# Must-have for Crowd-funding Projects: Credibility

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#### ABSTRACT

The success of a crowd-funding project can be attributed to various reasons, among which, backer's (also known as 'investor', or 'funder') perception of project credibility may be a salient one. The purpose of this study is to investigate the extent to which perceived project credibility can affect a backer's investment decision. We examine the factors that could influence the building of perceived project credibility by testing the proposed research model using survey data. Analysis results indicate that perceived project credibility has a significantly positive effect on backer's investment intention. Furthermore, information quality and source credibility are two key determinants of perceived project credibility. This study contributes to crowd-funding literature by enriching the list of successful factors for fund-raising with project credibility. The study also has practical implications because it explains why and how a backer's perception of project credibility can be improved.

Keywords: Crowd-funding, Perceived Project Credibility

# I. Introduction

The emergence of crowd-funding has provided a wide range of entrepreneurs (also known as, founders or creators) with a powerful financing channel that can get monetary support from numerous investors (also known as, backers or funders) throughout the world. Being a low cost and open source capital system, crowd-funding, in an extent, could alleviate the difficulties facing by the small and growing businesses when they attempt to access capital under traditional financial systems. As a result, hundreds of thousands of entrepreneurs are flooding into this field in recent years. As an evolving industry, new crowd-funding patterns or systems are being created one after another; thus, nobody could give a popular definition for crowd-funding by far. In general, four main crowd-funding settings are widely recognized, they are: reward-based, equity-based, loan-based, and donation crowd-funding (Mollick, 2014). This study focuses on reward-based crowd-funding, in which backers' contributions would be helpful for launching innovative or immature items. In this approach, backers usually receive non-financial reward for their contributions (Mollick, 2014).

Nowadays, Kickstarter is one of the most successful

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reward-based crowd-funding intermediaries in the world. Kickstarter launched in the United States in April 2009 with a mission of helping bring creative projects to life. Many projects have raised a fund successfully on Kickstarter. In detail, more than 92 thousand creative projects have successfully fundraised \$1.68 billion from 9.4 million backers throughout the world in the last six years (Apr 2009 - Sep 2015). Those figures look amazing; however, it should be noted that the amounts of successful projects are far less than the failures (Etter et al., 2013; Mollick, 2014; Rao et al., 2014). According to the statistic of Kickstarter, only 37% of all projects have reached their funding goals; the percentage might be even lower on other platforms (Rao et al., 2014).

Research efforts to uncover the reasons of success and failure of the crowd-funding projects have conducted persistently in various areas. For example, draw on a dataset from Kickstarter, Mollick (2014) explored the influencing factors of successful fundraising from multiple perspectives and revealed that founder's social ties, the quality of project description (i.e., launching video clips), and even geographical proximity with backers are all significant determinants. Further, proper textual-description of the project is noteworthy, because rhetoric has been verified to be an important factor on persuading backers to invest (Allison et al., 2013; Moss et al., 2015). Social factors also have significant effects on the performance of crowd-funding. For example, the study of Colombo et al. (2015) focuses on the internal social ties that is developed by crowd-founders within a platform, and finds that it is a positive influencing factor. Moreover, Agrawal et al. (2015) highlight the offline social relationships between entrepreneur and backers, and find that it still plays a significant role in online crowd-funding setting. Other factors such

as funding goal sizes and duration (Etter et al., 2013; Mollick, 2014), the status of project (Burtch et al., 2013b; Colombo et al., 2015), the geographic and cultural influence (Agrawal et al., 2015; Burtch et al., 2013a; Kim and Hann, 2013; Zheng et al., 2014), the selection of funding models (Cumming et al., 2014) or forms (Belleflamme et al., 2014), and even the extent to which the completing of project (Wash, 2013) all have been examined and verified different extent of influences on successful fundraise.

Moreover, from the perspective of the backer, the feeling or judgment of the project credibility may be a salient influencing factor on his/her investment decision, because many reward-based crowd-funding projects target to launch creative products or services without any previous reviews-that will lead to a high level of perceived uncertainty of the project (Belleflamme et al., 2014). That is, unless the backer feels the project is credible, he/she might not contribute to the project. While the importance of project credibility seems obvious, to our knowledge, empirical evidence of its worth is lacking. Hence, in this study, we ask this question to fill up the gap: what is the impact of credibility to investment intention? In addition, compared with other IT-artifacts (i.e., e-commerce websites, blog, etc.), crowd-funding projects have some unique characteristics such as single-source-of-information and short-life which may lead to the difficulty to build and assess project credibility. Therefore, another research issue in this study is to uncover the factors that build backer's project credibility.

In fact, investors in an online crowd-funding website often make decisions only relying on partial or ambiguous information as users in other Internetbased systems do (Chen et al., 2009). Descriptions and multimedia clips provided by the project founder are primary grounds of backer's decision, but it should be carefully noted that uncertainty in decoding those decreases attractiveness of investment (Mollick, 2014). In other words, incredible information can result in negative impressions during or after a crowd-funding project proceeding.

In the traditional stream of commerce studies, credibility has been regarded as a crucial determinant to decision making (Sobel, 1985). Information credibility (McKnight and Kacmar, 2006) and IT-artifact credibility (Fogg and Tseng, 1999; Fogg et al., 2001; Tseng and Fogg, 1999) are also crucial in the online context. As the object of this research is crowd-funding project itself, which could be regarded as one kind of Internet-based artifact, we focus on project credibility rather than on information credibility in this study. The influence of project credibility to investment intention has been recursively highlighted in information technology studies. For instance, the findings of (Kim et al., 2008; Wells et al., 2011) indicate that more credible website develops more positive impression thus increasing performance of transactions. Studies on electronic word-of-mouth (e-WOM in short) reveal that believable reviews can strengthen user's positive attitude to purchase (Cheung et al., 2009; Cheung et al., 2012; Fang, 2014).

Further, being enlightened by the study of (Sobel, 1985), in which the theory of credibility is developed and indicates that both the information itself and its provider are significant influencing factors on the building of credibility in the process of information transmission, we attempt to uncover what are the predictors of project credibility. By extending this theory to the crowd-funding settings, the impact of project description (explanation information about the project) and crowd-founder's (information provider) identity information are examined. Specifically, we want to reveal that whether the project description is perceived by backers as persuasive and trustworthy; meanwhile, whether founder's identification could convey the information of founder's reputation and competence to backers; ultimately, whether they have effects on project credibility.

Although previous seminal achievements about successful crowd-funding have dedicated to stock a pile of patterns and factors, those findings are not linked with credibility concerns. Hence, this study targets to investigate the impact of project credibility to backer's investment intention, and the influencing factors of project credibility as well. The rest parts consist of hypothesis development, data analysis and discussions. This study concludes with future research directions.

# $\Pi$ . Hypothesis

# 2.1. Effect of Project Credibility on Investment Intention

Crowd-funding backers can obtain a certain amount of information about the campaigns from visiting the project webpage before making investment decisions. The information, such as project description, funding goal and duration, prior contributions, comments, and the sharing to SNS to name a few, would help backers understand and assess the project to some extent, and ultimately influence their investment decisions. However, from the perception of potential backers, the authenticity of the project is uncertain, making credibility a persuasive determinant of whether or not to invest the project (Qiu et al., 2012).

In line with the studies of Fogg et al. (2001) and Tseng and Fogg (1999), credibility, as a perceptual variable, is synonymous with believability. Thus, in this study, we define Project Credibility as the extent to which the crowd-funding project is perceived by backers as being believable, true, or factual (Cheung et al., 2009; Fogg and Tseng 1999). In other words, perceived project credibility implies a willingness to believe in the project (Giudice, 2010), which can help reducing individual's perceived uncertainty in an asymmetric information environment (Pavlou et al., 2007) and inspire subsequent participation in the project (Giudice, 2010).

The influence of IT-artifact credibility has been uncovered by some previous studies in the information systems context. For example, the studies of Cheung et al. (2009), Cheung et al. (2012) and Fang (2014) all note e-WOM review credibility is a vital predictor of online consumer's further purchase action. Perceived credible information in an unfamiliar advice website has positive influence on user's willingness to follow the website's advice (McKnight and Kacmar, 2006). Wells et al. (2011) investigates the relationship between website quality and product quality. They report that for a high quality website, consumer's credibility of website quality could positively influence his/her perception about the product quality on it, which subsequently affects consumer's online purchase intention. In addition, in their study about e-learning system, Ong et al. (2004) indicates users' perceived credibility of e-learning system result in the usage decision. Kim et al. (2008) also reveals that a more perceived credible Webpage will lead to a favorable first impression towards the website, which would lead to users' later visiting of the website.

Based on the findings from previous studies, we learn that backer's credible perception of the crowd-funding project will positively associated with investment likelihood. This idea is formulated as the following hypothesis: H1: Backer's perceived project credibility of crowd-funding campaign will positively associate with his/her investment intention on it.

## 2.2. Predictors of Project Credibility

Early studies have found some influencing factors on IT-artifact credibility. For example, the study of Fogg and Tseng (1999) has found that user's perceived credibility of computer-related product can be affected by the quality of the product itself, the interface design features, and so on. Fogg et al. (2001) explores the determinants of website credibility and revealed that the features of website (i.e., real-world feel, ease of use, and tailoring to name a few) and the capability of the website source (i.e., experienced, competent, and so on) are significant factors. In the studies about e-WOM credibility, Cheung et al. (2007), Cheung et al. (2008), Cheung et al. (2009) notes that review's source credibility and its argument strength (which concerns with the review quality) together could shape user's review credibility judgment. The findings are supported by Fang (2014)'s research results. Therefore, in terms of specific IT-artifact, individual's perceived credibility seems easily affected by the quality and the source of the artifact. It is consistent with the theory of credibility (Sobel, 1985) that both the information and its provider are important factors for the building of credibility.

We assume a similar insight to the case of crowd-funding settings; thus, the project description (explanation information about the project) and crowd-founder's (information source) identity information would be regarded as two important influencing factors on project credibility in this study.

Although projects published on different crowdfunding intermediaries have various pre-format layouts, most of them present (1) comprehensive information about the project, which includes descriptions about project, goals, duration, and updates information to name a few; (2) identity information of founders; and (3) some popularity signals (Burtch et al., 2013b; Duan et al., 2009) about the project such as the prior contributions, comments, and amounts of sharing to social network sites. Among the three types of information, this study shed more light on the project description and founder's identity information, which corresponds to the above 'quality information' and 'source' of information, respectively.

From the perspective of information quality, because many reward-based crowd-funding projects target to launch creative but immature items (products or services); thus, nobody has prior experience about the products/services and can provide relevant reviews, which leads to backers' perceived more uncertainty on the products/services than that in the normal e-commerce transactions. Hence, it is difficult for backers to judge whether the project description is accurate, relevant, or other traditional information-quality-related attributes. On the other hand, to attract backers funding a project is an obvious persuasive process, in which the project description could be regarded as one of instruments to persuade backers to believe in the project (Zhao et al., 2011). Therefore, we highlight the persuasiveness of project description in this study, and define Information Quality (of project description) as the extent to which backers deem project description as persuasive and trustworthy (Cheung et al., 2009; Zhao et al., 2011). The study of Cheung et al. (2009) indicates that the persuasiveness of e-WOM reviews has positive effect on e-WOM credibility. Similar insight would be introduced to the crowd-funding context that persuasive and trustworthy project description may significant improve backer's perceived project credibility. In addition, some other instruments such

as employing a video in the description, or providing timely updates, may enhance the persuasiveness of project presentation and ultimately affect backer's investment intention (Mollick, 2014). Thus, we propose:

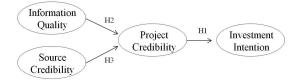
H2: The information quality of project description will have positive association with backer's perceived credibility on the project.

In crowd-funding context, the description information of projects is presented by founders. Indeed, founders are the salient source of the project information. This study attempts to examine the impact of source (founder) credibility on project credibility. Considerable scholars (Cheung et al., 2008, etc.; i.e., Hovland et al., 1951; Metzger et al., 2003) have revealed the relationship between the information source and the information credibility; however, this study provides a unique perspective based on the crowd-funding settings.

To some extent, source credibility depends on the reputation of the source (Cheung et al., 2009), that could be assessed by founder's identity information in the virtual Internet settings. Furthermore, founder's identity information (including, both the founder's personal information and his/her crowd-funding-related experiences such as the projects created or supported by the founder) could be the signal of his/her willingness and capability in launching product/service and providing rewards as promised (McKnight et al., 2002), which in turn, might influence backer's judgment on the project credibility.

Hence, we define Source Credibility as backer's credible perception on founder by believing that the founder has one or more characteristics (such as, competence, experience and so on) that could benefit to the backer during the process of investment to the crowd-funding project. We propose: H3: Source (or, founder's identity information) credibility of crowd- funding campaign will have positive relation with backer's perceived credibility on the project.

In <Figure 1>, we propose the research model based on the abovementioned hypotheses.



<Figure 1> Research Model

# $\square$ . Analysis

#### 3.1. Measurement

To test our hypotheses, we collect survey data. Measurement items are derived from previous studies with modification to fit into the context of crowd-funding. The items of Investment Intention are modified from Cheung et al. (2009). The items of Project Credibility are from Fogg et al. (1999) and Cheung et al. (2009), items of Information Quality of description are from Fogg et al. (1999) and Cheung et al. (2009), and items of Source Credibility are from Fogg et al. (1999) and McKnight et al. (2002). <Table 1> presents details about those measurement items. All the measurement scale follow the 7-Likert format.

# 3.2. Data Collection

Our questionnaires are published on an online survey platform (Sojump.com http://www.sojump. com/). After eliminating missing values, the final number of observations is 762. The respondents are mainly Chinese young people with the range of age is 1977 to 1998 (average = 1993, standard deviation = 3.47). The gender distribution consists of 441 female (57.87%) and 321 male (42.13%). Crowd-funding is indeed an emerging industry in China, as Chinese first crowd-funding platform "Demohour" launched in 2011, which leads to the fact that most Chinese people do not have enough knowledge about it. We selected Chinese youth as our respondents because they have richer experiences of e-commerce and other Internet-based artifacts than others (CNNIC, 2015). Meanwhile, Chinese youth are a large potential group of entrepreneurship, who are concerning with every innovative financial system such as crowd-funding. The average hour of each day Internet use is measured by 4.23 (standard deviation = 0.98).

### 3.3. Measurement Validation

The data are subjected to an exploratory factor analysis using the Principle Component algorithm (see <Table 2>). For the whole dataset, four stable factors emerge. All observational item loadings exceed 0.7 so that we are assured of allocating those items into separate latent variables. Four theoretical constructs are assured for convergent and discriminant validity via confirmatory factor analysis using both the LISREL method and the PLS path modeling method. All factor loadings in the models have significant values with high fit indices (CFI = 0.993, TLI = 0.990, RMSEA = 0.045, SRMR = 0.028).

We then check the convergent validity. As shown in <Table 3>, the standardized path loadings for all of the questions are statistically significant. The composite reliability and the Cronbach's alpha for all latent variables exceed 0.7. In addition, the average variance extracted (AVE) are over 0.5 for all the

## <Table 1> Measurement Items

Construct	Definition	ID	Instrument	Mean (Std. Dev.)	Reference	
Informatio n quality of description	The extent to which backers deem project description as persuasive and trustworthy	IQ1	I think the description of the project is persuasive.	4.05 (1.64)	Cheung et al.	
		IQ2	I think the description of the project is convincing.	4.03 (1.65)	Tseng (1999)	
		IQ3	I think the description of the project is trustworthy.	3.99 (1.59)		
Source credibility	Backer's credible perception on founder by believing that the founder has one or more characteristics (such as, competence, experience and so on) that could benefit to the backer during the process of investment to the crowd-funding project.	SC1	Based on the founder's identity information, I think the founder is experienced.	3.64 (1.84)	_ Fogg and	
		SC2	Based on the founder's identity information, I think the founder is reputable.	3.64 (1.72)	Tseng (1999), McKnight et	
		SC3	Based on the founder's identity information, I think the founder is capable and proficient.	3.57 (1.66)	al. (2002)	
Investment intention	The extent to which backers' perceived project credibility will influence their willingness and effort to make investment decisions to the crowd-funding project.	IN1	Online crowd-funding presentation will enhance my effectiveness in making investment decision.	4.15 (1.49)		
		IN2	Online crowd-funding presentation will motivate me to make investment decision.	4.15 (1.53)	Cheung et al. (2009)	
		IN3	Online crowd-funding presentation will make it easier for me to make investment decision.	4.19 (1.48)		
Project credibility	The extent to which the crowd- funding project is perceived by backers as being believable, true, or factual.	PC1	I think the crowd-funding project is factual.	3.87 (1.51)	Cheung et al.	
		PC2	I think the crowd-funding project is accurate.	3.82 (1.45)	(2009), Fogg and	
		PC3	I think the crowd-funding project is believable.	3.89 (1.51)	Tseng (1999)	

latent structures. Hence, we could safely conclude that the convergent validity for constructing a PLS path model is established. Discriminant validity is established if the square root of a construct's AVE is larger than correlations with other constructs (Fornell and Larcker, 1981). As shown in <Table 4>, the square root of AVEs in the diagonal vector are over the corresponding correlations; thus presenting good discriminant validity.

Method variance refers to the variance that is attributable to the measurement method rather than the construct of interest (Podsakoff et al., 2003). It can result from various sources such as common rater, a common measurement context, a common

Item	Factor Loading (Principle Component)					
ID	Factor 1	Factor 2	Factor 3	Factor 4		
IQ1	0.95	-0.02	0.00	0.01		
IQ2	0.84	-0.02	0.01	-0.01		
IQ3	0.91	0.05	0.00	0.01		
SC1	0.00	0.97	0.00	-0.06		
SC2	-0.01	0.93	0.02	0.01		
SC3	0.04	0.82	-0.02	0.11		
IN1	0.03	0.00	0.97	-0.03		
IN2	0.01	0.02	0.84	0.05		
IN3	0.07	0.01	0.84	0.02		
PC1	0.01	0.01	-0.07	0.97		
PC2	0.03	-0.05	0.09	0.83		
PC3	-0.03	0.10	0.10	0.75		

<Table 2> Exploratory Factor Analysis

Note: IQ: Information Quality; SC: Source Credibility; PC: Project Credibility; IN: Investment Intention

Item	Loading	AVE	CR	Cronbach's Alpha
IQ1	0.958***			
IQ2	0.935***	0.919	0.971	0.956
IQ3	0.919***			
SC1	0.924***		0.965	0.945
SC2	0.951***	0.901		
SC3	0.893***			
IN1	0.911***		0.955	0.929
IN2	0.896***	0.875		
IN3	0.899***			
PC1	0.914***			
PC2	0.908***	0.889	0.960	0.938
PC3	0.917***			

\* *p*-value < 0.05, \*\* *p*-value < 0.01, \*\*\* *p*-value < 0.001

#### <Table 4> Correlations and AVEs

	IQ	SC	PC	IN
IQ	0.959			
SC	0.270	0.949		
PC	0.538	0.658	0.935	
IN	0.649	0.637	0.835	0.943

Note: Leading diagonal shows the squared root of AVE of each construct

item context, or from the characteristics of the items themselves. Because the data set in this study are derived from self-reporting survey, the existence of common method variance should be considerately examined.

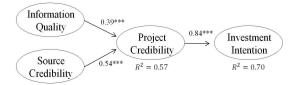
We adopt Harman's single factor test (see also, Bentler and Bonett, 1980; Podsakoff, 1986). This test procedure has been widely used in business research domains (Song and Zahedi, 2005). The result reveals that the fitted model had a significant difference compared to the null model with a common measurement (difference of  $\chi^2$ =3530.4, *p*-value < 0.000). In line with Straub et al. (1995), we conclude that the suggested path model for testing hypotheses is free from a common method bias.

# IV. Result

## 4.1. Result on Hypotheses

The path model developed in this study is tested by adopting the PLS path modeling approach. The results are summarized in <Figure 2> with showing that all the hypotheses are positively supported. The explanation power of response latent variables is 57% for Project Credibility. In the case of Investment Intention, the number reaches 70%; hence, we see the suggested model is powerful in explaining a key factor of investment in the context of crowd-funding.

The results evidence that both high persua-



<Figure 2> Result of Hypothesis Test

sive description and clear and trustful identification of the project founder can influence investment intention with passing through high project credibility. This theoretical argument is in line with Cheung et al. (2009), Cheung et al. (2012) and Fang (2014). As their studies show, ensuring review credibility is crucial for persuading potential consumers. After controlling experiences of Internet use, we also obtain similar results with moderate changes of coefficient between Source Credibility and Project Credibility. For less experienced users, clear evidences on founder are necessarily required to find themselves within a safe contract. This corresponds to Mollick (2014) partially.

# 4.2. Mediation Effect of Project Credibility

In the research model, we set up hypotheses based on theoretical arguments; however, checking mediation effects of Project Credibility is beneficial in understanding the explanation power of our research model compared with the full model which does not have a mediation variable. To learn about mediation effects, we conduct z-value test and calculate a variance-account-for (VAF) score (Henseler et al., 2009). The z-value test is to check the significance of mediation effect, and VAF is adopted to calculate total variances explained by indirect effects.

We set up three PLS models for inspecting mediation effects. The first model consists of three independent latent variables: Information Quality (IQ), Source Credibility (SC), and Project Credibility (PC). The second model has a mediation variable of PC between IQ and Investment Intention (IN), and the third model has a mediation variable of PC bridging between SC and IN. The direct path in the first model between IQ and IN is 0.28 (*p*-value < 0.001). The number marginally decrease to 0.276 (*p*-value < 0.001) in the second model. The z-score is 11.476 (*p*-value < 0.001), and the VAF is 0.474. Those values show that PC should be considered as a primary mediator. In addition, 47.4% of variance is explained by indirect effects from IQ to IN. In the comparison between the first and the third model, results are similar. The direct path coefficients are not changed significantly. Meanwhile, we find a strong mediation effect. The z-score is 11.585 (*p*-value < 0.001), and the VAF is 0.437. In this case, PC can be regarded as a strong mediation variable linking between SC and IN. In sum, the analysis of mediation effect clearly shows that PC needs to be considered as a mediating construct.

# V. Discussion

## 5.1. Theoretical Implications

The findings contribute theoretical knowledge to IT-artifact credibility and crowd-funding investment behavior. To our knowledge, this is one of the first studies to extend the theory of credibility to the crowd-funding context. Previous studies indicated that perceived credibility of product or information is predictor of persuading individuals to use the computer product (Ong et al., 2004) or to adopt the information (Cheung et al., 2009; Fang, 2014; McKnight and Kacmar, 2006) in both physical and online related contexts. Our finding confirms that perceived project credibility dedicates to persuade backers making positive investment decisions, which consent with abovementioned findings in other computer-based contexts. Furthermore, this finding enriches the list of successful factors of fund-raising that project credibility, besides prior revealed factors such as funding goal sizes, and duration (Etter et

al., 2013; Mollick, 2014), social network relationships of entrepreneurs (Agrawal et al., 2015; Mollick, 2014; Zheng et al., 2014) to name just a few is another significant predictor of crowd-funding performance.

Additionally, in line with the study of (Sobel, 1985), the information receiver's credible judgment of the information would be strongly influenced by sender's reputation and the quality of the information he/she received. Yang (2007)'s research on news-related blogs credibility and Cheung et al. (2009)'s study on e-WOM reviews credibility confirmed the above argument. The current study also provides evidences for the theory of credibility that specific information such as persuasive description of the project and informative founder's identification has strong influence on backer's perceived credibility of a crowdfunding project.

## 5.2. Practical Implications

This study also has implications for crowd-funding practitioners such as founders and administrators of intermediary platforms.

First, it is pretty important for founders to understand how backers perceived the credibility of crowd-funding project, because backers' perception of the project would affect their investment decisions, which in turn would influence the performance of fundraising. The study provides founders with clarified insight that the quality of project description and founder's credibility identity are the most significant predictors of backer's credible perception of the project. Thus, founders should focus on how to improve the persuasiveness of project description and how to convey his/her credibility-related identification to backers. To improve the persuasiveness of project description, founders are suggested to comprehensively using detailed text, vivid pictures, and lively video clips to present trustworthy, persuasive, and convincing information (Cheung et al., 2009; Zhao et al., 2011; Zheng et al., 2013) about the project, which would be helpful to provide more realistic evidences of the project (Coyle et al., 2001) to backers. Backers' positive judgment of the project description would alleviate their uncertainty (Pavlou et al., 2007) and improve their perceptions of project credibility. Further, to strengthen backer's credible belief about the founder, necessary cues of founder's crowd-funding experiences, capability and reputation should be conveyed by the identity information. Therefore, all the information that could prove the capability and reputation of the founder should be presented in the narrative webpage.

Second, from the perspective of intermediary platform, the platform administrators should provide guidelines to founders on how to present credible project information. For example, the administrators of Kickstarter assert that "A project should have a video and description that clearly explains the story behind the project", and the assertion has been confirmed by Mollick (2014) to be effective to improve fund-raising performance. Furthermore, the quality of the platform might affect backer's judgment about the project credibility in it. In line with the findings of Wells et al. (2011), website quality could influence consumers' judgment on product quality in it, because website could be regarded as a signal of the product quality in the virtual Internet-based environment. We posit the same insight could be referred in the crowd-funding context; thus, some creative projects pitched to Kickstarter might be deemed to be more credible than similar projects which presented in other unknown platforms, although it is probably not the truth.

# VI. Conclusion

In summary, this study provides new insights in understanding perceived credibility in crowd-funding context. Backer's perception of project credibility is found to have significant impact on his/her investment intention; meanwhile, the quality of project description and founder's credible identification are confirmed to be strong predictors of project credibility. This study contributes to the theory of credibility and successfully extends it to the crowd-funding settings. The study also contributes to the crowd-funding practitioners such as founders and administrators of platforms.

This study examines how backers assess project credibility, and the extent to which backers' perceived project credibility could persuade them to make investment decisions. Our structural model explained 57 percent of project credibility, which, in turn, explained 70 percent of the backer's investment intention.

A set of insights emerge from the data analysis results of this study. Our expectation that backers' perceptions of project credibility can positively contribute to predict their investment intention is confirmed. This is consistent with the findings of some previous credibility-related studies in information system context, such as Ong et al. (2004)'s research on user's acceptance of e-learning systems in high-tech companies, and Cheung et al. (2009)'s study of receiver's credible perception and adoption of e-WOM reviews.

As an exploratory attempt to investigate credibility in the context of crowd-funding, this study has its limitations.

First, our data were collected from Chinese young people who have high level of Internet usage but have only limited knowledge and experiences about crowd-funding. Thus, to ensure the reliability of survey data, we explained key knowledge of crowd-funding and manipulated real-world projects to generate different levels of project descriptions and founder's identity information in our survey. In addition, as crowd- funding platforms can be regarded as social communities, backers in which might show different behaviors under different cultural background (Zheng et al., 2014); thus, data derives from Chinese respondents who live in the collective culture could not represent the people live in the individualistic culture. Therefore, the data may introduce bias and the findings based on these data may be short of generalizability. Future research is encouraged to do comparative studies established on the different demographic and cultural backgrounds.

Second, crowd-funding cases were employed in our survey to provide explanation and enhance respondents' understanding about crowd-funding. However, we just focused on rewarded- based cases; thus, it is uncertain whether the findings of this study are suitable for other types of crowd-funding projects. Therefore, further researches are necessary to discuss project credibility on other types of crowd-funding projects respectively.

Third, the present study mainly demonstrates the predictive role of project description and founder's identification on backer's perceived credibility of the project; actually, other factors such as prior contributions (Burtch et al., 2013a; Burtch et al., 2013b), completing rate of the project (Wash, 2013), and the amounts of sharing to social network service would likely have effect on backer's perception of project credibility. Hence, there is a necessary to conduct further studies to examine the influences of those factors on backer's perceived project credibility in the future.

# <References>

- Agrawal, A., Catalini, C., and Goldfarb, A. (2015).. Crowdfunding: Geography, Social Networks, and the Timing of Investment Decisions. *Journal of Economics* & Management Strategy, 24(2), 253-274.
- [2] Allison, T. H., McKenny, A. F., and Short, J. C. (2013). The effect of entrepreneurial rhetoric on microlending investment: An examination of the warm-glow effect. *Journal of Business Venturing*, 28(6), 690-707.
- Belleflamme, P., Lambert, T., and Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29(5), 585-609.
- [4] Bentler, P. M., and Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588-606.
- [5] Burtch, G., Ghose, A., and Wattal, S. (2013a). Cultural Differences and Geography as Determinants of

Online Pro-Social Lending. MIS Quarterly, 38(3), 773-794.

- [6] Burtch, G., Ghose, A., and Wattal, S. (2013b). An empirical examination of the antecedents and consequences of contribution patterns in crowdfunded markets. *Information Systems Research*, 24(3), 499-519.
- [7] Chen, X.-P., Yao, X., and Kotha, S. (2009). Entrepreneur passion and preparedness in business plan presentations: a persuasion analysis of venture capitalists' funding decisions. *Academy of Management Journal*, 52(1), 199-214.
- [8] Cheung, C. M., Lee, M. K., and Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. *Internet Research*, 18(3), 229-247.
- [9] Cheung, C. M., and Thadani, D. R. (2012). The impact

of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems*, *54*(1), 461-470.

- [10] Cheung, M. Y., Luo, C., SIA, C. L., and Chen, H. (2007). How do people evaluate electronic word-of-mouth? Informational and normative based determinants of perceived credibility of online consumer recommendations in China. PACIS 2007 Proceedings, 18.
- [11] Cheung, M. Y., Luo, C., Sia, C. L., and Chen, H. (2009). Credibility of electronic word-of-mouth: Informational and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce*, 13(4), 9-38.
- [12] Colombo, M. G., Franzoni, C., and Rossi Lamastra, C. (2015). Internal social capital and the attraction of early contributions in crowdfunding. *Entrepreneurship Theory and Practice*, 39(1), 75-100.
- [13] Coyle, J. R., and Thorson, E. (2001). The effects of progressive levels of interactivity and vividness in web marketing sites. *Journal of Advertising*, 30(3), 65-77.
- [14] Cumming, D. J., Leboeuf, G., and Schwienbacher, A. (2014). Crowdfunding Models: Keep-it-All vs. All-or-Nothing. Paper presented at the Paris December 2014 Finance Meeting EUROFIDAI-AFFI Paper.
- [15] Duan, W., Gu, B., and Whinston, A. B. (2009). Informational cascades and software adoption on the internet: an empirical investigation. *MIS Quarterly*, 33(1), 23-48.
- [16] Etter, V., Grossglauser, M., and Thiran, P. (2013). Launch hard or go home!: predicting the success of kickstarter campaigns. Paper presented at the Proceedings of the first ACM conference on Online social networks.
- [17] Fang, Y.-H. (2014). Beyond the credibility of electronic word of mouth: Exploring eWOM adoption on social networking sites from affective and curiosity perspectives. *International Journal of Electronic Commerce*, 18(3), 67-102.
- [18] Fogg, B., Marshall, J., Laraki, O., Osipovich, A.,

Varma, C., Fang, N., . . . Swani, P. (2001). *What* makes Web sites credible?: a report on a large quantitative study. Paper presented at the Proceedings of the SIGCHI conference on Human factors in computing systems.

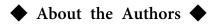
- [19] Fogg, B., and Tseng, H. (1999). The elements of computer credibility. Paper presented at the Proceedings of the SIGCHI conference on Human Factors in Computing Systems.
- [20] Fornell, C., and Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- [21] Giudice, K. D. (2010). Crowdsourcing credibility: The impact of audience feedback on Web page credibility. Proceedings of the American Society for Information *Science and Technology*, 47(1), 1-9.
- [22] Henseler, J., Ringle, C. M., and Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. *Advances in International Marketing*, 20, 277-320.
- [23] Hovland, C. I., and Weiss, W. (1951). The influence of source credibility on communication effectiveness. *Public Opinion Quarterly*, 15(4), 635-650.
- [24] Kim, H., and Fesenmaier, D. R. (2008). Persuasive design of destination web sites: An analysis of first impression. *Journal of Travel Research*, 47(1), 3-13.
- [25] Kim, K., and Hann, I.-H. (2013). Does Crowdfunding Democratize Access to Capital? A Geographical Analysis. Paper presented at the INFORMS Conference on Information Systems and Technology (CIST).
- [26] McKnight, D. H., Choudhury, V., and Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, 13(3), 334-359.
- [27] McKnight, H., and Kacmar, C. (2006). Factors of information credibility for an internet advice site. Paper presented at the System Sciences, 2006. HICSS'06. Proceedings of the 39th Annual Hawaii International Conference on.
- [28] Metzger, M. J., Flanagin, A. J., Eyal, K., Lemus,

D. R., and McCann, R. M. (2003). Credibility for the 21st century: Integrating perspectives on source, message, and media credibility in the contemporary media environment. *Communication Yearbook*, *27*, 293-336.

- [29] Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), 1-16.
- [30] Moss, T. W., Neubaum, D. O., and Meyskens, M. (2015). The effect of virtuous and entrepreneurial orientations on microfinance lending and repayment: A signaling theory perspective. *Entrepreneurship Theory and Practice*, 39(1), 27-52.
- [31] Ong, C-S., Lai, J.-Y., and Wang, Y.-S. (2004). Factors affecting engineers' acceptance of asynchronous e-learning systems in high-tech companies. *Information* and *Management*, 41(6), 795-804.
- [32] Pavlou, P. A., Liang, H., and Xue, Y. (2007). Understanding and mitigating uncertainty in online exchange relationships: a principal-agent perspective. *MIS Quarterly*, 31(1), 105-136.
- [33] Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., and Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903.
- [34] Podsakoff, P. M., and Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management*, 12(4), 531-544.
- [35] Qiu, L., Pang, J., and Lim, K. H. (2012). Effects of conflicting aggregated rating on eWOM review credibility and diagnosticity: The moderating role of review valence. *Decision Support Systems*, 54(1), 631-643.
- [36] Rao, H., Xu, A., Yang, X., and Fu, W.-T. (2014). *Emerging Dynamics in Crowdfunding Campaigns Social Computing*, Behavioral-Cultural Modeling and Prediction (pp. 333-340): Springer.
- [37] Sobel, J. (1985). A theory of credibility. *The Review* of *Economic Studies*, 52(4), 557-573.
- [38] Song, J., and Zahedi, F. M. (2005). A theoretical

approach to web design in e-commerce: a belief reinforcement model. *Management Science*, *51*(8), 1219-1235.

- [39] Straub, D., Limayem, M., and Karahanna-Evaristo, E. (1995). Measuring system usage: Implications for IS theory testing. *Management Science*, 41(8), 1328-1342.
- [40] Tseng, S., and Fogg, B. (1999). Credibility and computing technology. *Communications of the ACM*, 42(5), 39-44.
- [41] Wash, R. (2013). The Value of Completing Crowdfunding Projects. Paper presented at the The Seventh International AAAI Conference on Weblogs and Social Media.
- [42] Wells, J. D., Valacich, J. S., and Hess, T. J. (2011). What Signals Are You Sending? How Website Quality Influences Perceptions of Product Quality and Purchase Intentions. *MIS Quarterly*, 35(2), 373-396.
- [43] Yang, K. C. (2007). Factors influencing Internet users' perceived credibility of news-related blogs in Taiwan. *Telematics and Informatics*, 24(2), 69-85.
- [44] Zhao, X., Strasser, A., Cappella, J. N., Lerman, C., and Fishbein, M. (2011). A measure of perceived argument strength: Reliability and validity. *Communication Methods and Measures*, 5(1), 48-75.
- [45] Zheng, H., Li, D., Wu, J., and Xu, Y. (2014). The role of multidimensional social capital in crowdfunding: A comparative study in China and US. *Information* and *Management*, 51(4), 488-496.
- [46] China Internet Network Information Center (CNNIC). (2015, Jan). The 35th Statistical Report on Internet Development in China. China.





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