

Finding the hidden influencers:

The effect of altruism and demographics on the willingness to
participate in crowdfunding

Maastricht University
School of Business and Economics

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Name: Vera Nathalie van Sambeek
ID: i6032945
Study: MSc IB Strategy & Innovation

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Supervisor: Dr. W.A. Letterie
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Abstract

This thesis is a first step in the search for the characteristics of funders, and the underlying motivation that drives them to participate in crowdfunding. The purpose of the study is to identify demographics and psychographics that influence a funder's willingness to financially support a crowdfunding project (WFS). Crowdfunding, crowdsourcing and donation literature are combined to create a conceptual model in which age, gender, altruism and income, together with several control variables, are expected to have an influence on a funder's WFS. Primary data collection was conducted using a survey, and a dataset of 175 potential crowdfunders was created. The data is analysed using a multiple regression and provided several interesting results. First of all, age and gender have a significant effect on WFS, males and young adults until the age of 30 have a higher intention to give money to crowdfunding projects. Second, altruism is significantly positively related to WFS, meaning that the funders do not just care about the potential rewards they could receive, but also about the benefits that they create for the entrepreneur and the people affected by the crowdfunding project. Third, the moderation effect of income was found to be insignificant in this model. It shows that income does not affect the strength of the relationship between the age, gender and altruism, and WFS. This study provides important theoretical contributions by, to the best of my knowledge, being the first study to quantitatively investigate the characteristics of funders and using the funder as the unit of analysis. Moreover, the study provides important insights for entrepreneurs who wish to target the crowd better in order to attract and retain more funders, thereby increasing the chance of success of their project.

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Table of content

1. Introduction	6
2. Theory	9
2.1 Crowdfunding	9
2.2 Previous research	11
2.3 Related literature streams	14
2.4 Hypothesis development.....	16
2.4.1 The effect of altruism.....	16
2.4.2 Demographic influences	17
2.4.3 The moderating effect of income	20
3. Methodology	23
3.1 Nature of the research.....	23
3.2 Data collection and sampling	24
3.3 Measures	26
3.3.1 Dependent variable	26
3.3.2 Independent variables	27
3.3.3 Mediating variable	27
3.3.4 Moderating variable	28
3.3.5 Control variables	29
4. Data analysis and results	30
4.1 Measurement validation	30
4.2 Descriptive statistics	31
4.3 Regression analysis.....	37
5. Discussion and conclusion	39
5.1 Discussion.....	39
5.2 Theoretical contribution	43
5.3 Managerial implications	44
5.4 Limitations.....	45
5.5 Future research suggestions.....	46
5.5 Conclusion	47
References	48
Appendix 1	Fout! Bladwijzer niet gedefinieerd.
Appendix 2	Fout! Bladwijzer niet gedefinieerd.
Appendix 3	Fout! Bladwijzer niet gedefinieerd.

Appendix 4	Fout! Bladwijzer niet gedefinieerd.
Appendix 5	Fout! Bladwijzer niet gedefinieerd.
Appendix 6	Fout! Bladwijzer niet gedefinieerd.
Appendix 7	Fout! Bladwijzer niet gedefinieerd.
Appendix 8	Fout! Bladwijzer niet gedefinieerd.

Abbreviations:

WFS: Willingness to financially support a crowdfunding model

SRA-scale: Self-report altruism scale

KMO statistic: Kaiser-Meyer-Olkin statistic

1. Introduction

On the 18th of August, 2015, a project was initiated in order to raise money within 30 days to introduce a titanium pilot watch to the market. On the 27th of August, with still 21 days remaining until the end of the funding campaign, funding had reached 430% of the stated \$12.000 goal (Shahbakhshi & Kickstarter, 2015, August 27). How did the project manage to get so much financial support while most entrepreneurs find it very difficult to get the funding they need (Macleod, 2012)? The answer is crowdfunding. Over the last years crowdfunding has emerged as a new financing alternative for entrepreneurs. Instead of trying to receive capital from banks or business angels, entrepreneurs target a large group of people, asking them for a relatively small investment each. Four different types of models can be employed: the donation, reward-based, lending, or equity model (Mollick, 2014). The success of crowdfunding is shown by its rapid rise; in 2015 total global crowdfunding is expected to reach \$34.3 billion (Wareham, 2015).

In order to be successful in their crowdfunding efforts entrepreneurs need to know their market and the investors they are targeting. Yet, so far research on crowdfunding is still in an embryonic state. If crowdfunding is seen as a viable alternative to finance a business, then more research is necessary to determine the risks involved (Enria, A. & European Banking Authority, 2015). Entrepreneurs ask the consumer crowd for financial backing of their projects, thereby creating overlap between the activities of investors and consumers. Knowing which individuals are prone to participate in crowdfunding initiatives is critical for the achievement of a company's strategy, especially now the roles of consumers and investors are becoming intertwined.

In order to find out what makes crowdfunding efforts successful, most research so far has focused on the entrepreneurial side (Belleflamme, Lambert & Schwienbacher, 2014), and project attributes (Mollick, 2013). Additionally, the little research that includes behaviour or

characteristics of funders usually focuses on crowdfunding activities in one particular industry (Agrawal, Catalini & Goldfarb, 2015; Burtch, Ghose & Wattal, 2013; Macht & Weatherston, 2015). So far, only Ordanini, Miceli, Pizzetti & Parasuraman (2011) have looked at the investor side of the transaction to find out how and why consumers turn into crowdfunding participants. However, their findings were very limited. They conducted a case study in which information about funder characteristics was given solely by the managers instead of the funders themselves. Moreover, the results from the case study cannot be generalized over all funders. To the best of my knowledge no quantitative research has been conducted that has investigated the incentives and characteristics of funders in multiple industries, nor has quantitative research been done that approached the funders for answers. Overall, it is unknown what motivates individuals to be part of the crowd (Lehner, 2013). As both Ordanini et al. (2011) and Lehner (2013) concluded: more research is needed to determine the characteristics of the crowdfunder. Therefore, the purpose of this study is to determine which factors influence the funder's decision to participate in crowdfunding. Specifically, the following research questions will be addressed:

1. Which demographics have an impact on the funder's willingness to financially support a crowdfunding project?
2. What is the influence of altruism on the funder's willingness to financially support a crowdfunding project?
3. How does income impact the funder's willingness to financially support a crowdfunding project?

Answering these questions will provide important managerial contributions. Choosing crowdfunding as a financing method has a large influence on a firm's strategy. First of all, the acquisition of resources changes. Secondly, now that two of the most important stakeholder roles (consumer and investor) become partially combined, it is even more important to

determine their needs, wants, and motivations to participate in crowdfunding. Thirdly, the opportunities for competitive advantages change. Porter (1996) said that a competitive advantage derives from the activities a company performs. Having a greater insight in how to manage certain sets of activities can be at the basis of a competitive advantage. So, if companies have a greater insight into the characteristics and motivations of funders and can manage their funding activities better, they will be able to become a stronger competitor in the market. Lastly, to create a sustainable competitive advantage, the company has to create fit among its strategic activities (Porter, 1996). This becomes especially important now company activities such as funding and marketing overlap. Overall, it can be concluded that researching the factors that influence the decision of funders to participate in crowdfunding is critical to the success of crowdfunding activities and the achievement of strategic objectives of entrepreneurs.

This paper will add to the existing body of literature by being the first quantitative study to have the potential funders as a unit of analysis in order to obtain the most accurate information about their incentives and behaviour, thereby addressing a shortcoming in existing literature. Moreover, as crowdfunding is a particular type of crowdsourcing, the outcomes of this research can provide interesting results that can lead to further research topics in the field.

The study is structured as follows. In section 2, the concept of crowdfunding is described, literature is reviewed and a conceptual model is presented. Then the research method, data collection and measurements will be described in section 3. Section 4 will show the results of the analysis. Finally, in section 5 a discussion of results is provided as well as the theoretical and managerial contributions of the study. Moreover, the limitations of the study are described and future research options are recommended.

2. Theory

2.1 Crowdfunding

It is often a hard task for entrepreneurs to gather funding for their business ideas or projects. They have not yet built up a credit record, nor do they have the collateral or cash flow needed to get loans. Hence, a lot of entrepreneurs rely on their private savings, family and friends to gather the needed capital. However, since a few years crowdfunding has become a new alternative for these entrepreneurs. Via the Internet they can seek financial help directly from the general public (“the crowd”) instead of relying on banks, capital funds or business angels. Instead of asking for a large amount from limited sources, entrepreneurs ask a large number of people for relatively small contributions (Schwienbacher & Larralde, 2012). Crowdfunding is used both by entrepreneurs aiming to bring a product or service to the market, as well as individuals gathering funds for personal use or a charity. The focus of this paper will be on the first type of crowdfunding where the phenomenon is used to support a business idea. The crowdfunding model consists of three players. The first player is the entrepreneur who proposes a project and asks for financial support. The second player is the individual in the “crowd” supplying the financial backing of the project (hereafter called “funder”). The third player is the intermediary, usually in the form of a crowdfunding platform, through which the entrepreneurs and funders are connected (Ordanini, Miceli, Pizzetti & Parasuraman, 2011). Even though the online crowdfunding phenomenon is quite young, it is widely dispersed over different industries (Schwienbacher & Larralde, 2012). Besides, financial capital is not the only reason for entrepreneurs to engage in crowdfunding. It is also a good way to create a hype around a project and to evaluate whether there is market demand for the product or service in the first place. If demand does not seem sufficient, the entrepreneur can adapt or drop the idea before having to invest a lot of capital (Mollick, 2014).

Since researchers in the field have not yet agreed on a definition, crowdfunding will be defined, based on the definitions given by Mollick (2014) and Schwienbacher and Larralde (2012), as follows in this paper:

Crowdfunding refers to the efforts by entrepreneurial individuals and groups – cultural, social, and for-profit – to fund their ventures by drawing on relatively small contributions from a relatively large number of individuals using the internet, in exchange for some form of reward (either intrinsic or extrinsic) and/or voting rights, without standard financial intermediaries, in order to support initiatives for specific purposes.

An extrinsic reward is a “positive outcome that is obtained by performing work but which is separate from and not inherent to the work task.” (Law, 2009a, n.p.). An example is monetary compensation for the performed task. An intrinsic reward is “a positive outcome of performing work, that is integral to the work itself, such as love or pride in one’s work, a sense of challenge or achievement” (Law, 2009b, n.p.).

Generally, four types of crowdfunding are recognized in the literature. The first type is the donation form where entrepreneurs try to attract funders without the obligation to give any type of extrinsic reward in return. The second type is reward-based crowdfunding where the funders do get an extrinsic reward. The reward can have many forms from getting a thank you-card to getting the right to pre-order the product. The third type is a lending model, in which funders get a rate of return on the capital they lend. Lastly, the fourth approach is equity-crowdfunding where the funders receive equity or future profits for their investment. Here the funders can play a more active role in the development process of the project (Belleflamme & Lambert, 2014; Belleflamme, Lambert & Schwienbacher, 2014; Mollick, 2014). However, the latter form is not used often as the regulations are still rather stringent (Mollick, 2014). Only as of March 25, 2015 when President Obama signed Title IV of the Jumpstart Our Business Start-ups (JOBS) act, the equity-form of crowdfunding has become a feasible option for the general

public in the United States (U.S. Securities and Exchange Commission, 2015, March 25). Laws and regulations such as the JOBS act have not yet been created worldwide, hence the adoption of this form has been very limited (Belleflamme & Lambert, 2014; Mollick, 2014). The lending model also has some regulatory issues. Because business forms can differ extensively, a lot of different financial laws can apply, making it difficult to determine the risks and rights of funders (Enria & European Banking Authority, 2015). Lending-, donation- and reward-based models are used a lot on current platforms. However, due to the different conditions and laws that apply it is important for this research to focus on a particular model in order to create valuable results. As donation and reward-based crowdfunding models are subject to similar rules and are both not focused on financial rewards, these models can be investigated together. Moreover, a lot of big (and well-known) crowdfunding platforms that have developed over the last years employ the donation and/or reward based crowdfunding model (Barnett, 2014; www.crowdfunding.com; www.similarweb.com). Therefore, the focus of this paper will solely be on these two models.

2.2 Previous research

As online crowdfunding for entrepreneurs is a relatively new phenomenon, limited research has been conducted in the field. Much of the literature has focused on the entrepreneur and the projects, rather than the funder. Belleflamme, Lambert and Schwienbacher (2014) have researched reward- and equity-based crowdfunding and came to the conclusion that the preference of entrepreneurs to employ either type depends on the initial capital requirement. Entrepreneurs prefer reward-based funding, in the form of pre-selling the products, when the initial capital requirement is low. If the needed capital requirement is high, pre-selling products becomes unprofitable. Therefore equity-based crowdfunding is preferred in this situation. The effect can be seen on the Kickstarter website, which employs the reward-based model. Most entrepreneurs ask for a limited amount of funding, the average funding goal for projects in the

years 2010 and 2011 was just over \$9900 (Kuppuswamy & Bayus, 2014). Moreover, Belleflamme, Lambert & Schwienbacher (2010), quoted by Schwienbacher and Larralde (2012), found that the median of the crowdfunding targets was \$100,000. This shows a tendency for smaller projects.

Other previous research has focused on the success factors of crowdfunding. Crowdfunding projects usually either succeed by small margins, or fail by large amounts (Mollick, 2014). Moreover, a project's success depends on the organizational structure. Belleflamme, Lambert and Schwienbacher (2013) showed that crowdfunding initiatives structured as non-profit organizations are more successful, because funders see the reduced focus on profits as a credible commitment to provide community benefits and produce high quality products. Success also depends on the entrepreneur's personal network. The more social capital the entrepreneur has, the larger the chance of success. Signals of quality, such as video's and frequent updates, also increase the likelihood that the funding goal will be reached (Mollick, 2014).

Furthermore, geography plays an important role in investment decisions. Due to information asymmetries, search and monitoring costs, most investors prefer to invest in projects within close geographical distance (Agrawal, Catalini & Goldfarb, 2015; Lerner, 1995). Crowdfunding platforms however, have certain attributes that could diminish some of the distance-related costs. First of all, the platforms provide easier search possibilities for funding options as all projects are presented online in a standard manner. Second, there is less need for continuous monitoring of the investment project as only relatively small one-time contributions are made. Third, most platforms have control mechanisms in place (Damus, 2014). For instance, on Kickstarter an entrepreneur can only access the provided funds once the capital goal is reached (Kickstarter, 2014). This greatly reduces the investment risk. Fourth, information asymmetries are reduced as important information is given on the platform, such as the cumulative capital raised so far for a project and the amount of funders it has. Moreover,

options are available for the funders to communicate with the creators of the project and the other funders. As a result, the influence of geographical distance on funding patterns largely disappears, especially when controlling for social networks (Agrawal, Catalini & Goldfarb, 2015).

Concluding, most research thus far focuses on crowdfunding in general as opposed to creating knowledge on its individual players (Macht & Weatherston, 2015). A thorough search of the literature only yielded one article by Ordanini, Miceli, Pizzetti and Parasuraman (2011) focusing on the funder characteristics. Their case study showed that characteristics and intentions of funders vary greatly across different projects. Only openness to innovation was found as a potential common factor.

A crowdfunding project's success can be measured by the amount of funding it has achieved relative to the goal (Belleflamme, Lambert & Schwienbacher, 2013), the success is therefore based on the supporting behaviour of individuals in the crowd. Thus, it is important to conduct more research focusing on the funders to determine what influences their behaviour of supporting a crowdfunding project. Several theories have determined that behavioural intentions are the most immediate and important predictor of behaviour (Sniehotta, Scholz & Schwarzer, 2005). "Intentions are explicit decisions to act in a certain way, and they concentrate on a person's motivation towards a goal in terms of direction and intensity." (Sniehotta et al, 2005, p.144). In order to determine when individuals would support a crowdfunding project, it is therefore necessary to research their behavioural intention towards the supporting behaviour. This paper focuses on the characteristics of the funder to see which aspects have an influence on the support decision, and it will do so by determining which characteristics influence an individual's willingness to financially support a crowdfunding project. Willingness to financially support a crowdfunding project (WFS) is regarded in this paper as the behavioural intention of an individual to engage in the behaviour of giving money to a crowdfunding project.

The process of crowdfunding can be divided in pre- and post-investment (Macht & Weatherston, 2015). The focal point of the paper is the pre-investment process since the funder's motivation and behavioural intention towards participating in crowdfunding are investigated.

2.3 Related literature streams

Existing research in the field is limited, therefore, other literature streams have to be used to provide a background in order to better understand funders and the incentives that drive them to financially support crowdfunding projects. One of the related literature streams is crowdsourcing. Crowdsourcing is defined as:

“A type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task. The undertaking of the task, of variable complexity and modularity, and in which the crowd should participate bringing their work, money, knowledge and/or experience, always entails mutual benefit. The user will receive the satisfaction of a given type of need, (...) while the crowdsourcer will obtain and utilize to their advantage what the user has brought to the venture, whose form will depend on the type of activity undertaken.” (Estellés-Arolas & González-Ladrón-de-Guevara, 2012, p.197).

Crowdfunding can be seen as a special type of crowdsourcing (Schwienbacher & Larralde, 2012). In the case of crowdfunding the undertaken task is financing the project, for which the funders get an intrinsic or extrinsic reward. The question is: what drives these individuals to participate in crowdsourcing requests? The financial rewards for the participants in crowdsourcing seem to be very low compared to the work they perform and the benefits they create for the company (Kleemann & Günter Voß, 2008; Schwienbacher & Larralde, 2012).

Research showed that the intrinsic rewards are often of equal or even greater importance than the extrinsic rewards (Brabham, 2010; Lakhani, Jeppesen, Lohse & Panetta, 2006; Kleemann & Günter Voß, 2008). As crowdfunding can be seen as a part of crowdsourcing, it is likely that the intrinsic rewards also play a large role in the WFS. This is especially the case in the donation crowdfunding model where the funders do not get extrinsic rewards in return.

Since intrinsic rewards potentially influence the WFS, it is necessary to determine what creates these intrinsic rewards. Donation literature is a body of literature that can be used to determine what creates the intrinsic rewards that have an influence on the funder's decision to participate in crowdfunding. Non-profit organizations oftentimes depend on small donations from a large amount of people in order to capitalize their operations, often without providing extrinsic incentives (Fuhrmann, 2012). Because of the similarities between entrepreneurs relying on crowdfunding and organizations asking for donations, donation literature can be used to elaborate on crowdfunding behaviour.

Donations are private contributions of individuals to public goods in the presence of social information, the contribution behaviour can generally be explained by two competing economic models: reinforcement models and substitution models (Burtch, Ghose & Wattal, 2013). Reinforcement models predict a positive relationship between the contribution of oneself and others. Each individual gives at least as much as the lowest contributor. The model assumes that individuals do not only care about their intrinsic preferences, but also about how others perceive them. They recognize that departing from the social norm will impair their status, thus information about the contributions of others can influence their own decisions and behaviour. This means that if others contribute more, so will the individual. The substitution model on the other hand is based on altruism, individuals derive utility from their own consumption, but also from the consumption and utility of others. They receive an intrinsic reward from their contribution to the utility of others (Andreoni, 1989). An important outcome is the crowding

out effect. As the contributions of others increase, the individual decreases his/her own contribution as the utility derived from the contribution to the public good decreases (Shang & Croson, 2009). Much research has been done in the area of altruism, however, researchers in different areas of research, such as economics, social science and biology, have not been able so far to agree on a definition (Roberts, 1984; Piliavin & Charng, 1990). Yet, it has been shown that altruism is a broad-based personality trait (Rushton, Chrisjohn & Fekken, 1981). Therefore, in this paper, altruism will be regarded as a personality trait and will be defined as showing behaviour that benefits another person, voluntarily and intentionally, whereby the benefit is the goal itself and whereby no extrinsic reward is expected. This definition is based on previous research, and includes the aspects of altruism that most researchers tend to agree upon (Piliavin & Charng, 1990).

2.4 Hypothesis development

2.4.1 The effect of altruism

Burtch, Ghose and Wattal (2013) conducted research in order to understand whether the private contribution of individuals to crowdfunding could also be explained by the substitution or reinforcement model. When a person supports a crowdfunding project it can be seen as an individual contribution to a public good in the presence of social information. In an online environment, a firm's reputation is co-created with customers because of the interactive communication between the customer and the firm. Entrepreneurs have to establish strong networks to convey legitimacy (Frydrych, Bock, Kinder & Koeck, 2014). Since funders depend on the information within the network to determine the legitimacy of the entrepreneur, social information is present in the crowdfunding marketplace and the funders' behaviour will be influenced by information on prior contribution behaviour of others. Because social information influences the decision of the funder to contribute to a public good, the two economic models, reinforcement and substitution, can be used to explain the behaviour of funders.

Burtch et al. (2013) found evidence for substitution in the crowdfunded marketplace, individuals contributed less when they observed that others contributed more frequently. The substitution model is based on altruism, meaning that individuals derive utility from the consumption and utility of others. Because the utility is derived from the action itself and is not separate from the work task, it can be regarded as an intrinsic reward (Law, 2009b). Crowdsourcing literature showed that intrinsic rewards are often of great influence in the decision of individuals to participate in a project (Brabham, 2010; Lakhani, Jeppesen, Lohse & Panetta, 2006; Kleemann & Günter Voß, 2008). Since crowdfunding is a type of crowdsourcing, intrinsic rewards are likely to have a positive influence on the decision of individuals to financially support a crowdfunding project as well. To conclude, an indication of the existence of altruism within the crowdfunding marketplace is found, and altruism allows for receiving intrinsic rewards from the utility of others. Moreover, intrinsic rewards are likely to positively influence an individual's WFS. Therefore, it can be argued that altruism positively influences an individual's WFS. The following hypothesis is tested:

H1: Altruism positively influences willingness to financially support a crowdfunding project (WFS).

2.4.2 Demographic influences

Considering the amount of research on altruism within donation literature and the similarities between philanthropy and financially supporting a crowdfunding project, more insights of the donation literature can be used to further investigate the factors that influence altruism and WFS. Much research in the donation literature stream has been done on the demographic factors that influence the willingness to donate. Multiple researchers have shown that the relation between age and donating is positive (Belfield & Beney, 2000; Bekkers & Wiepking, 2007; Lee & Chang, 2007; Midlarsky & Hannah, 1989). Some papers noted that the positive relationship decreases at a higher age (Bekkers & Wiepking, 2007). However, only a

few researchers found these effects and the resulting age levels at which the positive relationship levelled out differed a lot. Due to the similarities between funders supporting a crowdfunding project and individuals donating to support a charity, it is likely that age is also positively related to WFS. A positive linear relation is tested in hypothesis H2a.

H2a: Age is positively related to willingness to financially support a crowdfunding project.

Although the cause for the positive relationship between age and donations is unknown (Bekkers & Wiepking, 2007), one possible explanatory factor could be the level of altruism, which also significantly increases with age (Rushton, Fulker, Neale, Nias & Eysenck, 1986). The significant positive relationship between altruism and age is clearly demonstrated, yet what causes the positive relationship between altruism and age is not certain. There are several preliminary hypotheses mentioned in the literature, a potential explanation could be that as people become more altruistic while they age, they are more willing to behave in a way that benefits others, such as donating money. Henceforth, altruism could be a mediator, explaining the positive relation between age and WFS. The mediation effect works as follows: as people age they become more altruistic, the increased level of altruism causes them to be more willing to show beneficent behaviour. The increase in beneficent behaviour manifests itself in a higher WFS. Therefore the following hypothesis is formulated:

H2b: The relationship between age and willingness to financially support a crowdfunding project (WFS) is mediated by altruism in a way that age will positively influence WFS by increasing altruism.

The findings on the relationship between gender and altruism, and gender and willingness to donate are mixed. Some studies find that females report a higher willingness to volunteer and donate (Bekkers & Wiepking, 2007; Lee & Chang, 2007), others found that males are more likely to give money (Bekkers & Wiepking, 2007) while again other researchers found no

difference for gender in relation to beneficent behaviour and donations (Bolton & Katok, 2005; Schlegelmilch, Diamantopoulos & Love, 1997). In the field of crowdsourcing, one research paper looked at certain demographics of individuals participating at the crowdsourcing platform iStockphoto and the results showed that participants were mostly male (Brabham, 2008). However, there was no explanation mentioned for this finding. Moreover, as the research was focused on only one crowdsourcing platform the results cannot be generalized. Although results for both the donation and crowdsourcing research are ambiguous, a relationship is often found between gender and donations. Hence, it is likely that a relation between gender and WFS also exists, even though there is no clear indication as to which gender will have a higher influence. Therefore, two separate hypotheses are created and tested to see which gender is significantly more related to willingness to financially support.

H3a: Females are more willing to financially support a crowdfunding project than males.

H3b: Females are less willing to financially support a crowdfunding project than males.

As a result of the mixed findings between gender and donations it is hard to find explanatory factors for the relation between the two. The findings of previous research are complicated by the fact that most data concerning charity is based on one respondent per household, even though charity donations are often done by multi-person households (Bekkers & Wiepking, 2007). Again, it can be investigated whether altruism acts as a mediator. Research found that empathy is significantly and positively related to altruism (Rushton, Fulker, Neale, Nias & Eysenck, 1986) and charitable giving (Lee & Chang, 2007; Wiepking & Maas, 2009). Empathy can be defined as affective responsiveness to another's emotional state (Eisenberg & Lennon, 1983). Many studies find that females score higher on empathy than males (Rushton, Fulker, Neale, Nias & Eysenck, 1986; Piliavin & Charng, 1990). These usually are studies which use self-reporting as a measure. Others, using psychological measures, find few consistent sex differences in empathy (Eisenberg & Lennon, 1983). One could argue that, due

to the positive correlation between empathy and altruism, females also tend to be more altruistic. However, Rushton et al. (1986), who measured both empathy and altruism for females, found that females have a significantly higher score for empathy but not for altruism. It can be concluded that the results of studies concerning the relation between gender, altruism and donations are not yet definitive. As altruistic individuals obtain utility from helping others, it is possible that altruism accounts for part of the WFS. Henceforth, it is possible that the gender that is significantly more positively related to donations, also is significantly more altruistic than the other gender and would therefore have a higher WFS. To test this relation the following hypothesis is created:

H3c: The relationship between gender and willingness to financially support a crowdfunding project (WFS) is mediated by altruism.

2.4.3 The moderating effect of income

So far, this paper has focused on motivation to give money to crowdfunding projects. Now an important aspect of the ability to give will be added to the equation: income. According to Galardi (1989), cited by Sargeant (1999), economic downturns constrain both the desire to give and the actual ability to do so. Results are not entirely concise about whether or not income increases the likelihood of individuals to donate. Literature on donation shows that in a lot of studies income is positively related to giving money (Bekkers, 2010; Schlegelmilch, Diamantopoulos & Love, 1997), and that the given amount is higher (Belfield & Beney, 2000; Bekkers & Wiepking, 2007). However, some studies did not find a significant effect (Lee & Chang, 2007). It seems as if income is an important factor in the decision to give money. Most of the refusals to donate in the study of Belfield and Beney (2000) were based on the financial position of the individual.

Relating this to crowdfunding, it means that people might have the motivation to participate in crowdfunding, but simply not have the means to do so. This can be related to the theory of human needs by Maslow (1943, p. 370) “Human needs arrange themselves in hierarchies of pre-potency. The appearance of one need usually rests on the prior satisfaction of another, more pre-potent need.” This means that an individual will first meet his or her basic needs before spending resources on the need of self-esteem. This self-esteem is based on capacity, achievement or respect from others (Maslow, 1943). In this case it applies to giving money to crowdfunding projects to obtain intrinsic rewards, since intrinsic rewards are inherent to a performed task and can create a sense of achievement (Law, 2009b). Ergo, an individual might be altruistic and feel the need to obtain intrinsic benefits to satisfy the need of self-esteem, but he or she will not do unless the other pre-potent needs are satisfied. Therefore, enough disposable income needs to be available to the individual to satisfy all needs including the one for self-esteem. It can be argued that if an individual’s income is high, more disposable income is left to spend on the need of self-esteem and the individual’s WFS is higher. Thus, it is likely that the effect of altruism on WFS is stronger when income is high. The following hypothesis is tested:

H4a: The relationship between altruism and willingness to financially support a crowdfunding project (WFS) is moderated by income, in a way that the effect of altruism on WFS is more positive when income is high.

Income can also have an impact on the independent variables in the model. Age and gender have an impact on donations, even though it is not clear what causes this impact (Bekkers & Wiepking, 2007) and are likely to have an impact on WFS. Income potentially acts as a facilitating factor in these relations. Though the cause of the relation between age and WFS, and gender and WFS is not clear, this cause can only have an influence if the individual has

enough disposable income left to spend on WFS. Thus, one can argue that the income positively moderates the relation between age and WFS, and gender and WFS.

H4b: The relationship between age and willingness to financially support a crowdfunding project (WFS) is moderated by income, in a way that the effect of age on WFS is more positive when income is high.

H4c: The relationship between gender and willingness to financially support a crowdfunding project (WFS) is moderated by income, in a way that the effect of gender on WFS is more positive when income is high.

In order to find out what motivates individuals in the crowd to financially support a crowdfunding project, the drivers of their behavioural intention need to be researched. In this paper the influence of altruism on WFS will be analysed, as well as the effect of age and gender on WFS. The possibility that altruism acts as a mediator between age and gender and WFS is examined. Lastly, the moderating effect of income will be tested. The predicted relations above are depicted in the conceptual model in figure 1.

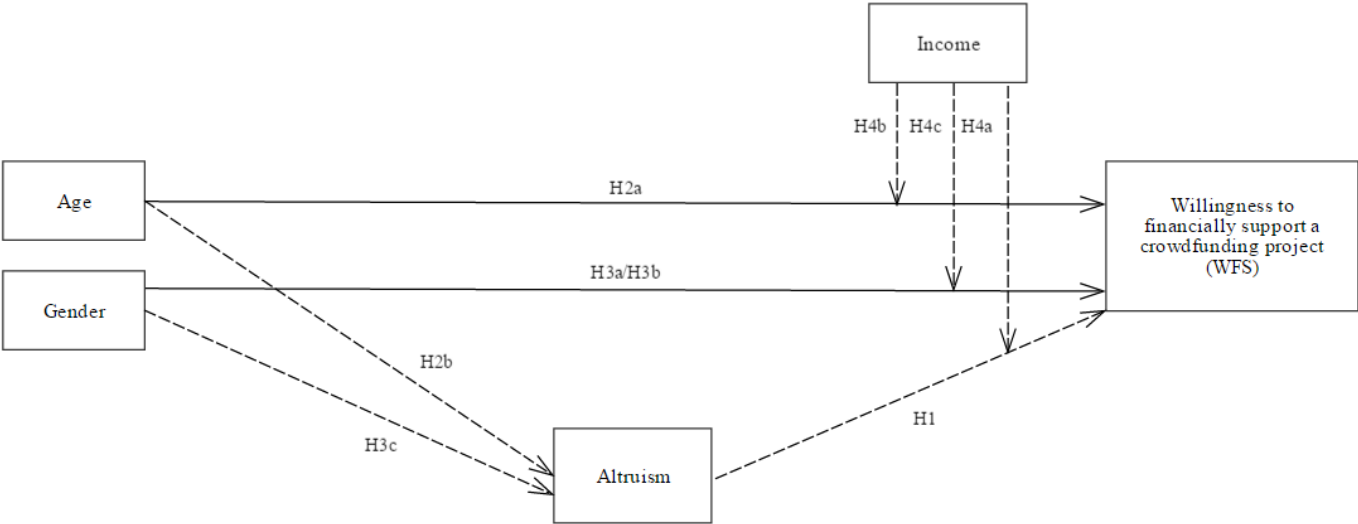


Figure 1: Conceptual model

3. Methodology

In this section the methodology and research design of the research will be explained. The first paragraph will briefly discuss the nature of the research. Next, the data collection method will be explained and lastly, the variables used to test the hypotheses will be operationally defined.

3.1 Nature of the research

Several steps have to be taken to further research in the field of online crowdfunding. As the topic is relatively new, the first steps need to be descriptive in nature to find variables, assess their relevance and to create correlation theories (Lehner, 2013). As this study investigates the characteristics associated with the subject population, and aims to discover associations among different variables, it is descriptive in nature (Blumberg, Cooper & Schindler, 2014). The research could not be based on established operationally defined variables, and the previously developed data is rather limited. Therefore, it could also be regarded as somewhat exploratory. However, the objective of the study is to test clearly stated hypotheses. Consequently, the study is regarded as descriptive (Blumberg, Cooper & Schindler, 2014). Furthermore, previous research on the characteristics of funders was in the form of a case study (Ordanini, Miceli, Pizzetti & Parasuraman, 2011). In order to advance the research in the field further this study has a quantitative nature. Additionally, quantified data provides the benefit of easier comparison to other research, for instance in a meta-analysis, and the findings can be more easily generalised (Blumberg, Cooper & Schindler, 2014).

3.2 Data collection and sampling

Most studies so far have focused on either the project characteristics or the entrepreneur and not the funder (Macht & Weatherston, 2015). Moreover, crowdfunding platforms show very little information of their members to protect their privacy (Kickstarter, 2015). Consequently, no secondary data sets are available that can be used to answer the research questions in this paper, so primary data has to be collected to test the hypotheses. Considering the time and budget that is available for the study, a self-report survey is the most practical means to collect the data.

The unit of analysis is the individual level, the subject of measurement is the potential funder. The research aims to discover characteristics of individuals who are willing to financially support a crowdfunding project. Hence, the population of which the sample is taken needs to include people with and without the behavioural intention to support a project. The population therefore includes all potential funders, as the study needs to determine whether the measured characteristics induce individuals to turn from potential to actual funder. Two conditions apply for an individual to be regarded as a potential funder. First, according to the definition of crowdfunding used in this paper, the individual needs to have access to the internet. Second, the individual needs to be at least 18 years old. Most crowdfunding platforms have the rule that, in order to sign up for an account, one needs to be at least 18 years old (Kickstarter, 2014). Some sites allow people to sign up when they are not 18 years old yet, however, then consent and supervision is required by a parent or guardian who is at least 18 years old (Indiegogo, Inc., 2015). The ultimate decision to financially support a crowdfunding project is then made by the parent or guardian of at least 18 years old, therefore it is this person's characteristics that need to be investigated.

Non-probability sampling is employed. Probability sampling is more accurate but due to time and money constraints not feasible. Moreover, the interest of the study is not the precise size of effects that occur, but rather whether positive or negative effects occur at all. Therefore, non-probability sampling is accurate enough to investigate the hypotheses (Blumberg, Cooper & Schindler, 2014). A combination of convenience, snowball, and judgement sampling is applied. A pool of friends, family and colleagues were approached and asked to fill in the survey. They were then requested to forward the survey as this creates a bigger sample that is not just restricted to personal contacts. Moreover, in order to include individuals in the sample with diverse interests in crowdfunding, the survey was also posted on a crowdfunding platform. Judgement sampling is used as sample members need to conform to two criteria: they need to have internet access and be over 18 years old. The survey is spread online (in English and Dutch) to make sure that the condition of internet-access is satisfied, and only individuals over 18 years old were asked to fill in the survey. Individuals were asked in the survey to fill in their age, this is used as an extra control factor to satisfy the age criterion.

Before distributing the survey, pre-testing was done with six individuals from different backgrounds, ranging from students to pensioned individuals, to refine the questions. The English and Dutch survey can be found in appendix 1. Before performing the analysis, all participants who had missing values in the variables needed for the calculations were removed, leaving a total of 175 respondents. According to Tabachnick and Fidell (2007) this is a sufficiently large sample size to perform the analysis.

3.3 Measures

In this section the variables that are used in this research and their types of measurement are described. In appendix 2, a table with the variables, their related survey questions, and the literature on which they are based is presented.

3.3.1 Dependent variable

The dependent variable is the willingness to financially support a crowdfunding project (WFS). WFS is defined in this paper as the behavioural intention of an individual to give money to a crowdfunding project. Behavioural intention is an explicit decision to act in a certain way, which concentrates on a person's motivation towards a goal in terms of direction and intensity (Sniehotta et al., 2005). To measure the dependent variable, a semantic differential scale is used which measures the stated inclination of a person to engage in specified behaviour. In previous research this scale is often used to describe purchase behaviour, but the items are general enough to refer to non-purchase behaviour as well (Bruner II, James & Hensel, 2001).

The variable is measured with two questions in the survey, which are based on previous research, specifically the study of Dabholkar (1994). Dabholkar (1994) developed a model analysing the influence of attitude on the intention to engage in behaviour, and the actual behaviour that follows. To measure the behavioural intention, questions were used with a scale ranging from likely-unlikely, and definitely would use-definitely would not use. Reliability of the scale was tested by means of the Cronbach's alpha, the alpha value ranged from 0.87 to 0.90 in the study of Dabholkar (1994) signalling high internal consistency. Barely any study, including the Dabholkar (1994) study, fully addressed the validity of the scale (Bruner II, James & Hensel, 2001). But Machleit, Madden and Allen (1993) used confirmatory factor analysis to test discriminant validity and showed that it did not measure the same construct as the other variables used in their research.

Even though the validity of the behavioural intention scale is not tested in detail in previous research, it is still a scale that is commonly used in consumer research (Dabholkar, 1994). Because the results of the reliability and discriminant validity test were good, the scale will be used to measure behavioural intention in this study. The questions are modified to test the WFS. The decision to use two questions was made after the respondents in the pre-test noted that they preferred a short questionnaire. They did not see the added value of a third question measuring the same construct, and mentioned that it would withhold them from filling in the question. Therefore only two questions were asked to measure WFS in order to prevent a non-response bias. The two scale items are measured with a 5 point Likert scale from strongly agree-strongly disagree, the responses are combined and averaged to get a score for the WFS.

3.3.2 Independent variables

The independent variables used in the model are age and gender. Griffith, Cook, Guyatt and Charles (1999) conducted a study to compare the impact of closed- versus open-ended questions on the completeness of demographic data collected with a mailed survey questionnaire and found that the response rates for demographic questions were significantly higher using closed format response options. Therefore the independent variables age and gender are measured using closed-ended questions. Gender was phrased as a dichotomous question, age was measured by using age-brackets.

3.3.3 Mediating variable

Due to the use of a self-report survey, a self-report measure has to be used to measure the mediating variable altruism. Rushton, Chrisjohn and Fekken (1981) have created a self-report altruism scale (SRA-scale) consisting of twenty items. Respondents are asked to rate the frequency with which they have engaged in altruistic behaviour on the following scale: never – once – more than once – often – very often. The scores of the twenty items are then averaged

to create one score for altruism. The internal consistency of the measure was calculated with the Cronbach Alpha in the study of Rushton et al. (1981), finding a value of 0.89. Self-report measures can be subject to social desirability response bias (Arnold & Feldman, 1981), however, correlation analysis showed that it is not of large influence in the SRA-scale of Rushton et al. (1981). The validity of the scale was tested in several ways. First of all, the correlation of the self-report scores with peer ratings of altruism was calculated and significant correlation was found, signalling criterion related validity. Second, construct validity was determined by demonstrating that the SRA-scale can be related with other measures of altruism. Altruistic responses of individuals were predicted using the other measures, and then correlated with the SRA-scale. The SRA-scale was found to predict a linear combination of the altruism simulations (Rushton et al. 1981). Lastly, the slightly adapted Chinese and Hindi version of the SRA-scale also found high internal consistency, and criterion and construct validity suggesting that the scale is a useful measure in other languages as well (Chou, 1996; Khanna, Singh & Rushton, 1993). Therefore, the SRA-scale will be used in the survey to measure altruism. However, some statements were slightly adapted to fit this research better.

3.3.4 Moderating variable

To measure income, a closed-ended question was created since Griffith, Cook, Guyatt, and Charles (1999) found that the response rate for demographic variables is much higher when the question is closed-ended. Because income can be regarded as sensitive information, an income bracket question was created since a general indication of income suffices to test the hypotheses. Participants in the pre-test confirmed that they consider income to be sensitive information, and prefer not to give the exact amount.

3.3.5 Control variables

In addition to the preceding variables, several control variables are added to control for effects that could influence the outcome of the dependent variable.

Education: Many empirical studies have found a positive relation between the level of education and donations (Bekkers & Wiepking, 2007; Wiepking & Maas, 2009). This effect is partly due to larger financial resources people with a higher education have, but also because they have stronger verbal abilities which facilitate the understanding of the needs of other people (Wiepking & Maas, 2009). These stronger verbal abilities might also facilitate better understanding of the entrepreneur's needs. Hence, education was measured using a closed-ended question because that might create a higher response rate (Griffith, Cook, Guyatt & Charles, 1999).

Social media usage: Online social networks are often used for the collection of money in crowdfunding (Belleflamme, Lambert & Schwienbacher, 2014). Therefore, people who regularly spend time on social media might be exposed more to the crowdfunding phenomenon which could influence their behavioural intention to participate. In order to keep the questionnaire short, one question was asked to measure the frequency of usage of social media platforms based on the questions asked in the study of Correa, Willard Hinsley and Gil de Zúñiga (2010). The response was measured on a Likert scale.

Crowdfunding interest: The amount of interest an individual has in crowdfunding might influence their willingness to participate. Therefore, interest is measured on a Likert scale using a modified version of the scale of Machleit, Allen and Madden (1993).

Previous crowdfunding experience: Previous experience with crowdfunding can influence the future intention to participate. Therefore experience is measured on a Likert scale by using an adapted scale of Murray & Schlacter (1990) cited in Bruner II, James and Hensel (2001).

4. Data analysis and results

This section will examine the data obtained in the survey. The measurements will be validated, then descriptive statistics will be provided. Afterwards the hypotheses will be tested by means of a regression.

4.1 Measurement validation

The quality of the measures that consist of several items will be checked by assessing the reliability and validity. For reliability analysis, the Cronbach alpha is used to check the internal consistency of the measures. The alpha needs to be above 0,7 for a scale to be reliable. The Cronbach alpha is 0,912 for WFS and 0,851 for interest, therefore these scales can be considered reliable. The alpha for experience is only 0,478 meaning that the scale is not very reliable. However, the low value can also be caused by the fact that experience is only measured with two questions (Tavakol & Dennick, 2011). This has to be taken into consideration with the interpretation of the analysis outcomes. The convergent validity of the variables will be checked by conducting a factor analysis. First of all, the Kaiser-Meyer-Olkin statistic (KMO statistic) is 0,500 for WFS, interest and experience. This is a mediocre value but just enough to perform the analysis (Field, 2009). Moreover, Bartlett's test is significant henceforth the factor analysis can be performed. All three analyses show that each variable has only one component, meaning that the items for each variable measure the same construct (see appendix 4). Therefore the variables have convergent validity.

The Cronbach alpha for the variable altruism is 0,825, therefore the scale is reliable and no items need to be removed to improve internal consistency. Next, a factor analysis is performed to check the convergent validity. The KMO statistic verifying the sampling adequacy is above 0,7 and the Bartlett's test is highly significant ($P < 0,000$) indicating that the correlations between the items are sufficiently large, meaning that the factor analysis can be performed. The

analysis showed five components with an eigenvalue over Kaiser's criterion of 1, these explain 55,17% of the variance. The scree plot also shows that after the fifth component the line becomes roughly horizontal. Appendix 4 shows the factor loadings after rotation. Loadings below 0,4 are repressed as values greater than 0,4 are considered as substantive (Stevens, 2002 cited by Field, 2009).

There are two options that can explain the existence of five components: the variable failed to measure altruism but measured some related constructs, or the five factors are sub-components of the variable altruism (Field, 2009). The altruism survey questions measure the occurrence of certain actions. Looking at the questions that load onto the same factor, it seems that the components represent different kinds of altruistic behaviour. Therefore, it is concluded that the five factors represent sub-components of the variable altruism. The first component represents small acts of kindness requiring little effort or thought, the second component represents helping a stranger, the third component represents acts that cost money, the fourth component represents acts requiring average thought or effort, and the fifth component shows behaviour that requires a large amount of effort or sacrifice. These five components together measure the overall variable altruism, so convergent validity is present. Overall the measure for altruism seems reliable and valid. The reliability analyses of all variables can be found in appendix 3, the validity analyses in appendix 4.

4.2 Descriptive statistics

In this section the descriptive statistics of the data will be analysed, it examines the characteristics of the respondents more closely. As a start, the responses in the "other" answer option for the variable education and the question inquiring about the way of receiving the survey are analysed and manually corrected if needed. The survey was spread to friends, family and colleagues, but also on a crowdfunding forum to reach a more diverse public. However, as can be seen from table 1, only 3 respondents are from the crowdfunding forum. One value was

missing, but this respondent is not excluded from the analysis as all values needed for the regression are present.

Table 1: Receipt method of the survey

	Frequency	Percent	Cumulative percent
Crowdfunding forum	3	1,7	1,7
Facebook/Email	166	94,9	97,1
Other:	5	2,9	100,0
Total:	174	99,4	

Most respondents were from the age 18-30, representing 63,4% of the sample, and female, representing 62,9%. These descriptive statistics can be seen in table 2 and 3.

Table 2: Age

	Frequency	Percent	Cumulative percent
18-30	111	63,4	63,4
31-40	17	9,7	73,1
41-50	16	9,1	82,3
51-60	19	10,9	93,1
Over 60	12	6,9	100,0
Total:	175	100,0	

Table 3: Gender

	Frequency	Percent	Cumulative percent
Male	65	37,1	37,1
Female	110	62,9	100,0
Total:	175	100,0	

Moreover, the vast majority of the respondents has an income from less than €500 up to €3000. There are very few respondents in the categories €3001 - €4500 and > €4500, but considering that the average monthly income of a single man or woman in the Netherlands is below €2000 this is not a surprising result (CBS, 2015). Lastly, 43,4% of the participants has a bachelor degree as highest completed education level. Overall, the responses for the education variable are reasonably spread out so they can provide a good overview of the influence of education on WFS. The statistics for education and income are shown in table 4 and 5.

Table 4: Income

	Frequency	Percent	Cumulative percent
< €500	55	31,4	31,4
€500 - €1500	57	32,6	64,0
€1501 - €3000	45	25,7	89,7
€3001 - €4500	9	5,1	94,9
> €4500	9	5,1	100,0
Total:	175	100,0	

Table 5: Education

	Frequency	Percent	Cumulative percent
High School	55	31,4	31,4
Community College	57	32,6	64,0
Undergraduate school (Bachelor degree)	45	25,7	89,7
Graduate school (Master degree or doctoral degree)	9	5,1	94,9
Total:	175	100,0	

The following table shows the mean, standard deviation, and minimum and maximum values of the variables that are measured on an interval scale.

Table 6: Descriptive statistics of variables with interval scale

	Minimum	Maximum	Mean	St. Dev.
WFS	1	5	3,17	1,07
Altruism	1,45	4,45	2,79	0,51
Crowdfunding interest	1	5	3,44	0,94
Previous crowdfunding experience	1	5	2,85	0,97
Social media usage	1	5	3,95	1,28

In table 7 the bivariate correlations between the variables are represented. Altruism appears to be correlated with WFS, just like age and gender, which fits the hypotheses. Moreover, there seems to be no initial sign of multicollinearity. Interest and experience are however, very strongly correlated with WFS. Previous experience is an obvious predictor of WFS, if an individual decided to participate in crowdfunding in the past then the behavioural intention is present (Sniehotta, Scholz & Schwarzer, 2005). The same logic applies to interest, Dabholkar (1994) showed that behavioural intention depends on the attitude and beliefs of an individual, which includes the interest in the subject. As the two control variables are extremely highly correlated to WFS and have medium to high correlation with each other it will be harder to assess the individual importance of the predictors in the model (Field, 2009). Therefore, after careful consideration, it is decided to exclude these two control variables from the analysis.

Table 7: Correlations

		Altruism	WFS	Interest	Experience	Gender	Education	Age	Income	Social media usage
Altruism	Pearson Correlation	1								
WFS	Pearson Correlation	,152*	1							
Interest	Pearson Correlation	,138	,672**	1						
Experience	Pearson Correlation	,107	,563**	,460**	1					
Gender	Pearson Correlation	-,029	-,185*	-,144	-,336**	1				
Education	Pearson Correlation	,106	,054	,045	,179*	-,014	1			
Age	Pearson Correlation	,120	-,169*	-,304**	-,123	-,150*	,108	1		
Income	Pearson Correlation	,080	-,027	-,166*	-,003	-,259**	,416**	,622**	1	
Social media usage	Pearson Correlation	-,068	,132	,228**	,130	,117	-,069	-,710**	-,449**	1

*. Correlation is significant at the 0,05 level (2-tailed).

** . Correlation is significant at the 0,01 level (2-tailed).

4.2.1 Assumption checks

Now, certain checks have to be done to make sure that assumptions are met and the data is suitable for analysis.

Normality: Skewness can be spotted by looking at the P-P plot and the histogram. As the P-P plots show in appendix 5, the data points of the variables WFS and altruism fall close to the diagonal line. Moreover, the histograms (see appendix 5) seem to depict a roughly normal distribution as well. However, the histogram and P-P plot of the variable social media usage show skewness. To be certain the skewness and kurtosis statistics of the variables are calculated which indeed show that the data of the variable social media usage is skewed. Therefore, the variable will be transformed using a base-10 logarithm as recommended by Pallant (2013).

Outliers: The boxplot in appendix 6 shows four outliers for the variable altruism. However, the Cook's distance was well below 1 meaning that these outliers do not have an undue influence in the model (Field, 2009). Therefore, they were not removed.

Linearity and homoscedasticity: In order to perform a linear regression analysis, the data has to show a linear pattern. Moreover, homoscedasticity has to be present, meaning that the variance of the residual terms is constant (Field, 2009). To check this, the standardized residuals of the data are plotted against the standardized predicted values. The resulting scatter plots in appendix 5 show that the conditions of linearity and homoscedasticity have been met.

4.3 Regression analysis

Due to the nature of the data, a multiple regression analysis will be performed (Blumberg, Cooper & Schindler, 2014). The first regression will test whether age and gender significantly predict the value of altruism. This is a necessary, but not sufficient, condition for altruism to act as a mediator between age and gender, and WFS (Warner, 2013). If altruism acts as a mediator, then age and gender should have a significant relation with altruism. If this is not the case, then altruism can only potentially have an effect as an independent variable, and no longer as a mediator. The results in table 8 show that the F-test is not significant, meaning that the overall model does not contribute to explaining altruism. Moreover, table 8 shows that the coefficients of age and gender are insignificant, indicating that no linear relationship between age and gender, and altruism can be detected. This means that altruism cannot act as a mediator between age and gender, and WFS.

Table 8: Regression analysis

Dependent variable: Altruism

	Model 1	Model 2
<i>Independent Variables</i>		
Gender	-,011	-,011
Age	,118	,181
Altruism		
<i>Control variables</i>		
Education		,094
Social media usage		-,111
ANOVA F-statistic	1,263	1,325
Adjusted R ²	,003	,007
R ²	,014	,030
ΔR ²	,014	,016

Note. Standardized regression coefficients are reported.

* p<0,05, ** p<0,01

Table 9: Regression analysis

Dependent variable: Willingness to financially support a crowdfunding project (WFS)

	Model 1	Model 2	Model 3	Model 4
<i>Control Variables</i>				
Social media use	-,115	,002	,020	,020
Education	,062	,074	,058	,045
<i>Independent Variables</i>				
Gender		-,215**	-,213**	-,186*
Age		-,210*	-,240*	-,348*
Altruism			,168*	,157*
<i>Moderating Variables</i>				
Income				-,051
Income*Gender				,003
Income*Age				,182
Income*Altruism				,068
ANOVA F-statistic	1,414	3,640**	4,021**	2,607**
Adjusted R ²	,005	,057	0,080	,077
R ²	,016	,079	0,106	,124
ΔR ²	,016	,063**	0,027*	,018

Note. Standardized regression coefficients are reported.

* p<0,05, ** p<0,01

In table 9 the results of the regression analysis with WFS as dependent variable are reported. In the first model only the control variables are tested, and they are both insignificant. The F-test is also insignificant. In the second model the independent variables age and gender are tested, which both are significantly related to WFS. In model 3 the variable altruism is added. Since age and gender are both still significant and the size of the coefficient barely diminishes and even increases for age, altruism does not act as a mediator between age and gender, and WFS. This data, together with the data from figure 3 shows that hypotheses H2b and H3c are not supported.

In model 4 all variables are included. Age significantly influences WFS ($p < 0,05$), therefore the null hypothesis can be rejected. However, the coefficient shows that the relationship is negative which means that H2a is not supported. The influence of gender on WFS was predicted with two separate hypotheses, since the coefficient shows a significantly negative relation ($p < 0,01$) H3b is supported and H3a is not supported. Altruism on the other hand significantly positively influences WFS ($p < 0,05$), which means that H1 is supported.

In order to test the moderators, interaction terms were made by multiplying income with altruism, age, and gender respectively. However, as the correlation table in appendix 8 shows, multicollinearity would be a problem if the interaction terms were created by multiplying the original data of the variables. The data was centred in order to solve this. Altruism was mean-centred (for mean, see table 6), and age and income are median-centred (for medians, see appendix 8). After centring the data the correlation was no longer too high, and the interaction terms were added to model 4. Table 8 shows that none of the moderating variables is significant meaning that H4a, H4b and H4c are not supported.

Finally, certain statistics are checked. According to the adjusted R^2 , the third model is the best, explaining 8% of the variance. The tolerance statistic is always over 0,2, and the VIF is under 10 showing that no multicollinearity is present (see appendix 7).

5. Discussion and conclusion

5.1 Discussion

The aim of this study was to determine which factors influence the funder's decision to participate in crowdfunding. Little is known about the characteristics of individuals in the crowd, and the utility the individuals derive from participating (Lehner, 2013). If entrepreneurs are more aware of the underlying characteristics of individuals and their influence on WFS,

then the entrepreneurs will be able to attract and retain more investors, and to increase efficiency in their targeting approaches.

The data analysis provided interesting results. Burtch, Ghose and Wattal (2013) found preliminary evidence that suggested altruism might be present as an incentive to contribute in the crowdfunding market. This study supports those findings and shows that altruism positively influences WFS. Altruistic behaviour is behaviour that is performed voluntarily and intentionally and aimed at benefitting others, whereby no external reward is expected (Piliavin & Charng, 1990). It provides the individual with intrinsic rewards, one feels good about oneself and one's behaviour (Andreoni, 1989). Thereby, this feeling creates motivation to participate in the crowdfunding market. This insight is of great value for entrepreneurs because it allows them to target their funders better. Entrepreneurs using a donation- or reward-based crowdfunding model should clearly show the benefits and project results that the funders would help create by supporting the entrepreneur, thereby appealing to the altruistic side of the funder. The intrinsic benefit of feeling good about oneself helps the individual to achieve the need for self-esteem described by Maslow (1943). Without satisfying the self-esteem need, the individual will never be able to satisfy the ultimate need for self-actualization (Maslow, 1943). Therefore, the entrepreneur will be able to attract more funders by appealing to the altruistic side of the funder since the entrepreneur relates to a deeper need for self-esteem within the individual that he or she will want to satisfy.

The donation research stream was used to complement the literature on crowdfunding, as this is still relatively limited in size and scope (Macht & Weatherston, 2015). Most donation research finds that age is significantly positively related to giving money (Bekkers & Wiepking, 2007). The findings of this paper are not in line with results of previous research. Age is indeed significantly related to WFS, but the relation is negative. Therefore, the older people are, the less willing they are to give money to crowdfunding projects. A second demographic variable

that is said to have an influence on giving money is gender, however, the findings in donation literature are very mixed (Bekkers & Wiepking, 2007). Whether females or males are more likely to give also seems to depend on the nature of the organization or projects that the money is given to (Bekkers & Wiepking, 2007). The results of this research show that females are significantly less willing to give money to crowdfunding projects. Overall, young male adults are more willing to financially support a crowdfunding project. Considering that crowdfunding is a special version of crowdsourcing (Schwienbacher & Larralde, 2010), these results can be compared to results of crowdsourcing research as well. The results correspond to the crowdsourcing related findings of Brabham (2008), who concluded that males in their 30's were most likely to participate on the crowdsourcing platform iStockphoto.

One potential explanation for this outcome is the difference of risk taking behaviour between genders. Behaviour is risk taking when the behaviour could lead to more than one outcome, and some of these outcomes are undesirable or even dangerous (Byrnes, Miller & Schafer, 1999). Funding a crowdfunding project is risk taking behaviour. Despite the control mechanisms that are put into place, some negative outcomes are still possible. The entrepreneur could use the money he receives for purposes other than the project, or the project could fail and the rewards or project benefits that are promised might never be realised. Moreover, crowdfunding is still a new phenomenon so many people are not familiar with it. Research has shown that males are more likely to show risk taking behaviour than females, therefore this is a possible explanation as to why males are more likely to engage in the risk taking behaviour of financially supporting a crowdfunding project (Byrnes et al., 1999). Moreover, the gender differences in risk taking behaviour vary according to age level (Byrnes et al., 1999). Therefore, the fact that young adults have a higher WFS might be due in part to the different risk taking behaviour levels across age.

Due to the relation between age, gender and altruism (Rushton, Fulker, Neale, Nias & Eysenck, 1986), it was expected that altruism would act as a mediator between age and gender, and WFS. However, the results have not supported this expectation: age and gender independently influence WFS. That means that these two variables might also be of influence in cases where altruism is not present as an incentive for individuals to give money to crowdfunding projects. In the lending- or equity-based crowdfunding model the funders expect a return for their financial support. An individual will not expect an extrinsic reward in return for their actions in the case of altruistic behaviour (Piliavin & Charng, 1990). By definition then, supporting a project in the lending or equity-based crowdfunding model is not altruistic. Since the model in this study shows that age and gender influence WFS, independently of altruism, this effect is likely to occur in the lending or equity-based model as well, where altruism is not present as a motivator to engage in crowdfunding.

Lastly, the influence of a moderator was tested. A lot of donation research shows that income is positively related to giving money (Bekkers, 2010; Schlegelmilch, Diamantopoulos & Love, 1997) Thereby, economic downturns constrain both the desire to give and the actual ability to do so (Galardi, 1989 cited by Sargeant, 1999). Lastly, according to Maslow (1943) self-esteem needs which provide intrinsic benefits for an individual are only satisfied after the basic needs are provided for. Therefore, individuals will only spend money on crowdfunding after their basic needs are met. It was therefore expected that income moderated the relation between age and WFS, gender and WFS, and altruism and WFS. However, no significant relation was found for the interacting variables, even though the coefficients were positive. Neither did income have a direct influence on WFS. Therefore, it can be said that the behavioural intention to participate in crowdfunding does not depend on income. One possible explanation as to why income has no impact on WFS could be that income has an influence at a later stage: going from behavioural intention to the actual behaviour. Behavioural intention

does not guarantee that the actual behaviour will take place (Bemmar, 1995), so it is possible that income only influences the process of the individual of going from behavioural intention to actual behaviour, instead of impacting the intention itself. Another explanation is that income does not have a significant influence because the amounts given to crowdfunding projects are usually rather low, on average \$6-\$50 (Macht & Weatherston, 2015).

5.2 Theoretical contribution

Most crowdfunding research to date has focused on the entrepreneurial side of crowdfunding (Belleflamme, Lambert & Schwienbacher, 2014), and project attributes (Mollick, 2013). Moreover, a lot of research is focused on a particular industry (Agrawal, Catalini & Goldfarb, 2015; Burtch, Ghose & Wattal, 2013; Macht & Weatherston, 2015). However, hardly any research has investigated one of the main three players in the process: the funder. Ordanini, Miceli, Pizzetti and Parasuraman (2011) conducted a case study to investigate why consumers turn into crowdfunding participants, but they have asked the managers of crowdfunding platforms for answers and not the funders themselves. This research contributes to the research field by responding to one of the research questions posed by Lehner (2013): Who is the funder and what motivates him or her to be part of the crowd? To the best of my knowledge, this study is the only one to date that quantitatively investigates this question and has the funder as a unit of analysis. Moreover, the data is not collected from a single industry, which means that the results of this study can be generalized over different industries. By addressing the question of what characterizes the individuals that participate in crowdfunding, an important shortcoming of the current body of literature is addressed. The study focuses on donation- and reward-based crowdfunding models, but it can provide a starting point for research aimed at finding out the characteristics and motivators of funders in lending- and equity-based crowdfunding models.

5.3 Managerial implications

Since a project's success depends on the funding of individuals in the crowd, this study has several managerial implications for entrepreneurs. If an entrepreneur plans on raising funds through the means of crowdfunding, then he or she needs the right strategy to attract and retain funders. Without knowing who one is targeting, it is hard to achieve the goal in an effective and efficient manner. Therefore, this study helps entrepreneurs by investigating what motivates individuals to give money to crowdfunding projects. First, the results show that the individuals most likely to fund a project are young male adults. Therefore, entrepreneurs could benefit from creating project attributes and promotion tactics that appeal to young adults, and males in particular. Naturally caution has to be taken as the project's subject sometimes predetermines the target group already. Then, this study indicates that in the donation- and reward-based model, altruism influences WFS. Altruistic people derive utility from benefiting other individuals. Entrepreneurs could appeal well to individuals in the crowd by clearly communicating to them what positive effect their participation would have for the project, and which positive effects the project has on society as a whole. It makes clear that entrepreneurs should not just focus on explaining what potential extrinsic reward the funder gets back in return, but should also explain which benefits the funder's behaviour would create for the entrepreneur, the project, and the consumer group that the project is targeting. Thereby the entrepreneur appeals to the altruistic side of the individual and the need for self-esteem. Lastly, the results of this study show that income is not a moderator that indirectly influences WFS. This means that entrepreneurs can target individuals from all incomes levels as long as they have a project with outcomes that appeals to them.

5.4 Limitations

Although this paper provides a first step in finding out the characteristics of people who give money to crowdfunding projects, certain limitations have to be discussed. First of all, the sampling method was a combination of snowball, convenience and judgment sampling. This means that it was a non-probability sample, therefore the size of the relations between the variables cannot be generalized. Future research should consider employing probability sampling in order to make more precise conclusions about the effects of certain variables and to be able to generalize these findings. Moreover, due to the convenience and snowball sampling technique, a certain amount of acquaintances are added to the sample who are known to the researcher as not very open to innovation. This could potentially create a bias in the results.

Second, this study uses cross-sectional data. However, the motivation of individuals and the behavioural intention to participate in crowdfunding might differ over time. Therefore, future research could determine whether the results of this study hold when using longitudinal data. Third, the choice of measurement can also create some limitations. For instance, age and income are measured using brackets in order to obtain more responses, however, as a result less information is captured with the data.

Fourth, the model is quantitatively tested which means that certain factors that could have an influence on WFS, but are not investigated in this paper, are not included in the model. The small adjusted R^2 of 0,080 of model 3 shows that there should be many other factors that influence WFS, but are not included in this research. Lastly, the moderating variables are tested by creating interaction terms from centred data. However, since income is an ordinal variable this might not be the optimal form of analysis. Future research could either measure income as a continuous variable or use a different method of analysis to get more precise results for the moderation effects.

5.5 Future research suggestions

Crowdfunding is a promising financing method for entrepreneurs, and considering the limited body of research that is currently present, future research on the topic is of great value. This study is a first step to find variables that can explain what characterizes and motivates individuals in the crowd. Future research could focus on investigating the influence of other variables that are not considered in this study, such as openness to innovation. As crowdfunding is a relatively new phenomenon, individuals who are generally open to innovation might be more willing to participate in the crowd. Ordanini, Miceli, Pizzetti and Parasuraman (2011) concluded in their case study that openness to innovation was an important motivator for the individuals on the crowdfunding platforms they researched.

Then, the size of the influence of altruism on WFS might differ for profit and non-profit projects. Non-profit organizations are more likely to be successful with crowdfunding as the reduced focus on profit is viewed by funders as a credible commitment to provide larger community benefits (Belleflamme, Lambert & Schwienbacher, 2013). Since altruistic people act to benefit others, the credible claim of non-profit organizations to use the funds to provide larger benefits might attract more altruistic funders. In addition, research recognizes a difference between pure and impure altruism (Andreoni, 1990). The distinction between these two types of altruism in crowdfunding research might also provide some interesting topics for future research.

Furthermore, this paper looks at the variables that affect whether people participate in donation- or reward-based crowdfunding models. Future research could test whether the same variables have an impact in the lending- and equity-based model, and could investigate what other factors have a significant influence. Furthermore, this study looked at the behavioural intention of individuals to participate in crowdfunding. Future research could identify factors that drive people to act on these intentions, and to see which variables can help to bridge the

gap between the behavioural intention to participate in crowdfunding and performing the behaviour.

Lastly, a broad array of future research direction is also suggested in previous research. Lehner (2013) proposed a research agenda that for instance does not only include the motivators of funders but also the metrics that should be used in a crowdfunding environment as well as the business models and corporate governance that is related to it.

5.5 Conclusion

Crowdfunding has emerged as a new financing strategy, that provides many promising opportunities. The aim of this research was to find out which factors influence the funder's decision to participate in crowdfunding. With an interdisciplinary approach, connecting crowdfunding, crowdsourcing and donation literature, several factors were identified as potentially influencing an individual's WFS. The results show that altruism positively influences WFS. Moreover, age and gender significantly affect WFS, males and young adults until the age of 30 have a higher WFS to be precise. Interestingly, the moderation effect of income was not significant, which could be caused by the fact that funders only give small amounts of money to projects. Overall, these outcomes allow entrepreneurs to create a better targeting strategy whereby they will be able to attract and retain more funders. All in all, the results of this study provide a first step in the search for characteristics of the funder, and the underlying motivation that drives them to participate in crowdfunding. The opportunities that crowdfunding provides for entrepreneurs, as well as researchers, are endless and if managed well, this phenomenon could create incredible value for research, individuals, and society as a whole.

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