Cognition, emotion and perceived values in crowdfunding decision making

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Abstract

Current research on crowdfunding treats different crowdfunding forms as identical, and focuses on finding generic success factors in crowdfunding. We argue that funding decisions are contingent on the vastly different types of crowdfunding and that these require more attention. Against the backdrop of neuroscience and consumption value theory, we shed more light on crowdfunders’ decision making. Using a factorial survey with 309 crowdfunding backers we find that decision making differs among equity, loan and presales crowdfunding types. In equity crowdfunding, cognitive values (perceived financial and informational benefits) play a dominant role. In contrast, loan and presales funding decisions are subject to both cognitive and affective factors (such as emotional value). In presales, affective values dominated, whereas financial value did not play a significant role. Loan-based forms shared characteristics with both extremes, taking some middle ground. Interestingly enough, neither novelty, nor aesthetics nor social value was found to be significant in any of the three crowdfunding types investigated.

Keywords: crowdfunding, decision making, factorial survey.
Introduction

Entrepreneurs increasingly rely on non-venture capital sources when raising funds (Mulcahy, 2013). An increasing number of web-based platforms allowed them to reach investors on a far wider scale than before. For instance, kickstarter.com alone – one of the biggest platforms – single-handedly collected $529million in 2014, by raising funds on the internet through relatively small contributions from a large number of people (Agrawal, Catalini, & Goldfarb, 2015). This practice is known as crowdfunding and poses a viable way for entrepreneurs, whose ideas seem be too innovative, too complex or too risky for using traditional capital sources (Lambert & Schwienbacher, 2010).

As crowdfunding is becoming one of the major financing sources for entrepreneurial ventures (Schwienbacher & Larralde, 2010), academic research has taken up the topic over the last few years. Although, there are very different types of crowdfunding forms (from so called-pledge banks, over equity participation to pre-ordering of gadgets), most ongoing research focusses on a single crowdfunding type (Burthe, Ghose, & Wattal, 2015; Mollick, 2014a) silently claiming generalizability to e.g. THE “behavior of online Crowdfunders,” (Burth et al., 2015, p. 961). However, it is neither obvious nor logical to assume that all types follow the same rules. The purpose of this study is twofold: First to shed more light on the differences among crowdfunding forms, by examining which perceived values play a significant role when deciding to financially back a project across equity, loan and presales crowdfunding forms. Second, we examine whether these values are cognitive or affective and also evaluate the degree of importance across the three crowdfunding types.

Related Literature

Crowdfunding

Raising financial capital is an obstacle encountered by many entrepreneurs embarking on a new venture, especially during their initial stage. Start-ups face difficulties in attracting external sources of finance, mainly since most of them are not eligible for bank loans or debt due to their limited business operating history. Therefore they depend exclusively on the so called “three Fs” namely their family, friends and fools (Kotha & George, 2012). However, the emergence of the Web 2.0 technologies enables nowadays entrepreneurs to raise funds in ways that were not possible before.

A novel and increasingly popular alternative method to raise financial capital is crowdfunding. As defined by Belleflamme, Lambert, & Schwienbacher (2014, p. 9) crowdfunding is “an open call, mostly through the Internet, for the provision of financial resources either in form of donation or in exchange for the future product or some form of reward and/or voting rights”. This means that, instead of a small group of traditional sources of entrepreneurial finance, entrepreneurs tap into a large crowd where each member donates a small portion of financial capital. Crowdfunding therefore stipulates more active roles from the crowd and gives the chance to consumers to perform an entrepreneurship role and invest in projects they want to be realized (Andrea Ordanini, Lucia Miceli, Marta Pizzetti, & A. Parasuraman, 2011).

The above mentioned definition includes the four prevailing types of crowdfunding; 1) equity, in which crowdfunders receive shares and maybe voting rights, 2) loan, in which the crowdfunders receive a monetary return in form of interest return, 3) presales in which crowdfunders receive
prototypes or products/services before the rest of the market; and 4) donation, where no or only symbolic rewards such as acknowledgements, mentions or invitations can be received (Hemer, Schneider, Dornbusch, & Frey, 2011). Donation crowdfunding is mainly employed by charities and non-profits organizations (Schwienbacher & Larralde, 2010) and it often operates in a different and non-comparable context. As this study focuses on the funding of entrepreneurial endeavors, this study opted to not focus on the donation type of crowdfunding.

The majority of crowdfunding platforms possess several social media elements which facilitate interactivity between project initiators and crowdfunders. In addition to giving financial support, crowdfunders are able to comment on, ‘like’, rank, or even report a project. Project initiators can leverage this interactivity that crowdfunding platforms offer in order to increase their likelihood to achieve their goal. Interactive communication through project actions, like posting, presence of videos or project updates has been identified as particularly important for the funding dynamics and the success rate of crowdfunding projects (Mollick, 2014b). For instance it has been confirmed that in crowdfunding, the number of project updates that a fund-seeker posts is positively related to the success of the campaign (Kuppuswamy & Bayus, 2015; Xu et al., 2014). Announcing for instance the seed money received at an appropriate time during the fundraising process increases the total amount of final funds (Verhaert & Van den Poel, 2012).

Further structural and platform choices seem to be linked to funding success. More specifically, visual pitch elements and project-creator’s social capital were found to play a significant role in funding success. More specifically, (Mollick, 2014b) established a connection between the availability of a video, spelling errors and project-creator’s Facebook friends with the project’s success. Similarly, Zvilichovsky et al. (2014) found that project initiators who are active on supporting others’ projects have higher success rates, attract more backers and collect more funds. Moreover, research shows that social capital contributes to one very important function in crowdfunding (Agrawal et al., 2015; Colombo, Franzoni, & Rossi-Lamastra, 2015; Freedman & Jin, 2014; Giudici, Guerini, & Rossi Lamastra, 2013; Hekman & Brussee, 2013; Hui, Gerber, & Greenberg, 2012; Lin, Prabhala, & Viswanathan, 2013; Lu, Xie, Kong, & Yu, 2014). Not only it reduces uncertainties and perceived information asymmetries, but also it is perceived as a sign of credibility and it performs signaling for other potential funders. Research has also confirmed that the amount of the funding goal and the duration of the campaign can also predict its success as they are negatively correlated with funding success (Mollick, 2014b; Muller, Geyer, Soule, Daniels, & Cheng, 2013).

Furthermore it has been proven that crowdfunders tend to follow funding choices of other crowdfunders (Agrawal et al., 2015; Herzenstein, Dholakia, & Andrews, 2011; Kuppuswamy & Bayus, 2015; Mollick & Nanda, 2015). Agrawal et al. (2015) for instance show that crowdfunders are more likely to invest in projects that near its funding goal. (Herzenstein et al., 2011) find that while lenders bid on projects that have received more bids in the past, they only do it to the point that projects receive full funding. Further, (Kuppuswamy & Bayus, 2015) discover that funding exhibit a “bathtub” shape, which means that investments are more intensive in the early and last weeks of the campaign. it is noted that there is an apparent herd effect in crowdfunding, indicating that information of prior contribution and other crowdfunders’

1 The boundary between presales and donation types can be somewhat blurry and hard to define. E.g. depending on the amount invested, a backer might for instance receive only a thank you, a t-shirt or receive the final product of a campaign.
choices is a key factor that influence the project’s success (Lin et al., 2013). Further studies have examined how platforms can reduce information asymmetries and improve their business models (Burtch et al., 2015; Moritz, Block, & Lutz, 2015). (Burtch et al., 2015) for instance employed a randomized experiment in order to study the impact of information (privacy) control mechanisms on crowdfunder behavior.

From what has been stated above, becomes clear that, although some studies have already embarked on the identification of success factors on crowdfunding, the literature regarding crowdfunders’ decision making is still very limited. Especially the relation between success factors and the various crowdfunding types remains unexplored so far.

**Decision making literature**

Decision making is a well-developed discipline that “captures the dynamic nature of decision processes by prescribing a decision strategy that indicates what action should be chosen” (Keeney, 1982), pg. 808).Various models have been developed over years in order to explain decision making, including the Rational Choice Theory (Becker, 1978), (Simon, 1991) bounded rationality model, and the Cognitive–Affective Behavioral paradigm (e.g. Foxall & Goldsmith, 1994). According to the first two models, decision makers act completely rationally, with the only restrictions being the availability of information, the cognitive limitations of their mind and the finite time they have to make a decision (Kaplan, 2005a)(Simon, 1991). The Cognitive Affective paradigm, which is based on the Stimulus-Organism-Response model by (Hebb, 1949) and other neuroscience psychology results, builds on the above mentioned decision making models and incorporates the affective aspect on the process (Furedy & Riley, 1987)

Based on the results of neuroscience experiments, where several brain structures and processes were examined, the cognitive-affective model suggests that upon exposure of an individual to an alternative, two processes are likely to occur. The first process produces cognitions about the alternatives given, while the second provokes affective reactions. More specifically, the first process encompasses a series of psychological processes such as learning, developing knowledge and comprehension, thinking, making judgments, etc. In this process information processing and decision making are data-driven, rational and utilitarian (Furedy & Riley, 1987). All situations in which factors as functionality, use of logic, price-quality relationship etc. affect the choice of behavior are examples of dominantly cognitive decision making. In contrast, the second process entails feelings and affective behaviors such as joy, excitement, love, happiness, pride, sympathy, lust, ecstasy, fear, bewilderment, etc. (Holbrook & Hirschman, 1982). In this process information processing and decision making is feelings-driven, intuitive, and hedonic. Irrational, impulsive and intuitive consumer behaviors are examples of dominantly affective decision making (Foxall & Goldsmith, 1994).

We assume that in the context of crowdfunding decision making, both the cognitive and the affective components play a fundamental role in explaining crowdfunders’ behavior. However, it is logical to assume that, as the complexity of the crowdfunding type increases, the decision making process tends to be based on more cognitive factors. This means that in equity crowdfunding, which is the most complex type, a more cognitive approach is expected to prevail in the decision making process, as compared to loan and presales.
Consumer Decision Making

In the consumer behavior literature several perspectives on decision making have been considered, including the ‘information processing perspective’, the ‘affective perspective’, and the ‘value perspective’. According to the information processing perspective (Bettman, 1979) the consumer decision making is a rational process, where consumers act as a logical thinkers who solve problems in order to make decisions (Blackwell, Miniard, & Engel, 2001). As this perspective failed to explain commonly observed, and less “rational”, choice behaviors (Olshavsky & Granbois, 1979; Sheth, 1979)(Sheth, 1979), the affective perspective emerged (Bagozzi, Gopinath, & Nyer, 1999; Holbrook & Batra, 1987; Holbrook & Hirschman, 1982). According to said perspective consumer affections and emotional responses are fundamental for consumer decision making models. Finally, a more holistic approach to consumer decision making has been offered by the value perspective, which is based on the idea that consumers are “value driven” (Holbrook, 1996); (Woodruff, 1997); (Sheth, Newman, & Gross, 1991); (Zeithaml, 1988).

On an early conceptualization of the term, (Zeithaml, 1988)pg. 14) defined perceived value as a “trade-off” between benefits and sacrifices. However, this unidimensional conceptualization of the term represents a narrow approach to the concept. Several authors have proposed a multidimensional construct of perceived value including (Holbrook, 1996, p. 199) with eight types of value (i.e., efficiency, play, excellence, aesthetics, status, ethics, esteem and spirituality), (Thaler, 1985) and (Grewal, Monroe, & Krishnan, 1998) with acquisition and transaction values or (Babin, Darden, & Griffin, 1994) with utilitarian and hedonic types. All these conceptualizations have in common that perceived value is viewed as a construct with distinct and additive concepts that arises from the multi-dimensional aspects of consumer value (Sánchez-Fernández & Iniesta-Bonillo, 2007).

According to (Sheth et al., 1991) very influential and widely accepted conceptualization of perceived value, the factors that contribute to consumer decision making are classified into five values. Functional value reflects whether or not a product is able to perform its attribute-related, utilitarian, or physical purposes. Social value refers to social and symbolic benefits offered by a product. Emotional value is related to various affective states, experiential or emotional benefits deriving from a product (for example, joy or excitement). Epistemic value is concerned with a desire for knowledge, whether motivated by intellectual curiosity or the seeking of novelty. Finally, conditional value reflects the fact that some market choices are contingent on the situation or set of circumstances faced by the consumers (e.g., Christmas etc.). Extending (Sheth et al., 1991) consumption value theory, (Sweeney & Soutar, 2001) developed a 19-item PERVAL scale, which consists of four different dimensions: emotional perceptions, social perceptions, quality/performance perceptions and price/value for money.

The various types of perceived value that research has identified can be further categorized into two generic dimensions, namely the cognitive value dimension and the affective one (Carlos Fandos Roig, Sanchez Garcia, Angel Moliner Tena, & Llorens Monzonis, 2006); (De Ruyter, Wetzel, Lemmink, & Mattsson, 1997). (Carlos Fandos Roig et al., 2006) for instance, investigated customer perceived value in banking services and identified four significant perceived values, namely quality of product, quality of service, emotional and social value. As they support, those perceived values can also be considered as a synthesis of two main dimensions, namely functional and affective. The functional value refers to people’s rational and
economic evaluations of people and incorporates the quality of product and service values. The affective dimension captures the feelings or emotions generated and can be divided into emotional and social values.

**Theoretical Framework**

In this section, the theoretical framework that guides our empirical study is discussed. The primary interest of this study is crowdfunders’ decision making process and how it varies among equity, loan and presales crowdfunding. Drawing on the decision making theory and consumer behavior literature, we develop a framework that explains decision making in the context of crowdfunding. We suggest combining two well-accepted theoretical frameworks, namely the Cognitive- Affective Behavioral Paradigm and the Consumption Value theory, in order to get a more holistic view of the decision making process in crowdfunding. Employing (Sweeney & Soutar, 2001) conceptualization and operationalization of the perceived value we develop a decision making framework in the context of crowdfunding.

Emotional, social and epistemic (Novelty) values were adopted without making major changes to the original constructs. The functional (value for money) dimension was renamed financial value in order to suit the context of crowdfunding. In general it measures the monetary reward for the supporters of a project. In equity crowdfunding this is the rate of return on supporters’ investment, which is highly associated with the future earnings of the funded company as well as its share value. In the case of loan crowdfunding, financial value is measured by the estimated interest rate the crowdfunders will receive when the project initiator pays back the credit. Finally, presales crowdfunding may also have great financial rewards for crowdfunders, as in many cases the supporters acquire the preordered product at a significantly lower price as compared to the market price (Bradford, 2012).

The functional value in our framework answers the question to which extent the project outcome (product or service) possesses specific tangible and intangible attributes, which are of interest to the crowdfunder. In other words, the functional value measures the extent to which the project outcome (product, service) is of interest to crowdfunders. Aesthetic value (Holbrook, 1996) refers to the value that a project possesses due to its capacity to provoke positive feelings when appreciated or experienced aesthetically. It also refers to the art value of the project, implying the presence of skill or craftsmanship exhibited in the project presentation (Mathwick, Malhotra, & Rigdon, 2001). Finally, the informational value that was introduced in our framework measures the utility deriving from the content of the project, i.e. it measures how indicative, adequate and trustworthy the given information is. It is worth noting that the above mentioned value types are subjective constructs and refer to perceived values, as they are difficult to be objectively assessed. In essence, financial, functional and informational values can be considered a cognitive assessment, as they are products of the mind. More specifically, the three values in our framework refer to cognitive responses, involving thinking, understanding and interpreting the project environment. In contrast, emotional, social, novelty and aesthetic values can be considered as an affective reaction to the stimuli. They refer to feelings-driven responses, which are often irrational and impulsive.

Based on the above analysis we propose the following decision making framework for crowdfunding.
Methods

For the purpose of this study a factorial survey (Peter H. Rossi & Anderson, 1982) was employed. This research method is an experiment administered to a representative population sample, combining the advantages of a survey (generalizability) and an experiment (causality) (Mutz, 2011). In that way it offers a better approximation to “real” cases than traditional surveys (Sauer, Auspurg, Hinz, & Liebig, 2011).

Factorial surveys are a special type of survey experiments, that are particularly appropriate for studying real world decision making (Peter H. Rossi & Anderson, 1982). They require minimal modelling of the way in which the decision maker functions (Jasso & Opp, 1997) and use realistic vignettes as stimulus. Vignettes are “artificially constructed case descriptions for respondents to consider and to report what they would have done in the circumstances” (Sapsford, 2007). Factorial surveys are based on the following experimental premise: the researcher presents respondents with a hypothetical scenario and asks for their opinion or reactions to the scenario. Not all respondents however are exposed to the same scenario. The researcher creates multiple subtle variations on the scenario manipulating systematically one or more elements of the survey across subjects. This allows statistical testing of the impact of the variations on respondents’ reactions to the scenario (Aviram, 2012).

The use of factorial surveys in social science research has a long history. Pioneered by (Peter Henry Rossi & Nock, 1982), vignettes have been used for thoroughly studying human judgments of social situations or people (Peter Henry Rossi & Nock, 1982), understanding norms and justice perceptions (Jasso & Opp, 1997) or for explaining complex social and political decision making (Love, Davoli, & Thurman, 1996). In management literature, factorial surveys have been
pronominally employed to study consumer preferences (Feitelson, 1992) and their willingness to pay (Goodman, 1989).

**Development of the Factorial Survey and Study Oversight**

For our factorial survey, an exemplary fictitious crowdfunding project served as stimulus. This project was developed based on a content analysis of a plethora of existing crowdfunding projects in various platforms. A wireless portable charger was chosen as target product of the project, as it is gender-neutral and unlikely to trigger a strong approach or avoidance tendency among participants. The core component of the project idea was explained and a prototype presented. Moreover, information on the project initiators was provided. In order to keep the exemplary project simple and be able to isolate the effect of perceived values on decision making we decided not to include additional sections of crowdfunding projects that have been found to have an impact on crowdfunders’ behavior. Thus the sections “target goal”, “funding status”, “time remaining” as well as “social media connections”. All in all, three surveys were developed, i.e. one survey for each variation of the vignette. The items following the vignette were exactly identical in all the surveys. Each variation of the vignette corresponded to one of the three crowdfunding types that are most common on entrepreneurial areas, namely equity, loan and presales.

Participants were randomly assigned to one of the three vignettes of the factorial survey, namely the equity, loan or presales condition. After reviewing carefully the hypothesized project, they were asked to evaluate it with regards to project-specific values and personal attitudes, such as their ideology towards crowdfunding and their altruism level. Their willingness to support the project served as the dependent variable of the model and was measured on a dichotomous scale. The final part of the questionnaire asked for demographic and socioeconomic characteristics of respondents such as age, gender, education, income, whether they had already supported a crowdfunding project, or whether they had created their own crowdfunding project.

The initial questionnaire was pretested using a sample of 40 master students and crowdfunders. The pilot study gave the researcher a chance to access the validity of the questions and the clarity of the questionnaire wording. As a result, two items were dropped and the comprehensibility of the exemplary project was improved with regards to the functionality of the product.

**Sample**

In the respondent selection process, no additional criteria were employed other than verifying that respondents were familiar with the concept of crowdfunding. Consequently, the questionnaire was addressed to members of crowdfunding platforms or of crowdfunding groups on social media, such as LinkedIn.

Between October and December 2014, overall 771 individuals received an e-mail or private message on their social media account, informing them that they had been randomly selected to participate in a study investigating decision making in crowdfunding. The messages also included the name and contact details of the investigator as well as a link to the online survey. As an incentive, participants were offered the opportunity to take part in a raffle for a $30 Amazon voucher upon completion of the survey. A total of 337 questionnaires were collected, corresponding to a response rate of 43.7%. Observations with more than 10% missing values were dropped from the data set. Finally 309 cases were retained and subjected to further analysis.
This sample is quite satisfactory given that the acceptable minimum ratio of observations to variables is considered to range from 10:1 ((Tabachnick & Fidell, 1996) to 5:1((Hair, Black, Babin, Anderson, & Tatham, 2006).

**Measures**

An extended version of the PERVAL scale (Sweeney & Soutar, 2001) was employed for measuring the values that influence crowdfunders’ decision making. To accommodate the special nature of crowdfunding, a few items were re-phrased. Especially in the case of financial value, items from (Lee, Chae, Lee, & Kim, 2007) were incorporated in the scale, in order to test for gambling effects. Items measuring novelty were adopted from (Unger & Kernan, 1983), aesthetics from (Mathwick et al., 2001) whereas the scales measuring the informational dimension were developed specifically for this study.

Besides the project-specific values that impact decision making, other person-specific attitudes and traits were controlled for. The Self-Report Altruism Scale, developed by (Rushton, Chrisjohn, & Fekken, 1981), was adopted to measure the extent to which individuals engage in behaviors that help others. Another variable considered essential was the participants’ ideology regarding crowdfunding. An ideology that favors’ crowdfunding in general and considers it “the right way” is assumed to influence the willingness to support a project. The measures for ideology were developed specifically for this study.

An initial exploratory factor analysis was conducted in order to eliminate items with ambiguous loadings (i.e. loading on a separate factor or loading in more than one factors) as well as items with loadings lower than 0.60. Prior to that, the suitability of the data for factor analysis was assessed. The Kaiser-Meyer-Olkin (KMO) value was 0.871 and thus exceeded the recommended value of 0.6 (Kaiser, 1970). Finally, the Bartlett’s test of Sphericity reached statistical significance, supporting the factorability of the data (Bartlett, 1951). Statistical properties of the constructs were then evaluated through a confirmatory factor analysis (CFA). As a second step the above pattern matrix was used to conduct confirmatory factor analysis. Since the initial model fit statistics indicated that the model could be improved, the loadings (consistency within and across constructs) and correlations were examined and revised (Hair et al., 2006). In the revised model, 25 items loaded on eight factors (Table 1).

<table>
<thead>
<tr>
<th>Factor</th>
<th>Standardized Regression Weights</th>
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</thead>
<tbody>
<tr>
<td>Financial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I expect to gain a good monetary return if this project succeeds</td>
</tr>
<tr>
<td></td>
<td>I may win big money with small money if I support this project</td>
</tr>
<tr>
<td></td>
<td>I may make money easily if I support this project</td>
</tr>
<tr>
<td>Functional</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I have personal interest in this smartphone charger</td>
</tr>
<tr>
<td></td>
<td>This smartphone charger would be very useful for me</td>
</tr>
<tr>
<td></td>
<td>If this project gets funded, I would use the smartphone charger intensively</td>
</tr>
<tr>
<td>Emotional</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supporting this project would arouse positive feelings in me</td>
</tr>
<tr>
<td></td>
<td>I would have fun supporting this project</td>
</tr>
<tr>
<td></td>
<td>The actual process of supporting this project would give me pleasure</td>
</tr>
<tr>
<td>Social</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supporting this project would give me social approval</td>
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<tr>
<td></td>
<td>Supporting this project would help me to feel acceptable</td>
</tr>
</tbody>
</table>
Supporting this project would improve the way I am perceived
Supporting this project would create a favorable perception of me among others

Novelty
Supporting this project would satisfy my sense of curiosity
Supporting this project would offer novel experiences
If I supported this project I would feel like I'm exploring new worlds

Aesthetic
The way this project is displayed is attractive
The project page is aesthetically appealing
I like the way this project looks

Informational
The information provided is very useful for my evaluation of the project
In your opinion, the project information is trustworthy
In your opinion, the project information is credible

Altruism
I have allowed someone to go ahead of me in a lineup (e.g. in the supermarket)
I have helped carry a stranger’s belongings (books, shopping, etc.)
I have given money to a charity

Table 1. Confirmatory Factor Analysis Results

The fit statistics for the revised model were quite satisfactory. Both the comparative fit index (CFI= 0.981) and the goodness of fit index (GFI=0.900) were above the recommended thresholds of 0.95 (Hu & Bentler, 1995) and 0.9 (Bollen & Long, 1993) respectively. Moreover, the root mean square residual (RMR=0.033) and the root mean square error of approximation (RMSEA=0.042) were below the threshold of 0.05 proposed by (Hu & Bentler, 1995). It is worth noting that the chi-square is heavily influenced by the sample size (Bollen & Long, 1993), therefore given our large sample, it was considered as a poor gauge of overall model fit (Bentler, 1990).

After conducting a CFA the convergent and discriminant validity, as well as the reliability of the constructs were assessed, based on the (Fornell & Larcker, 1981) technique. The factors demonstrate adequate convergent and discriminant validity. More specifically, the Composite Reliability (CR) value exceed the recommended threshold of 0.7 for all the factors (Hair et al., 2006), whereas the Average Variance Extracted (AVE) estimates are all above 0.5 with the exception of one case (Altruism), for which the AVE is 0.432. This value is acceptable according to (Fornell & Larcker, 1981) if AVE is less than 0.5, but CR higher than 0.6, the convergent validity of the construct is still adequate. Accordingly, the revised model was accepted for subsequent use of the constructs financial, functional, social, emotional, aesthetic, informational and novelty value. Ratings on the items were then averaged to generate mean scores for the seven dimensions.

Results

The results of the descriptive analysis for socio-demographic information indicated that among the analyzed sample (N =309), male respondents represented a slightly higher percentage (57%) as compared to female respondents (40.1%). The majority of the respondents were between 26 and 39 years old (N=183), followed by the age group 40-54 years (26.1%). The mean age of respondents was 36.5 years, ranging from 17 to 65 years old. The completed sample was composed of well-educated individuals. For example, approximately 78% of the respondents had at least completed a bachelor’s degree with 53.1% having completed a master’s education. As for
income, more than 40% of the participants avoided to reveal their income level. The mean income of the respondents was $80,000, ranging from $671 (30,000PHP) to $790,000. Moreover, our sample mostly comprised experienced crowdfunders, as 62.8% of the respondents had already supported at least one project before this survey was administered. Finally, only 11.3% of our respondents had created a crowdfunding project.

The dependent variable of our model measures the willingness to support a crowdfunding project on a dichotomous scale. Therefore, a hierarchical logistic regression was considered the most appropriate statistical test for the present study. Prior to conducting the hierarchical logistic regression, the relevant assumptions of this statistical analysis were tested. First of all, our sample size (N=309) was deemed adequate given the number of the independent variables included in the analysis (Tabachnick & Fidell, 1996). Moreover, the assumption of singularity was met as the independent variables were not a combination of other independent variables (Hair et al., 2006). Finally, tests for multicollinearity indicated a low level of multicollinearity so that the assumption of multicollinearity was considered to have been met (Pregibon, 1981). Finally, neither univariate nor multivariate outliers were identified. The examination of the data did not reveal cases that exceeded Cook’s distance threshold of 1.00 (Belsley, Kuh, & Welsch, 2005), or cases for which the Mahalanobis distance scores was unacceptable, according to (Leroy & Rousseeuw, 1987).

A hierarchical logistic regression was conducted predicting whether or not participants were willing to invest in the project from demographic factors, experience, altruism and ideology (Block 1) and cognitive and affective factors (Block 2). Table 2 shows the Block 2 logistic regression coefficient, standard errors, Wald test, statistical significance and odds ratio for each of the predictors.

In the equity regression (model 1), the entry of demographic factors, experience, altruism and ideology did not significantly increase the variance accounted for, -2 Log likelihood=96.732, Nagelkerke R²=0.168, χ²=11.040 (df=10), Sig.=0.354. In other words, the control variables are not characterized by a statistically significant relationship to the dependent variable, but can still serve their purpose as controls. The entry of the perceived values in Block 2, increased significantly the variance accounted for, -2 Log likelihood=40.455, Nagelkerke R²=0.758, χ²=56.276 (df=7), Sig.=0.000. The coefficient on the FINANCIAL VALUE variable has a Wald statistic equal to 6.414 which is significant at the .05 level with an odds ratio of 12.116. The coefficient on the INFORMATIONAL VALUE variable has a Wald statistic equal to 9.050 which is significant at the .01 level with an odds ratio of 19.914. The coefficient on the EXPERIENCE VALUE variable has a Wald statistic equal to 2.920 which is significant at the .10 level with an odds ratio of 12.585. This means that an individual that has already supported at least one project is 12 times more likely to be willing to support the project. The overall model is significant at the .000 level according to the Model chi-square statistic. The model predicts 92% of the responses correctly.
In the loan regression (model 2), the entry of demographic factors, experience, altruism and ideology did significantly increase the variance accounted for, -2 Log likelihood=93.099, Nagelkerke $R^2=0.381$, $\chi^2=30.063$ (df=11), Sig.=0.002. Four of the variables were found to be significant predictors: age, education, creator and ideology. The entry of the perceived values in Block 2, significantly increased the variance accounted for, -2 Log likelihood=30.482, Nagelkerke $R^2=0.862$, $\chi^2=62.616$ (df=7), Sig.=0.000. The coefficient on the FINANCIAL VALUE variable has a Wald statistic equal to 6.706 which is significant at the .01 level with an odds ratio of 6.813. The coefficient on the INFORMATIONAL VALUE variable has a Wald statistic equal to 7.716 which is significant at the .01 level with an odds ratio of 5.757. The coefficient on the EMOTIONAL VALUE variable has a Wald statistic equal to 5.286 which is significant at the .05 level with an odds ratio of 7.995. In contrast to model 1 in model 2 (loan crowdfunding) not only cognitive factors significantly impact backers’ evaluation of a project and their decision to support it or not, but also affective factors. The overall model is significant at the .000 level according to the Model chi-square statistic. The model predicts 97.8% of the responses correctly.

In the presales regression (model 3), the entry of demographic factors, experience, altruism and ideology significantly increased the variance accounted for, -2 Log likelihood=99.195, Nagelkerke $R^2=0.307$, $\chi^2=23.831$ (df=6), Sig.=0.001. Two of the variables were found to be significant predictors: age and ideology. The entry of the perceived values in Block 2, significantly increased the variance accounted for, -2 Log likelihood=20.662, Nagelkerke $R^2=0.909$, $\chi^2=78.532$ (df=7), Sig.=0.000. The coefficient on the FUNCTIONAL VALUE variable
has a Wald statistic equal to 3.699 which is significant at the .10 level with an odds ratio of 7.372. The coefficient on the EMOTIONAL VALUE variable has a Wald statistic equal to 4.282 which is significant at the .05 level with an odds ratio of 13.164. The coefficient on the INFORMATIONAL VALUE variable has a Wald statistic equal to 3.690 which is significant at the .10 level with an odds ratio of 25.198. The overall model is significant at the .000 level according to the Model chi-square statistic. The model predicts 96.8% of the responses correctly.

Conclusion

The starting point and main motivation of our study was to show that while there is a lot of ongoing research on crowdfunding, few studies (a notable exception is Belleflamme et al., 2014) have acknowledged the different crowdfunding forms in place, or attempted to differentiate between these forms. Our aim was to examine how cognitive and affective factors impact funding decisions in equity, loan, and presales forms of crowdfunding. Given that these differ significantly in their processes and complexity (Hemer et al., 2011) as well as in their reward structure, there are good reasons to assume differences.

Drawing on the cognitive-affective decision making and consumer value behavior theories, the results of our study support our skepticism: different forms emphasize different values. Based on our logistic regression results we find that in equity crowdfunding the decision making is predominantly cognitive, rational and data-driven; crowdfunders in loan and presales crowdfunding experience a "balance beam" effect between affective (emotional) desires and cognitive (reasoning) aspects. More specifically, in equity crowdfunding financial and informational (completeness) are the most important values. In the case of presales, the informational value remained significant while financial benefit was not found to have an impact on crowdfunders’ decision making. Instead functional use seems to play an important role. Affective processes are also observed in presales crowdfunding, as emotional value and the feelings provoked by a project will impact decision making. Finally, loan crowdfunding seems to share characteristics with both presales and equity crowdfunding, covering some form of middle ground. In loan crowdfunding, the emotional value was found to have great impact on predicting willingness, together with the cognitive values that determine decision making in equity crowdfunding (Functional and Informational Value). Interestingly, neither novelty, aesthetics nor social value were found to be significant in any of the three crowdfunding types investigated.

Across all crowdfunding types, we identified the importance of informational value, that is the relevance, completeness and reliability of information as a common factor playing a significant role in the backing decision.

Overall, we can now state with more confidence that determinants of a backer’s decision to fund a campaign are contingent on the type of crowdfunding performed. While common success factors exist (informational value) we can thus not silently assume that there are “success factors” and “determinants” for crowdfunding in general. A more nuanced view is required, and research should focus on equity, loan, and presales forms of crowdfunding specifically.

Finally, it is worth mentioning that our study contributed to the extension of previous value models to an area (crowdfunding) yet to be explored, which is considered an important step for the development of value theory. One of the main indicators of the validity of a theory is its applicability under a variety of circumstances.
Contributions to Managerial Practice

Crowdfunding has been a very influential new paradigm that seems to be adopted by more and more firms, which is also proved by the increasing number of crowdfunding campaigns (Lambert & Schwienbacher, 2010). The findings of this study are extremely viable for practitioners or managers, particularly in the current financial crisis, where entrepreneurs are striving to get access to capital.

Before a project is developed a decision should be first made, the project creators should decide first which type of crowdfunding they want to employ. Based on that decision they should frame their projects accordingly. Those who decide to employ equity crowdfunding should appeal to the crowdfunders’ cognition and frame their projects such that the financial and informational values of the project are perceived as high. Therefore information has to be transparent and extensive, credible and clearly comprehensible. At the same time emphasis must be given to the information regarding feasibility of the business idea and a prediction (if possible) of the market demand. The crowdfunders are likely to be willing to support a project even if personally they do not consider the project outcome relevant or interesting, as long as they are convinced of the relevance of the project and the estimated success of the business and the disbursed monetary rewards. Since their decision making is based on cognition, emphasis should be generally given to data and the rationality of their choice and not to emotional arousal, intuition or impulsiveness. Supporters are likely to carefully evaluate the alternatives before making a decision.

The recommended framing for loan crowdfunding is very similar to the equity crowdfunding framing explained above. As this study found, in loan crowdfunding the perceived values that influence decision making are the same as in equity with the addition of the emotional value. This means that loan crowdfunding is not based on a purely cognitive decision making process but that affective elements are important too. Therefore, apart from calculations and clear indication of the monetary return crowdfunders will receive if they support the project, the framing of the project should include aspects that are likely to arouse positive feelings in crowdfunders. Those positive feelings could refer to enjoyment, excitement, pride or sympathy.

In contrast, project initiators who decide to crowdfund via preselling should follow a different approach. The crowdfunders will not be interested in knowing how well the financial indicators of the company are or what is the demand or earnings of the company. What encourages them to support a project is a detailed and interesting presentation of its outcome. Matching the attributes of the outcome to the crowdfunders’ needs and interests will lead to a successful presales crowdfunding. Project initiators should clearly indicate the characteristics and potential of the product when employing presales crowdfunding. Moreover, it is vital to address the emotional benefits crowdfunders will enjoy if they support the project. Presales crowdfunding means to a great extent fun for crowdfunders. Since the decision making is also based on affective reactions, elements that increase crowdfunders enjoyment and arouse positive feeling are important. Finally, as in equity and loan crowdfunding, improving trustworthiness, credibility and clarity of the project information is vital for a successful fundraising.

A very important finding of this study is that informational value was found to be significant in all three crowdfunding types. This means that information in every project has to be perceived as adequate, indicative, complete, clear and above all trustworthy and credible. Providing clear non ambiguous information as well as proof by using photos of the project outcome, or financial
reports and business plans, will be advantageous for the success of a project. Moreover, developing a personal relationship with crowdfunders by answering their questions or posting updates on the progression of the project will contribute to a high perceived informational value.

**Limitations and Future Research**

This study provides academics and practitioners with valuable insights into factors that influence crowdfunders decision making. However, despite the fine grained approach, it has its limitations. Firstly, while our research subjects were actual, experienced crowdfunding backers, their decision in this study did not involve real monetary risks. Follow up studies implying real monetary risks are needed to confirm our factors. Secondly, while we incorporated both cognitive and affective factors, it is by no means certain that these factors provide us with a conclusive list of decision determinants. Other factors, such as social capital or time may influence crowdfunders’ behaviour as well. One promising field for future research is the role of trust in crowdfunding. As the present study indicated, perceived informational value is an important factor for the decision making process of crowdfunders. This value embodies elements of trust and adequacy of the information given. The more complete, indicative and trustworthy the given information is, the more likely it will be that crowdfunders are willing to contribute financially. However, the danger of over disclosure is apparent in crowdfunding. Another factor beyond the scope of our study deserving attention is the role of perceived risk in the funding campaign. For instance, assurance instruments exist that provide capital insurance for crowdfunding investments. Their impact on the decision to back a project remains still unclear. Finally, other forms of crowdfunding such as donation-based or pledge banks (“I will give $10, but only if 100 others do so as well.”) might abide by different rules and deserve separate attention too.

Altogether we can state that crowdfunding is an increasingly popular concept. We have demonstrated that the same campaign framed in different types of crowdfunding leads to different evaluation criteria by backers when making their funding decision. The implications for platforms, project founders and academics should be loud and clear: framing matters. Do not assume that “crowdfunding” equals “crowdfunding” as our evidence has shown that some forms are more equal than others.

**References**


