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Signaling in Donation Crowdfunding

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ABSTRACT

Signaling in Donation Crowdfunding

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This paper presents an examination of the effectiveness of signals that projectors use to induce donors to commit financial resources in donation crowdfunding. We study the impact of the project quality on funding success on donation crowdfunding. The project quality, research model, is organised human capital from education, human capital from experience, and social (alliance) capital.

The reason of choosing donation crowdfunding, almost crowdfunding

researches have been focused on directly related business types such as equity, lending, and reward based, even if donation crowdfunding is properly demonstrated original frame. In addition, the reason of looking detail at human capital and social capital, crowdfunding is essentially happened through the internet. In this meaning, anyone has willing to rely on perhaps unknown person and offering information. For that reason, to be provided information as certification and previous history is the best direct or indirect indicative factors.

For the empirical test, we use the one of active donation crowdfunding Donorschoose.org. Our data highlight that retaining providing detailed information about level of education, previous projector's history with the same subject, and number of participants from other projectors and therefore strongly impact the probability of funding success. The standard of funding success is measured by full funding from all-or-nothing rule on Donorschoose.

In the result of empirical test, level of education and social (alliance) capital is supported to positively affect on funding success. Unfortunately, however, human capital with experience as an earlier practice with same subject has negative impact on funding success. We discuss the implications of our results for further research and practice.

Keywords: Donation Crowdfunding, Donorschoose, Fintech, Funding success, Human capital, Project quality, Social (alliance) capital

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1. INTRODUCTION

In these days, a person who faced current business markets longs for new enterprise within rapidly innovating technology by IT. There are overly plenty of products and services in faced current industries. For this reason, one of ICT convergence, Fintech (Financial and Technology), attracts more attention. It is a new compound word and demonstrates generally an economic industry with high technology for efficient financial systems (Daniel, 2014). Among the industries of Fintech, crowdfunding brings new financial transactions resources. Crowdfunding is an evidence indicating direction to new financial business market with highly innovated information technology.

A commonly used definition of crowdfunding describes that "Crowdsourcing takes place when a profit oriented firm outsources specific tasks essential for the making or sale of its product to the general public i.e. the crowd in the form of an open call over the Internet, with the intention of animating individuals to make a contribution to the firm's production process for free or for significantly less than that contribution is worth to the firm (Kleemann et al, 2008)." It means that a project of crowdfunding is made in form of donation or in exchange for some form of reward for specific purposes through the internet (Lambert and Schwienbacher, 2010).

One of crowdfunding types, donation, is the birth of crowdfunding (Barnett, 2013). Other types such as equity, lending, and rewarded based are emerged from the frame of donation. At this time, it need to figure out and highlight through theoretically and empirically.

To begin with a donation crowdfunding study, the research question started from how to predict funding success of the project. There are a lot of issues such as successful fundraising on crowdfunding. On the other side, there are countless failed crowdfunding projects. At this time, to do consider both sides such as project and investors, which factors accelerate investors' decision making in crowdfunding. Prior researches are consistent with the view that potential investors try to evaluate the unobservable characteristics (Connelly et al, 2011 & Ahlers et al, 2015). However, in this study, we would like to focus that what kind of project quality is needed for funding success.

This paper presents an empirical examination of donation crowdfunding. We examine which crowdfunding project signals and attributes of project quality are most likely to induce investors to commit financial resources in a donation crowdfunding context. We examine 364,356 offering between September 2000 and September 2014 based on data from one of the activity donation crowdfunding platforms, the Donorschoose.org.

To this end, in this paper, we provide theory and supporting evidence of the result from data. We examine the impact of project quality (in terms

of human capital with education, human capital with experience, and social [alliance) capital) on funding success. Our data highlight that retaining detailed information about the donation and project can be interpreted as high probability fundraising signals and therefore affect the funding success.

2. BACKGROUND RESEARCH

2.1 Crowdfunding to Donation Crowdfunding

While crowdfunding has the basic concept that it is “an open call, essentially through the Internet, for the provision of financial resources either in the form of donation or in exchange for some form of reward and/or voting rights in order to support initiatives for specific purposes ” (Lambert and Schwienbacher, 2010). four types of crowdfunding models can be identified. These are: donated, equity, lending, and reward based (pre-purchased) format (Buysere et al, 2012).

In this examination, we believe that donation crowdfunding is the original format of crowdfunding and other types such as equity, lending and reward have developed from the donation crowdfunding model. Bradford

(2012) explains crowdfunding was started by politicians to collect small campaign donations from the general public. Large charitable organizations began collecting donations online long before Web-based crowdfunding emerged.

Barnett (2013) asserts that the original crowdfunding is donation type and other types have been extended through it as “the birth of crowdfunding has come through this model, where funders donate via a collaborative goal based process in return for products, perks or rewards” David and Matthew (2015) argue that large charitable organisations used to collect funds online before crowdfunding emerged. They report that small organisations and individuals solicited donations from crowd after 2010.

Based on previous research on the term donation crowdfunding, it literally described there are nothing to receive regardless of their donation unimaginable amount of money (Bradford, 2012).

In crowdfunding, donations are not just strictly for the use of charities. Lambert and Schwienbacher (2010) show that not all projects offer any rewards to investors. In means that, a project which is not a charitable character can be a donation model for enterprises profit.

3. THEORETICAL BACKGROUND

A framework is developed based on Ashlers et al [2015] framework with related hypotheses for how attributes of project quality are related to funding success. Thereafter, it becomes literature review for how characteristics of project quality and the associated signals are related to funding success.

3.1 Human capital

Human capital theory is defined as a valuable asset that provides individuals with their cognitive abilities, making more productive and potential activity (Schultz, 1959; Becker, 1964; Mincer, 1974). Coleman (1988) explains “human capital is created by changes in persons that bring about skills and capabilities that make them able to act in new ways.” The theory has been verified in previous research that whether person who can be willing to develop and profitable business is or not on entrepreneurship and venture success.

For that reason, human capital is the essential factor to be associated with venture success and project in the literature review of entrepreurship

(Unger et al, 2011). To discuss more precisely, as high human capital means high capabilities and skills, these are directly related to a venture or project quality (Ahlers et al, 2015).

The net of human capital can be measured by education and experience (Boxman et al, 1991). It means that depending on these two factors, we can recognize human capital. An individual who gets more education and experience can be seen as high human capital and it is the measure of effective signal venture founders.

Factors such as education and experience can be valuable information to predict superior ability in successfully exploiting opportunities. For that reason it can typically have an influence on an investor's decision making (Bottazzi et al, 2008). Thus, human capital is one of the signals to be guarantees and collateral to make a decision (Robb &Robinson. 2014).

In this research, consequently, education and experience are dealt with for classifying human capital influence on funding success. As discussed, these two variables provide signals to attract more investors and therefore increases the chances of successful crowdfunding.

3.1.1 Human Capital with Education

One of the main factors that increases human capital is education. General

human capital represented here by the entrepreneur's education may reflect the extent to which the entrepreneur has had the opportunity to develop relevant skills and contacts (Cooper et al, 1994). To make learning something would be a positive basis for future performance (Ackerman & Humphreys, 1990; Hunter, 1986).

Education is not a compulsory, in detail education degree as part of human capital can be an effective signal for a project's quality (Ahlers et al, 2015). It can be a project's strategy (Baum et al, 2001). Levie and Gimmon (2008) have demonstrated that to do first-time a project can have an effective signal by education degree. Therefore, through education level shall be recognized exploiting business opportunities (Shane & Venkataraman, 2000).

Previous research highlights that education is a key determinant of entrepreneurial success. As the characters of crowdfunding and inexperienced investors, it is totally relied and engaged on projector's ability and skill.

The following hypothesis proposes for the role of human capital of education on a project quality:

Hypothesis 1: The Human Capital by Education positively affects funding success.

3.1.2 Human Capital with Experience

Another component of human capital is experiencing. Earlier research mentions “specific vocationally oriented experience is theoretically predicted to increase human capital (Becker, 1964).” In other words, to accumulate experience in a relevant field brings improved human capital. If they pretend to make various imprecise experiences, it cannot ensure that it will help with any stage of the project process (Davidsson, P., & Honig, B, 2003).

In addition, it is happened not only the result of formal education, practical and specific practice (Davidsson, P., & Honig, B, 2003). For instance, entrepreneurial activity is expressively related with previous entrepreneurial experiences (Bates, 1995; Robinson and Sexton, 1994).

By means of previous research, prior experience would be relevant to the current venture result. It could be different how many tries are needed, but generally, a greater impact can be made from previous experience. In this examination, it is hard to reach a goal the first time without actual understanding.

The following hypothesis proposes for the role of human capital of experience on project quality:

Hypothesis 2: The Human Capital by Experience positively affects funding success

3.2 Social (Alliance) Capital

Social capital as network capital emphasise that networks and business linkages have valuable channels to access each other with resources, complementary and so on (Baum & Silverman, 2004; Hoang & Antoncic, 2003). Wellman and Frank (2001) argue that network capital is the form of social capital, which happen "personal community networks." During this term, they support to help and trade each other with any ties and networks in common. It encourages facilitate action in the relations among persons (Coleman, 1988).

Moreover, information by social capital is more valuable things to make "more useful, reliable, exclusive and less redundant" than formal channels (Brüderl & Preisendörfer, 1998). The reason of that, it makes up a reputation on signal of project quality (Hoang &Antoncic, 2003). Specifically, these are essentially benefits to unknown organization or individuals. Brüderl and Preisendörfer (1998) identified, it is "network success hypothesis." Since they get steady information, advice, and overall support (Hoang & Antoncic, 2003).

This should be especially important crowdfunding, for a project creates an online from unknown persons. If someone is looking for a project, they can recognise that there are information about project, teacher, school and materials.

The following hypothesis proposes for the role of social (alliance) capital on project quality:

Hypothesis 3: The Social (Network) Capital positively affects funding success

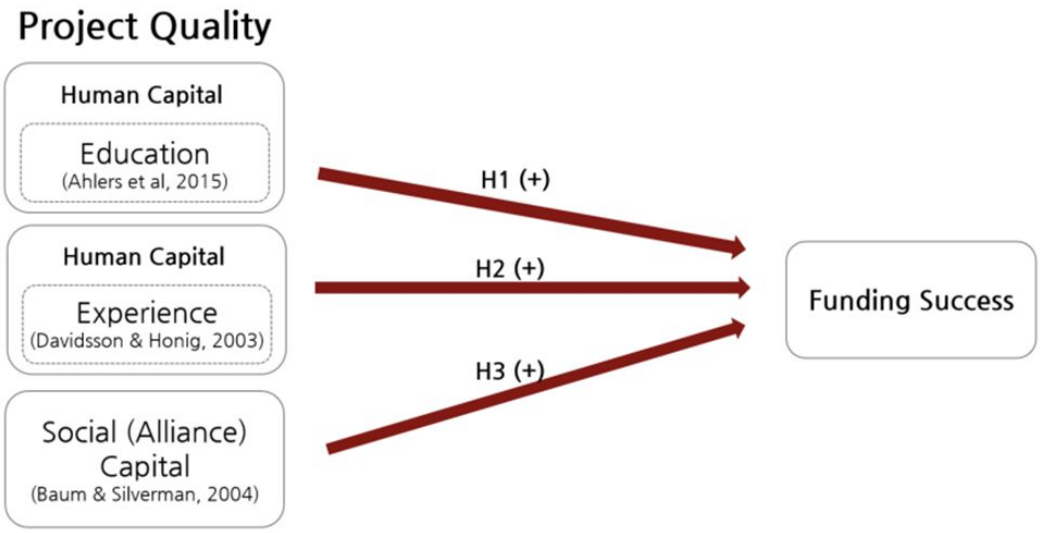
3.3 Funding Success

As looking at a theory of the growth of the firm, managerial resources play a pivotal role and some factors such as capabilities, culture, and environmental capacity affect venture growth (Penrose, 1959). The concept of funding success on the crowdfunding platform can be a controversial point. In this case, there is one obvious success measure whether a project is fully funded. Crowdfunding is especially important for the success of a project, because most of the platforms use the funding model, “all-or-nothing”. As to do transfer funding money to projectors, funded money has to be over a standard percentage of funding target. If it is not, then it will automatically be refunded to funders. Accordingly,

full funding is a basic and important measure of funding success.

<Figure 1>

Determinants of Funding Success



4. RESEARCH METHODOLOGY

4.1 Data

To figure out the correlation between hypotheses, one of the donation type of crowdfunding platform, Donorschoose, data is used. This has been in operating since 2000 in the United States. It is a typical non-profit organization in U.S for K-12 public schools in all 50 states and the District of Columbia (Donorschoose, 2015). The only allowed teachers can post requests for pedagogical needs by donations.

Based on analysis of the data, the platform is lively, expanding over the years. They have been operating 789,590 projects between 2000 and 2014 (Appendix 1). In addition, with USD 89 million funded in 2014, it has raised the largest total amount of donations (Appendix 2). Donors typically put emphasis on transparency, so all of the transaction data is open on the web-site.

4.2 The Donorschoose Donation Process

As it is mentioned, Donorschoose is only used for an online charity crowdfunding. Each of the projects fundamentally have different periods of time up to 4 months. The basic process to donate is that if someone decides to fundraise a project, a donor can pay from a minimum of one dollar to the rest of the goal. Moreover, there is an optional donation to

support Donorschoose.org by 0, 12, 15 and 19 the percentage of the total payment.

To be classified as a funding success, as previously discussed, they have an “all-or-nothing” rule. From this rule, they have chosen seventy percent of the total goal. It does not need the full collected amount of goals, but it has to reach a minimum of seventy percent. Consequently, this means that when the amount of funds raised is over seventy percent, Donorschoose prepares materials as listed on the “where your donation goes” of the web-site and delivery of teacher. Thereafter, the “where your donation goes” shows the guarantee of details of usage, such as cost, quantity and materials. This information is one of the performances on transparency.

If donation is collected below 70 percent, the money received from the crowdfunding is returned to donors. However, this web-site would like to give optional choices to donors, (1) to donate to a different project, and (2) to send a Donorschoose.org gift card to the teacher without taxes. Donorschoose makes donors to keep fundraising repeatedly on the web-site during this process.

After delivering all materials, there is obviously no monetary value reward to donors. However, there is a thank-you letter for donors. The letter literally implies appreciation message from students.

4.3 Data Set

As it is mentioned several times, Donorschoose puts the transparency into practice and all of recorded data are opened such as Open API. Our final data sources consist 364,356 projects published on Donorschoose between 2002 and 2014. All about the processing status of projects has been deleted. This study, because, has funding success as the dependent variable.

What we use in this experiment two open data “Projects“ and “Donations” from Donorschoose.org. Project data provide the information on each of a posted project on the platform such as teachers’ id, school location, target goal, funding status, and so on. Donations data show all donor information which is where they live, how much they paid, and so on. Using these huge two data sources, we can figure out the correlations between hypotheses.

Therefore, as follows above data set, 364,356 data are left for this empirical test. We collected four types of data: (1) human capital with education, (2) human capital with experience, (3) social (network) capital, (4) further control variables, and (5) funding status: fully funded or not fully funded. <Tables 1> and <Table 2> describe for all variables and the correlation matrix. In order to examine our hypotheses, following variables are used.

4.4 Measurement Development

4.4.1 Independent Variables and Analysis

Human capital with Education We obtained information about the project, such as composition and qualification from the open API. Each of the project includes short biographies of projector as a teacher. Among the information, there are two teaching certification information. On these data sources, the projector is typically a teacher. Thus, education is about teaching certification. Originally there are two columns of teaching certification.

However New York City Teaching Fellow (NYCTF) is one of the largest and most recognised urban certification programs (NYC, 2015). This is over one-fifth of the city's math, science and special education teachers program. We created a list of all 364,356 projectors (teachers) and distinguish by New York City Teaching Fellow.

We use a dummy variable New York City Teaching Fellow whether a teacher possesses a qualification (1), or not (0). It is based on Backes-Gellner and Werner (2007) and Levie and Gimmon (2008) and argue that education degrees, as part of human capital, are an effective signal for a venture's quality. For that reason, we choose a teaching

degree as a proxy for education.

Human Capital with Experience Regarding Human capital with experience, we follow that Dabisson and Honig (2003) use training experience as making higher human capital. More precisely, we use how many times a projector, the teacher, has tried project experience. To examine tactic knowledge, it cumulates total times of projects specifically in related topic.

Moreover, how many times projector have focussed same subject in a project. On the Donorschoose, they have six types of project topic such as math, science, literacy and so on. It shows by herfindahl index from 0 to 1. As closer with 1, it means projector has almost the same topic on a project. In reverse, if the index is near by 0, it presents a projector has made with various subjects. In addition, we cut off under four times projects' data to figure out clean data result. It cannot be enough opportunity to accumulate experience just one or three times. For that reason, we used number of previous projects within overlapping subject over four times.

Social (Alliance) Capital Human capital and social (network) capital are sometimes intertwined. Baum and Silberman (2004) also mention that high human capital is not only existed with large number of teams, but just at that time they may have social capital. Likewise, we measure the other projectors (i.e. Teachers) cooperation as a proxy of network capital.

Other projectors, teachers, may exactly catch out how many a projector has ability and understanding of class and will make success class using funding money. They are the best panel of judges and network than anyone else. Thus, we measure how many other teachers participate and invest in a project. The number of measuring can read supporting from a network and possibility of success.

<Table 1>

Descriptive Statistics

	Number of Observation	Min	Max	Mean	SD
Education	364356	0	1	0.02	0.14
Experience	364356	0.2	1	0.48	0.19
Social (Alliance) Capital	364356	0	300	1.02	4.67
Full Funding	364356	0	1	0.84	0.37
Type of Project	364356	1	6	3.16	1.04
N times Project	364356	4	288	24.11	32.96
Gender	364356	0	1	0.86	0.33
Location	364356	0	1	0.62	0.48

Notes: This table shows the mean, standard deviation (SD), minimum value (min), and maximum value (max) for all variables. The sample covers 364,356 crowdfunding projects.

4.4.2 Dependent Variables and Analysis

Fully Funded. The dependent variable, funding success, in this paper is identified crucial one measure. It is *Full Funded* which means that whether a project has received over the criterion of funding success on the platform. This is made dichotomous variable which is fully funded (1) or not fully funded (0). This is sufficient indicator to access differentiation a project receives full funding or do not receive full funding.

As it is explained, the Donorschoose also has own funding model which must be collected over seventy percent of goal. There is the column “funding status” on Projects data. It presents four categories such as completed, expired and reallocated.

These are literately meaning that completed is what we think full funding, expired and reallocated cover not fully funded as below 70 percentage of goal and continue to optional choice continually to donate another project. In this examination, we only need to classify a project success or not, thus all data are applied ‘not full funding (0)’ without completed data.

<Table 2>

Correlation Matrix

	Full Funding	Social (Alliance) Capital	Experience	Education	Gen-der	Location
Full Funding	1					
Social (Alliance) Capital	0.03***	1				
Experience	-0.02***	-0.04***	1			
Education	0.03***	-0.01***	-0.02***	1		
Gender	0.05*	0.03	0.01	-0.02*	1	
Location	0.02	0.04	0.03**	0.01	0.02*	1

Notes: This table shows the Pearson correlation coefficients for the variables in Table 1. ***, ** and * indicate statistical significance at the 1%, 5% and 10% levels, respectively.

4.4.3 Control Variables

Gender In most researches, gender has been found to be a significant factor in the probability of establishing a venture. *Location* Location has also been an associated factor. These variables are absorptive capacity of the implementing a project on crowdfunding. We include these two variables as controls.

5. RESULTS

<Table 3> presents logistic reasons for the full fundraising of funding success on independent variable. We explore whether and how fully funded project differ from non-fully funded projects in terms of the described attributes of project quality. For that reason, we only use a univariate analysis with stepwise and interaction techniques which is testing the full funding of a project.

Within the original larger data, we find missing values for individual variables. We exclude these cases for the most detailed analyses. In subsequent analyses, we use the reduced sample of 364,356 projects, and we find where all projects offer complete information for all attributes of

quality. Most importantly, <Table 3> shows that higher experience level is associated with non-fully funded projects which supports our hypothesis 2.

We also found that high level of experience combined with the networking power has interaction between two variables to make a positive effect of the independent variable. This is kind of big interesting points. Because before starting empirical test, we do not have a clear prediction about the relationship with funding success.

For the control variables, we find very limited evidence of stable relationships with funding success. Therefore, we find a significant support for our hypothesis 1 and 3. These two dependent variables positively affects funding sucess. On the other hand, there is no initial support for hypothesis 2. Even if it makes up interaction between hypothesis 2 and 3.

To be detailed explaining the results, all of independent variables have correlation with the dependent variable. When a projector has as much as higher levels of education, the project positively affect to increase funding success. In addition, social (alliance) capital has parallel correlation with funding success. It is existed on donation crowdfunding, although it is called crowdfunding.

Unfortunately, hypothesis 2 as level of experience is not supported by the data. The level of experience works negatively effect on funding success. It means that when a projector has been tried a lot of times with the

same subject on crowdfunding, it may affect unfavorably to the projector's ability and previous result of the projects. This can bring the distrust capability of projector and will lead lack of fundraising.

<Table 3>

Logistic regression,

	Estimate	Pr(>|z|)
Independent variables		
Education	0.672	.000
Experience	-0.222	.000
Social (Alliance) Capital	0.034	.000
Experience: Social (Alliance) Capital	0.038	.000
Control variables		
Gender	0.789	.000
Location	1.052	.000

Notes: This table presents the result by logistic regression. To be more valuable result, it used stepwise and interaction on logistic regression.

6. Implications and Limitations

Research on donation crowdfunding has not had much progress, and naturally a lot of interesting unanswered questions remain. In the following, it gives some implications and limitations of the research.

First of all, it can help for both practitioners and even policy makers. The reason for that, a word of crowdfunding is not only created recently but also it have to develop relevant regulations. Because it is one of financial categories market. In this meaning, it can be helpful developing in the other expanding crowdfunding market. According to Breaking Banks written by Brett King (2014), there is impact sentence “in the next 10 years, we will see more disruption and changes to the banking and financial industry thatn we have seem in the preceding 100 years.” Our findings offer guidance to make a successful project and brisk crowdfunding market.

Second of all, there are not enough previous studies about donation crowdfunding, even it is the original form of it. Almost theoretical and empirical research has been taking about reward funding model. At this time, the report highlights donation crowdfunding market with empirical test, although it is just a small step to be generalized to the conceptual model.

Finally, the finding conduct an empirical examination of the project quality attributes. Human capital and social capital present to be a good investment by increasing the probability of someone in the entering into a nascent process (Davidsson, P., & Honig, B, 2003). We demonstrate managerial strategies and these two theoretical perspectives at the time of crowdfunding expansion.

While we believe we have developed hypotheses and model, we also know it has many controversial limitations. First, we choose the data source from unique character crowdfunding such as class. It is kind of donation crowdfunding, but they have a restriction of subject and others. For that reason, if the research makes identifying and compare donation crowdfunding and another donation crowdfunding or not specific donation project. Then it may bring more precise result to figure out signaling on donation crowdfunding. Even if we used no lack of data quantity, we are limited in generalising our finding widely. This may affect to education donation crowdfunding.

Another, this is only focused on side of the project. As the topic of crowdfunding, this is not over decade research. It may need plenty of theoretical and empirical study to figure out what crowdfunding market has different characters with normal market and how funders may be motivated by non-monetary rewards and which are dominant effects in patronage and reward-based crowdfunding (Molick, 2014). Unfortunately, this study only finds about the project. Thus, a further empirical study would be needed to individual funders and donors' decision making processes.

7. CONCLUSION

This paper is an empirical examination of the effectiveness of project quality attributes. The data highlight how important the level of each variable in a donation crowdfunding context. It demonstrates the importance of human capital with education, as measured by the level of the projector's with certification and social (alliance) capital. We also found somewhat surprisingly, that human capital with experience as measured by previous history of projects had little or no significant impact on funding success. In addition, there are interaction relations between human capital with experience and social (alliance) capital.

Our findings have interesting implications for both practitioners and policy makers. For projectors that use donation crowdfunding, the data suggest that retaining a lot of project experience typically about same subject can be interpreted as effective signals that can increase the likelihood of funding success. Moreover, internal governance such as education level of projector and linkage of projector can enhance the likelihood of attracting investors as well as fundraising. Furthermore, from interaction of data, it figures out the relationship between the high level of previous experience within the same topic and linkage of projector bring funding success.

In this time of expanding donation crowdfunding, our data highlight the fact that the participants on the donation crowdfunding sites our research

seem to differentiate among the attributes of project quality and valuable signals. Crowdfunding, at this point, the industry is still in its infancy for all policies and research. From the empirical test, we hope such issues will be explored further more to the persons concerned.

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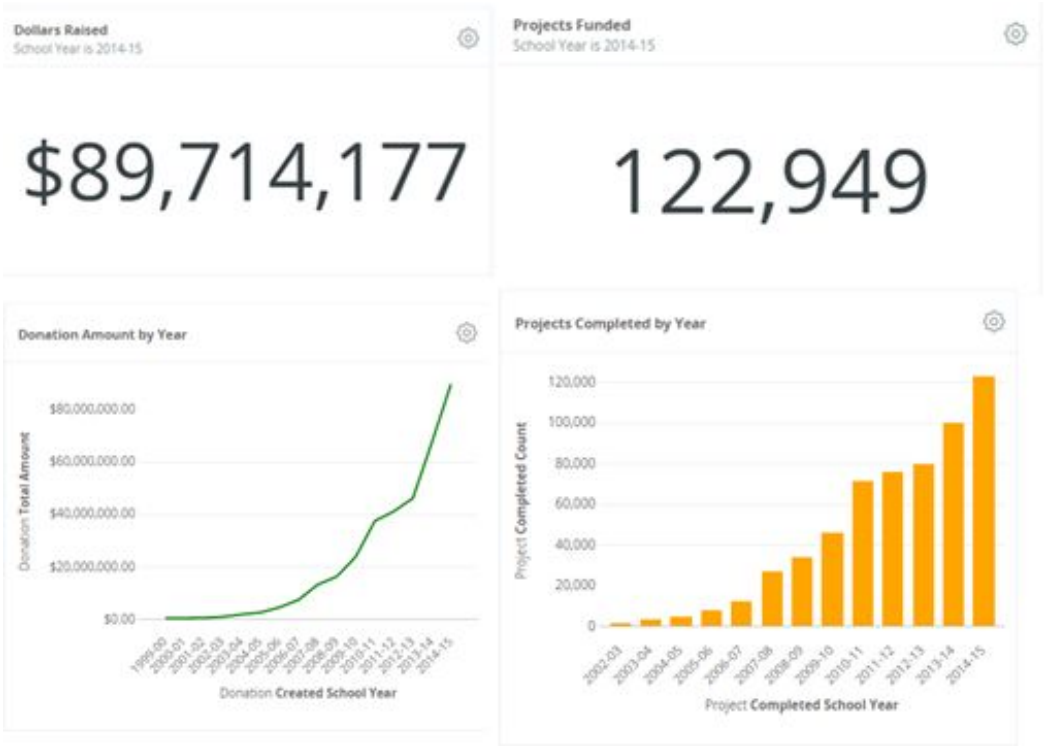
APPENDIXES

Appendix1: Number of projects on Donorschoose

2014 (1-12)	170,303
2013 (1-12)	131301
2012 (1-12)	117618
2011 (1-12)	104186
2010 (1-12)	86444
2009 (1-12)	63546
2008 (1-12)	48030
2007 (1-12)	31602
2006 (1-12)	20288
2005 (1-12)	9214
2004 (1-12)	4566
2003 (1-12)	1967
2002 (9-12)	514
Total	878776

Appendix2: Total amount donation and project funded by Donorschoose Data



[국문 초록]

최근 몇 년간 IT 기술발전은 매우 빠르게 진행되고 있다. 그러나 반면, 현재의 시장은 제품과 서비스가 풍족함을 넘어서 과포화 상태로 접어들고 있어 대다수 사람이 새로운 사업에 대한 갈망이 있었다. 이 결과 IT 발전과 더불어 ICT 융합이라는 새로운 비즈니스 영역 개발이 최근 들어 많은 이목을 끌고 있으며, 이 중 핀테크라는 개념이 발생하게 되었다.

핀테는 금융과 IT의 접목된 신조어로서 효율적인 금융 서비스 및 산업으로 정의되고 있다 (Daniel, 2014). 핀테크 산업 분야 중 크라우드 펀딩은 침체한 금융 경제 경기 활성의 하나의 방안으로서 많은 이목을 끌고 있다. 이번 연구에서도 집중적으로 보고자 한 크라우드 펀딩은 어떠한 특정 목적을 위해 인터넷에서 경제자원을 단순 기부 혹은 보상의 조건으로 지지받은 현상이라 설명된다 (Lambert and Schwienbacher, 2010).

현재 세계적으로 크라우드 펀딩을 통해 자금모금을 성공적으로 이룬 많은 사례가 보이지만 셀 수 없이 수많은 크라우드 펀딩 프로젝트들이 모금에 있어 실패에 직면하고 있다. 이에 이번 연구를 통해 학문적으로 혹은 실용적인 면에서 크라우드 펀딩의 성공 지표가 될 수 있도록 노력하였다. 그리하여 본 연구는 기부형 크라우드 펀딩에서 프로젝트 관리자가 효과적으로 기부자들을 설득하여 금전적 자원을 지원 가능할지에 대한 주제로 진행되었다. 특히 프로젝트의 질적 수준에 따른 성공적인 기부 정도를 파악하는 데 주력하였다.

프로젝트의 수준을 판단하는 요소를 교육으로부터 발생하는 인적자본, 경험

으로부터 발생하는 인적자본, 그리고 상호 간의 이익을 위해 동맹으로 발생하는 사회적 자본을 사용하였다.

특히 여러 가지 크라우드 펀딩 사업 모델 중 기부형을 선택한 이유는 크라우드 펀딩의 시초이며 대부분의 기존 연구들이 사업과 직결되며 기부형을 바탕으로 발전한 보상 형, 대출형, 그리고 투자형 주제로 활발히 진행되고 있었다. 이에 이번 연구를 통해 기부형 크라우드 펀딩을 재조명하며 실사용자와 관련 정책을 성립함에 학문적 및 실무적 의의를 기여하고 싶었다.

실증적 연구를 바탕으로 하기 위해 현 기부형 크라우드 펀딩 중 제일 활발하게 진행되고 있는 Donorschoose.org라는 미국의 기부형 크라우드 펀딩의 데이터를 사용하게 되었다. 기부와 프로젝트에 대한 발생한 실제 데이터를 통해 프로젝트 관리자의 교육 여부, 관련 주제로의 프로젝트 경험 정도, 그리고 다른 프로젝트 관리자들로부터 발생한 협업 기부 정도를 측정하여 성공적인 모금 발생과의 상관관계를 확인하였다.

성공적인 모금의 기준이란 Donorschoose.org와 다른 대부분의 크라우드 펀딩에서 사용되는 기준인 all-or-nothing으로 정하였다. 즉, 기준 이상의 모금이 발생하면 모금 성공 혹은 기준 미만으로 발생하면 모금 실패가 되는 이분형 범주 값을 사용하였다.

결과적으로 프로젝트 관리자의 교육 여부는 성공적인 크라우드 펀딩에 긍정적인 영향을 미치는 것을 확인하였으며, 또한 다른 프로젝트 관리자들로부터 발생한 상호 간의 협업 여부도 크라우드 펀딩 성공과 긍정적인 상관관계인 것을 데이터 결과로 증명하였다. 그러나 불행히도 관련 주제의 크라우드 펀딩 경험은 오히려 성공적인 크라우드 펀딩이 발생하는 요소로서 부정적인 영

향을 미치는 것으로 확인되었다.

주요어: 기부형 크라우드펀딩, Donorschoose, 크라우드 펀딩 성공 요인, 인적 자원, 사회적 자원, 핀테크

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