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# **FIGHTING FOR FUNDS: AN EXPLORATORY STUDY INTO THE FIELD OF CROWDFUNDING**



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## **ABSTRACT**

**Title:** Fighting for Funds: An Exploratory Study into the Field of Crowdfunding

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**Keywords:** Crowdfunding, crowdsourcing, funding, fundraising, investing, and motivation

**Thesis Purpose:** This thesis investigates users of crowdfunding platforms in order to further the insight into understanding what affects their motives and behaviour. The relationship between intrinsic and extrinsic motivation as well as peer influence is investigated.

**Theoretical Perspective:** This study is grounded on the limited theories surrounding crowdfunding and crowdsourcing, as well as relevant theories in the neighbouring fields of intrinsic and extrinsic motivation, investment decision-making, early stage-investment, informal investing, informal venture capitalists, online collaboration, and business angels.

**Methodology:** Exploration of the predicted relationships was tested in a quantitative cross-sectional design. Data was gathered by means of a web-based Likert scale questionnaire, which was distributed to crowdfunders primarily by crowdfunding platform administrators, and through the use of Facebook, LinkedIn, and Twitter.

**Analysis:** This study relies on quantitative data analysis. As part of this analysis, the authors made use of correlation, regression and factor analyses in order to find patterns in the data that resemble and contradict findings in the theoretical framework.

**Conclusions:** The findings confirm that: there are two major groups of individuals that crowdfund; more people engage for intrinsic reasons than might be expected; frequency and amount are reflected in motivational reasons for engagement; age does influence funding behaviours; and crowdfunders share similarities and differences with individuals in related fields.

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## CHAPTER 1

### INTRODUCTION

*What does a hip hop band from Italy, titanium bike locks, a football team in the UK, an urban wall-mounted garden, and farmer's market mustard have in common?*

They are all projects pitched on crowdfunding websites in hopes of being funded by individuals from around the world, so that they may one day become a reality. Crowdfunding is a novel concept both in the 'real' and academic world. It presents consumers with the opportunity to fund creative arts, existing businesses, start-ups and charities with amounts as low as \$1, consequently making it possible for anyone with internet access to participate. These consumers, or more accurately consumer-investors going forward, will be referred to as 'crowdfunders'. This thesis investigates users of crowdfunding platforms in order to further the insight into understanding what affects their motives and behaviours. Using a quantitative approach, the relationship between intrinsic and extrinsic motivation, as well as peer influence will be explored.

However, before crowdfunding can be discussed, it is important to first understand it in the broader setting of crowdsourcing, a more established concept that forms the basis of crowdfunding. This will enable an insight into the dynamics and context of crowdfunding to be reached. The current chapter will therefore elaborate on previous research on both crowdsourcing and crowdfunding. Based on the literature review the problem statement including the research aim will be presented, followed by the theoretical and practical relevance of the research.

### 1.1 Background: Crowdsourcing

This subsection will elaborate on the origins of crowdsourcing followed by the principles underlying the concept. As crowdsourcing is easily confused with other similar concepts a section explaining what crowdfunding is and is not will then draw this subsection to a close.

#### 1.1.1 The Origins of Crowdsourcing

Although the term is relatively new, the concept underlying crowdsourcing has been around for centuries. As Howe (2006b) suggests, the Longitude Act can be considered as the first crowdsourced project. Travel and transport across the Atlantic and Indian Oceans grew rapidly during the 16th and 17th centuries, causing the persisting navigation errors to become a very costly problem for the governments and merchants involved. In an attempt to solve this problem the British government

initiated the Longitude Act, which offered cash prizes to those who were able to develop a method to more accurately determine longitude while at sea (Sobel 1995, as cited in Masters, 2004).

Crowdsourcing is the use of labour distributed or outsourced to a ‘crowd’ of what traditionally are referred to as ‘consumers’. These consumers, similar to those in open innovation, open source and user generated content actively add value to a product, project or service, thus becoming part of the production process. In essence, what started out as outsourcing has developed into ‘crowdsourcing’.

As time passed, the concept evolved and in 2006, the term ‘crowdsourcing’ was born as Jeff Howe and Mark Robinson coined the word in the June issue of ‘Wired Magazine’, defining it as:

*“[C]rowdsourcing represents the act of a company or institution taking a function once performed by employees and outsourcing it to an undefined (and generally large) network of people in the form of an open call. This can take the form of peer-production (when the job is performed collaboratively), but is also often undertaken by sole individuals. The crucial prerequisite is the use of the open call format and the large network of potential labourers” (Howe, 2006b).*

Within two years of first being defined a few gaps within the definition were identified and Martin, Lessmann and Voß (2008, as cited in Welbers, 2010) redefined crowdsourcing as:

*“[A]n interactive form of service provision, which is collaborative or competitive-orientated organized and involves a large group of extrinsic or intrinsic motivated actors with different knowledge levels under application of modern information and communication system on the basis of web 2.0. Objects are products and services of different innovation level, which are developed due reactive or proactive behavior of the participants” (p. 8).*

### **1.1.2 The Principles Underlying Crowdsourcing**

It is key to note that crowdsourcing is applied by organisations within both the commercial and non-profit domain. Moreover, whilst some crowdsourcing initiatives can include monetary remunerations, others solely provide intangible rewards, which leads to the range of motives for both crowdsourcer and company participation to be rather vast. It should also be noted that one of the main problems surrounding the concept of crowdsourcing, and for that matter crowdfunding, is that of legalities and intellectual property rights, (Whitla, 2009) as work is usually the result of collaboration between multiple individuals. Due to ‘Web 2.0’, collaboration is common amongst individuals situated around the world with different laws. Similarly, for crowdfunding pertinent legal and policy issues concern investor protector and ownership (also see 1.5 Legal Limitations to Crowdfunding).



### 1.1.3 Examples of On-line Crowdsourcing Platforms

Although the concept at first glance may seem complex and the term crowdsourcing may still be new to the majority of the population, there exists examples of crowdsourcing all around us, many of which we interact with on a near-daily basis. Commonly used examples of crowdsourcing include, but are not limited to the following:

- 1) **Google Maps**<sup>1</sup>: traffic layer application which allows your phone to send information regarding the speed at which your car is moving back to Google who then compares it to other cars' movement in the area and provides real time road congestion reports (Barth, 2009).
- 2) **Google Earth**<sup>2</sup>: users are able to view detailed satellite images of most places on Earth (Google, 2011). Content is built up in the database by both Google and on-line users to create maps and complimentary information (Taylor, 2008).
- 3) **Amazon Mechanical Turk**<sup>3</sup>: a systems which allows users to perform (small) tasks that “are frequently those that are difficult for computers and yet simple for humans” (Ross, Zaldivar, Irani and Tomlison, 2010, p.1) such as ‘image labelling’ or the ‘processing of natural language’. In return, users get paid per completed task.

There are numerous applications of crowdsourcing in use today. Appendix A is taken from research by Kleeman et al. (2008), which is organized typologically to illustrate the different types of crowdsourcing.

### 1.1.4 What Crowdsourcing is *Not*

As explained in the previous subsection there are various phenomena that may be easily confused as being forms of crowdsourcing, but in reality are only related. Kleemann et al. (2008) classified and explained the following as being phenomena similar yet only relating to crowdsourcing:

#### ***Mass Customization***

The product is intended to be sold to the mass market to reap the benefit of economies of scale, yet is ‘personalized’ by an individual to meet their unique needs and desires. Mass customization differs from crowdsourcing in that the product becomes the property of the designer where the ownership rights do not pass onto the individual in crowdsourcing. Examples include Dell Computers<sup>4</sup>.

#### ***Creation of Limited Access Markets***

A platform offered by a third party company intended for users to connect and engage in some form of exchange while the company running the platform acts as a mediator and is financially rewarded

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<sup>1</sup> “Google Maps”, <http://maps.google.com/>, retrieved on 22/03/2011

<sup>2</sup> “Google Earth”, <http://www.google.com/earth/index.html>, retrieved on 22/03/2011

<sup>3</sup> “Amazon Mechanical Turk”, <https://www.mturk.com/mturk/welcome>, retrieved on 22/03/2011

<sup>4</sup> “Dell Computers”, <http://www.dell.com/us/p/>, retrieved on 07/03/2011.

for this activity alone. This phenomenon differs from crowdsourcing in that there is no co-production occurring between the platform provider and users. Examples include eBay.com<sup>5</sup>, Amazon's Marketplace<sup>6</sup>, and PayPal.com<sup>7</sup>.

### ***Creation of Free Access Markets***

Differs from 'creation of limited access markets' in that the platform provider is not financially compensated, the platform is free to use. The creation of free access markets is not considered crowdsourcing, as there generally is no co-production occurring between the platform provider and users. Examples include Flickr.com<sup>8</sup> and YouTube.com<sup>9</sup>.

### ***Open Source and Open Content Projects***

Peer production and collaboration lie at the heart of open source and open content projects as volunteers come together to work to reach a common goal. The main difference between this form of collaboration and crowdsourcing is that open source generally does not involve monetary compensation. Moreover, whilst crowdsourcing tends to be initiated by a third party who has legal ownership of the intellectual property created by contributors, open source is characterised by intellectual property that is part of either the public domain or under an open source license<sup>10</sup>. As Brabham (2008a) describes it, crowdsourcing is:

*"[A] hybrid model that blends the transparent and democratizing elements of open source into a feasible model for doing profitable business, all facilitated through the web"* (p. 82).

Furthermore, Brabham (2009) argues that while open source *"emphasize[s] the common good"* (p. 9), crowdsourcing differs because of the use of a 'bounty' on problems that are presented by commercial third parties. Examples of open content and open source include Wikipedia.com<sup>11</sup> and the Linux Operating System. Martin et al. (2008) acknowledge that although there are similarities between on the one hand open source and open innovation and on the other hand crowdsourcing, there is a significant difference between these concepts in terms of scope and the individuals involved. The author argue, as displayed in Figure 1 below, that open source is the domain of specialists and can be both innovative and non-innovative, whilst open innovation is the innovative result of efforts by both amateurs and specialists. Martin et al. (2008) continue by arguing that crowdsourcing encompasses both specialist and amateur participation as well as innovative and non-innovative results.

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<sup>5</sup> "eBay.com About", <http://ebay.about.com/>, retrieved on 07/03/2011.

<sup>6</sup> "Amazon Marketplace", <http://www.amazon.com/gp/help/customer/display.html?nodeId=537796>, retrieved on 07/03/2011.

<sup>7</sup> "PayPal.com", <https://www.paypal.com/>, retrieved on 07/03/2011.

<sup>8</sup> "Flickr.com", <http://www.flickr.com/>, retrieved on 07/03/2011.

<sup>9</sup> "Youtube.com About", [http://www.youtube.com/t/about\\_youtube](http://www.youtube.com/t/about_youtube), retrieved on 07/03/2011.

<sup>10</sup> "Open Source Initiative", <http://www.opensource.org/>, retrieved on 12/04/2011.

<sup>11</sup> "Wikipedia.com About", <http://en.wikipedia.org/wiki/Wikipedia:About>, retrieved on 07/03/2011.

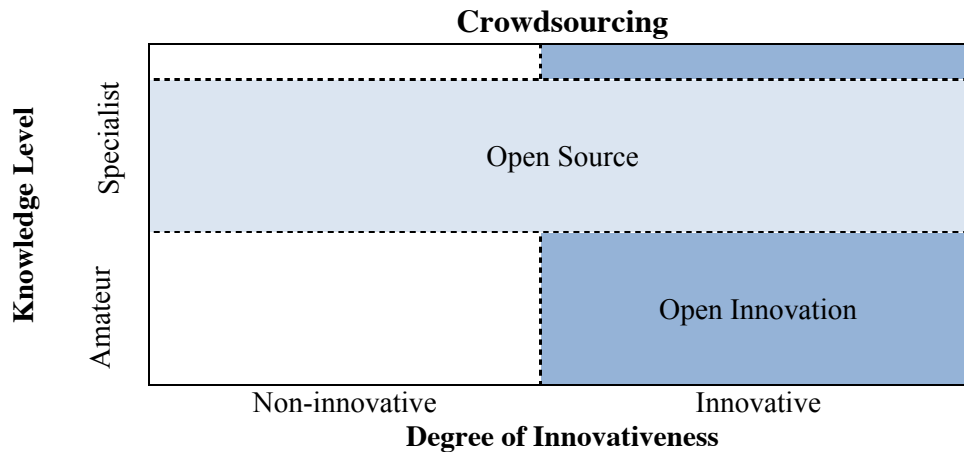


Figure 1 - Crowdsourcing classification scheme (adopted from Martin et al., 2008, p.1259)

## 1.2 Background: Crowdfunding

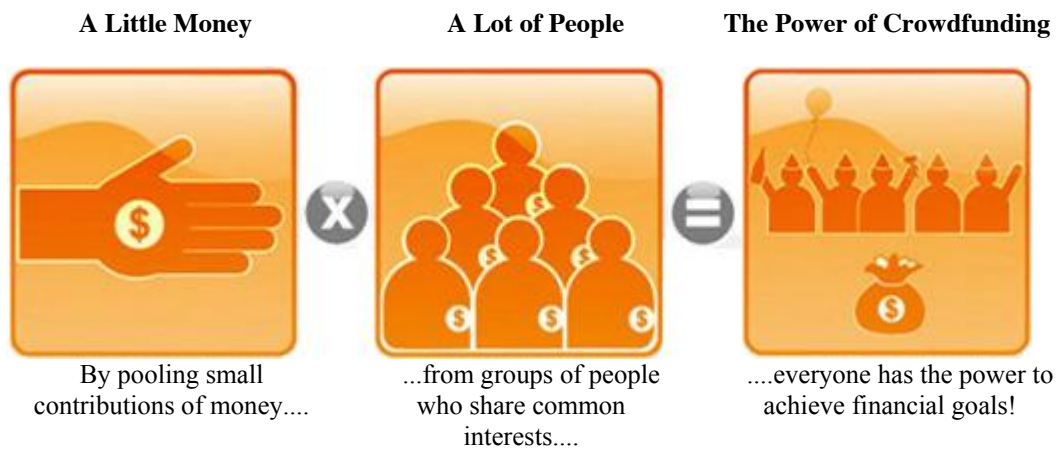
In its simplest form, crowdsourcing can be considered as the online outsourcing of tasks to a group or ‘crowd’ of virtual individuals. As a sub-set of crowdsourcing, crowdfunding has only recently started to gain attention in both the academic and professional world. Whereas crowdsourcing revolves around the division of labour and the contribution of efforts, input or work, contributions within crowdfunding are monetary in nature, be it as a donation, investment or pledge. This subsection presents an overview of the (limited) body of work on crowdfunding, including descriptions of the launch of crowdfunding, crowdfunding projects and types of crowdfunding.

### 1.2.1 The Launch of Crowdfunding

Belleflamme et al. (2011) identify crowdfunding as a subset of crowdsourcing, defining it as:

*“Involv[ing] an open call, mostly through the Internet, for the provision of financial resources either in form of donation or in exchange for some form of reward and/or voting rights” (p.7).*

Or put more simply, it is a fundraising mechanism that taps into the market or ‘crowd’ of ‘consumer-investors’ who by means of a donation, investment or pledge can support the development of a vast array of projects, including creative arts, charities, and entrepreneurial ventures. In return for a financial contribution consumer-investors may receive a variety of rewards such as music albums, artwork or ‘meet-and-greets’ with the artist whereas other platforms offer the possibility to earn a monetary return on the investment made, depending on the platform on which a project is hosted and the nature of said project. In the crowdfunding model, consumers actively invest or donate money in order for projects to be realized, which approaches fundraising from a novel angle.



**Figure 2 - Crowdfunding: How it Works (from Singapore Entrepreneur, 2008)**

On the opposing side, individuals and companies are able to receive funding for their ventures and creative projects that may not otherwise be possible by pooling these donations. According to Kappel (2009), crowdfunding is especially useful for companies without an “*established track record*” (p.385), which suggests a certain similarity to e.g. the informal investor, as will be further discussed in the following sections.

### 1.2.2 Crowdfunding Projects

Crowdfunding can be applied to fund a vast range of projects, including but not limited to business ventures, creative arts, NGO funding, and charities. Currently, a substantial portion of crowdfunding platforms revolve around creative projects with music (Agrawal, Catalini and Goldfarb, 2011) and movie (Braet and Spek, 2010) projects taking centre stage. However, it is important to acknowledge that crowdfunding is being adapted by other industries as well, including most recently those of journalism (spot.us<sup>12</sup>), software (Blender Foundation<sup>13</sup>) (Lambert and Schwenbacher, 2010) and sporting clubs (MyFootballClub<sup>14</sup>).

The range of successful projects within the crowdfunding domain is vast and by no means limited to only one category of project type. One of the most successful crowdfunding stories is that of the ‘TikTok’<sup>15</sup> watches project, which transforms an iPod Nano into a watch. Although the goal was set at only \$15,000USD this project managed to raise over \$940,000USD through 13,512 crowdfunding backers. Director Franny Armstrong raised more than £450,000 for the production, £180,000 for the

<sup>12</sup> “Spot.us About”, <http://spot.us/pages/about>. Retrieved on 16/03/2011

<sup>13</sup> “Blender Foundation”, <http://www.blender.org/blenderorg/blender-foundation/>. Retrieved on 16/03/2011

<sup>14</sup> “MyFootballClub About”, <http://www.myfootballclub.co.uk/about-myfootballclub>. Retrieved on 16/03/2011

<sup>15</sup> “TikTok and Luna-Tik MultiTouch Watch Kits” <http://www.kickstarter.com/projects/1104350651/tiktok-lunatik-multi-touch-watch-kits>, Retrieved on 29/03/2011

UK release and £220,000 for the international release of the film “The Age of Stupid”<sup>16</sup>. The film, concerning climate change, has since been aired on the BBC in the UK, Finland, Norway, Netherlands, and Belgium in December 2009 and on the American Discovery Channel on April 16<sup>th</sup>, 2010, winning many awards along the way (Spanner Films, 2011). And the winner of the most profiled crowdfunding project to date, with rumours of an investment by FaceBook founder Mark Zuckerberg, is that of Diaspora<sup>17</sup>. This Kickstarter project is an open sourced social network rival to the very popular FaceBook and through their crowdfunding efforts the four programmers from NYU’s Courant Institute managed to raise over \$200,000USD from 6,479 crowdfunders by their deadline.

### 1.2.3 Types of Crowdfunding

Similar to crowdsourcing, crowdfunding is aimed at getting input from the public or ‘crowd’, more specifically the desired input for crowdfunding is in the form of a monetary contribution. Belleflamme et al. (2011) identify ‘direct’ and ‘indirect’ fundraising. Whereas the first is aimed directly at the crowd, the second is characterized by the use of platforms such as Kickstarter<sup>18</sup>, Sellaband<sup>19</sup> and Fundable<sup>20</sup>. These platforms offer individuals and companies the opportunity to encourage (creative) projects or businesses (start-ups) by means of monetary contributions. Users can at any time decide to (not) invest in a project, with most platforms offering reimbursement to funders whose projects fail to meet their funding target, which is set at the beginning of the project.

The focal point of this thesis lays on indirect crowdfunding platforms and, more specifically, the users or ‘crowdfunders’ that participate in the funding of projects through platforms. These platforms offer their users the possibility of *ex ante* funding of projects, businesses or creative arts. As Kappel (2009) argues this type of crowdfunding, where crowdfunders contribute funds in order to achieve a certain goal, is especially useful for individuals or companies who do not yet have an “*established track record*” (p.385).

## 1.3 Benefits for Emerging Innovators

Crowdfunding has a number of benefits for individuals, NGOs and companies that aspire to receive funding for their projects. Going forward these fund seekers will be referred to as ‘emerging innovators’. These emerging innovators can consist of anyone from a company to a creative artist or

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<sup>16</sup> “Top 5 Crowdfunding Success Stories”, <http://www.crowdcube.com/blog/2010/11/08/top-5-crowdfunding-success-stories/> retrieved on 29/04/2011.

<sup>17</sup> “Decentralize the Web with Diaspora” <http://www.kickstarter.com/projects/196017994/diaspora-the-personally-controlled-do-it-all-distr>, retrieved 29/04/2011

<sup>18</sup> “Kickstarter.com FAQ” <http://www.kickstarter.com/help/faq?ref=footer>, retrieved on 06/03/2011.

<sup>19</sup> “Sellaband.com About Us” [https://www.sellaband.com/en/pages/about\\_us](https://www.sellaband.com/en/pages/about_us), retrieved on 06/03/2011

<sup>20</sup> “Fundable.org” <http://www.fundable.org/>, retrieved on 06/03/2011.

from a NGO to an individual. This subsection focuses of the three primary benefits for emerging innovators.

### **1.3.1 Effective Reach**

First and foremost, crowdfunding is a relatively effective way of reaching a wide audience. Whilst an ‘analogue’ funding pitch generally can only address (very small) groups of individuals, the reach of an online crowdfunding pitch is virtually limitless. Not only does a pitch generally only need to be compiled once, the marginal costs of sharing an idea or proposal to  $n+1$  prospective investors can be neglected. Once a pitch is hosted on a website, the marginal cost of physical storage and cost-per-display are oftentimes close to 0. However, these platforms often do charge a certain percentage of raised funds.

### **1.3.2 Market Exploration**

Secondly, commercial parties can utilize crowdfunding as a tool to explore a market (Belleflamme et al., 2010) whilst reducing the risk that comes with launching a new product to a minimum due to the funding structure. Belleflamme et al. (2011) propose that crowdfunding concerns more than ‘just’ raising funds, in that *“it is a way to develop corporate activities through the process of fundraising”* (p.28). Moreover, both commercial and non-commercial parties alike can use crowdfunding as a way to generate awareness for their product (Belleflamme et al., 2010) or create a *“hype around a new product”* (Schwienbacher and Larralde, 2010, p.7), making use of consumer-investors’ word-of-mouth. Due to the relatively high long-term value of a customer acquired through (e)WOM (Villanueva, Yoo and Hanssens, 2008) this can be considered as a significant benefit to the emergent innovators. Thus, besides being a way of raising funds, it can act as a marketing tool in itself (Belleflamme et al., 2010; Schwienbacher and Larralde, 2010).

### **1.3.3 Predictive Power**

Having established the fundraising capabilities of crowdfunding and the potential to be used as a marketing tool, it is interesting to consider findings on the workings of crowdfunding platforms in light of e.g. Caves’ (2000) *‘nobody knows principle’*. According to Caves (2000), this principle argues that in the ‘creative sector’ it is incredibly difficult, both ex-ante and ex-post, to determine why a project will and/or has been a success. Perhaps the structure of ex-ante investing by consumers and the inherent marketing capabilities (Belleflamme et al., 2010; Schwienbacher and Larralde, 2010) can moderate the implications of the seemingly random nature of success as stipulated by this principle, limiting the investment risk for companies whilst assessing the market at the same time. Taking this into consideration crowdfunding can be viewed as an efficient ‘litmus test’ in high-risk high-

investment industries such as the music industry (Agrawal et al., 2011) where ex ante success chances of a product are very difficult to assess, especially for record labels who traditionally invest in new artists (Caves, 2000).

#### **1.4 Crowdfunding in Relation to Early-Stage Investment, Informal Venture Capitalists and Business Angels**

Agrawal et al. (2011) find evidence that crowdfunding can “*reduce the economic frictions associated with investing in early-stage projects over long distance*” (p.17). Entrepreneurial projects in the early-stage often only have access to regional or local sources of funding, with Sorenson and Stuart (2005, as cited in Agrawal et al. 2011) even reporting that “*the average distance between lead VC and target firm is approximately 70 miles*” (p.2). Similar findings on venture capital investors were presented by Zook (2004) and Harrison and Mason (1992). Moreover, Mason and Harrison (1995, p. 168) report that:

*“There is widespread agreement that an equity gap exists for companies seeking small amounts of risk capital which constrains the development of the SME sector [...] it is particularly acute in peripheral regions which lack an indigenous venture capital industry”* (p. 168).

Perhaps crowdfunding can overcome these limitations by making use of the extensive reach and scope of the Internet and ‘Web 2.0’ (Agrawal et al., 2011). More specifically when the crowdfunded project revolves around an entrepreneurial venture, start-up or existing business, one can reason that there is a certain similarity between business angels and informal venture capitalists on the one hand and crowdfunders on the other. Landström (2007) specifies that informal venture capital projects revolve around investments made by private individuals in companies to which they do not have family ties.

Moreover, unlike institutional venture capitalists, the money invested comes from their private personal capital. Informal venture capitalists also tend to have “*small investment experience and limited investment capacity*”<sup>21</sup>. Sørheim and Landström (2001) distinguish between four categories of informal investors, as displayed in figure 3. Avdeitchikova (2008) presents a categorisation of investment roles, similar to that of Sørheim and Landström (2001), by offsetting financial to non-financial contribution, as displayed in figure 4 below. The following chapter, in which several hypotheses are presented, will draw on Sørheim and Landström’s (2001) and others’ informal venture

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<sup>21</sup> Hans Landström, “A market perspective On Venture Capital” Retrieved from [www.cru.aau.dk/fileadmin/dokumenter/Seminar/Seminar\\_190407\\_mat.pdf](http://www.cru.aau.dk/fileadmin/dokumenter/Seminar/Seminar_190407_mat.pdf), Aalborg, April 2007.

capitalist theories and more specifically on the ‘business angel’ group, who show a high level of both financial and non-financial resources (Avdeitchikova, 2008).

		<b>Competence</b>	
		Low	High
<b>Investment Activity</b>	High	<b>Group 2</b> <b>Traders</b> (24% of the investors)	<b>Group 4</b> <b>Business angels</b> (25% of the investors)
	Low	<b>Group 1</b> <b>Lotto investors</b> (30% of the investors)	<b>Group 3</b> <b>Analytical investors</b> (21% of the investors)

**Figure 3 - Categorisation of Informal Investors using four initial clusters (as found in Sørheim and Landström, 2001, p.358)**

		<b>Contribution of Non-financial resources</b>	
		Low	High
<b>Contribution of financial resources</b>	High	<b>Group 2</b> <b>Capital-oriented role</b>	<b>Group 4</b> <b>Classical business angel role</b>
	Low	<b>Group 1</b> <b>Micro investor role</b>	<b>Group 3</b> <b>Knowledge-oriented role</b>

**Figure 4 - Investment roles (as adopted from Avdeitchikova, 2008, p.62)**

### 1.5 Legal Limitations to Crowdfunding

Although there are several benefits for both emerging innovators and crowdfunders to engage in crowdfunding, payment of monetary rewards or profits shares are often limited due to legal restrictions (Belleflamme et al., 2011; Schwienbacher and Latalde, 2010). Kappel (2009), in a research on the potential use of crowdfunding in the US recording industry, distinguishes between a ‘betting model’ and an ‘investment model’ of crowdfunding, which falls under betting and securities law respectively. Moreover, Bonabeu (2009) identifies issues concerning the ownership of intellectual property in crowdsourcing, which given its multi-investor nature, are likely to be valid concerns for crowdfunding as well. This translates into the treatment of financial rewards being rather complex, hence why certain platforms may offer a financial return or not largely depending on their country of origin.



## 1.6 Problem Statement

Crowdsourcing and crowdfunding have presented the consumer with a new way of ‘consuming’ products and experiences. Although one can argue that the idea underlying crowdfunding is not new, the concept of raising funds through the internet on the scale on which it currently occurs certainly is. The term ‘crowdfunding’ has been coined recently, but has gained online attention very rapidly during the last 18 months<sup>22</sup>. As Appendix B shows, most crowdfunding platforms have set the minimum investment amount as low as \$1 or \$5, making it accessible to the majority of common consumers in developed countries.

With an increasing number of crowdfunding platforms and substantial amounts invested (e.g. \$15 million through Kickstarter.com during its first 18 months (The Economist, 2010)); crowdfunding is becoming an interesting opportunity to raise funds and promote products, projects and services (Belleflamme, 2011; Schwienbacher and Larralde, 2010). Moreover, crowdfunding can become a viable funding method for individual artists, SMEs and entrepreneurs, since it presents the possibility to broaden the geographical horizon of traditional investment-seeking (Agrawal et al., 2011; Kappel, 2009), which is a valuable characteristic given venture capitalists’ tendency to invest in geographically nearby companies (Zook, 2004). Perhaps crowdfunding can aid in closing the ‘equity gap’ often encountered by capital-seeking SMEs, as displayed by Mason and Harrison (1995).

### 1.6.1 Current Research Gaps

Given the novelty of the concept and its recent step into the limelight, the body of literature on crowdfunding is rather small. Nonetheless, a number of gaps have been identified in the handful of (working) papers on crowdfunding. Belleflamme et al. (2011), Schwienbacher and Larralde (2010), and Ward and Ramachandran (2010) suggest that research ought to be performed on the nature of the ownership structure in crowdfunding and its subsequent implications on e.g. corporate governance and investor protection. Moreover, the latter authors identify the need to further research on why so many crowdfunding projects seem to lose ‘momentum’, causing their target funding to remain unobtained. Statistics provided by the popular crowdfunding platform Kickstarter<sup>23</sup> also support this gap as only 43% of pitched projects meet their goal.

Braet and Spek (2010), argue that the benefits for emerging innovators, other than financing, which potentially include gaining (viral) publicity could be a topic of future research. Schwienbacher and Larralde (2010) underline the need to understand the “*optimal remuneration and participation*

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<sup>22</sup>Google Search Trends : ‘Crowdfunding’ and ‘Crowd funding’, Nov. 2007 until Feb. 2011 <http://goo.gl/IRc0N> Note: results are normalized. Retrieved on 28/03/2011.

<sup>23</sup> Strickler, Y. (n.d.). Happy Birthday Kickstarter!. *The Kickstarter Blog*. from <http://blog.kickstarter.com/post/5014573685/happy-birthday-kickstarter> retrieved on 05/04/2011

*scheme*” (p.20) in order to optimize the funding process. Furthermore, several authors suggest that the financial return is not the primary motivator or concern for crowdfunders (Lambert and Schwienbacher, 2010; Ward and Ramachandran, 2010) but do not offer up any definite conclusions on what it may be. What that primary motivator indeed is, thus remains unclear.

### **1.6.2 Fundamental Question**

Before researchers can focus on issues such as the ownership of intellectual property, investor protection or the viral marketing capabilities of crowdfunding, which arguably are important matters or in the latter case a valuable characteristic, it is important to first ask a more fundamental question. In essence, that question is ‘*why?*’ This question needs to be answered in order to better understand the workings and characteristics of the crowdfunding phenomenon. Therefore, the research problem this thesis revolves around is the motivation of individual users to crowdfund. Although it seems likely that consumers who engage in crowdsourcing or crowdfunding are different from ‘traditional’ consumers, little to nothing is known concerning the motivations and behaviour of these so-called crowdfunders. Given recent developments and the potential that lies in crowdfunding, it seems important that these motivations and behaviours be researched in order to gain a better understanding of what drives crowdfunders. This knowledge can subsequently be used to aid platforms and emergent innovators in ‘pitching’ their project, product or service.

## **1.7 Research Questions**

Given the lack of knowledge on crowdfunders and the motivational forces affecting engagement in this activity, the aim of this research is to discover what could drive these consumers to participate. Thus, the research is exploratory in nature. The goal in exploratory research usually is “*to develop hypotheses or questions for further research*” (Cooper and Schindler, 2006, p.140).

More specifically, the goal is to identify whether there are any intrinsic or extrinsic motivational factors and if so what sort of relationships exist between the nature of incentives, profit sharing, and peer influence on crowdfunders’ behaviour. Research in related fields such as crowdsourcing, online collaboration, investment decision-making and informal investing will be used as a starting point in order to investigate the relationships which will be tested through a quantitative analysis. Based on the research purpose, the research question can be formulated as follows: *What causes consumers/individuals to engage in crowdfunding?* Specific issues can then be addressed through sub-research questions. These include, but are not limited to, the following:

- 1) What role does intrinsic motivation play in the crowdfunder’s decision to invest?

- 2) What role do extrinsic motivators in the form of monetary rewards play in the crowdfunder's decision to invest?
- 3) How do actions by other crowdfunders influence the behaviour or preferences of a crowdfunder?

## **1.8 The Purpose of Theoretical and Practical Relevance**

The purpose of the proposed research is to gain a deeper understanding into what drives the behaviours and motivations of crowdfunders (believers) who use on-line crowdfunding platforms, in order to determine what the success factors for crowdfunding projects are. Gaining a better understanding is imperative given the recent surge in crowdfunding projects and its potential implications for investors, consumers, companies as well as policy makers.

### **1.8.1 Theoretical Relevance**

There are a number of fields to which crowdfunding can add new insights through this exploration of the field. Firstly, there has been very little research focussed specifically on the area of crowdfunding. This research can help define the outlines of the 'typical' crowdfunder, as well as the characteristics of the markets in which crowdfunders simultaneously consume and invest. Doing so can have a number of interesting theoretical implications. The similarities and differences between crowdfunders and 'regular' consumers and the marketing capabilities inherent in crowdfunding can shed new light on for example early adaptor or electronic word-of-mouth theories. Secondly, crowdfunding can add to the debate of value creation in and through online collaboration. Other potentially relevant implications can be found in areas such as the predictive or trendsetting powers of crowdfunding projects in complex sectors, such as creative arts and perhaps in terms of informal investing and venture capital.

### **1.8.2 Practical Relevance**

Although the term crowdfunding has only recently been coined, it is an area of consuming (or investing) that has rapidly grown over the course of the last few years. For example, one of the major crowdfunding platforms, Kickstarter.com, has launched over 20,000 projects with 43% meeting their target goal whilst helping to raise over \$53 million between its launch in April 2009 to April 2010<sup>24</sup>. Similarly, Sellaband.com, who focussed on providing music artists with funding for album creation, raised \$3 million between their start in 2006 and July 2010.

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<sup>24</sup> Strickler, Y. (n.d.). Happy Birthday Kickstarter!. *The Kickstarter Blog*. from <http://blog.kickstarter.com/post/5014573685/happy-birthday-kickstarter> retrieved on 05/04/2011

Given the relatively low cost of attracting capital through crowdfunding platforms, in combination with the increasing amount of capital raised through these platforms, it is evident that practitioners will benefit from insights into the motivation of crowdfunders and subsequently the factors that can ‘make or break’ a crowdfunding project. Furthermore, as mentioned above, crowdfunding can play an important role for creative artists in light of Caves’ (2000) *nobody knows* principle. Moreover, it shows promise of being able to close the equity gap (Mason and Harrison, 1995) encountered by SMEs around the world. Finally, it is important to understand the working of and motivators behind crowdfunders from a government perspective, in order to be able to develop policy to deal with crowdfunding (Kappel, 2009; Whitla, 2009).

### **1.9 Thesis Structure**

This first chapter has set out the context within which this thesis is placed. Crowdsourcing and crowdfunding were defined and a general lack of literature on the latter concept has been established. Furthermore, the research aim, purpose and relevance were introduced. The next chapter will present the theoretical framework, followed by the third chapter which gives an insight into the methodological reasoning and decisions made concerning methods. Subsequently, the analysis of data and discussion of results will be discussed. Finally, the last chapter will present the research conclusions, as well as the implications and limitations of the study.

## CHAPTER 2

### THEORETICAL FRAMEWORK

This chapter sets forth to create a theoretical framework in which crowdfunding and related fields are further presented. Although there is little literature on crowdsourcing and even less on crowdfunding there is quite an extensive body of published literature on related concepts and fields such as online collaborative work and open innovation. Moreover, when the concept of crowdfunding is first presented, many similarities between venture capitalists and angel investors come to mind.

Given that this thesis aims at exploring the motivational and behavioural drivers of crowdfunders this chapter will first begin by defining both intrinsic and extrinsic motivation. Motivational theory from related fields and past research is then presented which leads to initial suggestions of relationships that might exist between these constructs and the propensity to crowdfund. Next, a discussion on the contextual factors of crowdfunding will be set out based on theories in related field including investment decision making and herd behaviour therein. This leads to further suggestions as to where relationships between the context of a project and the individual users' likeliness to engage in the funding of a project might exist. These discussions and subsequent suggestions that arise from these discussions will form the theoretical foundation of the survey questions.

#### 2.1 Motivation: Background

Long ago, Charles MacKay's book entitled 'Extraordinary Popular Delusions and the Madness of Crowds' (1841) was used as a framework for collective work. *"According to it, the most likely outcome of collective human dynamics is market bubbles, instability and chaos"* (MacKay, 1841 as cited in Bonabeau, 2009, p.51). Since that time the outlook on collective work has shifted, becoming more favourable as the 'wisdom of the crowds' concept emerged:

*"[A] growing number of applications have shown that a group of diverse, independent and reasonably informed people might outperform even the best individual estimate or decision"* (Bonabeau, 2009, p. 51-52).

With the growing acceptance of collaborative work, an increasing number of studies on motivational factors explaining why individuals participate in collective work, for example crowdsourcing, have emerged. During the last decades authors have made use of the intrinsic-extrinsic dichotomy when discussing the concept of motivation (Deci and Ryan, 1985; Ryan and Deci, 2000). Although Kleeman, Voss and Rieder (2008) have applied this dichotomy on user engagement in crowdsourcing, theories regarding the motivation for crowdsourcing and crowdfunding nonetheless remains in a very

early stage. Before discussing motivations for collaborative work any further, intrinsic and extrinsic motivations will first be defined.

Intrinsic motivation is the *“inherent tendency to seek out novelty and challenges, to extend and exercise one’s capacities, to explore, and to learn [...] in the absence of specific rewards”* (Harter, 1978, as cited in Ryan and Deci, 2000, p.70). Lepper, Sethi, Daldin and Drake define it as *“com[ing] from the organism itself, arising and persisting in the absence of external events [...]”* (p. 24). Contrary to intrinsic motivation where performance is motivated by an inherent satisfaction through performing the task itself, extrinsic motivation concerns motivation through the use of an external factor such as a *“promised reward, praise, critical feedback, deadlines, surveillance, or specifications on how the work is to be done”* (Amabile, 1993, p.189). Although the factor or reward may be based on the work itself, these motivators are external both to the task or job, as well as the individual performing it.

Generally theorists argue that for task performance, once extrinsic motivators have been placed on a task, intrinsic motivation will decline (Amabile, 1993). Deci, Koestner, and Ryan support these findings by stating that *“all expected tangible rewards made contingent on task performance do reliably undermine intrinsic motivation”* (1999, as cited in Ryan and Deci, 2000, p.70). Similarly, Amabile, Conti, Coon, Lazenby and Herron (1996) in research into the work environment’s affect on creativity, find that extrinsic motivators can ‘undermine’ intrinsic motivation. Threats, deadlines, pressured evaluations, directives, and imposed goals were also proven to diminish intrinsic motives; however, opportunities for self direction, choice, and acknowledgement of feelings lead to increased intrinsic motivation as they allow the individual an increased feeling of autonomy (Deci and Ryan, 1985).

## **2.2 Intrinsic Motivation and Collaborative Work**

Since theory on crowdfunding is in an infant stage, this discussion draws upon studies on the motivations that drive users in crowdsourcing and open source. This approach is similar to that of Lambert and Schwienbacher (2010) as well as Belleflamme et al. (2011), who identify crowdfunding to be a subset of crowdsourcing. In turn, crowdsourcing research often draws on research from open content and open source creation when establishing its theoretical foundation (e.g. Brabham, 2008a; Kleeman, 2008). Although the context of these studies does not show a perfect fit with the task at hand, it is reasonable to argue that they are similar, especially in the case of crowdsourcing. However, as Brabham (2008a) notes, *“[o]pen source motivators are helpful but are not precisely translatable to crowdsourcing cases”* (p.87). This is attributed to the absence of monetary rewards (i.e. extrinsic motivator) in open source development.

Initial research indicates that intrinsic motivation plays the most important role in explaining why people get involved in crowdsourcing (Luthiger Stoll, 2006, as cited in Kleeman, 2008). By working on the problem people feel more in control of the product or service they will use in the future and in the end save money (cf. Michel, 1997, 2000; Voswinkel, 2000, as cited in Kleeman, 2008). Consumers are also more likely to participate if they are dissatisfied with the current product and feel they can make improvements (Reichwald and Piller, 2006, as cited in Kleeman, 2008):

*“In sum, the primary motivations of working consumers are intrinsic (“for the fun of it”), but also of central importance are characteristics that make tasks fun (autonomy, creativity, importance of the task)” (p.22).*

Furthermore, there are several studies that support the notion of ‘fun’ as a primary motive for an individual’s engagement in a task or certain behaviour, which includes but is not limited to the following studies. Using a crowdsourced idea generation competition as the focal point of research, intrinsic motivation to engage in crowdsourcing is found to revolve around involvement, fulfilment and *“feelings of competence”* (Leimeister, Huber, Bretschneider and Krcmar, 2009, p.203). Lakhani and Wolf (2003) find that intellectual stimulation, which according to the authors is an *“enjoyment-related intrinsic”* (p. 12) motivator, is the single most important motivator for users to collaborate on open source software projects. Additionally, in their research on crowdsourcing motivation Lakhani, Jeppesen, Lohse and Panetta (2007), identify ‘having fun’ as the single most important motivator for crowdsourcers.

Moreover, Kleeman et al. (2008) find that for crowdsourcing, the involvement in and control over what is created is a strong motivator for crowdsourcers. However, as Lambert and Schwenbacher (2010) point out, the majority of crowdfunding projects do not offer direct involvement in or control over the decision-making process within that project. The authors hypothesise that when investors *“cannot be involved in the happening of the initiative”* (Lambert and Schwenbacher 2010, p.10), more rewards may be required to satisfy the investor. Belleflamme et al. (2010) came to a similar proposition, stating that:

*“A negative correlation exists between whether a reward is offered and whether it is a passive investment, which suggests that rewards and control are used as substitutable incentives” (p.7-8).*

Similarly, studies on investment decision making reveal similar ‘for the fun of it’ reasons for involvement. San José, Roure and Aernoudt (2005) found that, although not the primary motivator, ‘fun’ plays a significant role in the angel investor’s decision-making process. Although the authors argue that for informal venture capital investors the ‘financial reasons’ are the most important motivator, Harrison and Mason (1992) acknowledge that non-financial motives also play an important

role. The authors argue that “*the fun of making informal investments*” (p. 463) is a significant motivator for informal venture capitalists. Similarly, Baty and Sommer (2002) argue that angel investors are generally motivated by non-financial factor such as “*joy in the process*” (p. 292).

Harrison and Mason (1992) find that besides ‘having fun’, the ability to “*play an active role in the entrepreneurial process*” (p. 463) is an important motivator for informal venture capitalists. In addition, Ibrahim (2008) argues that for business angels, one of the most important motivators apart from financial incentives is the ability to be involved “*in a new venture’s development*” (p.1439). In this regard, one could argue that there’s a similarity between crowdfunding platforms and angel investor groups, although the latter generally invest on a much larger scale. Moreover, Duxbury, Haines and Riding (1996) find that business angels “*are intrinsically motivated [and] highly involved with their work and their investments*” (p. 44). Similarly, Avdeitchikova (2008) finds that business angels display a relatively high non-financial investment into targeted firms, suggesting a strong involvement that goes beyond financial contributions.

What authors on informal venture capitalists and angel investors as well as crowdsourcers and crowdfunders accordingly seem to argue is that the researched individuals all seek a certain ‘sense of involvement’ with the project they fund. This ‘sense of involvement’ can manifest itself in various forms such as the form of control over the decision-making process. Moreover, ‘having fun’ seems to play a significant role for individuals or individual users partaking in e.g. crowdsourcing, open content creation and angel and informal investing. Given the similarities between the context of these fields and/or activities with what is known to be crowdfunding, it is suggested here that similar motivations might transcend to the activity of crowdfunding. Therefore, as subsequent sections 3.2.3 on the survey creation and chapter 4, which contains the data and results, will show these motivations form one of the spearheads in this thesis research.

### **2.3 Extrinsic Motivation in Crowdsourcing**

There are several researchers who have concluded that it is not intrinsic motives but extrinsic motives that were the underlying reason for individual engagement in certain activities. Brabham (2008b), in his study of the photo crowdsourcing community iStockphoto, finds that “*the opportunity to earn money*” –an extrinsic motivator- plays the most important role for the active crowdsourcers within the iStockphoto community. In subsequent research on crowdsourcing, Brabham (2009) found further support that ‘making money’ plays an important role in crowdsourcing. Although Lakhani, et al. (2007) find that intrinsic motivation such as enjoyment, a factor potentially influencing crowdfunders as discussed in the previous section, plays the most important role in crowdsourcing, they argue that



the desire to win the award money or ‘bounty’ also plays a significant role. Similarly, Peng and Zhang (2008), find a moderate positive effect of ‘direct compensation’ on the use of crowdsourcing as well.

Although these findings do not perfectly align with Brabham’s (2008b; 2009) conclusions, which place the ability to earn money as the top motivator, these initial studies do converge in suggesting that the possibility to earn money plays a significant role in crowdsourcing. Furthermore, these findings seem to contrast the aforementioned authors’ findings on the importance of intrinsic motivation. However, it should be noted that the general context of e.g. open source is one in which the ability to earn money as an individual contributor is generally not present (Brabham, 2008a). These initial findings by Brabham (2008a; 2008b; 2009) on crowdfunding and Lakhani (2007) and Kleeman et al. (2008) on crowdsourcing could indicate that a relationship exists between crowdfunding and extrinsic motivation (i.e. financial return) and therefore deserve further investigation.

Returning to the first chapter on the crowdfunding literature review, it must be noted that because of legal limitations in e.g. the USA, not all crowdfunding platforms offer the possibility of profit sharing, or for that matter, any form of pecuniary reward. A number of platforms located in other countries, such as Sellaband.com which is legally located in Germany, do offer the possibility of profit sharing or monetary rewards. Given the extensive reach of the World Wide Web, these differences in legal circumstances do not necessarily imply that citizens of e.g. the USA do not have access to platforms where monetary rewards or returns make up part of the crowdfunding experience. It is of interest in investigating the importance attributed by individuals to whether or not a platform allows emerging innovators to disburse monetary rewards to their funders.

From a theoretical point of view it is of interest to become more knowledgeable on this issue in order to better understand not only decision making process on a project-to-project basis, but also from a wider platform perspective, whilst from a more practical point of view, it could be valuable to pertain information concerning the crowdfunder’s choice of platform set off against his preference in order to gain insight into the crowdfunder’s ability to find a platform that best meets their needs amidst a rapidly increasing number of platforms. Therefore, as is displayed in the following sections, data will be gathered on the characteristics of their primary platform in order to further explore the difference between platforms that do and platforms that do not offer the ability to earn a monetary reward.

## **2.4 Informational Cascades, Momentum and Investment Context**

Since there is virtually no literature on crowdfunding, let alone the investment decision-making aspect of crowdfunding, theory from related fields and similar contexts are utilized in order to examine the

crowdfunder's behaviour. Specifically, the theories on 'informational cascades', a term coined by Bikhchandani, Hirshleifer and Welch (1992), are presented before elaborating on herd behaviour and 'momentum' in investing. In their 1992 article, Bikhchandani et al. (1992) introduce and define the concept of 'informational cascades' as:

*"An informational cascade occurs when it is optimal for an individual, having observed the actions of those ahead of him, to follow the behavior of the preceding individual without regard to his own information"* (p.992).

In a follow-up article, the authors argue that:

*"The simplest and most basic cause of convergent behavior is that individuals face similar decision problems, by which we mean that people have similar information, face similar action alternatives, and face similar payoffs. As a result, they make similar choices"* (Bikhchandani, Hirshleifer and Welch, 1998, p.152).

Welch (1992, as cited in Bikhchandani et al., 1992) argues that an informational cascade model can be used to explain phenomena such as bank runs, where the behaviour regardless of the positive or negative effect for the individual is involved, quickly cascades or 'snowballs' into similar behaviour by other individuals. More interestingly, the author finds that for initial public offerings (IPO), *"if sufficiently many (few) individuals sign up early to receive shares, all (no) subsequent individuals follow their lead"* (in Bikhchandani et al., 1992, p.1013). Hence, what Welch (1992) seems to argue is that it is key to gain a certain 'momentum' early in the IPO process, underlining the importance to quickly garner a certain 'critical mass' in the sign-up process of an IPO in order to increase the chances of success.

Moreover, Welch (1992) argues that *"as the number of investors,  $n$ , increases the probability that the last investor is still using his own information decreases rapidly with  $n$ "* (p.713). This suggests that a rapid increase in the number of investors or the amount invested, a 'momentum', can cause individuals to disregard their own information in favour of 'going with the herd' and making a similar investment decision. Evidence suggesting that the findings by e.g. Welch (1992) from within an institutional investor context transcend into crowdfunding is supported by Ward and Ramachandran (2010), who in their study on crowdfunding through the Sellaband platform, suggest that momentum plays a key role in raising funds. Moreover, according to Bikhchandani and Sharma (2000, p.282), momentum-investment strategies revolve around investing in 'recent winners', whilst divesting 'recent losers'; non-rational behaviour that 77% of the (professionally managed!) mutual funds in Grindblatt, Titman and Wermers' (1995) sample displayed. Since none of the crowdfunding platforms offers the possibility to sell 'shares' or divest in a project, this would perhaps best translate into investing in projects that have recently received (significant) funding.

Taking the findings by Welch (1992), Bikhchandani et al. (1992, 1998), Bikhchandani and Sharma (2000), and Ward and Ramachandran (2010) in regard, a direction for further exploration within the field of crowdfunding can be proposed. Theories in the investment field, and especially those concerning the momentum-investment and herd principles, will need to be further considered in light of crowdfunding. Arguing for the existence of so-called informational cascades (Bikhchandani et al., 1992) and finding evidence for herd behaviour in a significant number of professionally managed mutual funds (Grindblatt et al., 1995) within the sample used; questioning whether similar behaviour exists within crowdfunding seems worthwhile. Therefore, as will be argued in the questionnaire design section (3.2.3) and the results chapter, this thesis aims at further exploring so-called ‘peer influence’ factors, including the level of previous funding, the actions of others and the distance to time and funding goals. Seeking further understanding of how these factors potentially influence the behaviours and actions of crowdfunders.

## **2.5 Summary**

This section presents previous works by several authors in the fields of open source, open content creation, crowdsourcing, and crowdfunding as well as informational cascades and investment decision-making. Based on these theories several directions for further exploration within the field of crowdfunding were suggested, which will form the basis for the survey questions presented in the following section. Before these questions and subsequent data can be presented it is vital to consider the methodological reasoning underlying this thesis, which follows in the proceeding section.

## CHAPTER 3

### METHODOLOGY AND METHOD

Methodology is defined by Prasad (1997, as cited in Mir & Watson, 2000, p. 944) as the “*intrinsic set of ontological and epistemological assumptions that a researcher brings to his or her work*” whereas Mir and Watson (2000, p.944) define method as the “*tools or techniques that are used in the process of inquiry*”. Although the differentiation between the two concepts is not necessarily trivial, Machlup (1982) suggests that methodology works to position the thought process and in turn research. Thus, a researcher needs to clearly demonstrate the appropriateness of his or her methodological choice. The following section therefore sets the stage by exploring the ontological and epistemological view on which this thesis is based. Succeeding the methodological choice this chapter describes the design of the study, which includes the data collection method, research sample, questionnaire design, method of analysis, along with the reliability, validity and generalizability of the study.

### 3.1 Methodology

Before moving onto the issue of method, it is first important to explicate the methodological position, as without these methodological clarifications the formation of the study and the conclusions may run the risk of being perceived as opaque and ambiguous. The ontological and epistemological view will first be explored followed by the research approach.

#### 3.1.1 Ontological and Epistemological View

Based on the exploratory nature of this research, one might expect a social constructionist approach (Easterby-Smith, Thorpe and Jackson, 2008). However, the ontological approach in this research is relativist in nature (Easterby-Smith et al. 2008). More precisely, the critical realism position is adopted. This is done for several reasons. Firstly and perhaps most importantly, is the necessity to have a good fit between the context in which the study takes place and the ontological and epistemological approach. As Bryman and Bell (2007) explain, critical realism argues that

*“[S]ocial phenomena are produced by mechanisms that are real, but that are not directly accessible to observation and are discernable only through their effects” (p.628).*

Hence, “*it makes a conscious compromise between the extreme positions*” (Easterby-Smith et al., 2008, p.62) of positivism and social constructionism. Given the nature of the research the critical realism approach seems best equipped to investigate the social phenomena (i.e. peer influence factors) that are part of or have influence on the crowdfunder’s behaviour (Bryman and Bell, 2007).

Secondly, as Easterby-Smith et al. (2008) argue the positivist approach is '*inflexible and artificial*' (p.73) and not very well suited for theory generation, which is one of the aims of this thesis. Critical realism in this case also has several benefits over the social constructionistic approach, in that it generally tends to lead to more generalizable outcomes through the use of larger sample sizes and e.g. questionnaire data (ibid). Moreover, the relativism epistemology of which critical realists is a subset is known to make use of surveys in their research (Easterby-Smith et al., 2008). Furthermore, given the temporal scope of the research, as well as the limited access to qualitative data sources, the social constructionist approach would be an inappropriate approach (Easterby-Smith et al., 2008).

A third consideration is the nature of the questions that form the basis of this research. Returning to the research questions section (1.7), the research question was defined as "*What drives consumers/individuals to engage in crowdfunding?*" The previous section elaborated on several approaches to answering this question, including motivational factors (intrinsic and extrinsic) and contextual (peer influence) factors. A significant number of questions dealt with phenomena such as 'having fun' or 'being involved' and the *effects* they have on the propensity to crowdfund. These and other phenomena such as 'investment momentum' and 'herd behaviour' are in this thesis acknowledged as 'real mechanisms' (Bryman and Bell, 2007). Grounded in a critical realism view, it is the *effect* of these phenomena *on* crowdfunding propensity that this thesis aims to further explore, and not the causes of these particular motivations, an approach that could be considered more suitable when taking a positivistic approach.

Although critical realism is more commonly found in research that is qualitative in nature, there are many instances in which this philosophical background has been adopted for quantitative research. Based on the aforementioned reasoning and giving consideration to other scholarly studies grounded in this theoretical framework (Contu & Willmott, 2005; Fleetwood, 2005; Reed, 2005; Kwan & Tsang, 2001; Mir & Watson, 2001; Tsang & Kwan, 1999; Willmott, 2005), as well as the context of this research in combination with the limited time-frame in which the research ought to be performed, the critical realism approach is deemed most appropriate for reaching the objective of this study.

### **3.1.2 Exploratory Approach to Research**

The aforementioned lack of previous theories on crowdfunding would call for the use of an exploratory study. Exploratory studies usually aim at "*develop[ing] hypotheses or questions for further research*" (Cooper and Schindler, 2006). Thus, the goal is to provide a basis or a starting point for future researchers.

Although exploratory research is often associated with qualitative methods, (Cooper and Schindler, 2006; Bryman and Bell, 2007) making use of findings in the aforementioned neighbouring fields that are assumed to be relevant to the research task at hand, a quantitative exploratory method is deemed more appropriate. Based on the presented theories, several research directions have been suggested. These suggestions are used as the starting point of a questionnaire (presented in section 3.2.3) that aims to collect data based on which further insights can be gained into the motivational and peer influence factors that have been indicated in the theory section.

## **3.2 Method**

Now that the methodological foundation of this thesis has been outlined the design and the tools and techniques of the study can be described. This includes the general research design and data collection method, the research sample, the questionnaire design, the method of analysis as well as the reliability, validity and generalizability of the study.

### **3.2.1 General Research Design and Data Collection Method**

Data has been gathered by means of web-based questionnaires (Easterby-Smith, Thorpe and Jackson, 2008). These questionnaires are aimed at exploring whether there are relationships between certain dependent and independent variables, the latter of which can be roughly divided into two groups, those being ‘motivational factors’ and ‘peer influence factors’. The questionnaire is inferential (Easterby-Smith et al. 2008), in that it revolves around a sample of 124 respondents in similar contexts (also, see 3.2.2 Research Sample) that are surveyed at a single point in time in order to establish whether a relationship exists and if so what the strength of that relationship is (Bryman and Bell, 2007).

The questionnaire was delivered to respondents through four means in order to best pursue the target audience. Initially, crowdfunders were contacted by means of an email request sent on behalf of the crowdfunders’ platforms, which contained a link to the on-line questionnaire. Additionally, a post on three crowdfunding discussion forums was created requesting users to complete the on-line questionnaire by clicking on the provided link. Thirdly, since initial response numbers were unsatisfactory, the Twitter<sup>25</sup> medium was used to directly target individual crowdfunders and crowdfunding platforms. Fourthly, the questionnaire link and short descriptive message asking for crowdfunders’ help was posted onto Facebook.com<sup>26</sup> crowdfunding group walls. By directly targeting crowdfunders the representation was expected to be much higher.

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<sup>25</sup> Twitter Crowdfundthesis account, <https://twitter.com/#!/crowdfundthesis>, accessed on 09/05/2010

<sup>26</sup> Facebook.com, [www.facebook.com](http://www.facebook.com), accessed on 09/05/2010

Web-based questionnaires have several strengths, including:

*“Respondents can complete the questionnaire in their own time, going away from it they are interrupted, and returning to it later, it may be effective in addressing sensitive issues [...] evidence from Keller (2004) and Basi (1999) supports the view that because there is no interviewer there is less social desirability bias and the respondents answer more honestly”* (Brace, 2004, p.39-40).

Moreover, there are several advantages of self-administered questionnaires in general, including the fact that it is a relatively low-cost option, does not require many man-hours and is generally perceived as being more anonymous (Cooper and Schindler, 2006, p.253), which is ideal given the sensitive nature of the last portion of the questionnaire, as will be argued below. The ability to monitor results as they come in, as well as the way in which data can be easily imported into statistical software are further arguments supporting the use of a web-based questionnaire (Cooper and Schindler, 2006).

However, there are a number of disadvantages to self-administered (web) questionnaires. One of such disadvantages is *“not having an interviewer on hand to clarify questions or to repair misunderstandings”* (Brace, 2004, p. 41), a problem that was limited through the use of a pre-testing phase as well as basing questions on previously published questionnaires, which is further elaborated on in the 3.2.3 Questionnaire Design section. Another problem is *“lower response rates in some modes”* and the need for *“accurate mailing lists”* (Cooper and Schindler, 2006, p.253). The latter issue was addressed by only contacting crowdfunding platforms and actively targeting online crowdfunder communities, measures which are aimed at securing a relevant sample.

### **3.2.2 Research Sample**

Unfortunately, there is no clear overview of the scale on which crowdfunding takes place. Thus, the exact size of the population is unknown. However, to give the reader an idea of the large scale of crowdfunding participants Kickstarter, one of the largest crowdfunding platforms, reported 591,773 as the number of crowdfunders who supported one project and 79,658 repeat crowdfunders who have supported multiple projects over the platform’s two years in operation (April 28, 2009-2011)<sup>27</sup>.

To construct the research sample, multiple crowdfunding platforms were contacted via email, Twitter and Facebook, Appendix B provides details regarding who responded positively to the inquiry. Moreover, in order to ensure a more representative sample of the crowdfunding population, both platforms that do and those who do not offer their users the possibility of earning monetary rewards were approached. These crowdfunding platforms form the so-called sampling frame (Easterby-Smith

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<sup>27</sup> Strickler, Y. (n.d.). Happy Birthday Kickstarter!. *The Kickstarter Blog*. Retrieved May 4, 2011, from <http://blog.kickstarter.com/post/5014573685/happy-birthday-kickstarter>

et al., 2008). Hence, the sampling process was purposive in nature (Cooper and Schindler, 2006). Furthermore, since media like Twitter and Facebook were used, one could argue that this research makes use of a modern-day snowball sampling technique, which according to Cooper and Schindler (2006) occurs when “*participants refer researchers to others who have characteristics, experiences or attitudes similar to or different from their own*” (p.204).

### **3.2.3 Questionnaire Design**

In order to maximize the outcomes of the study several considerations were made in designing the questionnaire. These considerations will be presented below and include the objective in writing the questionnaire, questionnaire questions, the choice of scale, the language, and the pilot study.

#### ***Objectives in Writing the Questionnaire***

The questionnaire represents one of the vital parts of the thesis writing process. Without a means to collect accurate and timely responses from crowdfunders there would be no data to use to infer relationships on, nor to draw conclusions from. Thus, the objective of the questionnaire was to collect data which could be used to further explore the research directions presented in the theory section.

The design of the questionnaire is set out to meet the needs of several different stakeholders. The primary and most important stakeholder for this study is the researchers, as they have set the objective of the study hoping to contribute academic research to the field of crowdfunding. Obtaining the most reliable and valid responses that will lead to unique insights into crowdfunding were thus top priorities of the questionnaire design.

The platforms that were approached represent another stakeholder in the research as many have requested a copy of the final thesis which will enable them to gain a more accurate understanding of their users in order to better meet their needs. The final stakeholder is the respondents to the questionnaire, who require a questionnaire that “*poses them questions they can answer without too much effort, and that maintains their interest, without taking up too much of their time*” (Brace, 2004, p.9). This is key since complex and/or long questionnaires can have a detrimental effect on response rates (Cooper and Schindler, 2006).



### ***Creating the Questionnaire Questions***

When creating new questionnaires there is always the risk of lacking theoretical relevance<sup>28</sup>. Therefore, previously used and published academic questionnaires used in different but similar contexts have been utilized as the basis for the questions when preparing the questionnaire. Modifications were made in order to adapt to the relevance of the topic as suggested by Park and Srinivasan (1994) and where adaptations were not possible the gaps were filled with similar question structures.

Another benefit that comes with using previously tested questionnaires is to collect more reliable and accurate data. Many problems can be caused by “*ambiguity in the question; questions asked inaccurately; failure of the respondents to understand the question*” (Brace, 2004, p. 13). By modelling the questions on previous tested questionnaires the goal is to minimize these risks. To maintain a respondent’s attention, which is essential in generating an acceptable completion-rate, the number of questions to include in the questionnaire design is a very important dimension to consider (Cooper and Schindler, 2006). Past research has indicated “*the maximum number in one battery is rarely more than about 30 before a respondent’s attention begins to wander*” (Brace, 2004, p. 101) therefore, a limited number of questions were included. Moreover, it can aid in operationalizing a concept into variables, which can be measured through the questions (Buckingham and Saunders, 2004).

The following questionnaire construction section is broken down into three sections. The first is motivation oriented relating to theories related to intrinsic and extrinsic motivational factors that have been found relevant in e.g. crowdsourcing and open source software creation. The second deals with peer influence on decision making to address the suggestions made in regard to investment-decision making and the influence by peers in form of e.g. investment momentum and herd behaviour. Finally, the third section collects data on the characteristics and crowdfunding behaviour of the user, enabling the comparison of population based on age and type of platform used.

### ***Questions Concerning Motivation***

The questions on motivation are adapted from a study originally performed by Holbrook (1986) on intrinsic and extrinsic motivation in engaging in activities. This study was examined and is based on a

*“16-item, seven-point Likert-type summated ratings scale. [...] the reliability of .68 was reported for the scale... [and] though the validity of the scale was not intensively*

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<sup>28</sup> Anselmsson, J. (2011). “Survey method: consumer characteristics and attitudes”. Marketing Research Methods (Lecture). Lund, Sweden. 4 Jan. 2011.

*examined, some evidence of its concurrent and nomological validity was reported”*  
(Bruner & Hensel, 1994, p.363).

The majority of the questionnaire questions were easily adapted to meet the required context of crowdfunding. The questions on extrinsic and intrinsic motivation are as follows:

- 1) I only fund projects when I expect to receive a financial return on it.
- 2) I only fund projects when I expect to receive an incentive (non-monetary) in return.
- 3) When I fund a project, receiving the largest financial return is the most important thing to me.
- 4) When I fund a project I tend to view it more as a donation than as a way of receiving a return either in the form of money or incentives.
- 5) Being involved in the creation process through the funding of a project is a reward in itself.
- 6) When I fund a project receiving a reward in return matters less to me than helping someone reach their goal.
- 7) When I fund a project I am funding for the fun of it.

### ***Questions Concerning Peer Influence***

In order to obtain data regarding peer influence, a number of studies have been adapted to gather the required data. Firstly, a study on the product purchase influence, originally used in a study by Carlson and Grossbart (1988), was adapted to gain insight into the influencers on investment decisions. The study was originally intended to *“measure the degree to which a parent believes a child’s opinion should be consulted when purchase decisions are made for a variety of specific goods and services”* (Bruner & Hensel, 1994, p.448). As for reliability and validity, *“Carlson and Grossbart (1988) reported an alpha of .84 and a beta of .63 for the [reliability] scale... [with] no examination of scale validity”* (Bruner & Hensel, 1994, p.448). The adapted questions for product purchase influence are:

- 8) I consider other funders’ opinions and actions when I make a funding decision.
- 9) I prefer funding projects that have received little funding to date.

Secondly, a scale originating from Celsi and Olson (1988), which measures to which degree the consumer has been influenced by information presented in an advertisement, was adapted. The study consists of a *“seven-point semantic differential scale... the average interitem correlation was .85 [representing the reliability measure and]... no test of validity was reported”* (Bruner & Hensel, 1994, p.730). The adapted questions related to momentum are as follows:

- 10) I prefer funding a project that has recently received substantial funding from other crowdfunders.
- 11) The amount of funding a project has received has an influence on my funding decision.
- 12) I prefer funding a project that is close to meeting its deadline.
- 13) I prefer funding a project that is close to meeting its funding goal.

- 14) The more users that have helped fund a project, the more likely it is that I will help fund it as well.

### ***Questions Concerning Participant Information***

The final portion of the questionnaire is used to collect data about the participant and his or her propensity to crowdfund. Questions 15 through 17 deal with the characteristics of the crowdfunder and their primary crowdfunding platform. Whilst the propensity to crowdfund is operationalized in questions 18 and 19 in terms of average amount and the number of times the respondent has crowdfunded over the last three months. Given the potentially sensitive nature of these questions, they need to be carefully constructed in order to assure accurate responses and maintain a high response rate.

These questions may also be perceived by respondents as being intrusive; a certain level of rapport which will be built up through the process of answering the questionnaire may be helpful to overcome this barrier. Therefore, these questions are asked at the end of the questionnaire as they are not being used as screening data (Brace, 2004, p.233). Asking these more sensitive questions at the end stage will also not endanger the responses for the remainder of the questionnaire, as people might be deterred from completing the questionnaire if the first questions are perceived as rather intrusive (Brace, 2004, p.233). Moreover, 5- and 6-point scales were used in order to give the respondent the possibility to answer the questions without having to fill in a specific amount or age thus alluding to a more anonymous response. The questions concerning participant information are as follows:

- 15) Have you ever funded a project through means of crowdfunding?
- 16) Does the crowdfunding platform you use most often offer the possibility to earn a monetary return on the investment you make?
- 17) What is your age?
- 18) In the past 3 months how many times have you invested in a crowdfunding project?
- 19) What is the average amount you invest into a crowdfunding project? (For European users, €1 equals roughly \$1.50)

### ***Likert Scale***

As the questionnaire responses are used to measure crowdfunders' attitudes towards several dimensions of crowdfunding a rating scale is used in collecting this data. More specifically, the scale used for the questionnaire is that of a 7-point, balanced, interval, Likert scale. The primary influencer behind this decision is that it is the same type of scale used in the studies on which the questionnaire is based.

Respondents were asked to rank how strongly they agree or disagree with the statements in the questionnaire design. An interval scale was chosen to help “*determine the relative strength of the relationship between items*” (Brace, 2004, p.74). Only the end points were labelled as either strongly disagree or strongly agree with five options between the two points (Refer to Appendix C). The benefit of using an interval scale instead of an ordinal scale is that it enables the researcher to conclude whether an item is agreed upon or not based on its ratings (Brace, 2004). Moreover, it can give insight into the relationship between variables since the distance between different points on the scale are identical, in contrast to those on an ordinal scale (Brace, 2004).

A balanced scale with an equal amount of positive and negative scale items was used in order to reduce the bias of misleading a respondent into a direction where more either positive or negative options are offered (Brace, 2004). A seven point-scale was selected in favour of a five-point-scale as it provides greater discrimination in frequently possible which would allow for more scientific findings to be drawn (Brace, 2004).

Unlike the questionnaires which were used as a basis for, the questionnaire on crowdfunding contains an ‘I don’t know’ response option to limit the likelihood of the respondent leaving a question blank. “*Knowing that the respondent could not or would not answer the question gives positive assurance to the researcher that the interview was administered correctly*” (Brace, 2004, p. 69). Other knowledge regarding the respondent can also be gathered from this response option. An ‘I don’t know’ response may indicate that the

*“Respondents were not recruited correctly to the desired criteria. Widespread responses of this type may indicate that the information asked is beyond the scope of this research universe or that the question is poorly worded and not understood by many respondents”* (Brace, 2004, p. 69).

Although the seven point scale with a neutral mid-point was chosen, the ‘I don’t know’ option was included to help distinguish those respondents who genuinely do not know from those who have no strong view either way, as the neutral option is often selected by the ‘I don’t know’ respondents if that option is not available, which corrupts the data (Brace, 2004).

### ***Language***

In order to gather accurate data the respondent must understand what is being asked in the question. Therefore, the style of language, word choice, clarity, and ambiguity in which the questionnaire is written is very important. The language can also have an effect on how the respondent interacts with the questionnaire. Hence, it is important they do not feel “*intimidated, challenged or threatened by the*

*questions*” (Brace, 2004, p.114) as this may cause the respondent to feel alienated, resulting in less effort in responses and a decrease in the response rate (Brace, 2004).

To ensure that questions were framed in everyday language familiar to crowdfunders terminology from different crowdfunding platforms was studied. Terms that were used across all platforms were deemed common everyday language that crowdfunders are familiar with and thus included in the questionnaire. Additionally, to ensure the simplicity of the questions the questionnaire was pre-tested with a group of five individuals, two of whom are crowdfunders and three who have no prior experience, in order to gauge their response and comprehension of the questions being asked.

All the crowdfunding platforms that were contacted and agreed to distribute the link to the questionnaire had websites in English. After initial positive contact with several Dutch platforms, none of the platforms decide to aid the researchers by distributing the questionnaire. Nonetheless, based on the initial positive e-mail exchanges with these platforms, the questionnaire was translated into Dutch in order to gather responses from the Dutch crowdfunding population. This was done by a native speaker whose second language is English and reviewed by two native Dutch speakers, one of which has an extensive background in professional English. Refer to Appendix C for the crowdfunding research questionnaires in English and Dutch. It should be noted that each questionnaire was exclusive to only one language.

### ***Small Pilot Study***

In order to ensure that the questions were relevant and understandable an informal pilot study was conducted. Questionnaires were sent out to five respondents in order to receive feedback before the questionnaire went live. Two of the participants had experience crowdfunding and the three others were inexperienced. One of the participants is also a recognized marketing researcher. With the received feedback the questionnaire was revised to meet the research aim.

## **3.3 Methods of Analysis**

Once the data has been collected several methods of analysis will be performed using the computer statistic software SPSS (Statistical Software for the Social Sciences). The first step consists of the analysis of the response rate and missing values. This is done to narrow down the data set to the cases that are relevant to the research, i.e. those that both complete and display that the respondent previously helped fund a project.

The first step after the response rate analysis has been performed is to diagnose the reliability of the measurement scale by calculating the reliability coefficient *“that assesses the consistency of the entire scale”* (Hair, Black, Babin, Anderson, Tatham, 2005, p. 137). This is done through calculating Cronbach’s Alpha, where the cut-off value lies at 0.60, given the exploratory nature of this research (Hair et al. 2005). The second step consists of a descriptive analysis to give an overview of the data in order to get a ‘feel’ for it. This mainly consists of calculating frequency, means and standard deviations.

Thirdly, the data analysis section will calculate the correlation coefficient of relevant variables. These coefficients *“indicate the strength of the association between any two metric variables”* (Hair et al., 2005, p171). It is important to note, however, that a correlation coefficient merely indicates the direction of a relationship. Next, a factor analysis is used in order to *“define the underlying structure among the variables in the analysis”* (Hair et al., 2005, p104). These patterns are subsequently used to see if and how they fit in regression models, which is the final step in the data processing stages.

### **3.4 Quality of Research Design**

When performing research, it is of vital importance to consider the effect of methodological decision in relation to reliability and validity. The research method used in this study consists of a cross-sectional design as data on multiple variables is being collected by questionnaires from a large number of individuals at a single point in time, which will be examined to detect patterns of association (Bryman, 2008). With this type of study the reliability and measurement validity are *“primarily matters relating to the quality of the measures that are employed to tap the concepts that the researcher is interested, rather than matters to do with research design”* (Bryman, 2008, p. 45). Reliability is concerned with consistency of measurement whilst validity is concerned with whether or not a measurement tool actually measures what it was intending to measure (Hair et al., 2005; Cooper and Schindler, 2006; Bryman and Bell, 2007).

#### **3.4.1 Reliability**

In essence, reliability seeks to answer the question: if the same procedures were followed could anyone conduct this research and reach the same conclusions as the current researchers? Internal reliability is taken into consideration as multiple-indicator measures are used to analyse the same construct, these indicators’ scores must inter-correlate to indicate consistency. As this is an exploratory study in which the measurement scales used have not been tested in previous research, Cronbach’s alpha will be used in testing for internal reliability.

### 3.4.2 Validity

Validity answers the question “*does the measure of a concept really measure that [specific] concept*” (Bryman, 2008, p. 151). There are a number of different types of validity used for gauging the validity measure of a concept, including face validity and construct validity which have all been considered, strived for and arguably met in this research. Face validity, “*that the measure apparently reflects the content of the concept in question*” (Bryman, 2008, p.152), has been established by discussing our research with a marketing researcher at Lund University who concurred that the measure seemed to reflect the concerned concepts. Concurrent validity was established as the theoretical framework based on which the survey questions were created was set out using relevant theory from neighbouring fields including investment decision-making, motivators driving online collaboration and crowdsourcing. Secondly, the questionnaire was based on question construct from previously tested questionnaires used in similar and relevant studies. Thirdly, the use of a small pilot test ensured the use of appropriate language.

### 3.4.3 Generalizability

When using a questionnaire technique there is always the potential that a sampling error may occur, i.e. the sample will not be a perfect representation of the whole crowdfunding population as is the case with our anticipated research. The risk of a non-sampling error exists; as the sampling technique used risks receiving an inadequate sampling frame due to non-response as uncooperative members of the crowdfunding population may not be interested in answering our questionnaire (Bryman and Bell, 2007, p.204). However, given the nature of the research, the goal is not to come to generalizable conclusions that hold for the entire crowdfunding population. In contrast, the goal is to give an insight into the factors that *might* influence crowdfunder’s action, but need further research to confirm whether or not they do.

## 3.5 Summary

The research approach has been considered in a broader sense and the conclusion was drawn that the critical realism position would be best suited for the research aim of this thesis. The approach was subsequently narrowed down and it was determined that the research method to be used in this study employs a cross-sectional design which is exploratory in nature. The data is collected by online-questionnaires from a large number of individual crowdfunders at a single point in time in order to collect data that aims at giving further insight into the directions suggested by the theoretical framework (see Chapter 2). This data will then be examined to detect patterns of association in SPSS.

## **CHAPTER 4**

### **RESULTS AND DISCUSSION**

The goal of this chapter is to present the observations and comparisons relating to the suggestions made in chapter 2. Firstly, a short analysis is performed on the characteristics of the data, including a response rate analysis and data set descriptives such as frequencies, mode and median analyses. Next, a scale reliability analysis is presented which tests the internal reliability of the scale followed by correlations analyses to determine if there are relationships between the answers given on different questions. Subsequently, regression and factor analyses are performed in order to discover further patterns in the data in order to reveal existing relationships. Appendix D is provided as a reference in explaining which labels correspond to each question on the crowdfunding questionnaire.

#### **4.1 Response Rate Analysis**

The on-line questionnaire went live April 12<sup>th</sup> and remained open until May 3<sup>rd</sup>, 2011. A total of 203 (186 English + 17 Dutch) respondents clicked the link to the questionnaire website, of which 162 (155 English + 7 Dutch) completed the questionnaire and 124 (118 English + 6 Dutch) were deemed appropriate for inclusion in the analysis based on whether the respondent had ever crowdfunded a project. Thus, the conversion rate from usable questionnaire to URL visitors is 61%.

In order to eliminate ‘I don’t know’ responses from interfering with the data set and analysis these responses were treated as missing data in SPSS. This was deemed appropriate as the answers were not contributing any knowledge and did not represent a significant number of respondents (Refer to Appendix E). Question 15 was removed from the analysis data set as it was used to eliminate responses from non-target audience respondents, i.e. those who had never crowdfunded before or where not sure whether they had or not; this led to the elimination of 38 (162-124) questionnaires.

#### **4.2 Descriptive Statistics**

A univariate analysis is used to examine one variable at a time. This type of analysis typically includes the use of frequency tables, diagrams, measurements of central tendency, and measurements of dispersion to give insight on the particular variable being analyzed (Bryman, 2008). The univariate analysis provides the researchers with a rough outline of the data. This data is of interest, as the academic field of crowdfunding remains in its infancy any general observations can arguably be deemed as adding to the field. Brief observations are included in this short section to give an overview of the collected data. An overview of the descriptive statistics discussed in the following paragraphs can be found in Appendix E.



#### **4.2.1 Participant Information Questions.**

From the collected data it is interesting to note that 52% of the survey respondents are under the age of 35. The frequency of funding indicates that the majority (56.6%) of the respondents had only funded 1-2 times in the past three months and 70.2% of the time the average amount invested by these particular crowdfunders was in the range of \$6-50USD. However, a \$1-5 amount was pledged only 1.6% of the time, which strongly suggests that crowdfunders typically pledge amounts of over \$5 USD. The number of users who fund is fairly evenly split between using a platform where earning a monetary return is possible and where it is not (58.7% against 41.3%).

#### **4.2.2 Motivation Related Questions**

The vast majority of respondents (75.6%) indicated that they do not fund a project just to receive a financial return, of which 48% strongly believed that to be a very true statement. This is in line with the finding that 35.5% of respondents only fund a project when they receive an incentive in return, with 14.9% of respondents choosing to remaining neutral on the topic. The majority (58.5%) of respondents indicated that they view funding a project as if it was like giving a donation. Furthermore, 52.5% of respondents feel that helping someone reach their goal is more important than receiving a reward. However, interestingly enough only 13.9% of the population either disagreed or strongly disagreed with the statement that receiving a reward in return matters less to them than helping someone reach their goal. 71.3% of people agreed that being involved in the creation process through the funding of a project was a reward in itself. Just over half of the respondents (53.7%) agreed that they fund for the fun of it.

Overall, the data seems to suggest that the crowdfunding participants were motivated intrinsically rather than extrinsically. The majority feels that being involved in the process is important which supports Baty and Sommer's (2002), Ibrahim (2008), and Duxbury et al.'s. (1996) findings that joy in the process is a motivator for (angel) investors. The data also revealed that the majority of participants crowdfund for the fun of it which is in line with conclusions of fun being a motivator to engage in collaboration on open source software projects (Lakhani & Wolf, 2003), crowdsourcing (Lakhani et al., 2007), and angel decision making (José, 2005).

#### **4.2.3 Peer Influence Related Questions**

When making a funding decision 46.9% of respondents look to others' actions and opinions when selecting a project to fund, which is in line with the finding that a larger number of previous crowdfunders that have helped fund a project is preferred by 42.1% of respondents. The amount of previous funding a project has received from others is considered to have an influence on the funding decision-making process by 51.2% of respondents, while only 12.4% of respondents prefer funding

projects that have received little funding to date. Interestingly, only 30.9% agree that they prefer investing in projects that have received recent substantial funding from others. The majority of respondents did not favour funding a project that was close to meeting its deadline; 38% prefer to fund a project close to meeting its deadline whereas 62% didn't seem to care about the deadline or felt indifferent. There is no obvious preference by respondents when it comes to funding a project that was close to meeting its funding goal. Nonetheless, it is interesting to note that only a mere 1.6% of respondents felt it was a very important criteria when selecting a project to fund.

The concept of herd behaviour, (Bikhchandani, 1992; Welch, 1992; Bikhchandani & Sharma, 2000) which occurs when an individual makes his decision based on what the majority of others before them have done, was introduced in chapter 2. The data seems to show some support that this behaviour may also be observed in crowdfunding. However, the data seems somewhat inconclusive and rather contradictory given this initial analysis and will require further analysis before proper conclusions can be drawn.

### **4.3 Scale Reliability**

Although the current research is exploratory in nature and the constructs are mere suggestions for future research, testing the reliability of these suggested measurement scales is nonetheless important. That is, before the discussion moves onto subsequent analyses, there is a need to ensure that the measurement scales are measuring the construct they set out to measure and not a completely different construct (Persson, 2010).

Cronbach's Alpha is a widely used statistical method to address the reliability of multi-item scales (Santos, 1999). Cronbach's Coefficient Alpha values range between 0 and 1, representing the internal validity of the variable being measured, with a high value indicating a higher internal validity. In general, values  $>0.7$  are deemed reliable (Santos, 1999; Gliem and Gliem, 2003; Hair et al. 2005; Pallant, 2010; Persson, 2010), although several authors argue that an alpha of  $>0.6$  or even  $>0.5$  is sufficient for research that is exploratory in nature (e.g. Hair et al., 2005, Peterson, 1994).

As is clear from table 5 below, the three constructs that were suggested in the theoretical framework all display reliability values above 0.6, deeming the values appropriate for the current research task. Intrinsic motivation and extrinsic motivation display an alpha of .648 and .628 respectively, whilst peer influence, consisting of seven items, shows the highest reliability with .845. When the motivation constructs were combined for reliability testing values were either negative or too low. This can be attributed to both the directionality of the questions related to the variables and perhaps even more so the divergent and conflicting nature of the constructs.

Related construct	Number of items	Variables	Alpha
Intrinsic Motivation	4	INVOLV, FUN, DONATION, HELP	.648
Extrinsic Motivation	3	FIN_RTN, EXP_RTN, NM_INC	.628
Peer Influence	7	CL_GL, OTHR_ACT, LIT_FND, AMNT_INFL, CL_DL, MORE_USR, SUB_FND	.845

**Table 5 - Scale Reliability**

#### 4.4 Bivariate Analysis

Bivariate analyses are useful for analysing two variables to uncover whether or not the variables are related. The goal of this section is to discover whether there are any significant relationships between the independent variables and the dependent variables, as well as inter-relationships between the independent variables. The significance of the correlations is tested two-tailed, since the directionality of the relationship has not yet been established (Keller, 2005).

Unlike Pearson's correlation test, which is used when testing correlating interval or ratio data, Spearman's rho is applied as a correlation analysis when ordinal data is tested against interval/ratio data (Keller, 2005). Thus, it is deemed as the most appropriate method to test the independent variables against the ordinal dependent variables. However, the data related to whether the crowdfunder's primary platform offers the ability to earn a financial return is a yes/no question, thus the data was coded as nominal. Consequently, Spearman's test of correlation could not be applied. Instead, a point-biserial correlation was used as it captures relationships between a natural dichotomous variable and a continuous variable (DeCoster, 2004). This type of correlation test is "*mathematically equivalent*" (DeCoster, 2004, p.28-29) to the Pearson correlation test and therefore the Pearson correlation is used to compute the correlation coefficients for the platform variable (Refer to Appendix F for further explanations).

The significant (e.g.  $p=0.05$  or  $p=0.01$ ) correlation coefficients that are obtained through Spearman's and Pearson's correlation tests represent the relationship between the variables that was not due to chance. However, it's important to keep in mind that just because there is a relationship between the two variables there is no guarantee that changes in one variable are a direct *cause* of changes in the other, since there may have been another (latent) variable at play. Put more black and white, there may be cause-and-effect between the variables but correlation does not prove cause.

#### 4.4.1 Correlation Analysis: Motivation

As section 3.2.3 established, the questionnaire contains seven questions relating to intrinsic and extrinsic motivation. The Spearman correlations of these and the dependent variables can be found in Table 6 below and the point-biserial correlation analysis can be found in Appendix F. The dependent variable AGE displays two significant but weak correlations ( $p=.05$  and  $p=.01$  respectively) with the AVG\_AMT ( $r=.335$ ) and DONATION ( $r=.229$ ) variables. Although there is no explanation in the literature or data suggesting a link between seeing the amount funded as a donation and the age of the crowdfunder, the correlation between age and the average amount funded can perhaps be attributed to the generally assumed increase of disposable income with age.

The dependent variable FREQUENCY, which depicts the number of times the respondent has funded a project over the last three months, shows significant ( $p=.05$ ) correlations with the INVOLV ( $r=.222$ ) and FUN (.190) variables. Although these correlations are rather weak, they provide some support for the expected role of fun based on aforementioned studies by Leimeister et al. (2005) on crowdsourcing and San José et al.'s (2005) as well as Harrison and Mason's (1992) findings on angel and informal investor motivation. Furthermore, it hints to the existence of, albeit it minor, evidence in support of the suggestion made that involvement plays an important role in investment decision making based on studies on angel investors and informal investors by Duxbury et al. (1996), Avdeitchikova (2008) and Ibrahim (2008).

For the average amount invested, there are two significant ( $p=.05$ ) correlations, apart from the previously discussed correlation with age. Both FIN\_RTN ( $r=.190$ ), for which a high value indicates that the respondent considers a financial return the most important factor when funding a project as well as EXP\_RTN (.221), indicating the respondent's expectation to receive a financial return on investment, show low but significant ( $p=.05$ ) correlations with the average amount invested. Although unfortunately not very high, these correlations are nonetheless in line with the expectation that financial returns play an important role in crowdfunding which was based on previous findings in the crowdsourcing field by Brabham (2008, 2009) and Lakhani (2007), who suggest that financial returns play an important role in crowdsourcing.

It is of interest to note that although the intrinsic motivational variables 'having fun' and 'being involved' correlate to the frequency with which crowdfunders fund projects, it does not correlate to the average amount with which they do so. Moreover, the opposite holds for the expected return and the importance of gaining a financial return, which is correlated to the average amount invested and not the frequency of investments. Perhaps this suggests that those respondents who strongly prefer financial rewards take up a more financial-analytical approach to crowdfunding, distorting any

correlation between these variables and the frequency with which projects are funded. However, this remains speculation without further in-depth research on this type of crowdfunder.

A point-biserial correlation was conducted to capture the relationships between crowdfunders who were/were not able to gain a monetary reward based on their platform choice and the independent variables. It was interesting to note that only one of the motivational independent variables, NM\_INC, did not indicate a significant relationship to PLATFORM. However, this did not come as a surprise since in general both types of platforms offer non-monetary incentives, so no difference ought to be expected.

The remaining independent variables indicated the existence of a significant relationship. Those survey participants whose primary platform does not offer the possibility to earn a monetary reward do not feel that earning a monetary reward is important to them ( $r=.323$ ,  $p=.001$ ) and tend to fund projects just to receive a monetary reward ( $r=.380$ ,  $p=.000$ ). Those respondents who do fund through a platform offering the possibility to earn a monetary reward do not feel that being involved in the process is a reward in itself ( $r=-.249$ ,  $p=.009$ ) and do not fund a project for the fun of it ( $r=-.254$ ,  $p=.008$ ). Moreover, they do not feel that helping someone reach their goal is more important than getting a reward ( $r=.274$ ,  $p=.004$ ), nor do they see their pledge as a donation but as a way of receiving a return ( $r=.354$ ,  $p=.000$ ). Amabile (1993) argues that for task performance once extrinsic motivators are introduced intrinsic motivation declines. The current data suggests that this theory is also applicable to crowdfunding, as when an extrinsic reward was introduced intrinsic reasons for funding seemed to diminish.

When looking at the correlations between the independent variables, a number of issues catch the eye. Firstly, although e.g. Avdeitchikova (2008) and San José et al. (2005) suggest that informal and/or angel investors give great care for both a financial return and being involved with the projects they invest in, there exists a negative correlation ( $p=.01$ ) between the INVOLV variable and the FIN\_RTN ( $r=-.301$ ) and EXP\_RTN ( $r=-.285$ ) variables. Although the correlation coefficients are low, this could suggest that crowdfunder and angel and informal investor motives and behaviour diverge on this matter.

			Correlations									
			AGE	FREQUENCY	AVG_AMNT	NM_INC	FIN_RTN	INVOLV	FUN	HELP	EXP_RTN	DONATION
Spearman 's rho	AGE	Correlation Coefficient	1.000	-.156	.335**	-.170	-.060	.014	.072	.158	-.097	.229*
		Sig. (2-tailed)	.	.084	.000	.063	.512	.879	.429	.083	.284	.011
		N	124	124	124	121	121	122	123	122	123	123
	FREQUENCY	Correlation Coefficient	-.156	1.000	-.082	-.123	-.072	.222*	.190*	.030	-.118	-.127
		Sig. (2-tailed)	.084	.	.363	.177	.435	.014	.036	.743	.193	.162
		N	124	124	124	121	121	122	123	122	123	123
	AVG_AMNT	Correlation Coefficient	.335**	-.082	1.000	-.115	.190*	.028	-.134	-.084	.221*	-.043
		Sig. (2-tailed)	.000	.363	.	.211	.037	.761	.139	.358	.014	.640
		N	124	124	124	121	121	122	123	122	123	123
	NM_INC	Correlation Coefficient	-.170	-.123	-.115	1.000	.268**	-.127	-.079	-.381**	.186*	-.408**
		Sig. (2-tailed)	.063	.177	.211	.	.003	.165	.389	.000	.041	.000
		N	121	121	121	121	119	120	121	120	121	121
	FIN_RTN	Correlation Coefficient	-.060	-.072	.190*	.268**	1.000	-.301**	-.329**	-.414**	.780**	-.561**
		Sig. (2-tailed)	.512	.435	.037	.003	.	.001	.000	.000	.000	.000
		N	121	121	121	119	121	121	121	120	121	121
	INVOLV	Correlation Coefficient	.014	.222*	.028	-.127	-.301**	1.000	.309**	.159	-.285**	.262**
		Sig. (2-tailed)	.879	.014	.761	.165	.001	.	.001	.082	.001	.004
		N	122	122	122	120	121	122	122	121	122	122
	FUN	Correlation Coefficient	.072	.190*	-.134	-.079	-.329**	.309**	1.000	.328**	-.373**	.358**
		Sig. (2-tailed)	.429	.036	.139	.389	.000	.001	.	.000	.000	.000
		N	123	123	123	121	121	122	123	122	123	123
HELP	Correlation Coefficient	.158	.030	-.084	-.381**	-.414**	.159	.328**	1.000	-.431**	.498**	
	Sig. (2-tailed)	.083	.743	.358	.000	.000	.082	.000	.	.000	.000	
	N	122	122	122	120	120	121	122	122	122	122	
EXP_RTN	Correlation Coefficient	-.097	-.118	.221*	.186*	.780**	-.285**	-.373**	-.431**	1.000	-.518**	
	Sig. (2-tailed)	.284	.193	.014	.041	.000	.001	.000	.000	.	.000	
	N	123	123	123	121	121	122	123	122	123	123	
DONATION	Correlation Coefficient	.229*	-.127	-.043	-.408**	-.561**	.262**	.358**	.498**	-.518**	1.000	
	Sig. (2-tailed)	.011	.162	.640	.000	.000	.004	.000	.000	.000	.	
	N	123	123	123	121	121	122	123	122	123	123	

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed).

**Table 6 - Correlations variables relating to motivation**

#### 4.4.2 Correlation Analysis: Peer Influence

Similar to the motivation-related section of the questionnaire, the peer influence related section consists of seven questions (for the exact questions, refer to section 3.2.3). The Spearman correlation coefficient of the corresponding independent variables and the dependent variables can be found in table 7 below.

There are a number of significant correlations between the AGE variable and other independent variables. With significant correlations ( $p=0.01$ ), ranging from  $r=-.276$  to  $-.450$  for all independent variables related to peer influence except for the variable indicating a preference for funding projects that have received little funding to date. Consequently, a picture emerges that suggests that, although the correlations are weak to mediocre, crowdfunders become (at least in their own perception) less influenced by the actions of others. This includes the role of previous funding a project has received (e.g. SUB\_FND,  $r=-.449$ , AMNT\_INFL,  $r=-.428$  CL\_GL,  $r=-.450$ ) as well as the actions of others ( $r=-.276$ ) and the preference to invest in projects that have a relatively high number of previous funders ( $r=-.440$ ). These findings are quite interesting, since there is no suggestion made in the previously discussed literature (e.g. Bikhchandani et al. 1992; Welch, 1992; Bikhchandani and Sharma, 2000) on investment decision making that the effects of herd behaviour or investment momentum decrease with age.

Meanwhile, for both frequency and the average amount invested there is only one independent variable related to peer influence that shows a significant correlation. For frequency the only significant ( $p=.05$ ) correlation is with the OTHER\_ACT variable ( $r=.208$ ). For average amount invested CL\_GL is negatively correlated ( $p=.01$ ,  $r=-.252$ ). The latter is somewhat unexpected, as the discussion as part of the theoretical background suggested that based on e.g. Grindblatt et al. (1995) and Bikhchandani and Sharma (2000), the nearing of a deadline would increase the propensity of an individual to fund it.

			AGE	FREQUENCY	AVG_AMNT	CL_GL	OTHR_ACT	LIT_FND	AMNT_INFL	CL_DL	MORE_USR	SUB_FND
Spearman's rho	AGE	Correlation Coefficient	1.000	-.156	.335**	-.450**	-.276**	.093	-.428**	-.356**	-.440**	-.449**
		Sig. (2-tailed)	.	.084	.000	.000	.002	.311	.000	.000	.000	.000
		N	124	124	124	123	123	121	123	121	121	123
	FREQUENCY	Correlation Coefficient	-.156	1.000	-.082	-.032	.208*	-.015	.036	.003	.113	.017
		Sig. (2-tailed)	.084	.	.363	.725	.021	.874	.694	.976	.216	.850
		N	124	124	124	123	123	121	123	121	121	123
	AVG_AMNT	Correlation Coefficient	.335**	-.082	1.000	-.252**	.033	.071	-.140	-.084	-.068	-.075
		Sig. (2-tailed)	.000	.363	.	.005	.718	.440	.123	.358	.461	.409
		N	124	124	124	123	123	121	123	121	121	123
	CL_GL	Correlation Coefficient	-.450**	-.032	-.252**	1.000	.337**	-.132	.603**	.599**	.574**	.552**
		Sig. (2-tailed)	.000	.725	.005	.	.000	.149	.000	.000	.000	.000
		N	123	123	123	123	123	121	123	121	121	123
	OTHR_ACT	Correlation Coefficient	-.276**	.208*	.033	.337**	1.000	.090	.546**	.371**	.529**	.459**
		Sig. (2-tailed)	.002	.021	.718	.000	.	.324	.000	.000	.000	.000
		N	123	123	123	123	123	121	123	121	121	123
	LIT_FND	Correlation Coefficient	.093	-.015	.071	-.132	.090	1.000	-.010	-.047	-.038	-.054
		Sig. (2-tailed)	.311	.874	.440	.149	.324	.	.915	.613	.680	.558
		N	121	121	121	121	121	121	121	119	119	121
	AMNT_INFL	Correlation Coefficient	-.428**	.036	-.140	.603**	.546**	-.010	1.000	.655**	.730**	.678**
		Sig. (2-tailed)	.000	.694	.123	.000	.000	.915	.	.000	.000	.000
		N	123	123	123	123	123	121	123	121	121	123
	CL_DL	Correlation Coefficient	-.356**	.003	-.084	.599**	.371**	-.047	.655**	1.000	.623**	.634**
		Sig. (2-tailed)	.000	.976	.358	.000	.000	.613	.000	.	.000	.000
		N	121	121	121	121	121	119	121	121	119	121
	MORE_USR	Correlation Coefficient	-.440**	.113	-.068	.574**	.529**	-.038	.730**	.623**	1.000	.767**
		Sig. (2-tailed)	.000	.216	.461	.000	.000	.680	.000	.000	.	.000
		N	121	121	121	121	121	119	121	119	121	121
SUB_FND	Correlation Coefficient	-.449**	.017	-.075	.552**	.459**	-.054	.678**	.634**	.767**	1.000	
	Sig. (2-tailed)	.000	.850	.409	.000	.000	.558	.000	.000	.000	.	
	N	123	123	123	123	123	121	123	121	121	123	

\*\* . Correlation is significant at the 0.01 level (2-tailed). \* . Correlation is significant at the 0.05 level (2-tailed).

**Table 7 - Correlations Variables Relating to Peer Influence**



## 4.5 Factor & Regression Analyses

A factor analysis summarizes the underlying patterns of correlation and assigns groups that are closely related into a number of new component groupings. The purpose is to narrow down a large set of variables or scale items to a smaller more manageable number. *“This technique is often used when developing scales and measures, to identify the underlying structure”* (Pallant, 2010, p.104). A factor analysis can be either confirmatory or exploratory in nature. Confirmatory factor analysis is generally used to test specific hypotheses or theories and used in deductive testing, whereas an explorative factor analysis is used to explore the interrelationship amongst variables (Pallant, 2010). Thus, the latter is more inductive in that it searches for patterns in the data, making it best suited for this study.

The 14 independent items from the crowdfunding questionnaire were subjected to a principle components analysis using SPSS. Before the data underwent the analysis, an inspection of the factorability of the correlation matrix was assessed. *“To be considered suitable for factor analysis, the correlation matrix should show at least some correlations of  $r=.3$  or greater”* (Pallant, 2010, p. 187). Even though the correlation matrixes (Refer to Tables 6&7) shows several coefficients above 0.3, determining whether or not a factor analysis is deemed an appropriate method of analysis for the collected data is not possible at this point.

After a satisfactory initial inspection of the data factor analyses were performed, subsequently followed by the strategic removal of selected independent items. When the most optimal factors were established regression analyses were performed, which looks at the predictive ability of independent variables in explaining values of a dependent variable (Babbie, Halley, Wagner, & Zaino, 2011).

### 4.5.1 Initial Factor Analysis Results

The Kaiser-Meyer-Olkin value obtained was 0.809, which exceeds the recommended value of 0.6 (Kaiser, 1970, 1974, as cited in Pallant, 2010) and Bartlett’s Test of Sphericity is significant ( $p=.000$ ) which gives support to the factorability of the correlation matrix (Pallant, 2010).

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.809
Bartlett's Test of Approx. Chi-Square	734.396
Sphericity df	91
Sig.	.000

**Table 8 - KMO and Bartlett’s Test Values for Initial Factor Analysis**

The principal component extraction technique was applied to determine the smallest number of factors to be used to represent the underlying relationship amongst variables. Using Kaiser’s criterion

only factors with an eigenvalue  $>1.0$  were included in the analysis (Hair et al., 2005; Pallant, 2010). The initial principal component analysis revealed the presence of four components with eigenvalues exceeding 1.0, each of the components explaining 33.5%, 18.1%, 8.2% and 7.3% of the variance respectively, cumulating to 66.98%. This is a satisfactory cumulative percentage as *“it is not uncommon to consider a solution that accounts for 60 percent of the total variance (and in some instances even less) as satisfactory”* (Hair et al. 2005, p.120).

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.685	33.465	33.465	4.685	33.465	33.465	3.936	28.112	28.112
2	2.529	18.064	51.529	2.529	18.064	51.529	2.890	20.642	48.753
3	1.142	8.159	59.688	1.142	8.159	59.688	1.402	10.012	58.765
4	1.020	7.288	66.976	1.020	7.288	66.976	1.150	8.211	66.976
5	.947	6.765	73.741						
6	.793	5.661	79.402						
7	.561	4.009	83.411						
8	.536	3.832	87.242						
9	.458	3.271	90.513						
10	.396	2.828	93.341						
11	.316	2.255	95.595						
12	.239	1.705	97.300						
13	.227	1.618	98.918						
14	.151	1.082	100.000						

Extraction Method: Principal Component Analysis.

**Table 9 - Total Variance Explained for Initial Factor Analysis**

To help interpret these four components a varimax rotation was performed. The component matrix and rotated component matrix provide correlation information pertaining to the variables and factors. Typically these tables are examined alongside the communalities table to further condense the scale by removing items that show a low value ( $<0.3$ ) in the communalities table and have a low loading in the rotated component matrix (Pallant, 2010). However, in this case it did not seem necessary to further eliminate items to increase the scale given the exploratory nature of the research.

Rotated Component Matrix					Component Matrix				Communalities
Item	Component				Component				Extraction
	1	2	3	4	1	2	3	4	
AMNT_INFL	.871				.797	.382			.790
MORE_USR	.865				.779	.414			.779
CL_DL	.846				.683	.453			.719
SUB_FND	.827				.807	.285			.743
CL_GL	.769				.698	.257		-.284	.671
OTHR_ACT	.584	.322	.332	.317	.615	.262	.340	.304	.655
DONATION		-.797			-.525	.589			.673
FIN_RTN		.757	-.277		.581	-.564			.698
EXP_RTN		.743	-.318		.570	-.572	.277		.729
HELP		-.714			-.520	.458		-.261	.568
INVOLV			.774			.528		.581	.652
FUN		-.343	.622		-.290	.504		.406	.519
LIT_FND				.738			.740		.555
NM_INC		.520		-.548	.385		-.502	.413	.625

Small coefficient absolute value below 0.25 suppressed

**Table 10 - Factor Analysis results**

By performing the factor analysis four new components were identified. A new component name was then assigned to best reflect the items in each component.

Component 1: Peer influence

Component 2: Return

Component 3: Intrinsic motivation

Component 4: Characteristics

These four components clearly show a certain similarity to the proposed factors in the theoretical framework section (chapter 2). This is especially true for components 1, 2 and 3, which largely reflect the theorised peer influence, extrinsic motivation (or 'return') and intrinsic motivation. The only deviation to this is the fourth component, which deals with certain characteristics of the project, namely LIT\_FND and NM\_INC. As it was previously unclear whether a factor analysis was appropriate for the data set, a regression analysis was used to test how much variance in the dependent scores can be explained by the four new components.

#### 4.5.2 Initial Regression Analysis Results

A brief regression analysis check was performed (for in-depth regression analysis refer to subsection 4.5.4) to see if the factor analysis was appropriate to use. A summary table of the regression analysis follows:

Dependent	Adjusted R squared	Sig.
PLATFORM	0.151	0.000
AGE	0.223	0.000
FREQUENCY	0.079	0.002
AVG_AMT	0.129	0.002

Table 11- Summary table regression analyses

From the output one can briefly, without going into detail, make the following observations concerning how predictive the four components are on the dependent variables:

- Component 2: Return is able to explain 15.5% of the variance in PLATFORM
- Component 1: Peer influence is able to explain 22.3% of the variance in AGE
- Component 3: Intrinsic motivation is able to explain 7.9% of the variance in FREQUENCY
- Components 2 and 4: Return and characteristics are able to explain 12.9% of the variance in AVG\_AMOUNT

Given the context of what this thesis sets out to do, i.e. exploring the field of crowdfunding, the explanatory power of the factor components unfortunately is somewhat weak. This suggests that perhaps a factor analysis is not appropriate for analysing the collected data. Before the use of a regression analysis can be completely ruled out it is important to re-examine the factor analysis by experimenting with the removal of items and their effect on the regression analysis outcomes.

#### 4.5.3 Re-examination of Factor Analysis

The same procedures for the initial factor analysis were conducted using a principal components analysis with varimax rotation as they yield the best results. Multiple error messages were encountered, indicating that there were no predictor components, with the best results in the regression analysis for each dependent variable being reflected on the removal of the items listed below. All the while ensuring that the Kaiser-Meyer-Olkin value obtained exceeded the recommended minimum value of 0.6.

Item(s) Removed	KMO	Adjusted R Squared: Dependents			
		PLATFORM	AGE	FREQUENCY	AVG_AMT
Original- no items removed	0.809	0.151	0.223	0.079	0.129
1. lt_fnd	0.815	0.175	0.215	<b>0.091</b>	0.119
2. lt_fnd, help	0.809	<b>0.188</b>	0.233	0.032	0.114
3. lt_fnd, help, donation	0.800	0.167	<b>0.239</b>	0.067	0.136
4. lt_fnd, help, donation, sub_fnd	0.769	0.170	0.223	0.064	<b>0.137</b>

\*Bold items represent highest component predictive power per dependent variable

\*\* It should be noted that not all components affected each dependent variable

Table 12 - Results of Factor Analyses

Taking the output from the trial-and-error regression analyses with the removal of items from the factor and regression no significant increases were observed. As one final test to determine the appropriateness of a factor analysis a regression analysis was performed using the original independent variables *before* they were combined into the components by means of a factor analyses. This shows the following result:

Dependent	Adjusted R squared	Predictors	Sig.
PLATFORM	0.161	EXP_RTN, DONATION	0.000
AGE	0.241	SUB_FND, AMNT_INFL	0.000
FREQUENCY	0.069	OTHR_ACT, FUN	0.006
AVG_AMT	0.166	EXP_RTN, CL_GL	0.001

**Table 13 –Regression with all independent variables**

The output from the regression analysis using the individual independent variables provides the highest explanatory variance for half the dependents, with output adjusted R squared values not showing a significant difference overall. These aforementioned findings, the fact that the research is exploratory in nature, as well as that by using the factored components it ‘flattens’ a large set of variables with risk of losing some useful data, all supports the argument that a factor analysis is deemed inappropriate and unsatisfactory to use when analyzing the given data set.

#### **4.5.4 Regression Analyses of Individual Items**

In an attempt to further zoom in on the individual variables that have the highest explanatory power, an individual regression analysis was performed for every independent-dependent variable combination. Since the dependent variables were coded as ordinal data, the curve estimation method, part of the SPSS statistical software package, was used to determine when significant regressions occurred. Overall, the best results were obtained when using linear, cubic or quadratic regression methods. Therefore, these three regression methods will be used for further comparison.

##### ***Average Amount***

For average amount, five independent variables showed significant regression with the dependent variable, which are displayed below in table 14. The R-square values in the tables below “*indicate[s] the percentage of total variation of [the dependent variable] explained by the regression model*” (Hair et al., 2005, p.236). Of these independent variables, FIN\_RTN and EXP\_RTN stand out, showing R-square values ranging from .088 to .159 and .091 to .096 respectively, indicating that the average amount invested increases as users prefer or expect a financial return when funding a project.

This suggests some support in the data for e.g. Brabahn (2008, 2009) and Kleeman et al. (2008) who suggested that extrinsic motivation plays an important role in crowdsourcing.

AVERAGE AMOUNT						
Variable	Linear		Quadratic		Cubic	
	<i>R square</i>	<i>Significance</i>	<i>R square</i>	<i>Significance</i>	<i>R square</i>	<i>Significance</i>
CL_GL	.056	.009	.056	.032	.059	.065
FIN RTN	.088	.001	.112	.001	.159	.000
FUN	.026	.073	.028	N.S.*	.031	N.S.*
EXP RTN	.091	.001	.091	.003	.096	.007
AMNT_INFL	.026	.076	.026	N.S.*	.024	N.S.*

\* Not significant at p=0.10 level.

**Table 14 – Individual Regressions for dependent variable AVG\_AMNT**

### **Frequency**

For the dependent variable frequency, three independent variables showed a significant R-square value, ranging from .037 to .061. These variables are similar to the aforementioned regression analysis with all independent variables discussed above plus the addition of the INVOLV variable. These outcomes, displayed in table 15 suggests that intrinsic motivation (INOLV, FUN) and peer influence (OTHR\_ACT) have a minor but significant predictive power, indicating that the more importance a respondent attributes to being involved, having fun or the behaviour of others, the higher the frequency with which (s)he crowdfunds. This is in line with Ibrahim (2008) and Harrison and Mason's (1992) findings on the role of intrinsic motivation in investment decision making.

FREQUENCY						
Variable	Linear		Quadratic		Cubic	
	<i>R square</i>	<i>Significance</i>	<i>R square</i>	<i>Significance</i>	<i>R square</i>	<i>Significance</i>
INOLV	.037	.033	.039	.093	.40	N.S.*
FUN	.040	.027	.041	.080	.041	N.S.*
OTHR_ACT	.046	.018	.052	.039	.061	.057

\* Not significant at p=0.10 level.

**Table 15 – Individual Regressions for dependent variable FREQUENCY**

### **Age**

For the dependent variable age, nine independent variables show significant R-square values when performing linear, cubic and quadratic regression analyses, as displayed below in table 16. Of these nine, AMNT\_INFL and SUB\_FND indicate the strongest explanatory power, .216-.238 and .209-.219 respectively. This is in line with the linear regression analysis performed with all independent variables for the dependent variable AGE, as displayed above. Based the SUB\_FND and AMNT\_INFL variables, it becomes clear that the older the respondent, the less likely it is that (s)he is influenced by the funding that a project has previously received. Similarly, closeness to funding goal (CL\_GL) and closeness to time deadline (CL\_DL) seem so have significantly less influence on older

respondents. Moreover, influence of a substantial number of previous funders, as measured through the MORE\_USR variable, as well as the behaviour of other actors (OTHR\_ACT) seem to have substantially less effect on older participants. The independent variables indicating the preference to help an emerging innovator (HELP) and view the funded amount as a donation (DONATION) seem to have a positive predictive relationship to age.

AGE						
Variable	Linear		Quadratic		Cubic	
	<i>R square</i>	<i>Significance</i>	<i>R square</i>	<i>Significance</i>	<i>R square</i>	<i>Significance</i>
NM_INC	.030	.058	.046	.063	.050	N.S.*
DONATION	.063	.005	.107	.001	.114	.002
HELP	.027	.070	.033	N.S.*	.937	N.S.*
MORE_USR	.209	.000	.219	.000	.219	.000
SUB_FND	.217	.000	.223	.000	.234	.000
AMNT_INFL	.216	.000	.232	.000	.238	.000
CL_DL	.124	.000	.132	.000	.145	.000
CL_GL	.170	.000	.171	.000	.180	.000
OTHR_ACT	.098	.000	.134	.000	.139	.000

*Items in italics show a negative regression; \* Not significant at p=0.10 level.*

**Table 16 – Individual Regressions for dependent variable AGE**

### Platform

For the dependent variable PLATFORM, six independent variables show significant R-square values, as displayed in table 17 below. As expected, the preference for and expectation to earn a monetary return shows a negative regression as one moves from platforms *with* the possibility to earn a monetary return to those *without* that possibility, with the FIN\_RTN and EXP\_RTN having a R-square value of .104-.201 and .145-.148 respectively. Three variables related to intrinsic motivation indicate low but significant predictive power suggesting that respondents who are intrinsically motivated prefer platforms that do not facilitate the earning of monetary rewards, which is also in line with expectations.

PLATFORM						
Variable	Linear		Quadratic		Cubic	
	<i>R square</i>	<i>Significance</i>	<i>R square</i>	<i>Significance</i>	<i>R square</i>	<i>Significance</i>
DONATION	.125	.000	.129	.001	.130	.002
INVOLV	.062	.009	.064	.031	.064	.075
FUN	.065	.008	.096	.005	.097	.014
HELP	.075	.004	.078	.015	.079	.036
EXP_RTN	.145	.000	.147	.000	.148	.001
FIN_RTN	.104	.001	.109	.002	.201	.000

*Items in italics show a negative regression*

**Table 17 – Individual Regressions for dependent variable AVG\_AMNT**

#### **4.5 Summary**

This chapter presented the results and discussion. Firstly, the response rate analysis, found in detail in Appendix E and the descriptive analysis laid out the framework for the more in-depth analysis and discussion of the data. This initial analysis was followed by Spearman and Pearson correlation tests which indicated the presence of several significant correlations for the 14 independent and four dependent variables. Next, a factor analysis largely confirmed the structured in the factors influencing crowdfunders that was suggested in the second chapter on the theoretical framework. Finally, the regression analysis yielded interesting results, especially for the dependent variable AGE.



## CHAPTER 5

### CONCLUSIONS

This chapter will provide a brief overview of the findings presented in the results and discussion's chapter, which will link back to the aforementioned research questions presented in chapter one. As the research focuses on the motives and peer influence on crowdfunder's the results will also be presented in those subsections. Subsequently, the discussion and implications, limitations and finally concluding with suggestions for future research will bring this paper to an end.

#### **5.1 Conclusions: Motivational factors**

Returning to the research questions presented in the first chapter, a number of interesting conclusions can be drawn in regards to the motivational factors driving individuals to participate in crowdfunding. More specifically, the findings confirm that: there are two major groups of individuals that crowdfund; more people engage for intrinsic reasons than might be expected; frequency and amount are reflected in motivational reasons for engagement; and crowdfunders share similarities and differences with individuals in related fields.

As crowdfunding platforms offer two types of rewards (i.e. monetary and non-monetary), it is not surprising that the analysis of the data shows two categories of crowdfunders, namely those that crowdfund to earn an extrinsic reward and those that participate for intrinsic reasons. This was confirmed as survey respondents that chose to engage in crowdfunding activities on platforms where they cannot earn a monetary reward indicated that they do not fund projects to gain a monetary reward, nor do they feel that earning a monetary reward is important to them. Meanwhile, the crowdfunders who do have the possibility to earn a monetary reward based on platform choice generally do not fund a project for the fun of it, do not feel that helping someone reach their goal is more important than getting a reward, nor do they feel that being involved in the process is a reward in itself.

What is interesting in regards to these two groups of crowdfunders is that as crowdfunders are free to choose which platforms and projects they engage in, only 58.7% of crowdfunders chose to engage in crowdfunding activities with the possibility of earning a monetary reward. This is of interest as several authors (Deci & Ryan, 1985; Amabile, 1993; Amabile et al. 1996; Deci et al., 1999) argue that once extrinsic motivators are introduced intrinsic motivation declines. In the case of crowdfunding this could mean that once the opportunity to earn a monetary reward is made possible the desire to crowdfund for intrinsic reasons consequently will decline. Although the data somewhat supports this

notion one would perhaps expect a larger portion of crowdfunders to participate for monetary reasons. This finding could imply that another more influential factor that was not investigated in this research is driving crowdfunding, e.g. funding to support an acquaintance such as a family member or friend, a notion suggested by Agrawal et al. (2010). It could also imply that crowdfunders are unaware of the differences between the platforms or that they regard the cost to switch between platforms as being too high.

The data shows that crowdfunders who participate for intrinsic reasons, such as being involved with a project and for the fun of it, fund projects more frequently than those who are more interested in gaining a monetary reward. However, no relation was found between the average amount invested into a project and intrinsic motivations, which is interesting as the opposite holds true for those who are extrinsically motivated. Although there is a relationship between the expectations of a return and importance attributed to gaining a financial return and the average amount invested, none exists for the frequency of investments. Although it's only speculative, this finding suggests that those respondents who strongly prefer financial rewards take up a more financial-analytical approach to crowdfunding, distorting any correlation between these variables and the frequency with which projects are funded.

It is interesting to find that the majority of the amounts funded by the respondents were in the range of \$6-50USD (35.5% for 6-25\$ and 34.7% for \$26-50 pledge amounts). However, a \$1-5 pledge was only made 1.6% of the time, which strongly suggests that both types of crowdfunders typically pledge amounts of over \$5. In most cases, rewards such as e.g. CD downloads or meet and greets are only offered to users who fund more than \$5, which could be a reason why just 1.6% of respondents indicated they fund just 1-5\$ on average.

The data suggests that individuals engage in the activity of crowdfunding for intrinsic reasons, mimicking a relationship also existing in the neighbouring fields of crowdsourcing (Michel, 1997, 2000, Voswinkel 2000, Stoll 2006, as cited in Kleeman, 2008; Lakhani et al., 2007; Kleeman, 2008; Leimeister et al., 2008; ), open source (Lakhani & Wolf, 2003), and investment decision making (Harrison & Mason, 1992; Baty & Sommer, 2002; San José et al., 2005). The analysis suggests that previous findings within the field of crowdsourcing regarding extrinsic motivation being a primary motivator (Lakhani et al., 2007; Pen & Zhang, 2008; Braham, 2009) also hold for crowdfunding.

Interestingly, when examining the inter-correlation between independent variables, the data pertaining to crowdfunding indicates that earning a financial return is negatively related to being involved. Findings from Harrison and Mason (1992), San José et al. (2005), and Avdeitchikova (2008) suggest that informal and angel investors give great care for both a financial return and being involved with

the projects they invest in, whereas the data pertaining to crowdfunding indicates that earning a financial return opposes being involved. This suggests that crowdfunders and informal and angel investor's motives and behaviours may diverge on this matter. This could possibly be explained when taking into consideration the amount of money invested. Amounts are typically substantially larger when angel investors are involved as opposed to crowdfunders who, based on the survey results, reportedly fund on average only \$6-50USD. Perhaps this indicates that when more money is at stake, individuals are more likely to get involved as more serious consequences are likely to be experienced. These findings could also be a reflection of the people who participate in each activity. Angel investors are typically wealthy individuals who are also fellow entrepreneurs (Morrisette, 2007) whereas given the low cost to participate anyone with computer access can easily crowdfund.

## **5.2 Conclusions: Peer Influence Factors**

This thesis addresses the question *“how do actions by other crowdfunders influence the behaviour or preferences of a crowdfunder?”* These actions were operationalized in terms of e.g. closeness to deadline, the amount of funding received and the closeness to the funding goal. There are several interesting findings related to the peer influence variables on different levels of analysis. One of the most interesting and surprising of these is the influence that the age of the respondent seems to have on these factors. The statistical analyses show several negative relationships between the age variable and several independent variables. ‘Amount influence’ and substantial amount funded in a project were found to be most influential, together predicting approximately a fifth of the variance in the age variable.

Interestingly, the regression shows that the older the respondent gets the less likely (s)he is to be influenced by these or other peer influence factors that were found significant. The same holds for the closeness to the funding goal, closeness to time deadline and the behaviour of other investors. In contrast, older respondents seem to attribute more importance and receive more joy from helping emerging innovators, as well as viewing funded amounts more as donations than their younger counterparts.

It is of interest to note that both the lack of a relationship between age and expected financial return and the increase of average amount invested with the increase of age are in line with Antonides and van der Sar's (1990) findings in their research on investment decision making in investment clubs. What remains unexplored and thus unexplained is why there is a negative relationship between the age and the propensity to invest in projects that have received substantial funding or are close to their deadline. Speculating that those projects that have received substantial funding or are close to their funding goal have a larger chance of success and therefore display less risk, this is especially true in

light of Barber and Odean's (2001) findings which show that older investors are more likely to hold less volatile investment portfolios than their younger counterparts.

However, these findings should not be seen as a rebuttal to herd behaviour brought forward by e.g. Bikhchandani (1992), Welch (1992) and Bikhchandani & Sharm (2000). It merely suggests that initial findings show that older respondents perhaps were less likely to be influenced by these phenomena, a finding for which unfortunately no further theoretical support could be found. Unfortunately, none of the independent variables yielded any significant results when used in a regression analysis with average amount as a dependent variable. Whilst for frequency, measured as the number of times a crowdfunder has funded a project during the last three months, the only peer influence independent variable to show a significant predictive power was the behaviour of other actors, albeit a very minor 4.6%.

### **5.3 Theoretical Implications**

As discussed in section 1.8.1 on the theoretical relevance of this thesis, the focus was primarily on how findings could contribute to the field of crowdfunding. Through the investigation of both intrinsic and extrinsic motivational factors and peer influence factors, as previously discussed, a number of theoretical implications have surfaced relating to the field of crowdfunding. Firstly, there seems to be a dichotomy in user types. The first type of user focuses on intrinsic motivation where fun is associated with 'making something happen', whilst the second group focuses more on making a financial return on their investment. This dichotomy can prove helpful in further research on crowdfunding.

Secondly, these findings have implications for neighbouring fields. One can speculate towards the existence of similar user motives and behaviours in fields such as co-creation, crowdsourcing and open source software creation. However, it would not come as a surprise if these motives and behaviours were to transcend into these relating fields considering the shared similarities. Also, when the (legal) issues pertaining to crowdfunding can be resolved, one could argue that these findings have implications for fields such as informal investors and angel investors. In essence, crowdfunding can be considered as providing an opportunity for informal or angel investors to investment beyond the geographical boundaries often encountered. This undoubtedly will have implications on both practical and theoretical levels.

Finally, this thesis can have implications for marketing in broader terms. The number of users that engage in crowdfunding and the increase in invested funds perhaps indicate the shift towards a new type of consumer. Besides the classic 'consuming' consumer and the co-creating consumer that one

can find in co-creation and crowdsourcing, a new type of consumer seems to present itself. This consumer, or perhaps more accurately consumer-investor can both create value as well as provide capital in order for others to create value. This brings the level of engagement with a construct, project, business, or brands to a whole new level.

#### **5.4 Managerial Contributions**

Crowdfunding is a rapidly growing method of raising funds for both creatives as well as entrepreneurs. It embodies a vast amount of possibilities for individuals and companies alike to efficiently raise funds, promote a project, and engage consumers. As previously mentioned, the number of crowdfunding platforms is on the rise as crowdfunding continues to gain in popularity. Therefore it would be valuable for practitioners to gain information concerning the crowdfunder's choice of platforms. The conclusions regarding motivation and peer influence provide many interesting findings regarding how a platform should be set up in order to maximize user engagement. Practitioners should consider the interesting findings in regards to age. These findings, indicating that older respondents on average make larger investments but are less influenced by peer effects can be of value when constructing a crowdfunding platform for certain demographics group, or when targeting a specific age group as an emerging innovator.

Before a platform is set up a decision should first be made as to which type of crowdfunder to target; extrinsically motivated or intrinsically motivated individuals. Based on this decision, the rewards should be reflected exclusively to target their prime motives. For extrinsically motivated crowdfunders the bells and whistles, such as involvement with the project, should be given a lower priority and focus should be on promoting the disbursement of monetary rewards. For intrinsically motivated crowdfunders the opposite is true and user engagement should be encouraged with monetary rewards being a low priority. In both cases the 1-5\$ funding amount should be reassessed as few (1.6%) of respondents seem to select this option.

Promotion and marketing efforts should be viewed from a rather unique angle. The age related finding of this thesis indicating that older respondents on average make larger investments but are less influenced by peer influence whereas the opposite also holds true. Additionally, the survey results indicate that the vast majority of respondents do not frequently engage in crowdfunding, with 71% indicating that they had funded 0-2 times within the last three months. This finding should be reflected in the type of marketing and promotion efforts put forth in order to minimize costs and maximize profits.

Crowdfunding is frequently compared to similar activities in related field. For example, open source software shares many similarities to crowdfunding. However, the main differentiation is that unlike crowdfunding these activities do not offer a monetary reward in exchange. Using the conclusions drawn in this thesis predictions can then be made as to how users would respond if monetary rewards were introduced.

## 5.5 Limitations

It is important to note that when conducting the study there were a number of limitations, both in terms of research scope and methodological approach taken. Firstly, it is clear that ideally there would be a number of factors controlling for the level of disposable income, the propensity to invest in a more traditional setting, the familiarity with 'Web 2.0' practices and perhaps even the effect of culture on investing, donating and pledging. However, given the fact that the writing of this thesis was strictly time-bound, it was impossible to control for these factors without having a detrimental effect on response rates and quality of the research in general.

The survey was also kept at a short length to entice more individuals into sparing five minutes to complete the survey and also reserved to a realistic number of angles to research given the time restrictions. Doing so reduced the number of measurement items relating to both motivation and peer influence factors as well as excluding other potential influencers from the survey. As the results show, only a small portion of the dependent variables could be explained by the chosen individual variables. Section 5.6 will give several suggestions for further research that include factors that have not been researched in the current study.

In collecting the data, the researchers had to rely on the workings of social media networks and readiness of crowdfunding platforms to send the call to individual crowdfunders to participate in the research. There was no direct control over who came in possession of the survey link as it was primarily distributed to individuals on behalf of the researchers. As a countermeasure to the inclusion of individuals who have never crowdfunded, the survey was created in such a way that those respondents could be easily removed from the sample. Nonetheless, the researchers are aware that collected sample may not be an ideal reflection of the crowdfunding population as a large portion of our respondents were repeat funders where information and statics, such as those provided by Kickstarter.com<sup>29</sup>, suggest that only a small percentage of individuals are repeat crowdfunders.

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<sup>29</sup> Strickler, Y. (n.d.). Happy Birthday Kickstarter!. *The Kickstarter Blog*. from <http://blog.kickstarter.com/post/5014573685/happy-birthday-kickstarter> retrieved on 05/04/2011

Although the survey remained open for a three-week period, more time for data collection would have been ideal as the snowball effect was reflected in the number of respondents, as more and more people started passing on the survey link. This can truly be reflected in the number of Dutch respondents, which more than tripled in the last few days that the survey was live. Thus, a longer timeframe for collecting data would have been ideal.

## **5.6 Suggestions for Future Research**

Given the lack of knowledge on the workings of crowdfunding, as well as the decision making process of individual crowdfunders, the aim of this research was to gain an insight into the factors that drive crowdfunders. As this is a rather ambitious aim, the decision was made to focus on intrinsic and extrinsic motives and peer-influences, limiting the online survey to 19 questions. The conclusions that were drawn are a good starting point at exploring these phenomena related to crowdfunding, but at the same time suggest that there are a lot more factors influencing the decision making behaviour of crowdfunder that need to be taken into consideration.

Future research should take additional motivators into consideration such as, but not limited to, the amount of effort a crowdfunder puts into searching for a project to fund, the enjoyment level obtained through participating in the crowdfunding activity, funding a project based on curiosity about an idea or concept, or perhaps funding a cause that the crowdfunder genuinely believes in. Other important research avenues relate to potential differences in the large deviations between the characteristics of projects in terms of rewards (monetary vs. non monetary) and general type (e.g. music, movie or start-up). Furthermore, as Agrawal et al. (2010) suggested, perhaps the concept of crowdfunding has yet to move out of the realm of *"friends, fans and family"*, (p.1) into more mainstream markets, although this cannot be acknowledge with great certainty without further research.

Additional peer influential factors also merits further research, since the initial results presented suggests that these factors are likely to influence the decision making process. Moreover, the marketing influence gained through e.g. word-of-mouth generated by these projects deserves further attention, especially since this is of great importance to practitioners and theorists alike. Expanding on the limited number of four dependent variables could lead to some very interesting findings into crowdfunding. These additional dependent variables could include gender, nationality, income, or first time crowdfunders versus repeat funders. The research on motivation and peer influence could also be more focussed on the differences between different categories of crowdfunding such as on the one hand art and creative projects and on the other hand business ventures. As research into the field of crowdfunding is almost non-existent the research possibilities still remain somewhat limitless.

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## APPENDIX A: DIFFERENT TYPES OF CROWDSOURCING

Type of Crowdsourcing	Description
Participation of consumers in product development and configuration	Calls by established firms for participation in the design or configuration of new products.
Product design	Some crowdsourcing calls are intended to mobilize internet users for the creation of a product that wholly depends on their input.
Competitive bids on specifically defined tasks or problems	Public request for bids on specifically defined tasks or problems.
Permanent open calls	The permanent open call for the submission of information or documentation.
Community reporting	Another way to transform informational inputs from a large number of internet users into a marketable product is to organize consumers into a "community" of registered users who report on new products, new trends or other kinds of news outsiders might be willing to pay for.
Product rating by consumers and consumer profiling	Widely used in e-commerce is the practice of activating and publishing consumers' knowledge and opinions about products. Also common is the collection and utilization of data on the purchasing habits of its customers.
Customer-to-customer support	Customer-to-customer support via chats and discussion forums. Experiences can be shared, users can challenge each other to com-petitions or grant emotional support.

**Table A - "Different Types of Crowdsourcing" (adopted from Kleemann et al., 2008)**

## APPENDIX B: DISTRIBUTION METHODS

This appendix is a reflection of all the different modes used in contacting crowdfunders to complete the on-line questionnaire.

Email contact sent on behalf of the crowdfunding platform		
Company Name	Company Website URL	Contact Email
Buzzbnk	<a href="https://www.buzzbnk.org/">https://www.buzzbnk.org/</a>	<a href="mailto:hello@buzzbnk.org">hello@buzzbnk.org</a>
Crowdfunder	<a href="http://www.crowdfunder.co.uk/">http://www.crowdfunder.co.uk/</a>	<a href="mailto:support@crowdfunder.co.uk">support@crowdfunder.co.uk</a>
Verkami	<a href="http://www.verkami.com/">http://www.verkami.com/</a>	<a href="mailto:info@verkami.com">info@verkami.com</a>
Kapipal	<a href="http://www.kapipal.com/new">http://www.kapipal.com/new</a>	<a href="mailto:webmaster@kapipal.com">webmaster@kapipal.com</a>
Small Change Fund	<a href="http://www.smallchangefund.org">www.smallchangefund.org</a>	<a href="mailto:clare@smallchangefund.org">clare@smallchangefund.org</a>
Blur Group	<a href="http://www.blurgroup.com">www.blurgroup.com</a>	<a href="mailto:dorothy@blurgroup.com">dorothy@blurgroup.com</a>
Sokap	<a href="https://www.sokap.com/">https://www.sokap.com/</a>	<a href="mailto:info@sokap.com">info@sokap.com</a>
33 Needs	<a href="http://www.33needs.com">www.33needs.com</a>	<a href="mailto:team@33needs.com">team@33needs.com</a>
Feed the Muse	<a href="http://www.feedthemuse.net/">http://www.feedthemuse.net/</a>	<a href="mailto:support@feedthemuse.net">support@feedthemuse.net</a>
Growvc	<a href="http://www.growvc.com/">http://www.growvc.com/</a>	<a href="mailto:sponsor@growvc.com">sponsor@growvc.com</a> , <a href="mailto:partner@growvc.com">partner@growvc.com</a>
Sponsume	<a href="http://www.sponsume.com">www.sponsume.com</a>	<a href="http://www.sponsume.com/contact">http://www.sponsume.com/contact</a>

### Posted on platform forums



### Crowdfunding Thesis: 5 MINUTE QUESTIONNAIRE in need of YOUR HELP to complete!

Posted by Crowdfunding Thesis on April 11, 2011 at 7:15pm [View Discussions](#)

Dear Fellow Crowdfunders,

As you have had the opportunity to participate in the new and exciting activity of crowdfunding we invite you to help further the research into the academic field of crowdfunding by answer our thesis questionnaire (link below). It will only take five minutes of your time, be completely anonymous, and be very much appreciated! The survey will be open for responses now until April 26th.

5 MINUTE QUESTIONNAIRE LINK: [www.thesistools.com/web/?id=190007](http://www.thesistools.com/web/?id=190007)

**A bit about us:** we are two students enrolled in the Master's of Science in Business and Economics at Lund University in Sweden. As part of this MSc., we are currently writing our master's thesis on crowdfunding. In order to collect data to further the research into the field of crowdfunding we need your help in completing a quick and simple 5 minute survey. All answers will remain completely anonymous. If you have any questions feel free to contact us at [crowdfundingthesis@gmail.com](mailto:crowdfundingthesis@gmail.com).

Take Care,  
Jessica & Ralph

Tags: [Crowdfunding Thesis](#), [Sweden](#), [Thesis](#)

Company Name	Company Website URL
Innovatrs	<a href="http://www.innovatrs.net/forum/topics/crowdfunding-thesis-5-minute?xg_source=activity">http://www.innovatrs.net/forum/topics/crowdfunding-thesis-5-minute?xg_source=activity</a>
Slice the Pie	<a href="http://www.slicethepie.com/Forum/Default.aspx?g=posts&amp;m=83699&amp;#83699">http://www.slicethepie.com/Forum/Default.aspx?g=posts&amp;m=83699&amp;#83699</a>
Sell-a-band	<a href="https://www.sellaband.com/en/forum_topics/3033-crowdfunding-thesis-5-minute-questionnaire-in-need-of-your-help-to-complete">https://www.sellaband.com/en/forum_topics/3033-crowdfunding-thesis-5-minute-questionnaire-in-need-of-your-help-to-complete</a>

## Facebook crowdfunding group wallposts



Crowdfunding's Profile · RocketHub's Profile · Crowdfunding's Wall



**Crowdfunding Ryan** ▶ **RocketHub**

Help Needed: 5 Min. Questionnaire

We are 2 master's students at Lund University who need your help to further the research into the academic field of crowdfunding by answer the survey (link below). It will take only 5 minutes of your time, be completely anonymous, and be very much appreciated.

5 MINUTE QUESTIONNAIRE LINK: [www.thesistools.com/web/?id=190007](http://www.thesistools.com/web/?id=190007)

<http://www.thesistools.com/web/?id=190007>  
www.thesistools.com

📅 April 26 at 12:21pm · Like · Comment · Share

Company Name	Company Website URL	Likes*
Cofundit	<a href="http://www.facebook.com/pages/Cofundit/132364876791412">http://www.facebook.com/pages/Cofundit/132364876791412</a>	48
Buzzbank	<a href="http://www.facebook.com/Buzzbank">http://www.facebook.com/Buzzbank</a>	218
Biracy	<a href="http://www.facebook.com/biracy">http://www.facebook.com/biracy</a>	915
Better Place	<a href="http://www.facebook.com/betterplace">http://www.facebook.com/betterplace</a>	34,267
BelieversFund	<a href="http://www.facebook.com/believersfund">http://www.facebook.com/believersfund</a>	81
Crowdfunding Facilities	<a href="http://www.facebook.com/pages/Crowdfunding-Facilities/205032509507437">http://www.facebook.com/pages/Crowdfunding-Facilities/205032509507437</a>	3
Crowdfunding	<a href="http://www.facebook.com/pages/Crowdfunding/142220622514322">http://www.facebook.com/pages/Crowdfunding/142220622514322</a>	5
GoFundMe	<a href="http://www.facebook.com/gofundme">http://www.facebook.com/gofundme</a>	613
Givezooks	<a href="http://www.facebook.com/givezooks">http://www.facebook.com/givezooks</a>	363
FunBreak	<a href="http://www.facebook.com/pages/FunBreak/89506440076">http://www.facebook.com/pages/FunBreak/89506440076</a>	3,573
Feed the Muse	<a href="http://www.facebook.com/pages/Feed-the-Muse/95219474298">http://www.facebook.com/pages/Feed-the-Muse/95219474298</a>	347
FansNextdoor	<a href="http://www.facebook.com/FansNextdoor">http://www.facebook.com/FansNextdoor</a>	261
Crowdrise	<a href="http://www.facebook.com/crowdrise">http://www.facebook.com/crowdrise</a>	11,539
Crowdcube	<a href="http://www.facebook.com/crowdcube">http://www.facebook.com/crowdcube</a>	51
CofundOs	<a href="http://www.facebook.com/pages/CofundOS/116445511712214">http://www.facebook.com/pages/CofundOS/116445511712214</a>	4
Microfundo	<a href="http://www.facebook.com/microfundo">http://www.facebook.com/microfundo</a>	778
Love Like Hers'	<a href="http://www.facebook.com/lovelikehers">http://www.facebook.com/lovelikehers</a>	321
Kickstarter	<a href="http://www.facebook.com/Kickstarter">http://www.facebook.com/Kickstarter</a>	74,265
Investiere	<a href="http://www.facebook.com/investiere.ch">http://www.facebook.com/investiere.ch</a>	83
Invested.in	<a href="http://www.facebook.com/investedin">http://www.facebook.com/investedin</a>	1,327
Innovatr's	<a href="http://www.facebook.com/innovatr">http://www.facebook.com/innovatr</a>	226
Pozible	<a href="http://www.facebook.com/pozible">http://www.facebook.com/pozible</a>	620
Pledge Music	<a href="http://www.facebook.com/pages/Pledge-Music/91276892590">http://www.facebook.com/pages/Pledge-Music/91276892590</a>	2,911
Pifworld	<a href="http://www.facebook.com/pages/Pifworld/109983122651">http://www.facebook.com/pages/Pifworld/109983122651</a>	1,527
Peerbackers	<a href="http://www.facebook.com/peerbackers">http://www.facebook.com/peerbackers</a>	218
mySherpas	<a href="http://www.facebook.com/mysherpas">http://www.facebook.com/mysherpas</a>	723
My Major Company	<a href="http://www.facebook.com/apps/application.php?id=162042136152">http://www.facebook.com/apps/application.php?id=162042136152</a>	20,067
Mutuzz	<a href="http://www.facebook.com/Mutuzz">http://www.facebook.com/Mutuzz</a>	84
Pling	<a href="http://www.facebook.com/apps/application.php?id=175284842507471">http://www.facebook.com/apps/application.php?id=175284842507471</a>	20,118
Sellaband	<a href="http://www.facebook.com/Sellaband">http://www.facebook.com/Sellaband</a>	3,147
Seedlounge – Live	<a href="http://www.facebook.com/seedlounge">http://www.facebook.com/seedlounge</a>	518

Crowdfunding for Startups'		
Sandawe	<a href="http://www.facebook.com/sandawe">http://www.facebook.com/sandawe</a>	1,266
RocketHub	<a href="http://www.facebook.com/RocketHub">http://www.facebook.com/RocketHub</a>	1,512
Respekt.net	<a href="http://www.facebook.com/zivilgesellschaft">http://www.facebook.com/zivilgesellschaft</a>	2,334
ProFounder	<a href="http://www.facebook.com/ProFounder">http://www.facebook.com/ProFounder</a>	2,056
Ulule	<a href="http://www.facebook.com/ulule">http://www.facebook.com/ulule</a>	3,814
The Independent Collective	<a href="http://www.facebook.com/theindependentcollective">http://www.facebook.com/theindependentcollective</a>	484
The Age of Stupid	<a href="http://www.facebook.com/ageofstupid">http://www.facebook.com/ageofstupid</a>	28,654
Startnext	<a href="http://www.facebook.com/startnext">http://www.facebook.com/startnext</a>	3,007
Sponsume	<a href="http://www.facebook.com/Sponsume">http://www.facebook.com/Sponsume</a>	558
SonicAngel	<a href="http://www.facebook.com/SonicAngelMusic">http://www.facebook.com/SonicAngelMusic</a>	2,185
Small Change Fund	<a href="http://www.facebook.com/smallchangefund">http://www.facebook.com/smallchangefund</a>	366
Slicethepie	<a href="http://www.facebook.com/Slicethepie">http://www.facebook.com/Slicethepie</a>	1,651
WiSEED: microinvestissem nt dans l'innovation	<a href="http://www.facebook.com/pages/WiSEED-microinvestissement-dans-linnovation/293735283127">http://www.facebook.com/pages/WiSEED-microinvestissement-dans-linnovation/293735283127</a>	226
Wefund.co.uk	<a href="http://www.facebook.com/wefund">http://www.facebook.com/wefund</a>	4,676
VisionBakery	<a href="http://www.facebook.com/VisionBakery">http://www.facebook.com/VisionBakery</a>	614
Venture Bonsai	<a href="http://www.facebook.com/VentureBonsai">http://www.facebook.com/VentureBonsai</a>	93

\*When someone "Like"(s) an advertisement, group, page, etc. they establish a connection which enables the page to post content to the followers' (people who 'like'(d) the group) News Feed. It can be perceived as how popular a page is based on the number of followers who may/ or may not visit the page frequently.

#### Tweets & Retweets on Twitter



**crowdfundthesis** Crowdfunding Thesis

@TheRaiseCapital Help further the research on #crowdfunding- 5 min anonymous survey for thesis research: <http://bit.ly/hzQsD2> please RT

26 Apr



**crowdfundthesis** Crowdfunding Thesis

@respekt\_net Brauchen Unterstützung bei #crowdfunding Masterarbeit: <http://bit.ly/hzQsD2> 5-minütige anonyme Umfrage. Please RT!

26 Apr

Retweets by twitter users		
Username	Followers	Language of Survey
Cinecrowd	257	NL
JulianaReedLA	926	EN
CoCreatr	2032	EN
JayceBartok	73	EN
Vinylfoote	269	EN
MaartenTimmerman	153	NL
SuzanneGoGreen	403	EN
Appcatalystfund	77	EN
Matthewgonzales	651	EN

Innovatrs	2569	EN
Ioumusic	262	EN
Crowdcube	814	EN
Ideiasme	626	EN
Crowdsourcing	4255	EN
Bloomvc	232	EN
Davidgernaat	69	NL
Essenabre	678	EN
Verkami	688	EN
Startnext	608	EN
Seedups	1310	EN
mySherpas	185	EN
Cofundit	222	EN
Crowdfunderuk	466	EN
Bouwinbeeld	575	NL
Africaunsigned	433	EN
8bitfunding	361	EN
Sponsume	4917	EN
Friendfund	123	EN
Betterplace org	2028	EN
Tramp0	197	EN
Lookatmygame	250	EN
Duraznofilm	293	EN
Nonprocons	488	EN
Powertothecloud	1430	EN

## APPENDIX C: QUESTIONNAIRE

Helemaal mee oneens /Strongly disagree							Helemaal mee eens / Strongly agree
1	2	3	4	5	6	7	
1)	I only fund projects when I expect to receive an incentive (non-monetary) in return.						
	Ik financier een project alleen wanneer ik kan verwachten er een (niet-geldelijke) beloning voor terug te krijgen.						
2)	I prefer funding a project that is close to meeting its funding goal.						
	Ik geef de voorkeur aan het financieren van projecten die het financieringsdoel naderen.						
3)	When I fund a project, receiving the largest financial return is the most important thing to me.						
	Wanneer ik een project financier is het behalen van het hoogste financiële rendement het belangrijkste.						
4)	Being involved in the creation process through the funding of a project is a reward in itself.						
	Betrokken zijn in het ontwikkel proces door middel van het financieren van een project is een beloning op zichzelf.						
5)	When I fund a project I am funding for the fun of it.						
	Wanneer ik een project financier doe ik dit puur voor het plezier.						
6)	I consider other funders' opinions and actions when I make a funding decision.						
	Ik neem de mening en het gedrag van andere financiers in overweging in mijn financieringsbesluit.						
7)	I prefer funding projects that have received little funding to date.						
	Ik geef de voorkeur aan projecten die tot dusverre weinig financiering hebben ontvangen.						
8)	When I fund a project receiving a reward in return matters less to me than helping someone reach their goal.						
	Wanneer ik een project financier is het ontvangen van een beloning ondergeschikt aan het helpen om iemand zijn/haar doel te bereiken.						
9)	I only fund projects when I expect to receive a financial return on it.						
	Ik financier alleen wanneer ik kan verwachten er een financieel rendement op te behalen.						
10)	The amount of funding a project has received has an influence on my funding decision.						
	De hoeveelheid financiering die een project reeds ontvangen heeft, heeft invloed op mijn financieringsbesluit.						
11)	I prefer funding a project that is close to meeting its deadline.						

Ik geef de voorkeur aan het financieren van projecten waarvan de deadline nabij is.

- 12) When I fund a project I tend to view it more as a donation than as a way of receiving a return either in the form of money or incentives.

Wanneer ik een project financier zie ik de investering meer als een donatie dan als een manier om een beloning (zowel geldelijk als niet-geldelijk) te ontvangen.

- 13) The more users that have helped fund a project, the more likely it is that I will help fund it as well.

Hoe meer gebruikers een geholpen hebben een bepaald project te financieren, hoe waarschijnlijker het is dat ik ook help om het te financieren.

- 14) I prefer funding a project that has recently received substantial funding from other crowdfunders.

Ik geef de voorkeur aan het financieren van een project dat recentelijk substantiële financiering van andere crowdfunders heeft ontvangen.

- 15) Have you ever funded a project through means of crowdfunding?

Heeft u ooit in een project geïnvesteerd door middel van crowdfunding?

1. Yes
2. No
3. I don't know / *Weet ik niet*

- 16) Does the crowdfunding platform you use most often offer the possibility to earn a monetary return on the investment you make?

Biedt het crowdfunding platform waar u het meest gebruik van maakt de mogelijkheid om een financieel rendement te behalen op investeringen?

1. No
2. Yes
3. I don't know/ *Weet ik niet*

- 17) What is your age? – *Wat is uw leeftijd?*

1. 16-25
2. 26-35
3. 36-45
4. 46-55
5. 56+

- 18) In the past 3 months how many times have you invested in a crowdfunding project?

Hoe vaak heeft u tijdens de afgelopen 3 maanden een crowdfunding project gefinancierd?

1. 0
2. 1-2
3. 3-4
4. 5-6

5. 6+

19) What is the average amount you invest into a crowdfunding project? (For European users, €1 equals roughly \$1.50)

Hoeveel investeert u gemiddeld in een crowdfunding project (waar €1 grofweg gelijk is aan \$1,50)?

1. \$1-5
2. \$6-25
3. \$26-50
4. \$51-100
5. \$101-250
6. 250+



## APPENDIX D: LABELLING

Reference for analysis section in explaining which labels correspond to each question on the crowdfunding questionnaire.

	Label	Corresponding Question	
Motivation	NM_INC	Question1	I only fund projects when I expect to receive an incentive (non-monetary) in return.
	EXP_RTN	Question9	I only fund projects when I expect to receive a financial return on it.
	FIN_RTN	Question3	When I fund a project, receiving the largest financial return is the most important thing to me.
	DONATION	Question12	When I fund a project I tend to view it more as a donation than as a way of receiving a return either in the form of money or incentives.
	INVOLV	Question4	Being involved in the creation process through the funding of a project is a reward in itself.
	FUN	Question5	When I fund a project I am funding for the fun of it.
	HELP	Question8	When I fund a project receiving a reward in return matters less to me than helping someone reach their goal.
Peer Influence	OTHR_ACT	Question6	I consider other funder's opinions and actions when I make a funding decision.
	LIT_FND	Question7	I prefer funding projects that have received little funding to date.
	AMNT_INFL	Question10	The amount of funding a project has received influence on my funding decision.
	CL_DL	Question11	I prefer funding a project that is close to meeting its deadline.
	MORE_USR	Question13	The more users that have helped fund a project, the more likely it is that I will help fund it as well.
	SUB_FND	Question14	I prefer funding a project that has recently received substantial funding from other crowdfunders.
	CL_GL	Question2	I prefer funding a project that is close to meeting its funding goal.
Participant Info.	PLATFORM	Question16	Does the crowdfunding platform you use most often offer the possibility to earn a monetary return on the investment you make?
	AGE	Question17	What is your age?
	FREQUENCY	Question18	In the past 3 months how many times have you invested in a crowdfunding project?
	AVG_AMNT	Question19	What is the average amount you invest into a crowdfunding project?

## APPENDIX E: DESCRIPTIVES

### Age, frequency, average amount and platform descriptives

Statistics					
		AGE	FREQUENCY	AVG AMNT	PLATFORM
N	Valid	124	124	124	109
	Missing	0	0	0	15
Mean		2.60	2.55	3.09	1.59
Median		2.00	2.00	3.00	2.00
Mode		2	2	2	2
Std. Deviation		1.153	1.054	1.196	.495

AGE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	16-25	20	16.1	16.1	16.1
	26-35	45	36.3	36.3	52.4
	36-45	34	27.4	27.4	79.8
	46-55	14	11.3	11.3	91.1
	56+	11	8.9	8.9	100.0
	Total	124	100.0	100.0	

FREQUENCY					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	7.3	7.3	7.3
	1-2	70	56.5	56.5	63.7
	3-4	25	20.2	20.2	83.9
	5-6	8	6.5	6.5	90.3
	6+	12	9.7	9.7	100.0
	Total	124	100.0	100.0	

AVG_AMNT					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5	2	1.6	1.6	1.6
	6-25	44	35.5	35.5	37.1
	26-50	43	34.7	34.7	71.8
	51-100	20	16.1	16.1	87.9
	101-250	6	4.8	4.8	92.7
	250+	9	7.3	7.3	100.0
	Total	124	100.0	100.0	

PLATFORM					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	45	36.3	41.3	41.3
	Yes	64	51.6	58.7	100.0
	Total	109	87.9	100.0	
Missing	I don't know	15	12.1		
Total		124	100.0		

### Motivation Related Descriptives

Statistics							
		FIN RTN	EXP RTN	DONATION	HELP	INVOLV	FUN
N	Valid	121	123	123	122	122	123
	Missing	3	1	1	2	2	1
Mean		2.36	2.37	4.65	4.59	5.08	4.46
Median		2.00	2.00	5.00	5.00	6.00	5.00
Mode		1	1	5	6	6	5
Std. Deviation		1.543	1.762	1.824	1.738	1.684	1.747
Sum		285	292	572	560	620	548

FIN_RTN		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	51	41.1	42.1	42.1
	Disagree	24	19.4	19.8	62.0
	Somewhat Disagree	18	14.5	14.9	76.9
	Neutral	16	12.9	13.2	90.1
	Somewhat Agree	6	4.8	5.0	95.0
	Agree	4	3.2	3.3	98.3
	Strong Agree	2	1.6	1.7	100.0
	Total	121	97.6	100.0	
Missing	Don't know	3	2.4		
Total		124	100.0		

EXP_RTN		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	59	47.6	48.0	48.0
	Disagree	23	18.5	18.7	66.7
	Somewhat Disagree	11	8.9	8.9	75.6
	Neutral	10	8.1	8.1	83.7
	Somewhat Agree	10	8.1	8.1	91.9
	Agree	6	4.8	4.9	96.7
	Strong Agree	4	3.2	3.3	100.0
	Total	123	99.2	100.0	
Missing	Don't know	1	.8		
Total		124	100.0		

DONATION		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	4.8	4.9	4.9
	Disagree	15	12.1	12.2	17.1
	Somewhat Disagree	14	11.3	11.4	28.5
	Neutral	16	12.9	13.0	41.5
	Somewhat Agree	26	21.0	21.1	62.6
	Agree	22	17.7	17.9	80.5
	Strong Agree	24	19.4	19.5	100.0
	Total	123	99.2	100.0	
Missing	Don't know	1	.8		
Total		124	100.0		

**HELP**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	5	4.0	4.1	4.1
	Disagree	12	9.7	9.8	13.9
	Somewhat Disagree	18	14.5	14.8	28.7
	Neutral	23	18.5	18.9	47.5
	Somewhat Agree	18	14.5	14.8	62.3
	Agree	27	21.8	22.1	84.4
	Strong Agree	19	15.3	15.6	100.0
	Total	122	98.4	100.0	
Missing	Don't know	2	1.6		
Total		124	100.0		

**INVOLV**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	6	4.8	4.9	4.9
	Disagree	7	5.6	5.7	10.7
	Somewhat Disagree	10	8.1	8.2	18.9
	Neutral	12	9.7	9.8	28.7
	Somewhat Agree	23	18.5	18.9	47.5
	Agree	41	33.1	33.6	81.1
	Strong Agree	23	18.5	18.9	100.0
	Total	122	98.4	100.0	
Missing	Don't know	2	1.6		
Total		124	100.0		

**FUN**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	8	6.5	6.5	6.5
	Disagree	14	11.3	11.4	17.9
	Somewhat Disagree	12	9.7	9.8	27.6
	Neutral	23	18.5	18.7	46.3
	Somewhat Agree	27	21.8	22.0	68.3
	Agree	24	19.4	19.5	87.8
	Strong Agree	15	12.1	12.2	100.0
	Total	123	99.2	100.0	
Missing	Don't know	1	.8		
Total		124	100.0		

## Peer Influence Descriptives

		Statistics					
		OTHR_ACT	MORE_USR	LIT_FND	CL_DL	SUB_FND	CL_GL
N	Valid	123	121	121	121	123	123
	Missing	1	3	3	3	1	1
Mean		4.13	3.95	3.13	3.79	3.64	3.75
Median		4.00	4.00	3.00	4.00	4.00	4.00
Mode		5	5	4	2	4	5
Std. Deviation		1.829	1.596	1.347	1.639	1.605	1.653
Sum		508	478	379	458	448	461

		OTHR_ACT			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	8.9	8.9	8.9
	Disagree	20	16.1	16.3	25.2
	Somewhat Disagree	16	12.9	13.0	38.2
	Neutral	15	12.1	12.2	50.4
	Somewhat Agree	28	22.6	22.8	73.2
	Agree	22	17.7	17.9	91.1
	Strong Agree	11	8.9	8.9	100.0
	Total	123	99.2	100.0	
Missing	Don't know	1	.8		
Total		124	100.0		

		MORE_USR			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	8.1	8.3	8.3
	Disagree	16	12.9	13.2	21.5
	Somewhat Disagree	20	16.1	16.5	38.0
	Neutral	24	19.4	19.8	57.9
	Somewhat Agree	29	23.4	24.0	81.8
	Agree	19	15.3	15.7	97.5
	Strong Agree	3	2.4	2.5	100.0
	Total	121	97.6	100.0	
Missing	Don't know	3	2.4		
Total		124	100.0		

LIT_FND		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	12	9.7	9.9	9.9
	Disagree	33	26.6	27.3	37.2
	Somewhat Disagree	26	21.0	21.5	58.7
	Neutral	35	28.2	28.9	87.6
	Somewhat Agree	9	7.3	7.4	95.0
	Agree	4	3.2	3.3	98.3
	Strong Agree	2	1.6	1.7	100.0
	Total	121	97.6	100.0	
Missing	Don't know	3	2.4		
Total		124	100.0		

CL_DL		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	10	8.1	8.3	8.3
	Disagree	24	19.4	19.8	28.1
	Somewhat Disagree	19	15.3	15.7	43.8
	Neutral	22	17.7	18.2	62.0
	Somewhat Agree	22	17.7	18.2	80.2
	Agree	23	18.5	19.0	99.2
	Strong Agree	1	.8	.8	100.0
	Total	121	97.6	100.0	
Missing	Don't know	3	2.4		
Total		124	100.0		

SUB_FND		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	11	8.9	8.9	8.9
	Disagree	25	20.2	20.3	29.3
	Somewhat Disagree	21	16.9	17.1	46.3
	Neutral	28	22.6	22.8	69.1
	Somewhat Agree	19	15.3	15.4	84.6
	Agree	16	12.9	13.0	97.6
	Strong Agree	3	2.4	2.4	100.0
	Total	123	99.2	100.0	
Missing	Don't know	1	.8		
Total		124	100.0		

CL_GL		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Disagree	13	10.5	10.6	10.6
	Disagree	21	16.9	17.1	27.6
	Somewhat Disagree	20	16.1	16.3	43.9
	Neutral	22	17.7	17.9	61.8
	Somewhat Agree	26	21.0	21.1	82.9
	Agree	19	15.3	15.4	98.4
	Strong Agree	2	1.6	1.6	100.0
	Total	123	99.2	100.0	
Missing	Don't know	1	.8		
Total		124	100.0		



## APPENDIX F: POINT-BISERIAL CORROLATION

		Point-Biserial Correlations														
		NM_IN C	CL_GL	FIN_RT N	INVOL V	FUN	OTHR_ ACT	LIT_ FND	HELP	EXP_ RTN	AMNT_I NFL	CL_ DL	DONATION	MORE_US R	SUB_FN D	NEW_PLAT FORM(0&1)
NEW_PLA TFORM(0 &1)	Pearson Correlation	.084	-.051	.323**	-.249**	-.254**	.159	.054	-.274**	.380**	.042	-.012	-.354**	-.015	.112	1
	Sig. (2- tailed)	.391	.598	.001	.009	.008	.101	.582	.004	.000	.669	.902	.000	.876	.246	
	N	106	108	107	108	108	108	106	107	108	108	106	108	106	108	109

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*. Correlation is significant at the 0.01 level (2-tailed).

- 1) Group 1 represents crowdfunders who cannot earn a monetary reward through their platform selection
- 2) Group 0 represents crowdfunders who can earn a monetary reward through their platform selection

*“The point-biserial correlation captures the relationship between a dichotomous (two-value) variable and a continuous variable. If the analyst codes the dichotomous variable with values of 0 and 1, and then computes a standard Pearson correlation using this variable, it is mathematically equivalent to the point-biserial correlation. The interpretation of this variable is similar to the interpretation of the Pearson correlation. A positive correlation indicates that group associated with the value of 1 has larger values than the group associated with the value of 0. A negative correlation indicates that group associated with the value of 1 has smaller values than the group associated with the value of 0. A value near zero indicates no relationship between the two variables” (DeCoster, 2004, p. 28-29).*