

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research Design

3.1.1 Types of Study

This research will collect the data through questionnaires. In quantitative research data, collection approach is by using questionnaires including paper survey and online survey that contain several questions related to the research variables and distributed to several people. Therefore, the researcher has to decide the population and sample as the data source.

3.2 Population and Sample

A research of Prihatna, Abidin, & Kurniawati (2005) stated that in 11 cities in Indonesia proved that Indonesians are more generous compared to American. There is an increasing number over the year, the percentage of a donation from Indonesia started from the year 2000 until 2004. Therefore, crowdfunding is potentially applied in Indonesia. According to Kitabisa.com, many creators of crowdfunding are students. Radiansyah (2015) stated that crowdfunding will help students to find another resource for their projects.

Social media become popular and useful tools to promote a project for crowdfunding. Chu (2011) mentioned that college students are potentially to create something viral on social media, represented by a variety of universities and majors, Facebook's college-aged users have favorable attitudes toward advertising in social media. Thus, social media are potentially rich avenue for viral advertising campaigns. There is an expansion indication of supporters in crowdfunding campaigns which is activated by the influences of social promotions (Lu, Xie, Kong & Yu, 2014). Therefore, the population of this research is active college students, especially in Yogyakarta.

The representation of a population is a sample. Sampling is a way to obtain data by selecting a group of people, actions, performances, or other features. The suitable sampling method for this research is the purposive sampling because it is known as a judgemental or personal judgment from the researcher to select subjects as representatives of the population.

Related to the topic, the research requires several requirements that should be done by the respondents, such as:

- a. The respondents are active students (2015-2018) in Yogyakarta.
- b. The respondents should understand the meaning of crowdfunding.
- c. The respondents have experience in crowdfunding as a funder.
- d. The respondents have social media (facebook, line, email and Instagram) or as a member of the crowdfunding website.

3.3 Data Collection Method

The type of data collected was primary data. Primary data are collecting data for the first time, obtained by distributing a list of questions in a questionnaire and directly met the respondents, by Google form and emails to active students (2015 – 2018) in Yogyakarta. Therefore, based on the topic, this research will use primary data because it is more suitable than secondary data. the questionnaire consists of two parts that are; the first part consists of questions relating to respondents' personal data and the second section is used to obtain data on the question dimension by using Likert scale.

3.4 Definition of Variable Operational and Measurement Research

The research variable is everything set by the researcher for the purpose of obtaining or testing information. The research variable consists of three variables; they are the dependent variable, mediating and independent variables. As mentioned previously by the researcher, this research aims to examine and analyze the impact of collecting reward, helping others, being a part of community, supporting ideas, easy use of technology on supporters motivation in

crowdfunding. The independent variables of this research are collecting the reward, helping others, being a part of the community, supporting the idea and easy use of information technology. The mediating variable in this research is supporters' motivation in crowdfunding and the dependent variable of this research is becoming supporters of crowdfunding. Being a part of community indicators can be seen in table 3.1:

Table 3. 1 Research Variable

Independent Variable	1. Helping Others 2. Being a Part of Community 3. Supporting Idea 4. Easy Use Information Technology
Mediating	1. Intrinsic Motivation in Crowdfunding 2. Extrinsic Motivation in Crowdfunding
Dependent Variable	1. Becoming Supporter of Crowdfunding

3.4.1. Independent Variable

The research has several independent variables to be discussed. Independent variables of this research are the reasons behind supporters motivation in crowdfunding. In the questionnaire, all variables mentioned are helping others, being a part of the community, supporting ideas and easy use of information technology.

1. Helping Others

Helping others is one of the reasons for supporters to be involved in crowdfunding. Helping others is an intrinsic and social motivation from supporters (Profatilov et al. 2014). It comes from supporters' desire to help creator's project in humanity purposes. Substantial differences from supporters who concern in collecting rewards as their reason to involve in crowdfunding, there are supporters desire to help others with the motivation of giving without expecting benefits (profit or return). Stated by Zhao (2017), there is a positive trust on supporters' commitment which means, when the project can meet supporters' needs with good ethics, the more the supporters care about the creator's project then the high possibility to be involved and

the more intention to help creators reach the goal. Harms (2007) stated that intention to participate in crowdfunding is emotional values, one of them is supportiveness which is defined as helping behavior. This behavior comes from the underlying motivation to support the creator or to support the provision of the project outcome to the society. This variable will be measured by several questions with 4 Likert scale from strongly disagree to strongly agree. According to respondents perception, the highest score in this variable means helping others is a supporters' motivation in crowdfunding. Otherwise, the lower score in this variable indicated that helping others is not the supporters' motivation in crowdfunding. Helping others indicators can be seen in table 3.2:

Table 3. 2 Table Measurement Indicators of Helping Others

Variable	Items	References
Helping Others supporters desire to help others are motivated to give without expecting a benefit (profit or return)	1) Supporters prefer to have a personal and extended connection.	Gerber & Hui (2013)
	2) Supporters who had wanted to support them but previously weren't able to do so.	
	3) Helping someone who closes to their funding goal in a hope that they make a meaningful impact	
	4) I like to contribute to things which seem right to me	Harms (2007)
	5) If I would never give to a crowdfunding project, I would feel a bit bad about myself (item dropped)	

2. Being a Part of Community

Crowdfunding is not only seeking for the fund, rewards or helping others, but it also can be a way to be a part of the community. Sometimes, supporters involved in crowdfunding is used a media to find other supporters having the same interest. In these spaces, as the member of a community in crowdfunding, supporters can contribute to the community's growth by performing menial tasks, such as voting, or coordinating content production, such as managing a forum (Hui et al., 2014). The relationship as a part of the community is a supportive relationship, not a competitive one because they are connecting to one and another in order to

feel the sense as a part of that community. Supporters usually communicate by using email, chat, facebook, and other social media on the internet. After giving their contribution in the project, mentioned by Gerber and Hui (2013), supporters have the desire to see any evidence of being a part of the project, by showing the list of who has supported a project on the project supporter page. This variable will be measured by several questions with 4 Likert scale from strongly disagree to strongly agree. According to respondents' perception, the highest score in this variable means being a part of community is a supporters' motivation in crowdfunding. Otherwise, the lower score in this variable indicated that being a part of community is not the supporters' motivation in crowdfunding. Being a part of community indicators can be seen in table 3.3:

Table 3. 3 Measurement Indicators of Being a Part of Community

Variable	Items	Reference
Being a Part of Community connecting to one and another in order to feel the sense as a part of that community	1) Supporter involve in crowdfunding because they want to feel a sense of community 2) The desire to see any evidence of being a part of a selected group by listing who has supported a project on the project supporter page 3) Being a part of the project-supporter community also allows supporters to have a say in the design of the final product.	Gerber & Hui (2013)

3. Supporting Ideas

The supporting ideas is an identical influence. The influence of internal motivations refers to beliefs (religion), moral or creativity from their points of view. Whether they want to be involved in crowdfunding or not, it depends on the motivations of crowdfunding and their identity. Aaker & Akutsu (2009) stated that people support efforts that are consistent with their identity or the identity to which they aspire (cited from Gerber & Hui, 2013). The supporters motivation in crowdfunding also came from the project's creativity and purposes. They wanted to help the project that can represent their ideas or make them feel that it is also their project

(Harms, 2007). This variable will be measured by several questions with 4 Likert scale from strongly disagree to strongly agree. According to respondents perception, the highest score in this variable means supporting idea is a supporters' motivation in crowdfunding. Otherwise, the lower score in this variable indicates that supporting the idea is not the supporters' motivation in crowdfunding. Supporting the idea indicators can be seen in table 3.4:

Table 3. 4 Measurement Indicators of Supporting The Idea

Variable	Items	Reference
Supporting ideas	1) Supporters involve in crowdfunding because the project correlates with their identity	Gerber & Hui (2013)
Supporters considerations depends on the motives of crowdfunding and their identity	2) Supporters help to support ideas similar to supporter's personal beliefs	
	3) Supporting such a project would make supporters feel that it is also their project	Harms (2007)

4. Easy Use of Information Technology

In supporting crowdfunding projects, the use of information technology is considered as an important step. Nowadays, when supporters use information technology they automatically connected to the internet from computers, tablets or their smartphones. They can find any information easily anytime and anywhere about everything including crowdfunding projects. One of the examples is a crowdfunding platform such as websites and other social networks. Therefore, the number of supporters increases because of the expansion of crowdfunding campaigns which is activated from the influences of social promotions (Lu et al. 2014). Since the main purpose of crowdfunding is to find another resource to collect money, especially through the internet, then the information technology can support the process. The use of information technology in crowdfunding helps many campaigns reach their goals or targets by using social media such as Facebook and crowdfunding websites.

Supporters will have accessible information such as descriptions of projects, video/photo materials, and links to a website and social media profiles on the Internet (Moissejev, 2013). Harm (2007) stated that motivation in crowdfunding came from social value aspects, one of them is self-expressiveness which means supporters used the internet as a platform to connect and to present ourselves, supporters' commitment to crowdfunding activities to personal profiles on networks as MySpace can be used to shape one's online identity. This is also supported by Wechsler (2013) stated that social networks of supporters play an important role in crowdfunding. The number of Facebook friends and Twitter followers plays an outstanding role as they have a direct impact on the successful outcome of a project.

For this research, the researcher focuses on the media social that is used by many users to keep in touch with crowdfunding's activities such as Facebook, Email, and Instagram. Meanwhile, this variable will be measured by several questions with 4 Likert scale from strongly disagree to strongly agree. According to respondents' perception, the highest score in this variable means that easy use of information technology is a supporters' motivation in crowdfunding. Otherwise, the lower score in this variable indicates that the easy use of information technology is not the supporters' motivation in crowdfunding. Easy use of information technology indicators can be seen in table 3.5.

Table 3. 5 Table Measurement Indicators of Easy Use of Information Technology

Variable	Items	References
Easy use of Information Technology Easy to obtain any information related to the technology used	1) I am proud of the projects I support and like to display them on my publicly visible crowdfunding profile	Wechsler (2013) based on White & Peloza (2009)
	2) I mentioned in my online social network that I support the project (Facebook, Twitter, etc.)	
	3) Supporters would mention in their online profile that they support the project	Harm (2007) based on Nyvsveen et. al (2005)

3.4.2. Mediating

Supporters' Motivation in Crowdfunding

Every person has different reasons to decide something whether it is an important reason or not, it depends on the intrinsic and extrinsic motivation. Stated by Ryan and Deci (2000), intrinsic motivation is an inherent satisfaction that come from a person, meanwhile extrinsic motivation refers to doing an activity simply for the enjoyment of the activity itself, rather than its instrumental value. Therefore, in crowdfunding supporters also has intrinsic and extrinsic motivation to be involved in a crowdfunding project. Wechsler (2013) mentioned that intrinsic motivations are community-based motivation (in this research will be replaced by being a part of community) and philanthropy based motivation (represent as helping others) and the extrinsic motivations are reward, immediate payoffs, delayed payoffs and social motivation (from self-expressiveness, in this research this variable will be represented as easy use of information technology) because this research is focused on non-reward based crowdfunding, therefore immediate payoffs and delayed payoffs are not included. As stated by Gerber and Hui (2013), Supporters' motivation in crowdfunding is the motivations that come from a group of people or individual that supports the project with severals motivation such as; helping others, being a part of the community, and supporting a cause (in this research it will be replaced by supporting ideas). This variable will be measured by several questions with 4 Likert scale from strongly disagree to strongly agree. According to respondents' perception, the highest score in this variable means supporters' motivation in crowdfunding becomes the supporter of crowdfunding. Otherwise, the lower score in this variable indicated that supporters' motivation in crowdfunding is not becoming the supporter of crowdfunding. Motivation in crowdfunding indicators can be seen in table 3.6:

Table 3. 6 Table Measurement Indicators of Supporters' Motivation in Crowdfunding

Motivation	Variables	Items	References
Intrinsic Motivation	Being a Part of Community	1. Provides a way to feel part of a community. 2. unique opportunity to interact with and contribute to a like-minded group of people	Gerber and Hui (2013)
	Helping Others	3. Motivated to Help Others. 4. Make a meaningful impact	
	Supporting Ideas	5. Motivated to supporting ideas	
	Easy Use of Information Technology	6. would talk to others about the project 7. I would mentioned in my online profile that I support the project	Harms (2007)

3.4.3. Dependent Variable

Dependent variables of this research is becoming supporters of crowdfunding. Becoming supporters is caused by their motivation in supporting the project and those motivations become their behavior to involve in crowdfunding. There is a main context stated by Mollick (2014) in which individuals' fund projects and become supporters in crowdfunding when supporters expect no direct return (example; art or humanitarian projects) for their donation, then supporters place their position as philanthropists. Stated by Agrawal, Catalini & Goldfarb (2014), becoming supporters in crowdfunding means the supporters often want to engage with the project as a part of the process (Stanko and Henard, 2017). The dependent variable of this research is only focused on supporter's philanthropy motivation which adopted from Ryu, Kim & Kim (2016) stated that becoming a supporter of crowdfunding in philanthropy motivation is associated with early funding and based on the project's cause. The funding amount is generally higher when supporters focus on their feelings. This variable will be measured by several questions with 4 Likert scale from strongly disagree to strongly agree. According to respondents perception, the highest score in this variable means becoming a

supporter of crowdfunding is because of supporters' motivation in crowdfunding and vice versa.

Table 3. 7 Table Measurement Indicator of Becoming a Supporter of Crowdfunding

Variable	Construct	Measurement item	Reference
Becoming a supporter of crowd-funding	Phillan-thropist	1. (I decided to support the project in this service because...) I want to help the creators of the project.	Ryu, Kim & Kim (2016)
Behavior to involve in crowdfunding project as philan-thorpist		2. I believe it is important that I assist the creators of the project. 3. I want to help the creators of the project to improve their output. 4. I find it is my responsibility to support the creators of the project.	

3.5. Data Analysis Techniques

3.5.1. Descriptive Analysis

The measurement of the research needs a controller. Descriptive statistics are used to describe and summarise a given data set, whichever can be a representation of all population or a sample of it. In the descriptive analysis, there are several activities such as data collecting, data grouping, definition of value and statistics function, creating a diagram, chart, and picture. This research implies the descriptive analysis to analyze supporter's motivation to involve in crowdfunding. Data collecting is obtained by distributing a list of questions by using the questionnaire and directly meeting with the respondents, Google form and email. The respondents of this research are active students 2015-2018 in Yogyakarta aged 19-23 years.

3.6 Validity and Reliability Test

3.6.1. Validity Test

Validity is about the research finding's result, whether it is the same as the reality or not. All the questions in the questionnaire will be tested related to each variable. The validity of an instrument can be tested by using SPSS statistics 21. As stated by Ghazali (2007), the correlation between the score of questions with the total score of constructs or variables can be used to measure the validity. R table will be compared to r calculated to know the test of significance. Therefore, if $r_{\text{calculated}} > r_{\text{table}}$ then, the questionnaire is valid.

3.6.2. Reliability Test

According to Ghazali (2007), the measurement is done just once (one shot) and then the result from this, can be compared with the others question or measure the correlation cross the answer of the question. Because the researcher applied the Likert scale in the questionnaire. Therefore the suitable measurement tool is Cronbach's Alpha (α). Reliable value of Cronbach's Alpha (α) > 0.60 . Reliability test in this research is using SPSS statistics 21.

3.7. Classic Assumption Test

Classical assumption test is used as a requirement for multiple linear regression. Regression model used must be free from any classical assumption. There are three tests for the classical assumption, which are a normality test, multicollinearity test, and heteroscedasticity test.

3.7.1. Normality Test

In the regression model, the data distribution of dependent and independent variables can be seen by using the normality test. Every variable should be normally distributed and gathered. The normality test can be interpreted in two categories which are graphical and statistical methods. Usually, graphical methods are useful for a bigger sample size than the smaller sample size. Therefore, this research only interpreted in statistical method.

The normality test is about accepting a hypothesis having normal data distribution. Testing the normality can be measured by using statistical software of IBM SPSS statistics 21. The researcher finds the easiest way to test the normality of data by using the Kolmogorov-Smirnov test. The Kolmogorov-Smirnov test contains the statistical test to test the normal data distribution with degrees of freedom (df) and the probability or p-value.. This research is using 0.05 because the data used are observational data on fields related to social and human so that it does not need a high accuracy. If the probability is greater than 0.05 ($p\text{-value} > 0.05$), data can be classified as not normally distributed. While if the probabilities are less than 0.05 ($p\text{-value} < 0.05$) so, that the data are classified as normal. 0.05 is the level of significant used for determining whether the data is normally distributed or not.

Degree of freedom:

$$Df = (\text{number of rows in the table} - 1) \times (\text{number of columns in the table} - 1)$$

Normality test:

- a. probabilities ($p\text{-value}$) > 0.05 means the data are normal
- b. probabilities ($p\text{-value}$) < 0.05 means the data are not normal.

3.7.2. Multicollinearity Test

Multicollinearity test is caused by high intercorrelations between independent variables. Multicollinearity occurs because of less accurate use of unwanted variables. Multicollinearity also occurs when there is a recurrence of the same type of variable and correlated with one and another. Good regression does not imply any correlation in independent variables. Identified multicollinearity can be measured by using tolerance and its mutual named variance inflation factor (VIF). Collinearity or no multicollinearity can be seen if the tolerance value is about 0.10 or less and VIF value is 10 or more this indicating high multicollinearity on the other hand, if the tolerance value is about 0.10 or more and VIF value is 10 or less, it indicates no multicollinearity.

3.7.3. Heteroscedasticity Test

Heteroscedasticity test is used to determine equal or unequal variances in research dependent and independent variables. Heteroscedasticity happens when the variance is unequal. Errors and independent variable are moving together. When the independent variable value increases, the errors also increase. Heteroscedasticity can be measured by the Spearman Rank Correlation method. The assumption of the Spearman Rank Correlation method is about probability or significant values which are bigger than 0.05 or $\alpha > 0.05$. Therefore, it means, that there is zero heteroscedasticity.

3.8 Multiple Linear Regression Analysis

The positive or negative relationship between one dependent and two or more independent variables will be known in multiple linear regression analysis. Dependent variable can be mentioned as the outcome variable and independent variables as the predictor variables. Multiple linear regression analysis is used to identify strong or weak correlation effects between independent variables and dependent variable is based on the impacts of changes. For example, if the value of the independent variables is increasing, it will be reflected in the value of the dependent variable.

This research will apply the multiple linear regression as follows:

Regression Test Step 1

$$\text{IM} = a + b_1 \text{HO} + b_2 \text{BC} + b_3 \text{SI}$$

Where: IM = Intrinsic motivation to involve in crowdfunding

a = Constant

O = Help others

BC = Being a part of community

SI = Supporting ideas

b = Regression coefficient

Regression Test Step 2

$$\text{EM} = a + b5 \text{ EU}$$

Where: EM = Extrinsic motivation

a = Constant

EU = Easy use of information technology

b = Regression coefficient

Regression Test Step 3

$$\text{SU} = a + b1 \text{ IM} + b2 \text{ EM}$$

Where: SU = Supporter of crowdfunding

IM = Intrinsic Motivation

EM = Extrinsic motivation

b = Regression coefficient

3.9 Hypothesis Test

3.9.1. F - Test

F test is a tool to decide whether the hypothesis is supported or rejected. The result of F test is the F value and the F critical value. As stated by Hartono (2008), he suggested that a better significant level of F-test is less than 0.05 ($\text{sig} < 0.05$) to generate a good regression model for the hypothesis. It will be different and not good if the significant level is above 0.05 ($\text{sig} > 0.05$). 0.05 is the standard number to decide whether the hypothesis is supported or rejected.

3.9.2 T-Test

The t-test is another statistical tool as suggested by Hartono (2008), the significant level of an independent variable to a dependent variable can be seen if it is less than 0.05 ($\text{sig} < 0.05$).

then the influence is significant. On the other hand, if it is greater than 0.05 ($\text{sig} > 0.05$), it means that the influence of the independent variable to the dependent variable is not significant. 0.05 is the standard number to decide whether the influence of the independent variable to the dependent variable is significant or not significant.

3.9.3 The coefficient of Determination (R2) or adjusted r2

The coefficient of determination is the way to know the strong relationship in a numerical dependent variable with the other four independent variables in this research. The coefficient of determination (R2) is taking part between 0 and +1. In case, the coefficient of determination can be explained in 1 if an independent variable can explain every variation in the dependent variable, 0.5 for only 50 percent of variation that can be explained by independent variable and 0 if there is no variation.

3.10 Sobel Test

Mediation variable of this research will be test by using Sobel test. Sobel test is a test to determine whether the relationship through a mediating variable is significantly capable of being a mediator. In another words, Sobel test is use to know whether a mediator carries the influence of an IV to a DV. This research will apply the formula as follows:

$$Z = \frac{ab}{\sqrt{(b^2SE_a^2) + (a^2SE_b^2)}}$$

Where: a = regression coefficient for the relationship between the independent variable and the mediator

 b = relationship between the mediating variable to dependent variable

 Z = mediating variable

 SE_a = standard error relationship between the independent variable and the mediating

SE_b = standard error from mediating variable and dependent variable

