THE IMPACT OF SOCIAL CAPITAL ON CROWDFUNDING PERFORMANCE

Lady Aprilia

Department of Management,
Faculty of Economics and Business,
Universitas Indonesia Depok, Indonesia
oline_simanjuntak@ymail.com

Sigit S. Wibowo

Department of Management,
Faculty of Economics and Business,
Universitas Indonesia Depok, Indonesia
sigit.sw@ui.ac.id

Abstract

This study aims to analyze the effects of social capital—namely structural, relational, and cognitive dimensions—on crowdfunding performance using Kitabisa.com as a case study for 2013-2015. Using robust ordinary least squares methods, we find two important results. Structural dimension, which is measured by Facebook friends owned by an entrepreneur, affects crowdfunding success. The cognitive dimension, which is measured by the number of words that are written by entrepreneurs in the platform, also affects crowdfunding opportunities in order to wage a successful campaign. Using logistic regression technique, this study finds the same result, namely that the structural dimension and cognitive dimension have a positive relationship to the performance of crowdfunding. From a logistic regression, we can conclude that the number of Facebook friends and the amount of words to describe the project significantly positively influence the chances of success of the project; the more the number of friends and the number of words on a project, the greater chance of a project to achieve success. This study concludes Facebook friends owned by entrepreneur and number of words affect positively crowdfunding opportunities toward a successful campaign.

Keywords: Crowdfunding, agency theory, social capital, social entrepreneurship

Abstrak

Studi ini bertujuan untuk menganalisis pengaruh modal sosial - yaitu dimensi struktural, relasional, dan kognitif - pada kinerja crowdfunding menggunakan Kitabisa.com sebagai studi kasus untuk tahun 2013-2015. Dengan menggunakan metode OLS, kami menemukan dua hasil penting. Dimensi struktural, yang diukur oleh jumlah teman Facebook yang dimiliki oleh seorang pengusaha, mempengaruhi keberhasilan crowdfunding. Dimensi kognitif, yang diukur dengan jumlah kata yang ditulis oleh wirausaha di platform tersebut, juga mempengaruhi peluang crowdfunding untuk kesuksesan. Dengan menggunakan teknik regresi logistik, penelitian ini menemukan hasil yang sama, yaitu dimensi struktural dan dimensi kognitif memiliki hubungan positif dengan kinerja crowdfunding. Dari regresi logistik, dapat disimpulkan bahwa jumlah teman Facebook dan jumlah kata untuk menggambarkan proyek secara signifikan berpengaruh positif terhadap peluang keberhasilan proyek; semakin banyak jumlah teman dan jumlah kata dalam sebuah proyek, semakin besar peluang sebuah proyek untuk meraih kesuksesan. Studi ini menyimpulkan teman

Facebook yang dimiliki oleh pengusaha dan sejumlah kata mempengaruhi peluang crowdfunding secara positif menuju sebuah kampanye yang sukses.

Kata kunci: Crowdfunding, teori keagenan, modal sosial, kewirausahaan sosial

Nowadays, ideas and human creativity have been highly developed compared with the past. Not only entrepreneurs, but employees and students have also begun to distribute their ideas and creativity through a project. However, the problem is that the project often could not be realized because of lack of funds. Most possible funding is through banks or other financial intermediaries. Unfortunately, not everyone can borrow funds for their business from the bank, because there are so many lending requirements, which are not easy to be fulfilled. In addition, borrowing from the banks also needs a collateral or guarantee that is not necessarily available to small project owners or entrepreneurs. Surely this is an obstacle for someone who does not have not adequate capital and is constrained from accessing bank loans.

But now, with improvement in technology, project owners can get funds for their project without going through a bank and with the use of public funding by utilizing advances in technology. Technology not only develops the education but also enhances the investment system. Through advanced technology, entrepreneurs who have new ideas and creativity to deliver a project, but have limited funds, can get funding with the technological advances. This kind of funding is called crowdfunding. Freedman and Nutting (2015) define crowdfunding as a method of collecting a lot of small contributions through an online funding platform to finance a new business.

The development of crowdfunding in the United States has been rapid and followed by government regulations for crowdfunding platforms. For this reason, the US Government has released the JOBS Act, which stands for Jumpstart Our Business Startups. Before this law was signed in April 2012, the concept of the JOBS Act had been developed earlier through crowdfunding platforms such as Kickstarter.com in 2009 and Indiegogo.com in 2008. In Indonesia, "crowdfunding" practice is not a new thing, although it is likely that the name itself may not be familiar. Collecting Coins for Prita is also a form of crowdfunding donations. Although Indonesia has no clear rules related to crowdfunding, there are already several websites that facilitate crowdfunding in Indonesia such as Patungan.net, Wujudkan.com, Gagas.web.id, and Kitabisa.com.

For crowdfunding websites in Indonesia, Wujudkan.com is considered as the pioneer platform, followed by Kitabisa.com, Ayopeduli.com, and Gandengtangan.org. However, based on the number of successful campaigns, Kitabisa.com is currently considered to be the most developed platform. Kitabisa.com also promotes transparency and accountability by publishing all names of investors involved and the amount of investment into the online platform. Moreover, Kitabisa.com is the crowdfunding site that has the highest number of employees and the only one that employs full-time employees

compared the other crowdfunding websites in Indonesia.

The development of crowdfunding has certainly attracted the attention of researchers. Schwienbacher and Larralde (2012) argue that a successful crowdfunding project is usually able to draw a crowd and needs a small amount of funds. Several studies have investigated the motivation of entrepreneurs and sponsors in participating in crowdfunding. Entrepreneurs seem to have plenty of motivation in starting a crowdfunding project, such as for generating funds, attracting public attention and getting feedback from them for their products and services. Zheng *et al*. (2014) investigate how social capital affects the performance of crowdfunding in the United States and China. This study finds that there are three dimensions that significantly affect crowdfunding performance, namely, the structural dimension, relational dimension, and cognitive dimension. For the structural dimension, an entrepreneur's social network is measured by the number of friends on social media owned by project makers, such as measuring the number of Facebook friends. For the relational dimension, the liabilities of reciprocation are measured by the number of other projects contributed by the project makers on the same platform between the start date period and end date of the project itself. For the cognitive dimension, the same perception measured by the number of words on a narrative project.

This paper examines the performance of crowdfunding in Indonesia using Kitabisa.com as a case study. The rest of this paper is structured as follows. The second section discusses related literature. The third section describes the research methodology. The fourth section provides research findings and discussion. The last section concludes.

LITERATURE REVIEW

The term of crowdsourcing was coined by Howe. According to Howe, crowdsourcing is something conducted by a company or institution, as well as worked by their employees, and then they will be plunged into a network of groups to explore ideas, feedback, and the solution of the group, which is also their business partner. Apart from being able to collect business ideas and solutions, crowdsourcing is also able to accommodate the excess capacity of public financial resources. A type of crowdsourcing that makes participants also act as investor is called crowdfunding.[1] Massolution reports that crowdfunding volume in the US grew 81% from 2011, reaching USD 2.7 billion in 2012.

Based on existing literature, there are at least three important insights in studying crowdfunding platforms. Firstly, Schwienbacher and Larralde (2012) argue that a successful crowdfunding project is generally interesting for many people and only requires a small amount of funds. This kind of entrepreneurs certainly has extensive knowledge and has skills with technology 2.0. The second is the motivation of entrepreneurs or investor when participating in crowdfunding. According to Lambert and

---

[1] http://crowdsourcing.typepad.com/cs/2006/06/crowdsourcing.html, accessed on February 22, 2016.

Schwienbacher (2010), entrepreneurs have some motivation running a crowdfunding project is to get the money, attract public attention, and get feedback from the public on its products and services. Meanwhile, according to Gerber *et al*. (2013), the motivation of investors is to support individuals who share their same interests and have similar expertise. Investors are also motivated to become a member of a community. Crowdfunding can be a place to learn and share knowledge or share business ideas between investors. Thirdly, research by Schwienbacher and Lambert (2010) and followed by Mollick (2014) argues that crowdfunding project focused on non-profit goals tend to be more successful. In addition, projects that generate finished goods attract more capital than the projects that offer services. Bechter *et al*. (2011) argue that social network is important to entrepreneurs who run a crowdfunding campaign. As a result, social media like Facebook and Twitter have an important role as a platform for entrepreneurs to connect with peers and sponsors who wish to participate in providing financial support and information.

Another study by Belleflame *et al*. (2011) summarizes three characteristics of crowdfunding. Firstly, the initiation of crowdfunding usually begins to fulfil needs for items that are not available in the market. Entrepreneurs who run crowdfunding start by explaining the final result of the product, which will be created, and offering rewards for sponsors who will invest. Secondly, the customer or sponsor pays more for the pre-ordering process and can reserve in advance, where this cannot be done by the customers in general, who are waiting to buy the products on the market. Thirdly, sponsors involve themselves in the production process, starting from an initial donation in the form of money, until engaging directly in the whole project.

From a financial theory point of view, crowdfunding as a source of financing may create some problems between the project owners or the entrepreneurs, and sponsors as the investors, mainly due to asymmetric information. Leland and Pyle (1977) argue high uncertainty of information between entrepreneurs and investors will make investors become more ambiguous in forming investment decisions. This will reduce investment interests; furthermore, this could make investors no longer interested in investing. In crowdfunding platforms, asymmetric information can also take place between entrepreneurs and investors, as investors tend to select a campaign in a platform based on project quality, while the entrepreneurs will always have to create quality projects. To find and create quality projects, there will be problems encountered, such as information received by the investor may differ from the information owned by entrepreneurs. The quality of a project should be able to provide an indication of entrepreneur networks and experience. In order to create a good project, an entrepreneur should also make an adequate description about his project to attract investors.

Connelly *et al*. (2011) argue that signalling theory can be useful to explain the behavior when two parties have access to different information. Generally, one party, namely the information sender, must choose whether and how to communicate this information. The other party, namely the recipient, must choose how to interpret the signal. Read (2013)

argues that non-profit projects in crowdfunding are significantly easier to get funding because entrepreneurs' main focus is not for profit. However, the signalling theory does not explain the motivation of why people donate or even more to invest. The impetus behind the power to donate or give to non-profit projects can be explained by non-profit signals and other additional motivations.

Another factor to be considered is the channel between entrepreneurs and its environment. This factor can be called a network. Network could provide access for entrepreneurs to the potential investors or customers (Brüderl and Preisendörfer, 1998). Moreover, an entrepreneur network can enhance the legitimacy and reputation of business, and could be a signal of the quality of business (Hoang and Antoncic, 2003). This potential advantage is very important for businesses in the early stages. But the potential advantage is not only limited to the initial stage of business establishment. Networks can be the basis for business success in the future because they provide information resources, advice and ongoing support.

Furthermore, Nahapiet and Ghoshal (1998) theorized that social capital consists of three dimensions: structural, relational, and cognitive. The structural dimension can be defined as the structural characteristics such as the network linkage and network configurations needed to build and empower social capital. The relational dimension refers to the capital gain from the obligations, expectations, and the trust of the social network. The cognitive dimension states that understanding the language and schema, as well shared narrative, can

help people in the organization obtain gain from social capital.

In line with Nahapiet and Ghoshal (1998), Hazleton and Kennan (2000) find that a network of friends in social media gives advantages for sharing information in three forms: access, timing, and referral. In the context of crowdfunding, entrepreneurs can deploy a crowdfunding project to the public through social media and social networks to contact friends to invest in the project. Colombo et al. (2016) find that an entrepreneur's social network plays an important role in attracting investors in the early period of the project that led to the success of the project. Using the LinkedIn network as a proxy to calculate social network friends, Vismara (2016) finds that entrepreneurs who have more social networks have an increased likelihood of crowdfunding project success. Mollick (2014) also finds that an entrepreneur's social media friendships in Kickstarter, measured from the number of Facebook friends, helps predict the success of crowdfunding.

From a relational perspective, Staber (2006) argues the motivation for entrepreneurs to build social capital can be seen from investing in other entrepreneurs' crowdfunding projects. Additionally, Nahapiet and Ghoshal (1998) also stated obligation is individual commitment to perform an action in the future as a response to another individual. They also stated that obligation can influence sharing of knowledge, while according to Coleman (1998), liabilities may affect the exchange of capital. The obligation to fund other entrepreneurs can increase social capital in two ways. First, sponsoring other projects

will generate strong relationships with other entrepreneurs that can increase the closeness of the relationship. Secondly, sponsoring another project can enhance entrepreneurs' reputation in the social network, thereby making entrepreneurs more credible. Moran (2005) finds the closeness and trust from relationships have a positive relation to improving social capital. The more entrepreneurs invest or donate on other projects in a crowdfunding platform, the likelihood that their project will succeed increases.

From the cognitive perspective, shared understanding is an important element of social capital (Hazleton and Kennan, 2000). The cognitive dimension itself focuses on the meaning and natural understanding of individuals or certain groups, while communication is needed as a tool for developing social capital through the exchange of information, identification of problems and solutions, and conflict management. Communication means at least require context that sharing between the parties (Boisot, 1995). Shared understanding between entrepreneurs and sponsors plays an important role in the production process. For entrepreneurs, crowdfunding is an approach to get money, advertise products and services, and get feedback to develop products and services, while investors will get a return, social reputation, and the pleasure of successful business initiatives (Lambert and Schwienbacher, 2010). To facilitate the production process together, the entrepreneur should build the project with a clear description to be shared with the sponsor. According to Gerber *et al*. (2013), crowdfunding provides a way for sponsors to become a part of a community that can share knowledge and business ideas. Therefore,

sharing stories with investors about crowdfunding projects can effectively bring a sponsor into the crowdfunding project. Ordanini *et al*. (2011) argue that it is important for entrepreneurs to put their crowdfunding projects on their social media.

RESEARCH METHOD

This study aims to examine crowdfunding performance. The crowdfunding performance is defined based on the percentage of donations collected in the crowdfunding project. Following Ahlers et al. (2015), this study also employs the number of investors donating to or investing in a project as a measure of crowdfunding performance.

We follow Zheng et al. (2014) to construct variables to derive crowdfunding performance. Social capital can be divided into three parts: (1) structural dimension, measured from a social networking entrepreneur or project maker; (2) relational dimension, measured from the obligation of reciprocation perceived; and (3) cognitive dimension, measured by the ability to make the perception among investors and entrepreneurs or project makers. The population in this study are all crowdfunding projects on Kitabisa.com. The samples are selected based on several criteria, as follows: (1) Crowdfunding projects have started since Kitabisa.com was established and these projects ended their campaigns by December 31, 2015; (2) Crowdfunding projects have one donation of at least IDR 20,000 (approximately USD $2), according to minimum regulatory donation of Kitabisa.com; and (3) The owner of that crowdfunding project must have social media Facebook.

We use crowdfunding project duration and amount of donations needed to fund a crowdfunding project. We also utilize several control variables, namely: the start year of the project, crowdfunding project category, and the city or area where the crowdfunding project is implemented. This study uses OLS robust standard errors regression for the first and second model, and logistic regression for third model.

Model I

$$CPper,i = a_0 + a_1 DS_i + a_2 DR_i + a_3 DK_i + a_4 lnCG_i + a_5 CD_i$$
$$+ \sum_{i=1}^{2} \beta_i DY_i + \sum_{i=1}^{9} \gamma_i DC_i + \sum_{i=1}^{7} \delta_i DCIT_i + \varepsilon_i$$

where:

$CPper,i$: Comparison between actual funds that were achieved in the crowdfunding project with the expected goals for project i.

DS_i : The number of Facebook friends of crowdfunding project owner i.

DR_i : The number of other projects financed by the project owner on the same platform for project i.

DK_i : The number of words in the project narrative considered where investors could perceive the ability of the project owners to make the same perception for project i.

CG_i : The amount of funding needed to make crowdfunding projects i a success.

CD_i : Crowdfunding project duration for project i (starting date until the expiry date of a project when campaigned on Kitabisa.com).

DY_i : Dummy for year of commencement crowdfunding project i, dummy would be divided into year 2013, 2014, and 2015.

DC_i : Dummy is divided into 10 categories: social campaign, emergency, special events, prize award, infrastructure, health, environment, education, products and technology, art and creative.

$DCIT_i$: Dummy for area where crowdfunding project implemented. Dummy is divided into 8 categories: East Java, Jakarta, West Java, Central Java, Riau, NTT (Nusa Tenggara Timur), Papua, and for other areas.

ε_i : Residual errors.

This model is used to see whether the three dimensions studied have influence on the success percentage of a crowdfunding project.

Model II

$$CPinv,i = a_0 + a_1 DS_i + a_2 DR_i + a_3 DK_i + a_4 lnCG_i + a_5 CD_i$$
$$+ \sum_{i=1}^{2} \beta_i DY_i + \sum_{i=1}^{9} \gamma_i DC_i + \sum_{i=1}^{7} \delta_i DCIT_i + \varepsilon_i$$

where *CPinv* denotes the number of investors who fund a crowdfunding project.

This model is used to see whether the three dimensions studied have influence on the number of investors who participate in a crowdfunding project.

Model III

$$CPlogit,i = ln \frac{P}{(1-P)} CP_i$$
$$= a_0 + a_1 DS_i + a_2 DR_i + a_3 DK_i + a_4 lnCG_i + a_5 CD_i$$
$$+ \sum_{i=1}^{2} \beta_i DY_i + \sum_{i=1}^{9} \gamma_i DC_i + \sum_{i=1}^{7} \delta_i DCIT_i + \varepsilon_i$$

where *CPlogit* denotes a comparison between actual funds that were raised in the crowdfunding project in one period with the expected goals in the form of dummy variables, each project will be given the numbers 1 if the ratio reached 100% and 0 if the ratio did not reach 100%. This model is used to see whether the three dimensions studied impact the likelihood of success of the project to achieve 100% funding.

ANALYSIS AND DISCUSSION

We collect the data directly from Kitabisa.com and we conduct interviews with relevant persons in charge to investigate deeper about crowdfunding practice. First, we check for robustness of the data. We use Breusch-Pagan's test for heteroscedasticity, and the result for the first model indicates the probability of χ^2 at 0.0000, which means that there is heteroscedasticity. Then, the probability of χ^2 in the second model is 0.0000. Breusch-Pagan test results came back showing that there are heteroscedasticity problems. To avoid the problem, we do a treatment with OLS Robust to remove heteroscedasticity. The heteroscedasticity is removed by weighting variance with robust standard errors.

Table 1 provides a correlation matrix for the data. The table above shows nothing exceeding 0.8 in absolute terms, meaning there is no problem of multicollinearity in independent variables and controls, so that all independent variables and controls can be used in this study. Table 2 provides descriptive statistics of the crowdfunding campaigns between 2013 and 2015. The percentage of a successful project is computed by comparing the donation achieved with an initial donation target, which is set by entrepreneurs, which we called CP_{per}. In Table 2, we can see the overall average of CP_{per} is 56%, which means an average success of crowdfunding projects in Kitabisa.com is 56% of the total campaigns. The highest success campaign in terms of funds collected is near 5 times the target. The average number of investors who participated in the project demonstrated, namely CP_{inv} variables, is 19 sponsors and the maximum investors in one project was 186 people.

In Table 2, CP_{logit}, which indicates the number of successful crowdfunding campaigns, has average value of 27%. This means that 27% of the samples managed to get targeted funding. The number of entrepreneur's Facebook friends indicated by DS shows that the average number of entrepreneur's Facebook friends from the overall sample is 1888 people. The highest number of Facebook friends is 5000 friends and the lowest is 43 friends. Entrepreneurs' willingness to fund other projects on the same platform during their project period is indicated by DR, where the average of other projects is 0.16. This indicates that generally, an entrepreneur just puts the project on the platform Kitabisa.com without having any intention to fund other projects. The ability of entrepreneurs in describing the project to harmonize with potential investors is demonstrated through variable DK. This variable is obtained by counting the number of words written by entrepreneurs on the Kitabisa.com platform. In Table 2, the average number of words on the entire sample is 350 words on one project. The maximum words in one project is 1073 words and the minimum is 71 words.

Table 1. Correlation Matrix

Correlation Matrix	Structural Dimension (DS)	Relational Dimension (DR)	Cognitive Dimension (DK)	Crowdfunding Goal (CG)	Crowdfunding Duration (CD)
DS	1.0000				
DR	0.0197	1.0000			
DK	0.2249	-0.0411	1.0000		
CG	0.1860	0.0047	0.4351	1.0000	
CD	-0.1475	-0.0258	-0.2223	-0.3295	1.0000
Observations	190	190	190	190	190

Table 2. Descriptive Statistics

Descriptive Statistics for All Sample	CP_{per}	CP_{inv}	CP_{logit}	Structural Dimension (DS)	Relational Dimension (DR)	Cognitive Dimension (DK)	Crowdfunding Goal (CG)	Crowdfunding Duration (CD)
Mean	0.56	19	0.27	1888	0.16	350	15.49	380
Median	0.2	6	0	1571	0	289	15.42	316
Maximum	4.87	186	1	5000	6.32	1073	20.62	993
Minimum	0	1	0	43	0	71	11.51	1.02
Standard Deviation	0.79	33	0.45	1256	0.76	210	1.7	300
Observations	190	190	190	190	190	190	190	190

Notes: The total number of observations is 190 projects, consisting of 52 successful crowdfunding projects and 132 projects that are not successful, CPper is proportionate to the amount of donations achieved with an initial target donation of a project' CPinv is a number of investors who participate in a project; CPlogit is a dummy variable, one if the project reaches target of the donation (>=100%), 0 if it does not reach the target (<100); DS is the number Facebook friends who are owned by entrepreneurs; DR is the duty of an entrepreneur in funding another project during the period of the project itself; DK is the number of words that entrepreneurs used to describe the project on the platform Kitabisa.com; CG is a donation targets that are desired by entrepreneurs; and CD is crowdfunding project duration. CD and CG are control variables in this study. Source: *authors' calculation.*

CG indicates the initial nominal target specified by the entrepreneur. Since values are in terms of millions of Rupiahs, we transform this variable into a log form. As for the initial nominal target, the maximum value is 20.62 and the minimum value is 11.51. CD indicates crowdfunding project duration and is calculated in terms of hours. Table 2 shows that the average duration of a crowdfunding project from the overall sample amounted to 380.42 hours. The longest duration of a project is 993 hours and the shortest was 1.02 hours. Overall sample standard deviation is 300.37 hours, indicating that the crowdfunding project duration is quite spread out and diverse.

Table 3 provides a summary of three estimated models in this study. The structural dimension, which is measured by Facebook friends, has positive effects on all three models of research. In the first model, the coefficient of the structural dimension variable is 0.0133%. This implies that the chance of crowdfunding success is increased by 0.0133% by one more Facebook friend. In the second model, the coefficient of

Table 3. Success Determinants of Crowdfunding Projects

	Model 1		Model 2		Model 3		
	Coefficient	t-value	Coefficient	t-value	Coefficient	z-value	Odds Ratio
Structural Dimension (DS)	0.00013***	2.75	0.00315*	1.67	0.00034*	0.055	1.0003
Relational Dimension (DR)	0.00024	0.01	4.17826	1.14	0.23372	0.293	1.2633
Cognitive Dimension (DK)	0.00084**	2.44	0.00789	0.59	0.00253*	0.065	1.0025
Crowdfunding Goal (CG)	-0.13939**	2.51	8.38178***	3.57	-4.67741**	0.022	0.6264
Crowdfunding Duration (CD)	-0.00041***	-1.77	-0.01343*	-1.90	-0.00063	0.447	0.9994
Year Dummy (DY)	Yes		Yes		Yes		
Category Dummy (DC)	Yes		Yes		Yes		
City Dummy (DCIT)	Yes		Yes		Yes		

Notes: The dependent variable: Model 1 is the desired funding amount, Model 2 is the number of investors, and Model 3 is funding amount achieved (1 = achieved, 0=otherwise). DS represents the number of Facebook friends who are owned by entrepreneurs; DR is the duty of an entrepreneur to fund other projects during the period of the project itself; DK is the number of words that entrepreneurs used to describe the project on the platform Kitabisa.com; CG is a donation targets that are desired by entrepreneurs; CD is a crowdfunding project's duration; Year dummy is variable dummy for 2013, 2014 and 2015; Category dummy is dummy for crowdfunding project category: emergency, event, gift, infrastructure, health, environment, education, products and technology, art and creative, and social sport; City dummy is a dummy variable for areas crowdfunding project: Jakarta, West Java, Java Central, East Java, Riau, East Nusa Tenggara, Papua, and other areas; CD, CG, and dummy variables are used as control variables in this study. ***significant at 1% level, **significant at 5% level, *significant at 10% level. *Source: authors' calculation.*

structural dimension variables show that an entrepreneur must get on average 323 Facebook friends to get one potential investor. The third model confirms that a crowdfunding project with good structural dimension would have higher probability of experiencing success of the project. Therefore, the existence of Facebook friends for an entrepreneur can increase the potential success of the project. The odds ratio indicates how much influence the structural dimension has on crowdfunding performance. Entrepreneurs who have an adequate social network have a slightly higher probability of success on funding their project than the entrepreneurs who have less of a social network.

This finding is consistent with that of Shane and Cable (2002), who argue that social networks between entrepreneurs and potential investors influence the choice of projects to be funded as well as to tackling the asymmetric information. Furthermore, the number of social networking connections owned by entrepreneur is positively related to the amount of capital collected in a project. This is

also consistent with Mollick (2014) and Leyden et al. (2014). We can argue that social networks may provide a signal concerning project uncertainty. In this case, social network is able to inform specific information that can reduce project uncertainty.

However, the relational dimension, measured through a number of other projects funded by the entrepreneurs on the same platform, does not affect crowdfunding performance in all three models. The number of other projects funded by an entrepreneur or project owner does not have any impact on the percentage of success of crowdfunding and the number of investors who would invest on his projects. The third model also confirms that this will also not have any effects whatsoever on the likelihood of successful crowdfunding campaigns proposed by the project owner. Therefore, these results do not lend support to the second hypothesis of this study. This also does not support findings by Nahapiet and Ghoshal (1998) and Moran (2005).

The third dimension, or cognitive dimension, measured by the number of words written by entrepreneurs on the Kitabisa.com platform, has significantly influenced the percentage of successful projects and the likelihood of the campaign being successful. Shared understanding comes from the language and existing vocabulary, and has become a useful tool for communication. The ability of entrepreneurs in describing projects can also generate a good signal for the investor. The ability of entrepreneurs to deliver a good signal for projects may increase the likelihood of success for the project. Nahapiet and Ghoshal (1998) also find shared narrative as a story can develop the transfer of knowledge to enhance social

capital. This could have an impact on crowdfunding performance. The project description has a significant effect on the percentage of success of crowdfunding projects. The coefficient suggests that the crowdfunding success percentage will increase by 0.0843% for one more word to describe the project.

However, the length of description seems to not affect the number of investors who participated in the project. The results imply that the cognitive dimension variable has no significant effect on the number of investors. Shared understanding should help entrepreneurs to advertise or promote their own crowdfunding project. However, in this research, using a proxy number of words did not affect the number of investors engaging in a crowdfunding project. On the Kitabisa.com platform, motivated entrepreneurs are mainly seeking funding for their own project, and not seeking to finance other projects. This is also because entrepreneurs on Kitabisa.com are usually a foundation or an organization rather than person. Therefore, they may not have any motivation to sponsor other projects.

The third model shows that the project description has a positive correlation with the likelihood of crowdfunding success, at a significance level of 10%. The test results proved that the crowdfunding project that has good cognitive dimension will have a higher probability of success, so the number of words specified by an entrepreneur is able to increase potential success of the project. Thus, these results have supported the third research hypothesis. The odds ratio implies that entrepreneurs who offer a good description of the project have a higher chance to succeed

compared to the entrepreneurs who do not have adequate description about their project.

We add three variables to improve better explanation by the estimated models. First, we use area where the crowdfunding project will be designated or implemented. The area of the projects is categorized into eight areas, namely Jakarta, West Java, Central Java, East Java, Riau, East Nusa Tenggara, Papua, and other areas. Second, we use crowdfunding project category. Type of project is categorized into 10 categories: emergency, event, gift, infrastructure, health, environment, education, products and technology, art and creative, and social sport. Third, we utilize the year in which the project was initiated, namely 2013, 2014, and 2015.

Furthermore, we confirm our findings to Kitabisa.com, where we can conclude several factors that affect the success or failure of a crowdfunding project. The first factor is the network effect. When a story has a network effect, although the effect is not adequate, the possibility that a project will achieve success is still high. If an entrepreneur does not have an adequate network, the entrepreneur can use the other entrepreneurs' network effect. Some foundations or communities endorse artists or public figures as an entrepreneur to make projects become more attractive.

The second factor is the story effect. A successful project with this kind of effect is usually a project related to disaster and medical assistance. This occurs because the project lacked urgency so that investors feel the project should be funded quickly; whereas, in this project, a good story is needed to make investors fund the project. A personal story usually has a better influence in terms of the language used, rather than formal language used by foundations or communities.

The last factor is a campaign itself. An entrepreneur must campaign for his or her own project, through a communication network like Whatsapp or through social media such as Facebook and Twitter.

Overall, the findings in this study show that network is a main factor that determines the success or failure of a project. Related with agency problem, entrepreneurs and investors or sponsors who already know each other will significantly reduce asymmetric information. The possibility of investors being disappointed can also be minimized because this connection is established from a sense of friendship and already-established trust of one another.

CONCLUSIONS

This study aims to examine crowdfunding performance in Indonesia, which is considered as a new platform to conduct fundraising. We use three dimensions, namely structural, relational and cognitive dimensions, to assess the performance of all campaigns on Kitabisa.com between 2013 and 2015. The number of Facebook friends has a positive effect on the desired funding amount, the number of investors and the likelihood of successful campaign. The number of other projects sponsored by investors does not have any implications to crowdfunding performance. It can be concluded that investors who sponsor the project are due to relations or social networks, not because of the description of the project.

Since the sample data used in the study only spanned three years, this study is still dominated by social crowdfunding, such as funding for natural disasters and medical. This study can be expanded into a more commercial context by investigating the similar dimensions used. Further research could be more specific to classify types of projects based on certain criteria such as separate projects that are donate, reward, equity, and lending.

References

Ahlers, G. K., Cumming, D., Gunther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice, 39*(4): 955–980.

Bechter, C., Jentzsch, S., & Frey, M. (2011). From wisdom to wisdom of the crowd and crowdfunding. *Journal of Communication and Computer, 8*(11): 951– 957.

Belleflamme, P., Lambert, T., dan Schwienbacher, A. (2011). Crowdfunding: Tapping the right. CORE Discussion Paper No. 2011/32.

Boisot, M. (1995). *Information Space: A Framework for Learning in Organizations, Institutions and Culture.* New York: Routledge.

Brüderl, J. dan Preisendörfer, P. (1998). Network support and the success of newly founded businesses. *Small Business Economics, 10*(3): 213–225.

Coleman, J. S. (1998). Social capital in the creation of human capital. *American Journal of Sociology*, 94: S95–S120.

Colombo, M., Cumming, D. J., & Vismara, S. (2016). Governmental venture capital for innovative young firms. *Journal of Technology Transfer, 41*(1): 10–24.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. *Journal of Management, 37*(1): 39–67.

Freedman, D. M. & Nutting, M. R. (2015). Equity Crowdfunding for Investors: A Guide to Risks, Returns, Regulations, Funding Portals, Due Diligence, and Deal Terms. New Jersey: John Wiley and Sons.

Gerber, E. M., Hui, J. S., & Kuo, P.-Y. (2013). Crowdfunding: Why people are motivated to participate. *ACM Transactions on Computer-Human Interaction, 20*(6): 34.

Hazleton, V. & Kennan, W. (2000). Social capital: Reconceptualizing the bottom line. *Corporate Communications: An International Journal, 5*(2): 81–86.

Hoang, H. & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing, 18*(2): 165–187.

Lambert, T. dan Schwienbacher, A. (2010). An empirical analysis of crowdfunding. Diakses dari http://ssrn.com/abstract=1578175.

Leland, H. & Pyle, D. H. (1977). Informational asymmetries, financial structure, and financial intermediation. *Journal of Finance, 32*(2): 371–387.

Leyden, D. P., Link, A. N., & Siegel, D. S. (2014). A theoretical analysis of the role of social networks in entrepreneurship. *Research Policy*, 43: 1157–1163.

Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing, 29*(1): 1–16.

Moran, P. (2005). Structural vs relational embeddedness: Social capital and managerial performance. *Strategic Management Journal, 26*(12): 1129–1151.

Nahapiet, J. & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *The Academy of Management Review, 23*(2): 242–266.

Ordanini, A., Miceli, L., Pizzetti, M., & Parasuraman, A. (2011). Crowdfunding: Transforming customers into investors through innovative service platforms. *Journal of Service Management, 22*(4): 443–470.

Read, A. (2013). Crowdfunding: An empirical and theoretical model of non-profit support. Undergraduate thesis, University of Puget Sound. [Accessed on February 22, 2016].

Schwienbacher, A. & Larralde, B. (2012). Crowdfunding of small entrepreneurial ventures. in Cumming, D., *The Oxford Handbook of Entrepreneurial Finance*, New York: Oxford University Press, pp 369–91.

Shane, S. dan Cable, D. (2002). Network ties, reputation, and the financing of new ventures. *Management Science*, 48: 364–381.

Staber, U. (2006). Social capital processes in cross cultural management. *International Journal of Cross Cultural Management, 6*(2): 189–203.

Vismara, S. (2016). Equity retention and social network theory in equity crowdfunding. *Small Business Economics*, 46: 579–590.

Zheng, H., Li, D., Wu, J., dan 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.