pessimistic information might not be a great idea; although moderate pessimistic information might be useful. As has been explained, fundraisers can gain more attention through the limited tactical use of pessimistic information.

Although sentiment analysis in crowdfunding is not a novel analytic approach, it does offer us indications about how investors respond to an online posting. As the number of consumers using remote technologies and participating in online activities increases flows of such content repay constant monitoring and modification to ensure better, more positive service.

Despite its merits, the lexicon-based approach has its weak points. Since there are limitations in analyzing human emotional behavior, even though sentiment analysis is useful, we do not believe that this analysis could be a complete replacement for consumer surveys. In addition, this method requires us to invest heavily in time and effort to build a knowledge base of lexicon, patterns, and rules. As the lexicon-based approach is claimed to be domain-independent (Liu, 2012), it has a hard time recognizing sarcasm, irony, negation, jokes, and exaggeration, which even a human being might have trouble understanding. For example, “disappointment” might be classified as a negative word for sentiment analysis. However, given the usage of the “disappointment” word in the phrase “I am not disappointed,” in this case the sentiment should have been labeled as positive. That said, and even given the limitations of sentiment analysis, it remains the best method for analyzing emotions in online text.

While technological developments and the use of smartphone offers firms with new opportunities, it is essential to note the importance of how fundraisers and funders behave in transferring their information or opinions. Though sentiment analysis on crowdfunding is not a novel approach to analyze, it does indicate to us how the investors emotionally behave to the posting online. As the number of consumers using technologies and participation in online activities increases, these flows of such contents should constantly be monitored and modified to ensure better and positive service.

Though, our method of research, the lexicon-based approach has its disadvantages. As there are limitations to analyze human emotional behavior, even though sentiment analysis is useful, we do not believe that this analysis could be a complete replacement for consumer surveys. Also, this method requires us to heavily invest in time and effort to build a knowledge base of lexicon, patterns, and rules. As the lexicon-based approach is claimed to be domain-independent (Bing., 2015), it has a hard time recognizing sarcasm, irony, negation, jokes, and exaggeration, which, even a “person” might have trouble understanding. Even with the limits in sentiment analysis, in order to analyze emotions from the online text, sentiment analysis is the best method to be used.

In addition, in our study, we did not include the funders’ and fundraisers’ background information. In the future, when we include the background information in the study, we could further analyze the interaction and understand the impact of optimistic and pessimistic information in the crowdfunding platform. We believe that crowdfunding platform is an innovative and productive method for the start-up and entrepreneurs to start their product. As information plays an important role in crowdfunding’s success, it is essential for start-ups and entrepreneurs to focus on constructing the best communication method.

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Lim, Sung Jun (s.j.lim@outlook.com)



Lim, Sung Jun has a bachelor of Business Administration from the University of Missouri in the United States and a Master's degree in Business Administration from Sogang University. Major research areas include management analysis, planning analysis. He is currently in charge of planning and information on the global market related to the medical business at Ace Medical Co., Ltd.

Lee, Jong Hag (jhlee0216@sogang.ac.kr)



Lee, Jong Hag is currently attending a doctoral course at Sogang University's Graduate School of Business Administration. Bachelor of Electronics Engineering at Sungkyunkwan University and Master's degree in Business Administration at Sogang University. Major research areas include analysis of global management environment, supply chain management, and disaster crisis management.

크라우드펀딩 플랫폼에서 정보 비대칭과 감성 커뮤니케이션이 미치는 영향에 관한 연구*

임성준** · 이종학***

요약

본 연구는 최근 많은 관심을 받고있는 크라우드펀딩을 더많은 창업 및 기업가가 활용하기 위해서는 크라우드펀딩의 성공을 가져온 요인을 이해하는 것이 중요하나, 동시에 정보의 비대칭성을 이유로 비판받고 있는바 펀드사와 자금 조달자를 위하여 비대칭 정보 소스에서 수집된 정보가 크라우드펀딩 성공에 미치는 영향을 제시하고자 한다. 또한, 급변 연구를 통하여 서비스 사이언스가 추구하는 융합의 사회적 장을 마련하고 실질적인 연구와 실천을 수행하며 제품의 서비스화, 서비스의 제품화를 주도하는 핵심 연구에 과학적 접근법이 필요한 상황에 대하여 지식기반서비스의 실제 사례를 도출하고자 하였다.

첫째, 크라우드펀딩 플랫폼 내에서 자금 제공자와 기금 모금자 사이의 상호작용의 중요성에 대하여 조사 하였으며, “comments” 섹션에서는 자금 제공자와 기금 모금자 간의 의사소통을 통하여 비대칭 정보의 정도를 줄인다. 그리고, 잠정적인 자금 제공자의 측면에서는 투자에 대한 수익을 상실하지 않고 보다 확실한 정보를 수집하기 위하여 “comments” 섹션을 최대한 활용해야 함을 알 수 있다. 둘째, “story” (비대칭소스)와 “comments” 섹션에서 감성을 기반으로 낙관적이고 비관적인 정보를 분석 하였다.

결론적으로 “comments” 섹션의 낙관적 정보와 비관적 정보가 크라우드펀딩 성공에 큰 영향을 미친다는 것을 보여주며, 상대적으로 “story” 섹션의 영향은 특정 조건에서의 비관적인 정보에만 한정됨을 알 수 있다. 크라우드펀딩 플랫폼은 창업(startup) 및 기업가들이 비즈니스를 시작할 수 있는 혁신적이고 생산적인 방법으로, 정보가 크라우드펀딩의 성공에 중요한 역할을 하므로 최상의 의사소통 방법을 구축하는 데 집중하는 것이 필수적임을 확인할 수 있다.

주제어: 크라우드펀딩, 스타트업, 낙관적 & 비관적 정보, 정보 비대칭, 킥스타터

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** 제1저자, 서강대학교 일반대학원 경영학과 석사과정 졸업 (s.j.lim@outlook.com)

*** 교신저자, 서강대학교 경영전문대학원 글로벌서비스경영학과 박사과정 (jhlee0216@sogang.ac.kr)